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Motor-Car Journal.

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COMMENTS.

THOSE who made a special study of military matters have recently been expressing alarm at the dispersal of the studs of the various 'bus companies in London consequent on the advance of the motor vehicle. Evidence of this was afforded in the question which Mr. Lane-Fox addressed to the Secretary for War in the House of Commons on Tuesday. He asked whether, in view of the increase of motor traction and the consequent gradual decrease in the number of horses in use in this

country, the War Office were taking any steps to secure the maintenance of the supplies of remounts available for the Army. Mr. Haldane replied to the effect that the whole question of the supply of suitable horses for military purposes was receiving consideration by the Board of Agriculture, in conjunction with the War Office. There is no doubt that the subject is an urgent one, for the progress made by the automobile during the last few years is doing much to relieve horses of their work as beasts of burden. Ultimately their use will be almost wholly confined to military purposes as well as those of sport and pleasure.

A Reference to the Royal Commission.

MANY motorists are taking a very serious view of the present position in Parliament with regard to motoring, and steps are being taken to interest local authorities in coming into line with motorists in the matter. Should such a result be brought about it should prove a considerable factor in influencing the Chancellor of the Exchequer towards the view that any additional taxation should be devoted to a specific purpose. On Thursday, the 27th inst., Lord Montagu of Beaulieu was to raise a point in connection with the threatened taxation of motor-cars, which is regarded with the utmost interest not only by all concerned with the motor industry, but also by local authorities throughout the country. His lordship had previously intimated that he would ask the Government whether, in framing any further taxation relating to motor-cars, they will bear in mind the recommendations of the Royal Commission on Motor-cars and the Royal Commission on London Traffic, and take such steps as may be necessary to create a national road authority, by whom the main roads of the country should be managed.

Lights on Army Vehicles.

A GOOD deal of misapprehension both in civil and military circles of authority has hitherto existed as to the use of lights on Army vehicles. The new Act governing the lighting of vehicles generally, which came into force on January 1st last, covers the subject, and in conjunction therewith the King, by an Order in Council (just published as an Army Order), directs that the provisions of the Act shall not apply at all to gun carriages or limbers, ammunition wagons or limbers, general service wagons carrying ammunition, machine guns, small-arm ammunition carts, tool wagons and tool carts. Other vehicles included in this exemption order are technical stores wagons and carts, cable

wagons, limbered general service wagons, air-line wagons, balloon wagons, gas-reservoir wagons, wagons for collapsible boats, trestle wagons, pontoon wagons, travelling ovens and water carts. It is also not to apply to any of the following if and whenever they are employed in connection with the field training or manœuvres of any portion of the military forces, or in the opinion of the general officer commanding-in-chief the troops with which they are employed, or of the Secretary of State for War, the military necessities of the public service require that they shall not for the time being carry or display the light or lights prescribed by the Act, viz., general service wagons, bread and meat wagons, forage carts, ambulances, Maltese carts, bicycles and road locomotives not falling within the Motor Car Acts, 1896 and 1903.

The Taxation of Motorists.

As to the way in which taxes are regarded, something may be gleaned from the opinions of well-known motorists that have reached us during the last few days. We are not thoroughly convinced of the soundness of the tactics that have taken the hint of the Chancellor in 1907 as a practically adopted fact in 1908. The duty of local authorities to provide for new locomotion might have been made a primary fact in the position, and an active agitation entered upon to arouse them from their lethargy in that respect. Such, however, is now impossible, and we are face to face with the general idea that motor-cars will be further taxed, and one of the points remaining to be settled is as to the severity of the impost. To suggest reprisals in the shape of the introduction of a tax on horse-drawn vehicles, reminiscent of the ill-fated "wheel tax" of the late Lord Goschen, will, if seriously pursued, only aggravate the position. The great work to be done is (1) to secure that the road shall be brought into proper condition to carry the new locomotion; (2) to provide that men who use vehicles in a trade or professional way shall not be imposed upon by the State because they are possessed of the spirit of enterprise; (3) to secure fair play to the middle class motorist, whose enjoyment of the car is mainly in search of health for himself and family; and (4) to see that the taxes shall be graduated in such a way that the moderate man shall not be discouraged in assisting the industry by joining the ranks of motorists. These are points that need to be kept in mind by Mr. Asquith and his advisers; they can, perhaps, find many illustrations in the experiences of our readers, who are invited to contribute to the symposium begun on another page.

Speed Limits.

THE record of the fate of the applications which have been made for special restrictions of the speed of motor-cars in various places is very interesting. It proves the wisdom of allowing the departure from uniformity in the matter to remain under the control of a central authority. Since the Act was passed 103 applications have been received by the Local Government Board or county boroughs. No fewer than 49 were subsequently withdrawn or abandoned before inquiry; 19 were refused by the Local Government Board; 22 have been granted or promised, and 13 are still under official consideration. If this is the result after the applications from minor councils had been sifted by the county authorities, what would have

happened had the requests been allowed to go direct from the parish to Whitehall? This is one of those cases where an infinite deal of pains may be taken for nothing, save worrying motorists and others, whom many bucolic wiseacres seem to count as unworthy of consideration.

Roads in Ireland.

SEVERAL matters for congratulation were mentioned at the annual meeting of the Belfast Centre of the Irish Roads Improvement Association, over which Mr. John Brown, F.R.S., presided. The executive committee point to the great increase in the number of steam rollers purchased by County and City Councils since the inception of the Association as proof of the progress that has been made in educating public opinion to recognise the importance of the roads. Undoubtedly the backward condition of many of the great highways in the Emerald Isle has been due to the general apathy, and Mr. Hackett in Tipperary has done much to dissipate this by the practical demonstration he has given of the value of road improvement to the locality. We trust that the work of the Irish Roads Improvement Association will be continued with the vigour that has characterised it during the last seven years. There is still much room for improvement, and it will be some time before anything like perfection is attained. Then the motorist will be recognised as an important factor in the general progress.



Touring in Italy.—The Normal School, Pisa.

Horse and Motor Traffic.

IN view of the discussion now raging around motor-cars, the figures which the President of the Local Government Board has given Mr. Cathcart Wason in the House of Commons are of interest. During last year licence fees were paid in respect of 75,567 private motor-cars and cycles—an increase of 8,452 as compared with the previous year. In the period of 1906-7 licence duty was paid on 413,000 horse-drawn vehicles, excluding hackney and stage carriages, so that the proportion of automobile to other traffic is becoming very considerable. Following this answer by Mr. John Burns came a question from Mr. Fell, M.P. for Yarmouth, who wished for some differentiation between British and foreign cars, which he was unable to obtain.

Belfast Activity.

EVIDENTLY the new organisation that has lately been formed at Belfast to look after the interests of the motoring movement in that city will have plenty to do. Not only has a certain amount of antipathy been shown in connection with the threatened speed limit, but the action just taken against a local firm with regard to alleged obstruction in the street proves the need of automobile education in the city. In this particular instance—details of which are given on another page—the pro-

prietors of a depot and garage had four cars call at their place. None were directed thither for repair, but two were cars on hire which were calling for a supply of petrol; the others were owned by local gentlemen. According to the evidence the business is a growing one, a point which should weigh with the authorities. We agree that the law must be obeyed, but it should also be tempered with common sense.

Teaching Horse Drivers.

EAST and West seem at last to be agreed that the vagaries of those responsible for the driving of horses through the streets require police attention quite as much as does the behaviour of those in charge of motor vehicles. At East Ham Police Court the other day a trio of sleepy drivers who have long been prone to regard the highway between Romford and the London markets as a kind of dormitory, were charged with slumbering while in charge of their lumbering vehicles. The magistrate, recognising the dangers of such drowsiness on the highway, appropriately fined them, and doubtless the warning will be conveyed to others of their *confreres* similarly indifferent to the safety of others. Now we learn that in the West End police attention has been drawn to the fashion of drivers leaving horses unattended while they are delivering goods or amusing themselves elsewhere. This view is going still further into rural districts, and at Haywards Heath recently the local superintendent of police called the attention of the magistrates to the prevalence of the dangerous practice of leaving horses unattended. The practice is rendered all the more risky in view of the development of motor traffic. The clerk to the magistrates suggested that the only way to put a stop to the nuisance would be to summon the drivers, and also take proceedings against the owners of the trap for aiding and abetting the offence. The superintendent said he would act upon the advice, as repeated cautions had really had no effect upon the responsible parties. If the police will be as active in that work as they have been in trapping motorists, they will earn the appreciation of the community in which they operate.

The Camera and the Car.

THAT motorists are inclined towards photography is known to all who travel. With many enthusiasts the camera is almost as indispensable as the luncheon basket, and the pleasure of perpetuating records of holiday tours is half the enjoyment of a motor trip. At several gatherings of provincial motor clubs during the past winter photographic reminders of enjoyable motoring days have been on view; and a few evenings ago the Nottinghamshire A.C. held a well-organised exhibition of pictures taken by members when motoring. Now we hear that the Motor Yacht Club intends to hold a similar exhibition on the "Enchantress" during the first week of May. The popularity of such competitions is growing in motoring circles—on land and sea—and an incidental aspect of the business benefits conferred by the automobile is the fillip it has given the photographic industry.

Advertising on the Landscape.

AT length public protest has been made against the way in which the landscape is being embellished in many parts of the country by the announcements of garages and of firms that desire to be of assistance to those who travel. At the annual meeting of the English Lake District Association it was incidentally mentioned that the road between the Ferry and Wray Castle, on the west shore of Windermere, had been improved, and grants made towards the easing of corners on roads in Kentmere and Langdale. The committee renewed their appeal for a discouragement of the alleged disfigurement of the district by hoardings erected near the highways by motor-car manufacturers and petrol dealers. The solicitor to the Association emphasised the appeal of the committee, and

reminded the meeting of the Act of 1907, whereby local authorities could make by-laws for the regulation and control of hoardings and other advertising signs that tended to disfigure the natural beauty of the landscape. He suggested that the County Councils of Westmoreland, Lancashire, and Cumberland should be asked to make by-laws. It was decided to write to the three County Councils and to the county automobile associations urging them to take action.

Motoring M.P.s.

MOTORING has few really qualified advocates in the House of Commons, and the loss of Mr. Harvey Du Cros leaves their ranks denuded of the most practical among them. The return of his son would afford numerical compensation. Of course the M.P.s who rode to victory on motor-cars are a numerous band, but their knowledge of automobilism is theoretical rather than of the expert character that turns votes in divisions. And in view of the discussions that are soon likely to

the sanction of Parliament was obtained for the proposal, it was defeated by the merchants of Thames Street. During all succeeding years the wise ideas of Wren with regard to thoroughfares have been generally ignored, until the stress of traffic is again bringing the subject to the notice of the authorities with such insistence that the Local Government Board is taking it up. Any proposals which are made in the matter must take account of the growing needs of new forms of traffic.

Dust and Public Health.

NOT only surveyors and those directly responsible for the road are concerned with the mitigation of what is generally described as the "dust nuisance," but Medical Officers of Health, particularly in the South of England, seem to be studying the interesting problem. A few days ago the Public Health and Local Government Officers Association of Sussex held its annual meeting at Lewes, when Mr. F. J. Wood, the



An Interesting View on the Route of the Motor Union of Western India's Reliability Trial.

be heard on the matter at Westminster the education of M.P.s must be continued from within the walls of the House as well as in the columns of the public press. In such work Mr. Du Cros, jun., can—as Mr. Du Cros has—render good service to the movement.

Town Planning.

MOTORISTS have something more than an academic interest in questions of town planning, such as are brought to the front by the Garden City Association in its latest publication with that title. On the first page Sir William Treloar refers to the traffic difficulties of narrow and congested streets such as are realised by motorists wherever they drive through large centres of population. Had Sir Christopher Wren had his way London would have been a very different kind of place to what it now is. His idea was that there should be three principal streets leading east and west, and one or two cross streets which were to be at least ninety feet wide; the lesser streets were to be sixty feet. All thoroughfares were to be straight. Although

county surveyor of the eastern portion of the county, opened a discussion on "The Maintenance of Roads" for the edification of those who regard the dust question from the health standpoint. He mentioned the question of efficient drainage as one of the essentials to be thought of, and went on to say that not every authority could afford to properly "bind" their road services owing to the question of expense. Whatever stone was used dust was inevitable; it was by attrition that the dust formed. The cost of using a form of macadam as a binding material was out of all proportion to the benefits likely to be obtained. Tarring had been suggested for the county of East Sussex, but on a road 18 ft. wide it would mean a cost of £520 per mile, thus quintupling the sum now spent on maintenance. By the use of machinery the cost might be reduced to £44 per mile; if, however, they were to tar-spray the whole of the Sussex roads it would mean an addition of 2d. to the rates. In this last sentence is the key of the whole situation, and we doubt whether the ratepayers would appreciate a mitigation of the dust nuisance at such a cost, especially in view of rising rates generally.

The Taxation of Motor Cars.



THE prominence into which the Motor Union has brought the subject of the taxation of motorists has given a fillip to the public discussion of the matter. Apparently the deputation to the Chancellor of the Exchequer last week is regarded in many quarters as a recognition, by motorists, of the equity of further taxation. The acceptance of such a view, without qualification, is not calculated to further the cause of automobilism, and that the present position is one of some danger is apparent from the correspondence we have received since our last issue. Motorists can render no better service just now than in endeavouring to educate the public with regard to the effect of further taxation in thwarting the progress of what is rapidly becoming a national industry of primary importance. Hence we welcome the following expressions of opinion from representative motorists, whose presentment of the case against increased taxation for Revenue purposes only should afford valuable reading to Parliamentarians and the public alike. Several other letters reached us as we were going to press, and a selection from these, as well as any others that come to hand from readers during the next few days, will appear in our next issue.

A MINISTERIAL PROTEST.

The Rev. H. G. Morgan, Rector of Stoke Lacy, is well known in connection with the Herefordshire A.C., which has done so much for the "small car." His views may be regarded as representative of a large and important section of the motoring community. He writes to us as follows:—

"I consider that a further tax would be unfair to motorists of moderate means; also that a heavy tax will decrease the number of cars kept by this class of motorists (I am one of them) and in that way injure not only the men employed in motor manufacture, but the still larger number employed in garages, &c. It is practically certain that taxation would not produce much over £200,000 per annum; if it attempted to produce more it would defeat its own object."

THE SPORTSMAN'S VIEW.

Mr. John Hargreaves is a West Country sportsman who will be remembered in connection with the elimination races for the British Gordon Bennett team in the Isle of Man. He writes us as follows:—"We are already very heavily taxed—in fact, far more so than any other road traffic—and it appears to me most unfair if further taxation is imposed on motors."

Mr. H. R. Kirk, of Leeds, is the owner of several cars and was an entrant in some of the classic events in the motor world in the early years. His enthusiasm for motoring also extends to boating. His views will have general acceptance and are as follows:—"I am quite of the opinion that motorists are already too heavily taxed in proportion to other vehicular traffic, and fear that any further pecuniary burden in that direction would seriously hamper the motor industry of this country. Should it be found necessary, however, to contribute towards the upkeep of the roads, all other classes of vehicles should certainly be made to contribute proportionately."

A MEDICAL VIEW.

Dr. H. E. Bruce-Porter was the first doctor in England to employ a motor-car in his professional work, and when resident at Windsor a few years ago trained the late Queen's horses to familiarity with his automobile—thus setting a fashion which has had a wide vogue. He is the hon. sec. of the Committee of Medical Men using motor-cars, and his views may be regarded as thoroughly representative of those held by the members of his profession. In reply to our request for his views on motor-car taxation he says:—

"I believe, in Germany, doctors' cars are exempt, and, while too much to expect anything of the kind in this country, it would be reasonable for the doctor's car to be treated as a trade

vehicle and taxed at trade rate, even though the car should be used from time to time for non-professional purposes. The amount of gratuitous work performed in this country by the medical profession is enormous, and few people can have any idea of how enormous it is. A great deal of the work, if not done gratuitously, would have to be paid for by the rates, as many of the recipients of medical charity are quite unable to pay for the services rendered. A tax of a few pounds more or less does not affect a successful medical man living in London or in the country, but there are thousands of men scattered up and down the country, obliged to use a heavy car owing to the condition of the roads over which they have to travel, on whom an increased tax of a few pounds would fall very heavy. I should not object myself if this rebate were confined to medical men whose income did not exceed a certain rate, which can be afterwards determined on. Deputations have already waited upon the Chancellor of the Exchequer urging preferential rates for medical men, and should he be able in his budget to allow of this being done, I hope it will meet with the support of the members on both sides of the House. If the funding of this tax by the Chancellor of the Exchequer should prove a step on the way to nationalising the roads, it would be a very great improvement on the present state of care of the main roads. We require more money for national purposes in the twentieth century than our ancestors did in the nineteenth, and this money must be raised, and it can afford no amusement to any Chancellor of the Exchequer to introduce a tax which would be unpopular with any section of the community."

OPPOSITION TO EXTRA TAXATION.

Mr. T. Scott Foster, J.P., of Southsea, who has been twice mayor of Portsmouth, and long associated with the public life of Hampshire, where he has been able to do something in lessening the antipathy towards automobiles, writes:—"I have been a motorist, driving my own car, for eight years, and am opposed to extra taxation, believing the present tax quite high enough, and that any addition would be injurious to a growing industry. Having two cars I pay £4 4s. and £2 2s. a year, with 5s. for driving licence, and £1 registration for each new car. I find my licences with registration works out at an average of £7 16s. per annum and 15s. per man. I should sell one car if the tax is increased. A coach and four or a carriage and pair may be kept for £2 2s. a year. The objection is all the stronger because the money will go to the thriftless and will be taken from the provident. If for defence of our country one would strain a point, but for the wild cat schemes of some Parliamentarians there are strong objections."

A COUNTY COUNCIL CHAIRMAN'S OPINION.

Sir Ralph Littler, the Chairman of the Middlesex County Council, is of the opinion that "no tax ought to be raised for Exchequer purposes on locomotion. There is no 'luxury' which, as such, justifies taxation so little as motoring. The creation (of the motor-car) involves the employment of a very large amount of skilled labour, in addition to distributing a considerable amount of money throughout the country. But it wears the roads; it involves outlay for improvement of roads, for signals, for dust prevention, and in other ways, and may fairly be called upon on this score to pay more in proportion; and every farthing raised should be spent on the roads. I do not understand the suggestion of 'the odium of starting a new tax, and the expense of collecting it'; it could be collected by the existing machinery. Assuredly the main roads throughout the country should be maintained by the Government, as in France. The present system is anomalous, wasteful, almost barbarous."

A SCOTTISH OBJECTION.

Mr. Thomas Shaw, the well-known motorist, of Dundee, is of the opinion that the M.U. would have done well to let

sleeping dogs lie in place of approaching the Chancellor of the Exchequer. "I am not surprised," he goes on to say, "at the attitude taken up by the Chancellor. Naturally I am against any and all additional taxation of motor-cars, because it is a wrong way to approach the subject. It is neither the business nor the interest of the Government to put any obstacle in the way of a great industry which is beginning to hold its own against foreign competition. A special tax such as is proposed would doubtless be over and above the taxes which motorists are already called on to pay. Only on one condition would I be prepared to acquiesce in a tax of the kind, and I am sure that the majority of motorists agree with me, and that is that the proceeds be earmarked for the improvement and maintenance of roadways. In that event, motorists, if they did not welcome the tax, would certainly not be disposed to cavil at it. Otherwise, I should think any tax would be highly objectionable. Personally, I do not believe that motor-cars cut up the roads any more than other kinds of vehicular traffic—certainly not where the road is sufficiently well made to carry ordinary traffic. If there are depressions in the road surface, that causes a passing car to bump. The wheels, revolving at a high speed, cause, at

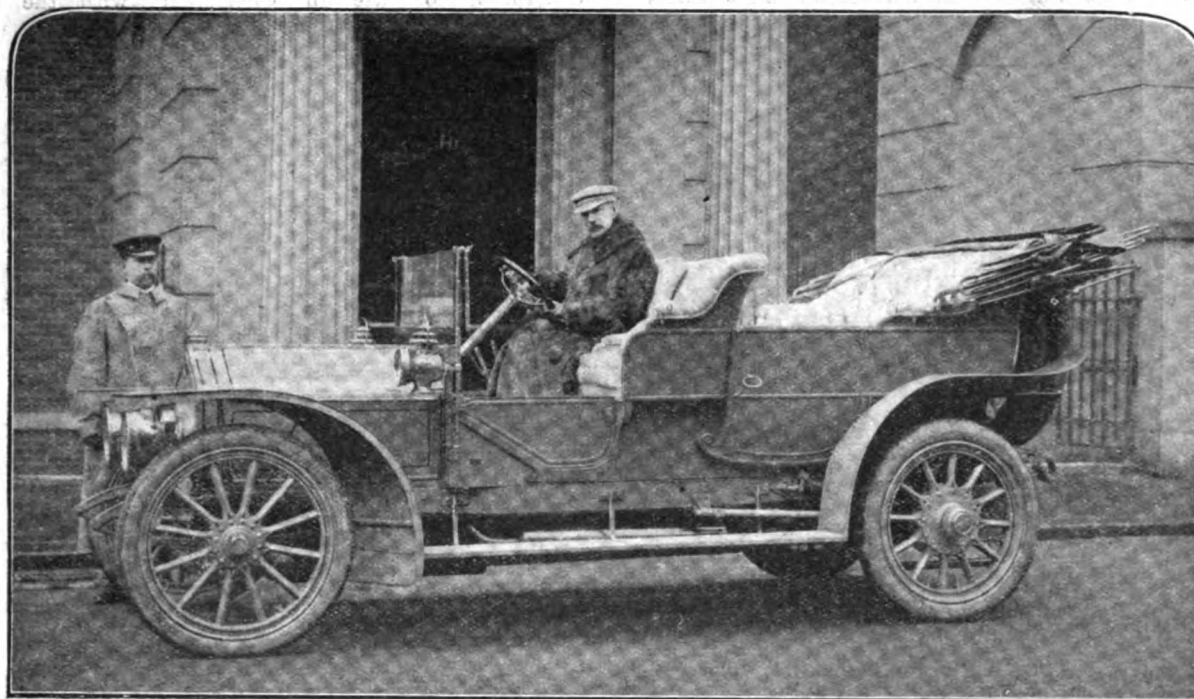
weight is to be the basis of taxation, this class of motorist, which includes many doctors, will have a distinct grievance. In this, as in other matters, I think it would have been well if, at the moment, the Motor Union had seen fit to stay its hand."

A HEAVY CAR POINT.

Mr. T. C. Aveling, Assoc. M. Inst. C.E., of Birmingham, was one of the pioneers of motoring, and rode with Mr. J. Holder on his 24-h.p. Panhard in the Paris-Madrid race. He is interested in lessening the cost of road transport, and believes that:—"In taxing motor-cars consideration should be given to the commercial vehicle. As regards the heavier type fitted with non-resilient tyres, there does not appear any need for further taxation if the authorities will only see that the standing regulations are carried out, i.e., that the speed of five miles per hour is not exceeded by this vehicle, and that the aggregate sum of the axle weights of the motor-car and trailer does not exceed 12 tons."

THE MOTOR UNION'S DECLARATION.

The Chairman of the Motor Union, Mr. W. Joynson-Hicks, sends us the following statement with reference to the views of



The Right Hon. the Earl of Dunraven at the wheel of his new 40-h.p. Crossley on which he recently left England for a long motor trip to Pau.

The car is finished in a fine pale grey, the mouldings of the body being brought into relief by the addition of light red lines. The upholstery is pale grey morocco leather and all the fittings are in nickel silver. The vehicle is the second 40-h.p. car supplied to Lord Dunraven, and in a letter just received by Mr. Charles Jarrott from Tours he expresses his extreme satisfaction with it.

the next point of impact, a certain amount of damage, and so the evil of badly-made highways is perpetuated. The highways of the country, after all, are a matter of Imperial concern, and hence the expediency of earmarking any funds derived from the taxing of motor-cars—and, indeed, of other vehicles—for the purposes of improvement and maintenance. Take, for instance, a county like Ross-shire. It is very sparsely populated, and it is a distinct hardship on its people to keep up a large mileage of roadway, which, generally badly made to start with, suffers from wear and tear to a greater extent than the better macadamised roads in the Lowlands. I observe that the Motor Union recommend that taxation of cars should be on the basis of weight instead of on that of horse-power. I think that is certainly wrong. There are motorists not a few who like a heavy, substantial car of low horse-power, incapable of any great speed. Although it is heavy, it will not have the same—I should say very much less—destructive effect on roads as a lighter, more powerful, and consequently faster car. If

his organisation with regard to the Parliamentary situation:—"The Motor Union desires to inform you that there is a strong probability of the Government proposing additional taxation in the forthcoming Budget upon motor-vehicles for general revenue purposes. The policy of the Union with regard to this taxation is not to oppose any reasonable proposals, provided that the funds so raised are put into a central fund and administered by a Central Department as a grant in aid to local authorities for the maintenance and improvement of the roads. The Union will oppose any additional taxation on motor vehicles which is to be applied only to the relief of the general taxes of the country."

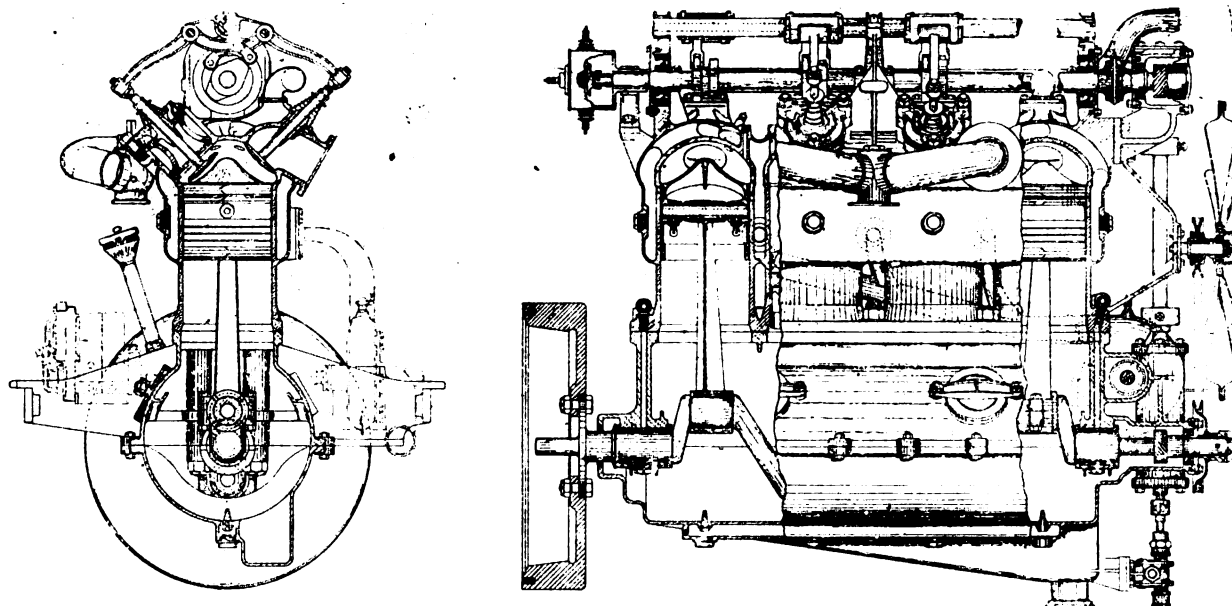
The gale on Saturday was particularly violent on the Firth of Clyde, and on the sides of Gareloch the highway was impassable by reason of flooding. At one point the waters broke over a motor-omnibus and brought the mechanism to a standstill.

THE WEIGEL RACING CARS FOR THE A.C.F. GRAND PRIX.

AS is now fairly generally known, three cars have been entered by Weigel Motors, Ltd., for the A.C.F. Grand Prix race (heavy cars), which is to be held on the Seine Inferieure circuit in July next. The contest is being held under the conditions agreed upon last year at the conference of delegates of the most important national automobile clubs in the world, the main points of which are that the engines of four-cylinder cars shall be restricted to a bore of 155 mm., and the weight of the vehicle to 1,100 kilogs. We are this week able to give two views of the engines which are being built for the specially designed Weigel racing cars, an examination of which will show that they are of an entirely different design to those usually fitted to Weigel vehicles. The motors comprise four-cylinders cast *en bloc*, this pattern having been adopted first to obtain as large a water area as possible and secondly to make a rigid base for the whole of the cam-shaft movement, which is above the cylinders, the brackets for the support of the same being cast in one piece with the cylinders. In fact, it will be seen that the cylinders contain in the same casting all brackets

material. The bearings—both the big and small ends of the connecting rod, are of phosphor-bronze with white metal liners. The crank-shaft is of the ordinary four-throw type, the webs between the journals being of an oval section and the whole exceptionally strong and light, all the journals being drilled through with the object of reducing the weight. It will be noticed that the base chamber is merely a covering for the crank-shaft, there being no cam-shafts introduced or working parts of any description beyond the main shaft. The chamber is of aluminium, and carries in its lower half a tube which is part and parcel of the casting through which the oil for the forced lubrication passes, the oil emerging from the tube through the small jets provided as shown. The oil is circulated by a pump and passes out of the jets in a continuous stream mounting as high as the top of the cylinders. The engines of the Weigel racers certainly should not fail for want of lubrication.

The method of driving the cam-shaft pump and magneto that has been adopted is also worthy of notice. The cam-shaft—the cams of which are case-hardened—is supported on the tops of the cylinders in three Hoffmann ball bearings—one at each end and one in the centre. At the end of the cam-shaft nearest the dashboard is fixed a high-tension distributor for use in connection with the accumulator



Transverse and Longitudinal Views of Engine of Weigel A.C.F. Grand Prix Racing Car.

and parts which are required for the support of any other portion of the motor. To prevent any difficulty arising with regard to the cylinder bore, a size of 154.5 mm. has been adopted so as to be on the safe side; at the same time the greatest thought and care have been given to the question of obtaining the most efficient engine of the bore given.

The feature of the motor is the location of the valves at an angle of 45 deg. on each side of the cylinders, the exhausts being on the left side and the inlets on the right. The valves, which are of unusually large size, 75 mm. on the face, are so inserted into the cylinders as to be within the cylinder proper without the addition thereto of any pockets, thereby permitting the ready admission of the gases and the emission of the exhaust. The inlet valve is contained in its own seating, which when pushed bodily into the port made to receive it is held in position by a yoke secured by three nuts. The exhaust valve is water-cooled round the guide and the valve seating, both the guide and the seating being part of the cylinder proper. The piston is of the floating type, that is to say, it is provided with rings both at the top and bottom. The head of the piston is of a peculiar pattern, designed to obtain a very high compression and yet clear the valves. The connecting rods are of the ordinary type, made, however, exceptionally light, yet strong, by using special

system of ignition, provided as a reserve in the event of the failure of the magneto. At the forward end of the cam-shaft is fitted a worm which engages with a worm wheel; the latter, in turn, meshing with a worm driven by a vertical shaft through two other worm wheels, fixed, one on the lower end of the shaft and one on the crank-shaft. The vertical shaft is carried on ball bearings fitted into the base-chamber in the lower end, and in the casing provided at the top of the cylinder at the other. The vertical shaft is coupled to the worm wheels both at the cam-shaft and the crank-shaft end by a toothed coupling ring, which can at a moment's notice be disconnected and the whole of the vertical shaft removed without any tools being required, the coupling rings being held in position by a pin having a semi-circular movement for disengaging. By this arrangement if it is ever necessary to re-time the whole of the cam-shaft, there is no necessity to remove the latter, it being possible to set it by uncoupling the connection between the vertical shaft and the cam-shaft, and placing the crankshaft at such different position in relationship with the camshaft as may be required. For the removal of any of the worm wheels with their short shaft, either at the top or bottom end, it is only necessary to undo four screws and remove the cap holding the ball race in position, when the shaft with the ball bearings and the worm wheel can be immediately

taken out. Thus the whole of the connection between the cam-shaft and the crank-shaft is immediately removable and easily replaced.

Continuing to deal with the cam shaft, it will be noted that above it there is fixed in a rigid position a hollow shaft upon which are also rigidly fixed four separate bridges. The latter are hollow at each end to receive within them the rocking arms which actuate the valves. On the valve end of the rocking arm is fitted a hardened ball pin which presses down upon the valve, while on the other end is a hardened roller on which the cam bears. It will be readily seen that as the cam shaft is revolved and the cams engage upon the rocking arm they lift the rocking arm at the cam shaft end and lower it at the valve end. The arms are held in position upon their bridges or brackets by a hardened bearing, which is removable by undoing one nut, and thereby permitting the immediate replacement if necessary of the rocking arm.

Reverting to the question of lubrication and the pump which supplies the power for the forced oil circulation, the vertical shaft which actuates the cam shaft is continued down to the bottom half of the crank case, and the oil pump fitted to it, one shaft thus practically driving both the cam shaft and the lubricating pump. Between the shaft and the pump a coupling ring is also fitted, so that the parts can be disconnected and assembled in the same manner as the others.

Passing now to the water circulating pump and the magneto, at right angles to the vertical shaft which operates the camshaft and the oil pump is a shaft driven through a worm wheel, connected to the pump on the left hand side of the engine and the magneto on the other side. The pump and magneto, which are both fixed to brackets cast bodily with the crankcase, are connected to their shaft through a coupling ring of the type already described, so that either part can be immediately removed and new ones substituted in their place in a few seconds' time.

Viewing the engine as a whole, it will be found that practically the whole of the accessories and the forward part of the motor are each equally removable, and that while the whole of the revolving parts are carefully enclosed, no single piece thus protected requires the removal of any portion of the crank case to get it out. All the spiral worms are cut solid with their shafts, as are all the connections for the coupling rings.

It will be noted that the drawings do not show the stroke of the engine or the carburettor, Mr. Weigel preferring to keep these items secret for the present. In fact, as regards the piston stroke, these drawings have been distorted to prevent the possibility of the dimensions becoming known. A few other details of the Weigel racers can, however, be given. They will be of the live axle type and have a wheel base of 9 ft. 2 in. The gear-box will give three forward speeds and a reverse actuated through a "gate" control, and giving a direct drive on top speed. The back axle will be the same as used on the Weigel 25-h.p. car, Weigel Motors, Ltd., informing us that throughout the whole of last year not a single axle breakdown occurred. The frame will be of pressed steel of special design, so as to permit the seats to be bolted direct on to the chassis without the necessity of building them up. The chassis will be exceptionally low, and the driver's seat will not be more than 28 in. from the ground, which is between 4 in. and 5 in. lower than the lowest car built for last year's Grand Prix, and roughly about 1 ft. in front of the rear axle. Thus the whole weight of the driver, the petrol and the tyres will be placed well back. In addition to the forced lubrication a pressure feed lubricator, with sight feeds on the dashboard, will be provided on the dashboard. Petrol will be carried in a tank at the back of the driver's seat, and will be pressure fed to the carburettor, arrangements being made for carrying the spare tyres round the petrol tank; in other words, the petrol tank will be in the centre of the tyres.

ON Thursday, at the annual meeting of the Bedford Park branch of the Middle Classes' Defence Organisation, a discussion took place on the question: Shall Back Common, Stamford Brook Green, and Ravenscourt Park be spoilt to make a motor road?

SOME NEW IGNITION SPECIALITIES.

We illustrate herewith a new contact maker (Fig. 1), for use in connection with the ignition in multi-cylinder engines, which has lately been introduced into this country by Messrs. Welté and Owens, Ltd., of Colquitt Street, Liverpool.

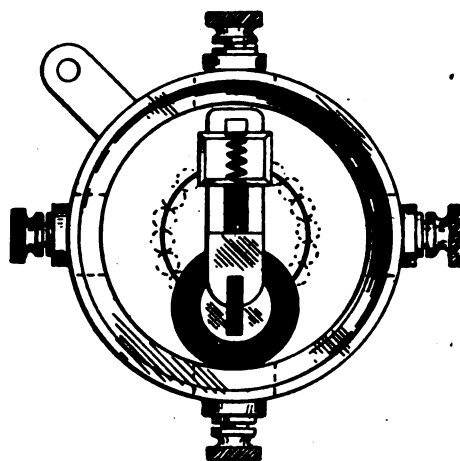


FIG. 1.

The feature of the device, which is of the rolling contact type, is that it is mounted on ball bearings, so that any wear that may take place, which might cause oscillation and bad contact, can be taken up by means of the adjustment screw ring at the back of the instrument. The inside contact roller is also mounted on balls, which are kept well supplied with oil

through the medium of a large oil duct or groove let in the commutator casing. The single roller used is of a large diameter and forced outwards against the fibre ring segments by a compression spring, by which perfect contact is obtained. The contact segments, the number of which varies in accordance with the number of cylinders, are built up on a scientific principle—the centre portion, being made of steel, gives a good wearing surface. On each side of this steel centre are soft copper strips, which are excellent conductors; and, furthermore, on the outside of these are two strips of brass which bind the whole together, whereby a very close fitting is obtained when it is necessary to make adjustments. The earth terminal is fitted to an arm on the contact-maker casing, whereby a perfect return connection is obtained. The device, which will, it is claimed, run well in oil or grease, without the possibility of a poor electric connection, is self-contained, and can be easily fitted to the half-time shaft of any engine in a very short space of time by the simple process of locking the two set screws fitted in the collar at the back of the contact maker, which fits over the shaft. Messrs. Welté and Owens have also sent us a sample of an American sparking plug known as the "Spitfire" (Fig. 2) they

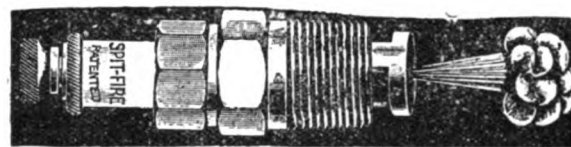


Fig. 2.

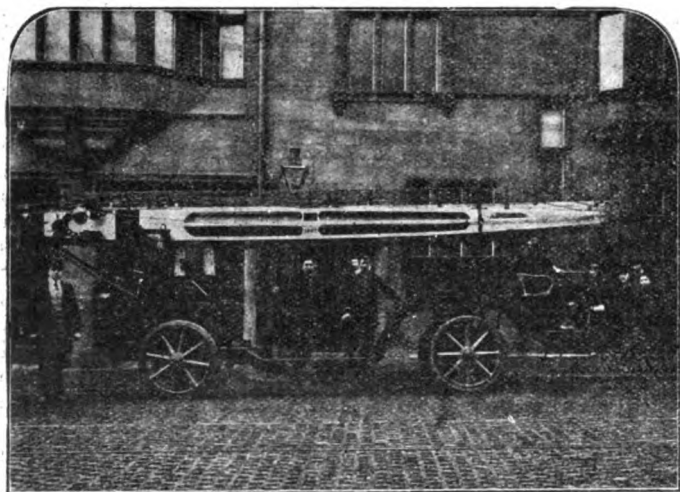
are putting on the English market. The plug is of the porcelain-insulated variety, the feature being the extension of the screwed portion in the form of a cap or dome having two long slots in the sides and a hole in the top, the spark passing between the end of the usual central rod and the sides of the hole. The rod terminates just below the cap, so protecting it and preventing it from being damaged or bent when inserting the plug in the cylinder. The arrangement of the dome is claimed to be such that there is no danger of breaking down the insulation by deposits of oil or carbon, and that it facilitates the rapid ignition of the gaseous mixture. It is also stated that much weaker currents can be used to obtain the same results than with the ordinary open end plug, and that with equally strong currents a much more energetic ignition is obtained. The plug is so made that it is very easily assembled and taken apart. The porcelain is set into the base, and is tightened between the cap and the base, while provision is made for readily adjusting the central rod. The plug, which appears to be thoroughly well made, is supplied in patterns suitable for use in connection with accumulator or magneto ignition.

THE RATIONALE OF LUBRICATION.

By J. W. FRINGS.

(Concluded from page 1131, Vol. IX.)

IT is a matter of comparatively simple calculation to ascertain the relatively exact quantity of oil necessary to provide efficient lubrication for a particular purpose. But it must not be overlooked that this quantity depends, in a very high degree, upon the physical and chemical characteristics of the oil, and may be actually 100 per cent. or more for one quality of oil than for another. It is always desirable, also, to allow a fair margin above the minimum necessary; for a safety factor, to meet possible contingencies in obstruction of supply, the presence of foreign ingredients, or a drop in the potential value of the oil itself. Enough should always be used to mitigate any conceivable evil likely to arise from either of these possibilities. Beyond this, excessive lubrication, though not necessarily harmful to the machinery itself, is a source of inconvenience and annoyance, to say nothing of the pecuniary loss occasioned by wasteful and unnecessary expenditure. The quantity of the lubricant to be used, therefore, should be strictly proportioned to the duty it has to perform. The necessity for its continuous application, whilst the engine and other moving parts are in action, follows, as an inevitable conclusion, the considerations given above, on wastage, physical de-



The Fire-Engine recently supplied to the Liverpool Fire Brigade by Messrs. Henry Simonis and Co.

terioration and chemical change. These processes are continuous and concurrent, and the renewal must, of necessity, be continuous likewise. It is apparent, however, that this continuity of application will be only relative when regarded from the standpoint of time. There will not be necessarily a steady and absolutely continuous stream of lubricant to a particular bearing, on account of the difficulty of exactly proportioning the flow to the exact rate of combined wastage, &c. The application of the lubricant, whether by drip feed or force-pump, is actually periodic in point of time, but continuous in relation to the movement of the engine, a fresh supply being afforded before the last has had time either to dissipate or lose its essential characteristics. The prominent feature of this necessity for continual application is the difficulty of providing a bearing which will retain for any length of time sufficient lubricant. Hence it is essential that a constant supply in replacement be maintained.

Effective distribution of the lubricant brings us to the consideration of the "method of oiling." There are in existence numerous systems of widely differing character, for each of which specific claims of particular advantages are made. Many of them, no doubt, are very good in principle, and, if they could be relied upon absolutely to perform, in their application of the lubricant, what is claimed for them in principle, there would be fewer cases of under and over lubrication,

with their attendant unspeakable evils and annoyances. The chief factors which militate against the efficient performance of any other system than a purely "mechanical" one are the differences in viscosity of the oil due to changes of temperature, the loss of power in discharge by friction against the delivery pipes, the comparative smallness of the bore of the latter, by which the smallest obstructions will suffice to choke them; and the general uncertainty which attends any system other than a mechanical one when the divergent and erratically compounded motions of a motor-car on the ordinary roads are permitted to interfere with its performance. It is reasonable to assume that the perfect lubricator has not yet been marketed, but, in the meanwhile, it is desirable to have the best approach to it that has been made, and that will be a system which conforms most nearly to a perfect conquest of the difficulties to which reference has been made. We have no desire to inflict an apparently wholesale condemnation on the many systems in use which are not mechanical—gravity, drip, and exhaust or water-pressure feeds, with or without auxiliary pumps. Each undoubtedly is very effective in its way, when care is taken in the design of the system to reduce to the lowest point the other factors of disturbance. But, in the consideration of a function upon which the very life of the principal portion of a mass of delicate, complex and expensive machinery is concerned, nothing less than the very best system for ensuring the longest possible term of life, by reducing to a minimum the wear and tear when in action, should be accepted. Even a purely mechanical system is not wholly independent, and entirely capable of overriding all the difficulties referred to. With the most excellently designed system of "force-pump supply," controlled by the engine itself, there is still occasion to view the necessities of the other points raised. The size of bore in its relation to friction, possible obstructions, and the changes in viscosity; and when these have all been duly considered and overcome, and a system evolved which is practically fool-proof in its simplicity, automatic in its performance throughout, and continuously consistent in its action, there is still existent a measure of necessity for a careful, thoughtful, and intelligent handling of the lubricating system of the car, in case, as very frequently obtains, "the unexpected happens."

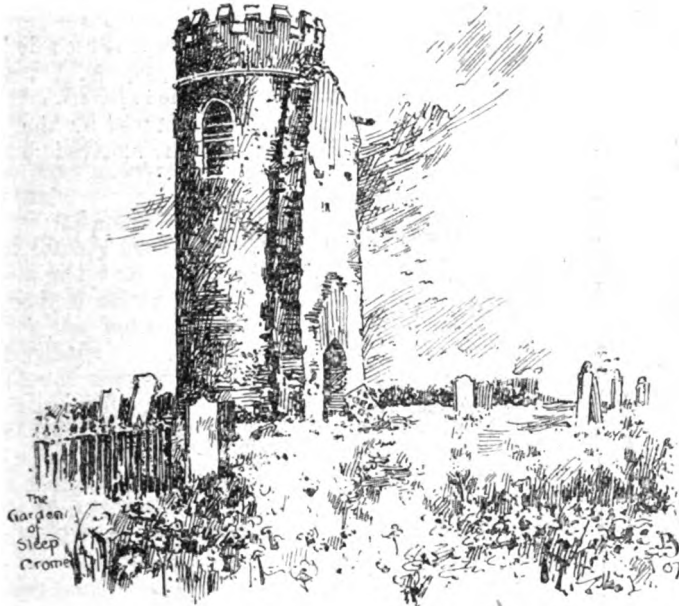
To sum up, quality of the lubricant is by no means of the second or third rate importance that some car-owners attribute to it. The colour, specific gravity, and viscosity are not absolute tests of its value as a lubricant, for these qualities may be easily simulated. Physical and chemical tests are alone of use to determine the relative value of a lubricant by comparison with its cost. The quantity, dependent primarily upon the quality, and proportionately upon the particular bearing, once ascertained, with a good system of supply, will need little subsequent adjustment. The final points of continuous application and effective distribution are largely governed, as to their success or non-success, by the method adopted. Any system is good in so far as it will effect its purpose with more or less personal attention, but that one which will function with the least measure of the personal element, other considerations being equal, must be the best and most suitable. In any case, whatever system be adopted, there is still the omnipresent necessity for intelligent overlooking.

THE Scottish A.C. has issued a certificate of performance of the trial of "Ross" spirit distilled by Messrs. James Ross and Co., of Linlithgow, from Scotch oil shale from mines on the Hopetoun estate. The trial was made on a 40-h.p. Berliet car, which had a total laden weight of 1 ton 13 cwt. 1 qr. 17 lbs. An ordinary Berliet carburettor was used, and the journey was one of 382 miles in three days. The specific gravity of the fuel used was .715 at 47 deg. Fahr., and .712 at 53.6 deg. Fahr. 22 gallons 3 qts. 1 pt. of spirit was used with the following result:—Car miles per gallon, 16.78; ton miles per gallon, 28.03; gallons per car mile, .0595; gallons per ton mile, .03567. Petrol was injected into the cylinders prior to the re-start on the mornings of the second and third days of the test.

A JAUNT IN NORFOLK.

There's beauty all around our paths,
If but our watchful eyes
Can trace it 'midst familiar things,
And through their lowly guise.

SO says Mrs. Hemans, and so must all who have, thanks to the modern car, been able to wander about Norfolk. And that's where an automobile comes in—no worry about trains, no conscience pricking about the horses' load, nothing is needed but a good "well-looked-after" machine and



The Garden of Sleep, Cromer.

plenty of petrol and lubricating oil, and no matter in which direction your fancy tends, it can be gratified. Variety of scenery—what more glorious than a run over the West Cliff from Cromer, past the Runtons, and by the ruins of the priory founded by Lady Isabel de Cressy, to Sheringham, with its glorious woods on one side and the ever-changing sea on the other; while, if old houses, priories, or abbeys be one's hobby, then Blickling, Hunstanton Hall, or Felbrigg, or Mannington, and at Bacton there are the remains of that old Cluniac priory Bromholm. Of quaint and beautiful churches, with and without relics, there is no end, but it is so true what Ruskin said: "The greatest thing a human soul ever does in this world is to see something and tell what it saw in a plain way." I am too enthusiastic over East Anglia, and I fear I am running away from what I want to talk about—namely, a pleasant drive, which we took in an ordinary car, though really, when I think of the ground we covered and the places we visited, it appears more as if we had sat upon the magic carpet of the Arabian Nights than the now every-day production of a motor-car manufacturer.

We started from where in years gone by some Danes had settled on our coast and named their habitation, probably after their native town, "Kraemmer," or, as we now call it, Cromer, and they certainly showed their good taste in selecting this ideal spot, with the open, blue, and ever free sea in front, and bold, beautiful cliffs on either side. Soon we had passed narrow Jetty Street, and were by the restored Church of St. Peter and Paul, said to have once sheltered Oliver Cromwell's men, and entered the road to Poppyland, the Trimmingham Road. At an old mill, where Clement Scott once stayed, we halted to wander to the cliff. There, right on the edge, is the remaining tower of a church, with graves around and poppies such as can nowhere else be seen, right down to the water. Wherever a slip of earth exists, there they grow. This is the well-known "Garden of Sleep."

On the grass of the cliff, at the edge of the steep,
God planted a garden—a garden of sleep.
'Neath the blue of the sky, in the green of the corn,
It is there that the regal red poppies are born.
Brief days of desire, and long dreams of delight,
They are mine when my Poppyland cometh in sight.

We were very glad that we had left our car at the corner; some other visitors had not cared for the little walk, with the result that they had longer to admire the poppies than even they cared for. The road up to the tower was rough and narrow, and in trying to turn they burst a tyre, and when we came away they were still trying to get a new stiff one on, which even with four tyre levers is not a joke.

The road onward gently ascends past Trimmingham, and from the Beacon Hill, which is over 300 ft. high, a glorious view can be obtained—Yarmouth in front, Norwich Cathedral spire to the right, and it is said that forty churches can be counted from the summit. We did not, however, wait to prove this statement, though we did stop on the way up to look at the church of Trimmingham, chiefly because at one time it possessed a famous relic, said to be the head of John the Baptist. Needless to say the relic is no longer on view, but the church with its unfinished tower is well worth a halt, and the screen, on which are panel paintings of SS. Petronilla, Cecilia, and Clare, is unique. For the next two miles the road is fairly level and bordered with extensive inland views on the right, while not far to the left the sea can be seen and often heard. It may stimulate motorists to take this road when I add that about here many half sovereigns have been found on the shore. And as all automobilists are said to be millionaires, this will interest them, on the principle that those that have much shall get more. Here it was that the poet Cowper lived and wandered when his end was near. The church is worthy of a visit; the tower has been roofed over and is used for service, the nave and chancel being in ruins. From here the road winds towards the land through Paston, the home of an ancient and important Norfolk family, and in the old church, near an altar tomb, a brass records that—

Here Eastimus Paston and Marye his wiffe
Enclosed are in claye,
Which is the resting place of fleache
Until the latter daye.

Another Paston, who was a judge in the time of Henry IV., lies here. A monument by Nathaniel Stone of Katharine Paston, representing a venerable lady richly clad, is worthy of inspection.



Burgham Thorpe.

The road now bends once more towards the coast, and Bacton, with its ruins of Bromholm Priory, is soon reached. They are crumbling away, but most picturesque, with ivy and wild flowers all around. The dormitory and chapter house can be made out, and what remains of the transept of the church is now a farm shed.

Some lie interr'd who
Lov'd the Church so well, and gave so largely to't,
They thought it should have canopied their bones
Till doomsday: but all things have their end;
Churches and cities, which have diseases like to men,
Must have like death that we have.

In the thirteenth century this was a most famous monastery, and possessed a portion of the cross on which Christ suffered, and any sick who approached it came away safe and sound. Capgrave says thirty-nine people were by its means raised from the dead. Another four miles and Happisburgh is reached, and here those keen on geology can spend a happy hour. A post-glacial submarine forest has been found, and in it numerous fossil remains of trees and bones of extinct animals, as well as those of the elephant and hippopotamus. The road can now be followed to Stalham, famous for its reeds, many of the Norfolk churches being thatched with them. If time permits, the Ant broads, Irstead and Barton, should be visited when the sun sets; the view is glorious, wooded on one side, with boat-houses, reed stacks, and old cottages, and the quiet, only broken by the sound of many a wild bird, lends a quaint charm to a unique scene.

A couple of miles of pretty country, and Wroxham is reached, with its comfortable hotel, and I must say that I have never had either as good a lunch or as cheap a one as we had at

church at Hoveton, with its detached embattled tower and the ancient sanctus bell attached to the rood screen. Those who are interested in screens should continue to Ranworth; it is like an illuminated missal, all the detail on the robes of the saints being lifelike and made more pronounced by elaborate flower work. The surrounding scenery, too, is charming, and those searching for plants may find white and yellow water lilies, the flowering rush, yellow iris, arrow head and the water soldier, and at one time many a rosary was made from the burs of the bede sedge, which is most plentiful. From Wroxham a well-wooded road leads by way of Worstead to North Walsham, and a turning to the left near Instead may be taken if it is desired to see another, or rather the remains of another home of the Pastons—Oxnead. Here once lived a Sir Clement Paston, of whom it is recorded:—

A peer of France, in spite of all his betters,
He took in fight, and brought him home in fetters.

This verse referring to a French admiral captured by him, and whom he brought to England and kept until he received "seven thousand crownes in ransome."



Belaugh Church, near Wroxham.

the Kings Arms Hotel there. It was so inviting that we determined to put up for the night and spend the afternoon exploring the Broad in a most comfortable motor-boat which we were lucky enough to be able to hire. Wroxham Broad is a glorious sheet of water crowded with crafts of all sorts. House-boats, motor-launches, wherries, and even Dutch boats, all were to be seen. From Wroxham Bridge we motor-boated along the picturesque Bure to Belaugh, a favourite and popular hunting ground with artists. The church, standing as it does on a steep bank, lends itself, as the accompanying sketch, I trust, shows, to pencil representation. In the church there is a fine brass of a knight in armour and a painted screen, from which some zealous Roundhead has obliterated the faces of the saints. We continued up as far as Coltishall along old Dutch-looking houses and quaint inns, and then stretched our legs by a walk through the home of the broom-tying industry to Tunstead Church, which has an original platform behind its altar said to have been used years ago for the representation of miracle plays. On the south door there are the remains of some pretty ironwork and the colouring of the rood screen is worthy of note. On our return we proceeded to Hoveton Broad to inspect the colonies of black-headed gulls, stopping on the way to see the fourteenth century

North Walsham is a market town chiefly known on account of its church. The porch of squared flint and ashlar bears the arms of John of Gaunt; the carved pulpit and rood screen are worth inspection, as well as the ruins of the tower, which fell in 1835. At the Grammar School Archbishop Tenison and Lord Nelson were partly educated. In the Market Place is a cross built by Bishop Thurlby in 1550, and if the direct road from Oxnead had been taken a mile north of the town, the cross commemorative of the defeat of the "dyer" Littester by Bishop Spencer in 1381 would have been passed.

(To be concluded.)

A USEFUL little device, known as a Spark Locator, for testing the ignition in multi-cylinder engines, has lately been put on the market by the Spark Locator Manufacturing Company, of Imperial Buildings, East Croydon. By means of the Locators, which are attached to the terminal ends of the sparking plugs, the latter can one by one be earthed by swinging the arm of the device down into contact with the base of the plug. In this way a faulty plug can easily be detected, and ignition troubles, either in connection with the accumulator and coil and magneto systems, readily located.

THE Chauffeurs' Commercial Motormen of Manchester is anxious to secure restrictions in the granting of licences to drivers.

AFTER a long inquiry, the bill for the provision of a motor road between Hammersmith and Windsor, with a tramway along the route, has passed the House of Commons Examiner.

In the catalogue of the auction sale of motor-cars held in the garage of Messrs. R. M. Wright and Co., Newland, Lincoln, on Wednesday, we noticed that the names of the previous owners of the various cars offered were given.

THE troubles of the six cars engaged in the New York to Paris run commenced at the very outset of the contest. Mud, ice, floods, snow, and fallen trees appear to be the order of the day. The latest news of the competitors is from Chicago, which city was first reached by the Thomas car.

THE Edinburgh District Board of Lunacy has decided to purchase a motor-car for the use of the medical officer as a substitute for the horse service at Bangour village.

BOOKS of tickets to be used in connection with their motor-cabs are about to be issued by the General Motor Cab Company—a plan that has proved successful in the United States.

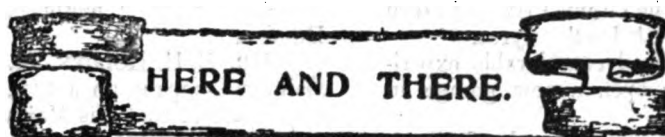
THE Tottenham District Council has resolved to ask the Middlesex County Council to take the necessary steps to restrict the speed of motor-cars when passing certain points in the district to ten miles an hour.

FOR a subscription of 5s. per annum the Shropshire Motor Protection Association is insuring the horses, cattle, carts, &c., of members up to £25 against accidents caused by motor-cars on the road.

ASSEMBLYMAN Fowler, of Ulster county, New York, has introduced at Albany a Bill calling for a tax on motor-cars of 50 cents a hundred lbs. This, he suggests, should be utilised for the repair and maintenance of the highways.

THE statistics for 1907, which have just been completed by the Licensed Association of American Motor-Car Manufacturers, show that during last year there were 47,302 petrol pleasure cars manufactured in the United States. During the same period, 5,000 steam and electric pleasure vehicles were built, this giving a total of 52,302 pleasure vehicles turned out in the past twelve months.

Up to the beginning of the present year nearly 1,000 pupils are reported to have passed through the National Motor Academy in the Boundary Road, Notting Hill, W. The new prospectus is very explicit as to the various courses of practical instruction that are given in the lecture room and upon the private track, the teaching comprising the management of tyres, including removing and replacing, the use of spare wheels and quick-change rims, vulcanising, &c., as well as the care of the car. In addition to driving on the track and in traffic daily workshop practice is given—both individually and in class. Those who are trained at this Academy should prove well qualified in any emergency they may have to face on the road.



A NEAT wall card has been issued in the interests of the Cycle and Motor Trades Benevolent Fund, which has now more than £6,000 in hand.

MESSRS. J. FENN WIGGINS AND Co., of Church Stretton, are bringing the Talbot cars to the notice of their numerous clients in Shropshire.

A COMMERCIAL Motor Vehicle Manufacturers' Association has been formed in Chicago. The organisation, which is intended to be national in scope, includes the leading makers of industrial motor vehicles in America.

MR. HARVEY DU CROS, who has resigned from the representation of Hastings in Parliament, was a pioneer of motoring in this country. His son, Mr. Arthur du Cros, is a candidate for the succession to his seat.

There will be many motor-cars at the seaside resort on the day of the election—Tuesday next.

A SUGGESTION has been made that, when the Motor Yacht Club of Ireland visit Lough Erne at the end of July, a motor camp might be established with the assistance of the Irish A.C.

At a meeting of the Romford Ratepayers' Association the subject of the proposed ten miles speed limit for motor-cars passing through the town was considered, and it was suggested that it would be better if danger posts were erected.

MR. M. DAVIES, whose motor works are at Dogpole, Shrewsbury, is undertaking the instruction in motor matters of local folks who obtain cars through his agency. Both at Shrewsbury and at Market Street, Wellington, he has repair shops and garage for the convenience of those who travel that way.

SINCE we wrote last week as to the inspection of the taximeters fixed to London motor-cabs, Mr. Herbert Gladstone has, in the House of Commons, confirmed our information and added the news that where such devices were found inaccurate the matter would be thoroughly investigated by the police.

MESSRS. G. POLKEY, LTD., of Birmingham, have just patented a lens by means of which a

powerful light is obtained directly in front of a car which is not dazzling to other users of the road. This lens consists of two annular rings and paraboloid centre, and gives full concentration, with a divergence of 33 per cent. at a good distance. The side prisms diverge sufficiently to fill up the spaces nearer, giving a full beam of light at a long distance from the car. The glass is composed of special optical mixtures having high refractive powers.

DETAILS of the great Reliability Trial organised by the Motor Union of Western India, from Bombay to Kolhapore and back, are coming to hand. The 40-h.p. Siddeley car entered in Class 5 made a clean non-stop run. In Class 4 the 18-h.p. Siddeley also made a complete non-stop. In Class 2 a 10-h.p. two-cylinder Siddeley gained a prize, and in Class 1 the two 6-h.p. cars made by the Wolseley Company alone completed the Trial. All five cars in the Siddeley team completed the tour.



The Poster of the Cordingley Show.

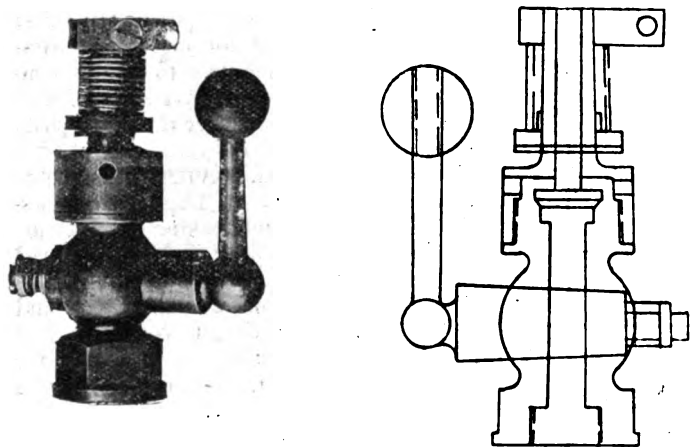
THE three Itala cars entered for the Grand Prix de France and Grand Prix d'Italie will be fitted with Dunlop tyres.

MR. P. W. ALEXANDER, who has had considerable experience in the motor trade, is about to open a new garage in Waterloo Street, Brighton.

AT the half-yearly meeting of the North London Railway Company, the chairman, Lord Rathmore, said the board attributed £13,000 out of the £18,180 decrease in the passenger traffic to the electric tramcar and the motor-omnibus competition plying between Stamford Hill and Moorgate Street, and Poplar and Bloomsbury.

IN addition to the friction driven auto tyre inflater described in our last issue, Messrs. Maxfield and Co. are supplying a gear driven apparatus for cars, where the flywheel is not accessible. This pattern is also so arranged that it can be put in and out of gear, when required for use, by the flexible cable and lever supplied.

WE illustrate herewith a new compression valve for petrol motors which has just been put on the market by the United Motor Industries. By means of the device, which is known as the Alpha, the amount of compression in an internal combustion engine to which it is applied may be regulated so as not to exceed a predetermined limit when starting the engine. It is so arranged that (when in potential action) any surplus contents of the cylinder above the amount necessary to produce such pre-



determined pressure automatically escape to the outer air. A valve body is provided, one end of which opens direct into the cylinder or is freely connected with the interior of same, and a plug cock near the base of this enables its passage to be opened or closed at will. The body carries an outwardly opening valve normally retained on its seat by a spring; the pressure of this spring, and consequently the lead at which the valve opens, is adjustable by means of a nut on the valve spindle. The plug of the plug cock is in place by spring pressure so as to ensure a tight joint. One of the advantages of the device lies in the fact that an excessive pressure in the cylinder is immediately eased, and shocks caused by back firing are buffered or done away with. A further advantage is that a perfect mixture may be drawn into the cylinder, and is not interfered with beyond that any surplus will at once escape when the valve is in action.

AS we were going to press with our last issue Mr. F. Newton was breaking records with the 60-h.p. Napier on the Brooklands track. The official figures were issued as follows:—50 miles, 35 min. 7.36 sec., or 85.41 m.p.h.; 100 miles, 1 h. 10 min. 20.31 sec., 85.3 m.p.h.; 150 miles, 1 h. 46 min. 6.17 sec., 84.82 m.p.h. One hour, 85 m. 555 yds.; two hours, 169 m. 615.6 yds. On a former occasion, when Tryon went for these records on a Napier, he was stopped owing to a tyre bursting. On the 19th inst. Palmer tyres were used, and these were found equal to the strain set up by the enormous speed. Pratt's spirit was used, and the ignition was the Napier synchronised Castle coil and accumulators.

A SERVICE of motor-buses is about to be inaugurated at Dundee.

MR. E. H. HOLDEN, M.P., has placed an order with the Daimler Company for a 42-h.p. Aston landaulet.

WE hear that His Majesty King Edward has just placed an order for a new Mercedes car of the 1908 45-h.p. type.

THE drivers of the three Weigel cars in the A.C.F. Grand Prix race will be Messrs. Weigel, Pryce Harrison, and Loxen.

MESSRS. DENNIS BROS., LTD., have just received a repeat order for six 30-cwt. motor-vans from Messrs. Harrod's Stores.

FROM the Motor House comes the new number of their Car Review, which, in addition to containing illustrations and descriptions of the vehicles they have for sale, has some notes which give it additional value to those who are fortunate enough to obtain a copy of the same.

THE County Road Board of Aberdeen have had before them a letter from the County Council of Inverness suggesting a conference upon the question of motor-car traffic. It was resolved that Mr. Duff, of Hatton (chairman), and Mr. Marr, with the Aberdeen district road surveyor, should attend the conference.

DURING the inquiry by the Departmental Committee of the Home Office into the provisions made for dealing with cases of accident and sudden illness in the streets of London a full investigation has been made into the electric ambulance service in the city. Sir Kenelm Digby, the chairman, is now, we understand, preparing his draft report.

SOME interesting speed trials with three Coventry-Humber cars—a 10-12-h.p. two-seater, a 15-h.p. four-seater, and a 30-h.p. six-cylinder vehicle having accommodation for five persons—were carried out on the Brooklands track on Tuesday. The cars, which were equipped with Dunlop tyres, were all in touring trim, notwithstanding which the 10-12-h.p. car attained a speed of 37½ miles an hour, the 15-h.p. 46, and the 30-h.p. six-cylinder just over 60 miles an hour.

THE R.A.C. trial of the tyres entered by the R.M. Syndicate for a distance of 1,000 miles was completed last week. The total distance run during the trial was 1,153 miles. Non-stop performances were made on the road each day. There was only one occasion in the motor house on which an adjustment had to be made with regard to the tyres under observation—the near hind wheel was changed for a new one owing to some of the tyre-filling having exuded from the valve.

THE motor mail van running between Southend and Chelmsford was found to be on fire on arrival at Rochford on a recent evening. The outbreak was at first attributed to a lamp inside the van. Many letters and parcels were damaged, but all registered letters were saved intact, and the van was able to proceed after a brief delay. Mr. J. W. Austin, the contractor, is of the opinion that the fire was caused by matches or something of a similar nature in one of the bags.

WE had an opportunity the other day of going over the large new garage which has recently been opened by Messrs. H. J. Chapman and Co., Ltd., at 104, Park Street, Regent's Park, N.W. The premises, which are situated in an excellent centre, are well adapted for their purpose, being electrically lighted and steam-heated. Some idea of their size may be gathered from the fact that there is accommodation for about fifty cars. Suitable plant has been installed to enable all classes of repairs to be carried out to both petrol and steam cars, the long connection of Mr. Chapman with steamers giving him special qualifications in connection with the last-named type of automobile. The work undertaken also includes the repainting of motor-bodies and the modernising of old cars by lengthening the chassis to enable them to accommodate side-entrance bodies; a large stock of spare parts, while three inspection pits are available, as also ample facilities for washing. Another of the firm's branches is that of teaching motor-driving, the teachers being qualified men holding the R.A.C. certificate for mechanical as well as driving proficiency. Messrs. Chapman are also building up a large business in second-hand cars, and at the time of our visit had a varied selection on view ranging from a 6-h.p. Rover to a five-ton lorry.

CONTINENTAL NOTES.

French Motor Imports.

According to a return just issued it is estimated the value of the foreign motor-cars and parts imported into France during last year amounted to £347,320, as compared with £346,600 in 1906.

Motor Racing in Sweden.

The annual motor-car race between Gothenburg and Stockholm, organised by the Swedish Automobile Club, has just been held. The distance between the two places is only 322 miles, but the journey was a difficult one owing to the snow and ice-bound roads over which the cars had to travel. There were only four competitors—Salmson, on a 28-40-h.p. Fiat; Raaf, on a 12-h.p. Star; Janeck, on a 12-14-h.p. Beckmann, and Lindstrom, on a 40-50-h.p. Darracq. All four drivers succeeded in getting through, although Lindstrom was disqualified for some contravention of the rules. Salmson, on the Fiat, proved the winner in 23 h. 42 min. Raaf, on the Star, was second in 27 h. 48 min., and Janeck, on the Beckmann, third, in 34 hours.

German Motor-Car Imports and Exports.

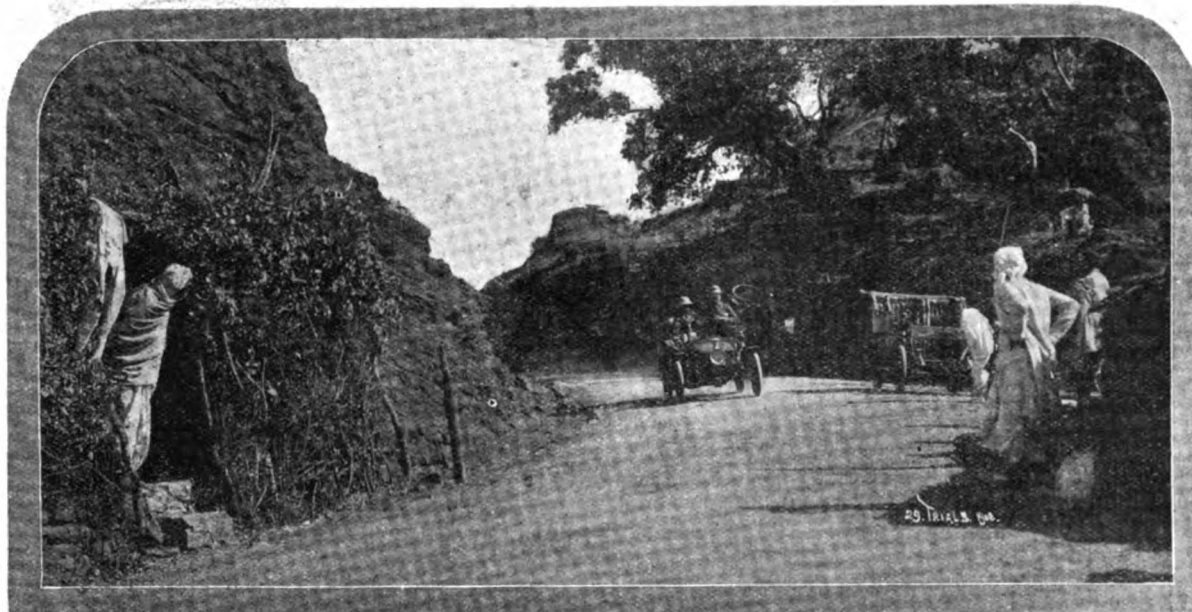
During last year 1,812 pleasure motor-cars and chassis were imported into Germany, their value being given as £847,750. Of industrial motor-vehicles forty-four, valued as £20,700, were imported. The exports of pleasure cars and chassis were 958 in number and £593,750 in value, the corresponding figures for commercial vehicles being 249 and £137,450.

An Exhibition of Agricultural Motors.

The Automobile Club du Centre has decided to hold an exhibition of agricultural motors at Bourges, France, from September 24th to October 4th next. The exhibits will be divided into sixteen classes, and will comprise, amongst others, fixed and portable internal combustion engines, automobile agricultural machines, tractors, &c.

The Austrian Automobile Industry.

With the view of encouraging the development of the automobile industry in Austria, Prince Thurn and Taxis is offering a prize, through the Austrian Automobile Club, of £500 to the home concern which in the next three years shall meet with the



The Motor Union of Western India's Reliability Trials.

The 6-h.p. Wolseley—the winner in the small car class—ascending the Ehandalla Ghat. The native house built in the rocks is worthy of note.

A Motor-Car Race in Russia.

The Moscow section of the Russian Automobile Club is arranging to hold another race from St. Petersburg to Moscow during the coming season. The event, which it is proposed shall be run off on May 31st, will be divided in categories, there being classes for (1) four-cylinder engines between 77 and 105 mm. bore, (2) ditto between 106 mm. and 130 mm., and (3) ditto over 130 mm. The distance to be covered is 425 miles.

Motor-car Racing in Spain.

The Automobile Club of Barcelona is organising a race for light cars for May 28th next. The event, which is known as La Coupe Catalana, will be held on a 28-kilometre circuit, taking in Bajo and Panades, this having to be covered nine times, to give a total distance of 252 kilometres (159 miles).

A Tyre Changing Competition.

A somewhat novel competition for motor-car drivers, with the view of testing their ability to deal with tyre troubles, is being organised by the Automobile Club de la Sarthe, of Le Mans, France, for March 8th. The contest will consist of (1) removing a cover, changing the inner tube and replacing cover; (2), effecting a tyre repair either to the tube or cover; (3), answers to questions relating to tyre troubles and the upkeep of tyres.

greatest success in the various events organised by the Austrian A.C. and other motoring bodies in the country.

Miscellaneous Items.

A lady motor-car driver has just made her appearance in Munich.—It is proposed to organise trials of agricultural motors at St. Quentin (Aisne) and Orleans, France, during the coming summer.—Messrs. Panhard and Levassor have just opened showrooms on their own account in the Champs Elysees, Paris.—The King of Roumania has just ordered his third N.A.G. car.—The Antwerp Automobile Club is organising a 100 kilometre reliability trial for April 5th.—A speed trial on the Medea Hill, near Algiers, was held on Sunday last over a seven and a half mile course. The best time of the day—17 min. 41 sec.—was made by M. Bissonnet on a 20-28-h.p. Clement-Bayard.—The Motor Plug Fabrik Gesellschaft is the name of a company which has just been formed in Berlin to manufacture motor ploughs.—The Automobile Club of Flanders proposes to organise an automobile meeting at Ghent in May next.—Seventeen entries have so far been received for the Tour of France event for motor-cycles and light cars, which is to be held in April next under the auspices of the Autocycle Club of France.—It is reported that Messrs. Charron, Girardot and Voigt are considering the question of establishing a branch factory in Hungary.

Correspondence.

[Letters to the Editor should be addressed to the offices, 27-33, Charing Cross Road, London, W.C.]

ARE TWO IGNITION SYSTEMS NECESSARY?

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—I have driven a 20-h.p. Dennis car for two years; it is fitted with high-tension magneto and accumulators—quite separate—two sparking plugs in each cylinder. When commencing a journey, I usually start up on the accumulator and immediately switch on to the magneto, of course switching off the accumulators; during the remainder of the day I start on the magneto. I find the accumulators very useful when driving in heavy traffic. I have never had a break-down while running with either ignition; on one occasion, after a stoppage for an hour, the car would not start on the magneto. On examining the latter I found the distributor broken, and as I had not a spare one with me, I should have been landed if I had not had two systems, as I was many miles from home. As it was I started up on accumulators and pursued my journey. I always (except in traffic) run on the magneto, treating the accumulators as an auxiliary ignition, but I have

break some of the gear wheels or nip some of the cardan shaft pins. I began to picture myself looking for the cause in a drenching rain at 2 o'clock in the morning, twenty miles from home, but luckily I had only to touch the switch and away went the engine as merrily as ever. I may say it took some time to find the cause of the trouble, as the next day everything seemed to be right, the motor pulling all right on the magneto for a while, but then started missing. I ran the car on the other system until I found out the cause and put it right. The argument is put forth that there is a tendency to neglect the accumulator system and that when it is wanted it is of no use. Well, that may be with some, but I think it is the exception, not the rule. The practice I generally adopt for keeping both systems in order is to test them every morning by starting up on the accumulator, leaving the engine to run for a short time, then switch over, doing the same. As a rule I always start up on the accumulator; although this is not necessary it keeps the plugs from getting sooted up. There are a few first-



The Start of the New York-Paris Race.

The event, which took place in New York on the 12th inst., attracted an unusually large crowd of spectators, traffic along Broadway being entirely held up.

never found the sparking plugs of either ignition soot up so as to prevent my using them when required.

I quite agree with the opinion expressed by Mr. J. C. Dennis, of Messrs. Dennis Bros., Ltd., and do not regret having gone to the expense of fitting my car with two separate systems of ignition. In my opinion, if two systems are installed, they should be entirely independent of one another.—Yours truly,

T.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—I would like to state a few facts. For four years I have been almost daily on the road and have driven cars with one and two ignitions. The vehicles with one system were fitted with accumulator and h.t. coil, and I may say I have nearly experienced all the troubles pertaining to this system, but always managed to bring the car home, although not without a lot of worry and a sacrifice of a good deal of precious time. The car I am now driving is fitted with two systems—low tension magneto and accumulator coil—and, if my experience goes for anything, the two ignitions are an absolute necessity if you want to do away with delays and disappointments, especially where there is much station work or the car is used for business.

I remember being many miles from home at a party one very wet night, and on my way home missing set in so badly that the car could not be driven on top on the level and seemed as if it would

class cars in my district with only one system of ignition—low tension magneto—and I have seen them all hauled home through ignition giving out. Had there been a reserve the result would have been otherwise. Many a time I have been told by other chauffeurs that I was lucky to have both ignitions.—Yours truly,

CHAUFFEUR.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—In accordance with the suggestion of your correspondent "Prestonian," that motor-car owners should give their experience on this subject, I now give mine. I have had a 16-20-h.p. Richard-Brasier car since May, 1905, with low tension ignition only. The engine has never refused to start up once since I got the car, and ninety-eight out of one hundred times on the first turn of the starting handle. The car has done a lot of hard work on Irish roads, and up to now neither the engine nor the magneto have been touched nor a bolt loosened on either.—Yours truly,

TALLY-HO.

HILL CLIMBING IN EDINBURGH.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—I notice the letter of Sir J. H. A. Macdonald in the *M.C.J.* of the 15th inst. objecting to the distance stated by Mr. Percy Richardson to have been travelled by the Sheffield-Simplex on the

steep hill of Frederick Street, Edinburgh, of about one mile in length. Mr. Percy Richardson, not being a resident in Edinburgh, was naturally not aware of the change of name from Frederick Street to Howe Street, from Howe Street to Royal Circus, from Royal Circus to Spring Gardens, from Spring Gardens to Kerr Street, from Kerr Street to Stockbridge. The hill-climb done by Mr. Percy Richardson on his car on top gear was from the level at Stockbridge to the top of Frederick Street, a distance of half a mile. An equally meritorious top gear climb was repeatedly done by the car, viz., turning out of Heriot Row into Frederick Street and immediately beginning the one in thirteen climb between the gardens, and where the car was photographed. This climb was done with Mr. E. Campbell Muir at the wheel, who had never previously driven a Sheffield-Simplex car. I shall have one of these vehicles in Edinburgh in a few weeks, and shall be very pleased to drive Sir John in the car either from Stockbridge or from Heriot Row to the top of Frederick Street, and shall be equally pleased if he will drive the car himself.—Yours truly,

W. E. TOWNSEND.

MOTOR BODY DESIGN.

TO THE EDITOR OF *The Motor-Car Journal*.

Sir,—As the writer of the original letter in your valuable journal on the superiority of the rear entrance tonneau over the side entrance, permit me to sum up the interesting correspondence by a strong reiteration of this conviction—one that requires repetition in view of the spilling of good cars under the supposed idea of "improvement," as illustrated on page 1133 of your last issue.

The following are facts:—(1) In application to a motor chassis the side entrance may be the more recent, yet in point of fact in form it is the older type. It has been pointed out that an ordinary side-entrance body with hood is an almost exact reproduction of an antiquated German Bugle car of the early part of the nineteenth century, while a side-entrance limousine is an undesirable return to an "extra Postwagen" of half a century ago in the German Fatherland. The side-entrance is no wonderful new discovery but a very old type of carriage revived. (2) All the newest corridor continental railway carriage dispense with side-entrances in favour of end entrances. (3) A side-entrance is still more unsuitable to motor-cars. What spectacle does one see at present? Side entrance doors inconveniently hinged in opposite directions on different cars, side entrance doors cut off at lower base in tortured and ludicrous shapes to admit of mud guards, &c., side-entrance doors rattling and not unfrequently flying open en route with disastrous effect! (4) In reply to a courteous letter from one of your correspondents, I am glad to inform him that my experience of side-entrances has been of the very best type and that none of these, landaulet (with its side draughts) or limousine (with its closeness and lowness of height like an obsolete early Victorian railway carriage) can compare, for real comfort during travelling, with a good roomy tonneau. Common sense shows that the curved fronts and rounded corners of the tonneau seats must, in the nature of the case, be more comfortable than the rigid knife board fronted second class railway seat of an ordinary side-entrance. I never pass an old side entrance car on the road without feeling pleased at possessing the more modern tonneau. One who has had great experience of motor-cars observed, a short time back, "Side entrances are just now the vogue, but a good tonneau is, as a matter of fact, ever so much more comfortable." (5) My own tonneau will seat either two or three (with middle-seat down) facing forwards, or four wagonette fashion, two each side, sideways. What side-entrance admits of such adaptability or change of posture? In all these the rear part of the car is equally comfortable, and, even in freezing or windy nights, I have never known a side draught. Look at the object lesson provided on page 1133, and a glance is sufficient to show which of the two can offer the most protection from draught to the rear passengers. Moreover, it is equally easy to see which car by length of wheel-base is most handy in traffic. It is the owners of long side-entrance cars who are now buying second cars with shorter base for London use. As for the swing-seat side-entrance, I believe it to be dangerous in every sense of the word—alike in the imprisonment of the back passengers till the occupant of the swing seat is out, and in the possible injury to the latter by the swinging out of the seat on a curve with fatal result, while the inconvenience of an entrance one side only is manifest at first sight. (6) I repeat my conviction that a motor-car, except for people to whom money is no object and who like to spend petrol in taking heavy luggage by motor, is not a luggage van but a passenger car. Rear luggage weight greatly increases tendency to side-slip, while the same weight on a limousine roof means top-heaviness, as was found out many years ago when, in the early days of railways, the tops of the carriages were used for this purpose, till danger caused discontinuance of the practice. May I say also that I have found my side-baskets neither "dust-catchers" nor "paint-scratchers," but uniquely useful and quite indispensable, as well as smart and workmanlike in appearance. Mine are long, deep, large, and divided into separate compartments for tea utensils, books, clothing, &c. I would not part with their delightful convenience for anything; indeed, I could not do without them. (7) I may here mention as a record of fact that my car has run 10,000 miles without one real puncture or skid; nor has an extinguished tail lamp or splashed number plate involved trouble of any kind with the police.

In conclusion, let me say that the single drawback, if such it may be thought, of a step into the road on entering the tonneau is as nothing

compared to the many practical faults of side-entrances as applied to motor-cars. People are, however, beginning to find these out by sad experience. Only a little time back an illustration appeared in your valuable column, depicting a brand new up-to-date motor-car chosen by a certain Royal Prince and, *mirabile dictu*, it was the supposed obsolete and despised rear-entrance tonneau!

It is because my own experience has shown me how much pleasure in motoring side-entrance passengers lose that I raise my voice of timely warning to all who would thus make a passing fashion and not solid advantage their guide. No old German Bugle car, or "extra Postwagen," dressing itself up in motor guise as so-called up-to-date side-entrance, can for real comfort while actually travelling compare with the really more modern rear entrance tonneau.—Yours truly,

COMMON SENSE.

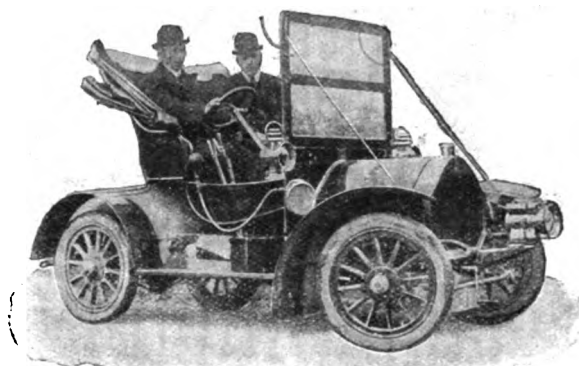
THE WAYS OF TAXIMETERS.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—I am glad to see that steps are being taken in connection with taximeters to enable the public to place more reliability in their records. I was very much interested in some remarks made the other day by Mr. A. Bailey, the taximeter manager of the Metropolitan Fare Register Company, in the course of which he mentioned that where the public seems to make the most general mistake is in not fully realising that the registering goes on when the car is pulled up for traffic or other cause. Directly the car stops, or the speed falls below six miles an hour, the little clock of the kilo-kilometric system takes up the tale and the fare is registered just the same—only by time.

Another point brought out by the gentleman referred to, and one that may well be remembered by taxi-cab users, is that the meter always registers "in advance." That is to say, at the expiration of the first mile the next twopence is at once shown. But the passenger can always go on, if he choose, until that twopennyworth is nearly exhausted.—Yours truly,

JONATHAN.



Mr. H. P. George, of Oswestry, on his 10-12-h.p. Coventry-Humber. — Mr. George has been using this car for travelling purposes since March last year, since which time he has covered over 15,000 miles, mostly in Wales.

THE SETTING OF VALVES.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—We are sorry that we have offended "Interested Enquirer" by making him an offer of £50 if he could prove that our valve timer was not correct for all engines. He says he started the discussion in the hope of the manufacturers disclosing their methods. He seems to forget that before we entered the discussion he asked for advice on the setting of Panhard engine valves; he was advised by a well-known gentleman, who had tried our setting and found it a success, to try one of our timers. He immediately replied, without testing same, that it was not suitable for all engines, and went on to state instances, which he will not give us an opportunity to verify. We then entered the discussion, and we were prepared to back up our statements with a substantial sum if it could be proved that we were wrong. Surely nothing could be fairer than that. We hardly think it was in the nature of a challenge, it was more of an offer, as he suggests in his last letter, "no cure no pay." Now we are prepared to go further and increase our offer to £100, which sum we will pay to any charity that your correspondent shall name, if he or anyone else will bring to our works two motor-car engines which, when we have set the valves to our standard setting, will not run quieter, slower, and develop more power, than if set or timed by any other method. The test can take place where, and as long as he wishes. Now, can he wish for anything fairer? We can assure him that we do not doubt his word as a gentleman about the instances he has mentioned; what we say is, that he is mistaken.

We take this opportunity of stating that no cure no pay has always been our motto, and we can give the address of dozens of different clients who have had their engines timed to our setting, from a 7-h.p. Panhard to a 40-h.p. De Dietrich (the property of a well-known motorist, Sir A. Macdonald), none of whose cars had ever ran so well as they did when we finished with them. Another well-known gentleman had a two-cylinder Clement (Aster engine) which, before it was timed to our

setting, would not go over a certain hill on its second speed; after it was timed it always went over on its second speed quite easily. Some time afterwards the owner unfortunately had a collision, which necessitated a new engine and gear-box, and, to save time, it was sent to London to be fitted with a new engine, &c. The car was returned, but, do what the owner could, it would not go over the same hill on its second speed; it was brought to our works, for our opinion; we put one of our timers on, and found it a long way out according to our setting; we showed the owner the reading, which he, in the presence of another gentleman, verified. We then said to him, if we cannot, by setting the valves of this engine according to our standard, make the car go up the same hill on its second speed as we did the old one, we will not make any charge for it. We now have this engine in hand, and when it is ready for the road we should be pleased if your correspondent will come and witness that which we have predicted shall come to pass.

—Yours truly,

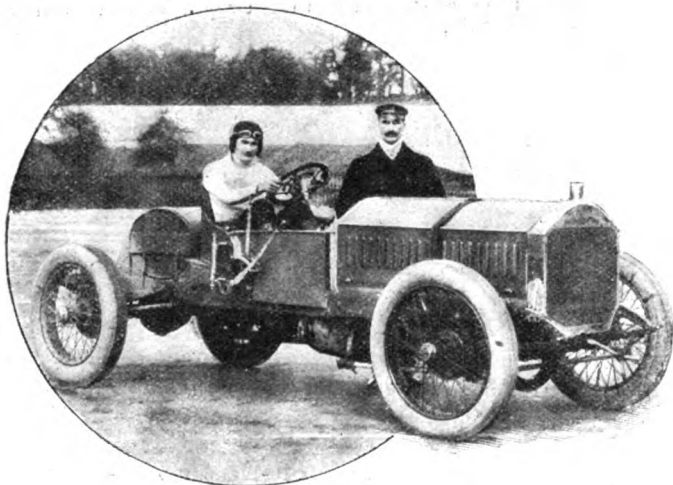
For Larrad's Patents Syndicate.
H. PULHAM.

STEAM CAR EXPERIENCES WANTED.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—Would one of your correspondents who has had experience with a Turner-Miesse steam car kindly state if he has found any difficulty in running the same? I should greatly esteem any information, especially from anyone who has run both a petrol and steam car. The antipathy against steam is so strong that it makes an amateur somewhat nervous to venture. I may state I have run a petrol car for over two years.—Yours truly,

AMATEUR.



F. Newton on the 60-h.p. Napier on which he last week established several new records on the Brooklands Track. Mr. S. F. Edge is standing at the side of the car.

A QUESTION OF LIABILITY.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—I sometimes lend my car to a friend, and I have lately been told that, in case of an accident occurring while in his charge, I should be held liable for damage to property and for compensation for personal injuries. Can any of your readers tell me if this is correct? If so, would an indemnity from my friend be sufficient to safeguard me?—Yours truly,

LAW.

THE TAXATION OF MOTORISTS.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—As a motorist of somewhat moderate means I have been rather alarmed at seeing the prominence which the motorist organisations have given to the idea that we should contribute to the cost of the road, and I frankly confess my disfavour of the proposals that have been made. If the spirit of differentiation of the wear and tear of the roads is to be introduced, and the respective destructiveness of the horse and cart and the motor vehicle is to be scientifically ascertained, something further will be wanted to secure equity of taxation. For the man who uses the car in his daily journeys to business, and then throughout the morning and afternoon in calling upon people, is having a far greater use of the roads than the professional person who enjoys a quiet run at the week-end and whose mileage would be considerably less than the regular motorist. Once allow that the basis of taxation as between owners of horse-drawn vehicles and motor vehicles should be according to their respective disintegration of the road surface, and it follows, as a logical sequence, that the man who travels 1,000 miles in a year should only be taxed to the

extent of one fifth of the person who travels 5,000 miles in the same period.

Such idea will be regarded by many as preposterous; but, as one who only uses his cars for the week-ends, I would suggest that we small people should be considered.—Yours truly,

D. E. F.

THE COST OF MOTORING.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—The appended figures, representing the cost of running a 28-36-h.p. Daimler for twelve months, may be of interest to your readers. The car has a roomy and heavy body. It belongs to a brother-in-law of mine, who has been careful to keep an account of all expenses.

EXPENSES FOR THE YEAR 1907.

(Car ran 8,023 miles).

| Total expenses: | £ | s. | d. |
|--|------|----|----|
| Chauffeur's wages | 127 | 10 | 0 |
| Chauffeur's clothes | 12 | 11 | 6 |
| Licences | 5 | 4 | 0 |
| Re-varnishing car | 13 | 6 | 0 |
| Petrol, oil, &c. | 65 | 18 | 0 |
| Tyres, 935 by 135 Michelin non-skid... | 73 | 11 | 0 |
| New chains | 7 | 18 | 4 |
| Three new gear wheels | 7 | 2 | 10 |
| New brake bands | 1 | 1 | 5 |
| Repairs | 12 | 19 | 8 |
| Small lamps, &c. | 5 | 18 | 8 |
| Sundries | 2 | 0 | 0 |
| | £333 | 3 | 5 |

—Yours truly,

C. D. LENG.

MR. J. E. HUTTON writes drawing our attention to a mis-statement in the advertisement of Messrs. S. F. Edge, Ltd., in our last issue, to the effect that the fastest time at the Shelsley Walsh Hill Climb was made by a six-cylinder Napier, whereas in effect he made the fastest time on a four-cylinder Berliet, and at the present moment has in his possession the cup presented by the club for the fastest time at the hill climb in question.

WE have also received a letter from Messrs. A. J. Wilson and Company, Ltd., on behalf of Messrs. S. F. Edge, Ltd., stating that the words "Club Competition" should have appeared in conjunction with the reference to the event, as the six-cylinder Napier was not the fastest car in the Open Competition.

MESSRS. CLEMENT TALBOT, LTD., write with regard to a report cable to Australia to the effect that there is a serious slump in the motor industry, asking us to contradict the statement. No Talbot car has ever been shipped to Australia or New Zealand at a lower price than they obtain in this country.

MESSRS. PERRY, THORNTON, AND SCHREIBER, LTD., forward a copy of a letter they have addressed to the Motor Union regretting its severance from the Royal A.C., and suggesting that it should take steps to cover the whole of the ground which was covered in effect by the M.U. when affiliated with the R.A.C., and assert itself as an authority by organizing a reliability contest catering particularly for small cars.

AT Wednesday, Mr. Albert House, of the Oak Lane Garage, Bradford, conducted an auction sale of motor-cars, &c., in that town.

A SYREN (Leclair Patent) has been found near Bagshot, and if the owner will communicate with the secretary of the Automobile Association, Princes Buildings, Coventry Street, W., every assistance will be afforded him.

THE Earl's Court Motor Garage Company, Ltd., Earl's Court Road, London, S.W., inform us that in addition to their agencies for the Standard six-cylinder and the Peugeot cars, they have taken over the sole London agency for the Buick vehicles, under licence from Messrs. Sternberg and Eason. They have also acquired the exclusive selling rights in the United Kingdom for the New Pick 14-16 h.p. cars, which they claim to be the cheapest four cylinder machines on the English market at present. They are British built throughout, fitted with engine of 3½ in. bore 4 in. stroke.

THE ROTAX MOTOR AND CYCLE COMPANY, of 43 and 45, Great Eastern Street, London, E.C., have issued a new catalogue of their motor accessories for 1908. Some idea of its completeness may be gleaned from the fact that the index contains nearly a thousand references. Acetylene, petroleum and electric lamps are fully illustrated and the selection of horns and accessories for the same is equally complete. The Rotax high speed trembler coils have several pages devoted to their good features, one of which is the small consumption of current, and the unusually slight wear on the platinum points. Sparking plugs, jacks, carburettors, general rubber goods and ironmongery for motor body builders, are included in the catalogue as well as Larrad's petrol motor timer, which has recently been the subject of extended reference in the M.C.J.

THE MANCHESTER MOTOR SHOW.

The twelfth annual exhibition organised by the Manchester and District Motor and Cycle Trades Association was opened in Belle Vue, Manchester, on Friday last week by Sir. Wm. H. Bailey. The exhibitors of pleasure cars include the Empress Motor Company, Ltd., Stockport Road, Manchester, who have a new vehicle in an Empress 20-30-h.p. six-cylinder car, the cylinders of which have a bore of 90 mm. by 127 mm. stroke. Several of the Empress standard 16-20-h.p. four-cylinder touring cars are also to be seen. Mr. F. Bullock, of Great Dacie Street, Manchester, displays examples of the latest Star 30-40-h.p. six-cylinder and 16-20-h.p. and 12-14-h.p. four-cylinder and 9-11-h.p. two-cylinder vehicles as well as an 8-h.p. Imperial Starling car. Considerable interest is shown in the 8-h.p. pleasure car and light delivery van exhibited by Messrs. J. A. Wade and Co., Liverpool, the feature of which lies in the ingenious friction drive adopted. The Stella Motor Company, Ltd., through their Manchester agents, Messrs. Ashworth and Wilson, Ltd., have on view the Stella cars, which are the product of a leading Swiss engineering concern. Fig. 1 gives a view of the engine, from which it will be seen that the four cylinders, 90 mm. bore by 120 mm. stroke, are cast in pairs. The carburettor is one of the special features of the vehicle; it is entirely automatic and possesses four separate jets, all actuated by the same lever that controls the throttle, so that one can see, whilst driving, from the position of the lever, exactly how many jets are open at a given time. By means of the multiple jets a correct flow of petrol is insured at all speeds of the engine. Ignition is by low tension magneto. The change-speed gear, which has gate control, gives three speeds forward and a reverse, with direct drive on the top speed through a cardan shaft and bevel gear to the live axle. At this stand are also to be seen the Rapid cars—an 18-h.p. chassis, a 30-h.p. landaulet, and a 70-h.p. racer. Messrs. Norman Crossland, and Co., Deansgate, Manchester, show the Calthorpe cars; Messrs. Jas. Hall and Co. (Manchester), Ltd., the Jackson cars; Messrs. L. F. Harvey and Co., a 12-14-h.p. New Pick two-seated vehicle; Mr. F. Foxwell Gray, an 8-h.p. Phoenix light car.

A strong feature of the show is the large number of industrial vehicles on view. The exhibitors of steam wagons include Messrs. Allchin, Ltd., Northampton; Messrs. Alley and MacLellan, Glasgow; Messrs. Fodens, Ltd., Sandbach, who, in addition to one of their standard vehicles, show a new three-ton wagon with solid rubber tyres; Messrs. Leyland Motors, Ltd., Leyland; Mann's Patent Steam Cart and Wagon Company, Ltd., Leeds; the Yorkshire Patent Steam Wagon Company, Leeds; Messrs. Savage Brothers, Ltd., King's Lynn, and Messrs. D. Stewart and Co. Ltd., Glasgow. The exhibit of Leyland Motors, Ltd., comprises two of their standard steam vehicles, one being a repeat order for Messrs. Greenall, Whitley, Ltd., of St. Helens, for a fourth wagon, and the other for Messrs. Wilcockson Brothers, of Middleton Junction, this making the last named firm's eighth machine. A new feature of the vehicles is the improved form of tube now being used in their vertical type of boiler. With the water in certain localities the

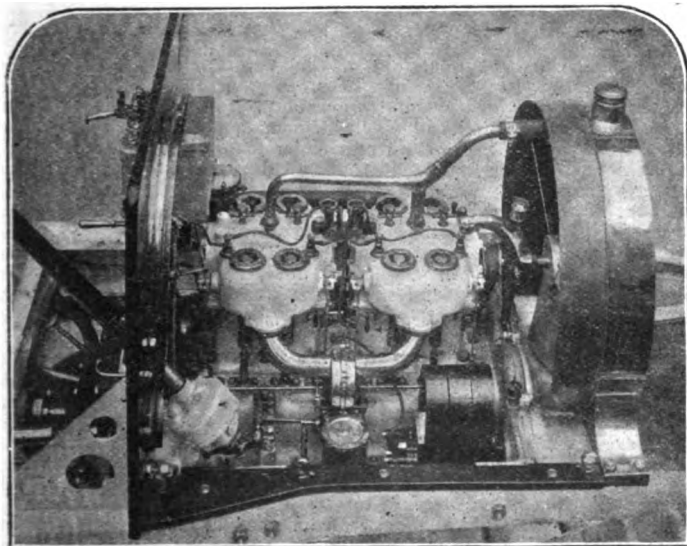


Fig. 1.—The Engine of the Stella 16-20-h.p. Car.

outsides of the steel tubes in the steam space have shown a tendency towards rather rapid corrosion. Copper tubes would overcome the difficulty, but their adoption introduces other defects which more than counterbalance their advantages. The difficulty has been overcome by the introduction of the new tube, which, after a great deal of trouble, Messrs. Leyland Motors have at last succeeded in getting made to suit their requirements. It consists of a solid drawn steel tube covered

with another of copper of 18 gauge. We understand that the tube has been given an extended trial, and has entirely overcome the difficulty which it was designed to meet. Another interesting device seen for the first time on these wagons is Spurrier's patent non-skid, of which we give an illustration in Fig. 2. This consists primarily of an auxiliary rubber block tyre, which can be put on in segments outside the main steel tyre, and is so arranged that the rubber blocks stand slightly above the steel tyre. In practice the auxiliary tyre carries only a small proportion of the total load, and has just sufficient grip upon the road to provide the necessary additional adhesion to enable the vehicle to run on snow and ice-bound roads. The new non-skid has been tried on a Leyland steam wagon by Messrs. G. H. Richards, carriers, of Darwen,

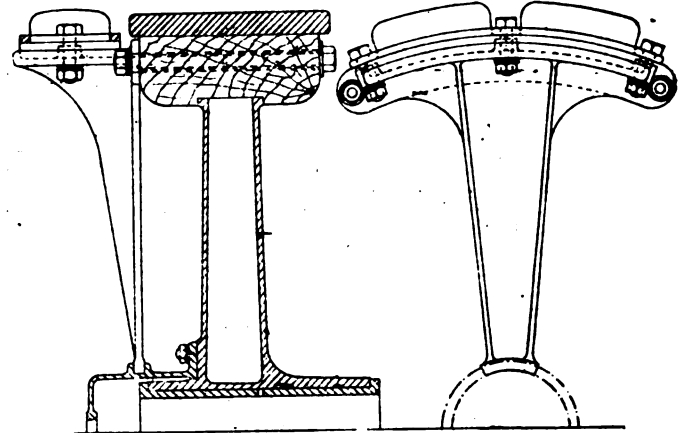


Fig. 2.—Spurrier's Non-skid Device for Industrial Motor Vehicles.

who state that they have been able to make trips over Turton Moor that would otherwise have been impossible, and they give it as their opinion that with a pair of non-skids they would be able to cope with a really heavy fall of snow. The petrol section of the company's productions is represented by a 35-h.p. 3-ton chassis suitable for either a lorry or bus.

Messrs. Walker Bros., of the Pagefield Ironworks, Wigan, show for the first time one of their new two-ton petrol motor lorries. The Lowcock Commercial Motor Co., Gaythorne, Manchester, display a Berna five-ton petrol motor lorry and a Garrett steam tractor, while the Renard Road and Rail Transport Corporation, Ltd., have one of their road trains on view.

In the accessory section a new detachable rim is shown by Turner's Automobile Works, Ltd., Rusholme, Manchester; Fastnut, Ltd., exhibit their "Fastnut" washer, which is now largely used by motor-car manufacturers; the County Chemical Company, Ltd., make a big display of their many specialities, including vulcanizers, accumulators, carbide &c.; the Shrewsbury and Challiner Tyre Company, Ltd., have on view a range of their wheels and tyres, including Challiner's detachable rims, while oils and lubricants are shown by Messrs. Moebius and Son, the Elephant Chemical Company, and Messrs. Marshall and Company, Ltd., Moseley. The show closes to-day (Saturday).

ROAD REPORTS.

OXFORD.—During March and April the portions within the city of the main roads from Oxford to Woodstock, and Oxford to Henley, will be undergoing repair, to be followed by tar painting, if the weather be suitable.

WESTMINSTER.—Dustabaters, Limited, of Hartman Road, Silvertown, E., have recently carried out the treatment of the stretch of road in front of the Houses of Parliament—Palace Yard—the order for the work being given following upon an inspection by the authorities of other roads which had been treated some twelve months or so previously on the same system with satisfactory results.

CROYDON.—Efforts are being made in Croydon to persuade the Corporation to take active steps to secure a restriction of the speed of motor-cars travelling through the borough.

BOSTON, U.S.A.—A mixture of soap-suds, petroleum, and water has been sprinkled on the roads of Boston's park system, and satisfactory results are reported to have been obtained. The road surfaces treated with this mixture required less sprinkling with water than those which had not been treated.

SOUTH SHIELDS.—During the next few weeks the main road from South Shields to Sunderland and the highway from South Shields to Newcastle-on-Tyne will be under repair.

NEWPORT.—The Town Council of Newport, Isle of Wight, has withdrawn the application to the L.G.B. for the issue of a regulation restricting the speed of motor-cars in certain streets in the borough.

THE War Department have ordered two 12-14-h.p. Shamrock cars from Messrs. Sidney Straker and Squire, Ltd.

CLUBS AND ASSOCIATIONS.

ROYAL A.C.

THE first meeting of the Royal A.C. General Committee, constituted under the new scheme for association, was held at the Club House on Wednesday of last week. Eighty-two representatives were present from twenty-eight clubs in all parts of the kingdom. The chair was taken by Mr. C. D. Rose, M.P. A representative Sub-Committee was appointed, the terms of reference to which included the consideration of the best method of working the new scheme.

The secretary reported that twelve clubs, with a total membership of 3,119, had decided to become associated with the Royal A.C., while forty-two, with 2,501 members, had expressed a wish to continue the existing affiliation with the Royal A.C. and the Motor Union during the present year. The first candidates for enrolment as individual associates, numbering 115, were elected.

THE MOTOR UNION.

SIGNED by the Rev. F. W. Hassard-Short, vice-president Cardiff M.C.; Mr. A. Warnery, hon. sec. Southend and District M.C.; and Mr. Herbert R. Mayo, Motor Union representative of Gt. Yarmouth and District Motor Cycle Club, a letter has been sent to the secretaries of the motor-cycling clubs affiliated jointly to the A.C.U. and the M.U. to the effect that:—As you are doubtless aware, the A.C.U. has given notice to the M.U. to terminate agreements, under the terms of the dissolution agreement between the R.A.C. and the M.U. It is, however, not yet certain whether the A.C.U. comes within the scope of this agreement: should it be decided that the A.C.U. does come within the scope of the dissolution agreement, then the severance will take place at once, but if it should be decided that the A.C.U. does not come within the scope of this agreement, then the severance cannot take place until December 31st, 1908, under the terms of the existing working agreement between the A.C.U. and the M.U. We would therefore urge upon the clubs to take no hasty action, but rather to hold the A.C.U. to its existing agreements, until such time as they may have both schemes before them and be able to judge which body they think to be most likely to safeguard their interests.

The chairman of the M.U. has forwarded a letter to the hon. secretary of the North-Eastern A.C., who is acting as hon. secretary of the "Peace" committee, in which he says: "The Motor Union has given very serious attention to the suggestion of the 'Peace' Committee that no further documents should be issued comparing the relative advantages of the R.A.C. and the Motor Union. It is entirely in agreement with the views of your committee on this point, and is most anxious that these recriminations should cease. There is an immense amount of business of the greatest importance to be dealt with, and the Motor Union has no wish to waste its energies in controversial matters which are of no advantage to the movement."

NOTTINGHAMSHIRE.

A SMOKING concert and photographic competition was held on Friday of last week at the headquarters of the Nottingham A.C. at the Black Boy Hotel. This was preceded by a supper. The after proceedings were held in the Welbeck room under the presidency of Mr. A. R. Atkey, and evidenced very great interest, songs being rendered by Messrs. Wm. Downing and Harold Loseby, Mr. W. Ryde being at the piano. The principal event was the photographic competition, members being invited to submit lantern slides for competition in sets of six, which were to be either motoring subjects or views taken while on tour. Nearly a hundred slides were entered, and Mr. Arthur Marshall, F.R.I.B.A., acted as judge. Mr. Booth Granger won the gold medal with a set of slides taken in Lincolnshire and the Isle of Wight, and Mr. A. R. Atkey a silver medal with a set of slides on South Africa. Mr. R. A. Young received honourable mention for a set of slides of church interiors, Mr. A. N. Lee's slides on the Trent Embankment last year were very much appreciated by the members.

LIVERPOOL.

MR. A. L. RATHBONE, J.P., has been elected chairman of the Liverpool Automobile Club for 1908; Mr. W. E. Moss, hon. treasurer; Mr. W. K. Poulson, hon. secretary; and Mr. T. B. Ross, secretary.

Among forthcoming events for next summer, the committee suggest a meet, with possibly a gymkhana, at a site within easy reach of Liverpool; the chairman of the club, Mr. A. Lyle Rathbone, has extended an invitation to the club to a garden party; and a long-standing invitation from Mr. H. S. Higginbottom to enjoy his hospitality will, the committee trust, be possible to accept this year.

DERBY.

THE fifth annual dinner of the Derby and District A.C. took place at the Royal Hotel, Derby, on Thursday of last week, when fifty members and friends were present. The chair was occupied by Mr. Francis A. Bolton (president), and amongst those present were the Mayor (Councillor A. Simpson), Ald. W. Hart, J.P., Mr. Chas. Hardy (president Notts. A.C.), Mr. J. B. Marsden-Smedley, J.P. (Matlock), Dr. W. G. Copestake, Mr. C. H. Guest, Mr. C. J. Allin (hon. treasurer),

Mr. E. H. Fryer (hon. secretary), Mr. Bernard Sadler (Burton), Mr. H. Ross Browne (Nottingham), Mr. Rowland Ford (Utttoxeter), Mr. P. E. Joule (assistant hon. sec.), and others.

After the repeat the toasts were duly honoured, and the Mayor, in proposing "The Derby and District Automobile Club," said that though the committee might be wise in managing the affairs of the club they had for once made a mistake, and that was in putting him down to propose the toast in his name that evening, because he was not an automobilist. He did not possess a motor-car, neither did he ride in one. He had had the opportunity of looking through their rules, and he was astonished to see the benefits and advantages which the club gave to its members at such an extremely small cost. In fact, he felt that no one who possessed an automobile was wise unless he became a member of the club. The other day he wrote, as Mayor of Derby, inviting the Master of Hounds to have a meet in Derby, and he tendered an invitation to the members of the Automobile Club to meet some time during the year.

The President, before acknowledging the toast, presented the cups and medals won last year and then went on to say he was sure he was expressing the feelings of everybody present when he said they cordially appreciated the honour the Mayor had done them by coming amongst them and proposing the toast of their club. They were glad to find that in Derbyshire the magistrates administered the law with a spirit of justice, while the gentlemen at the head of the police did not waste the ratepayers' money by instructing their men to devote the whole of their time sitting about in open stretches waiting for motorists who might exceed the speed limit. The club was growing, the numbers being 174, against 152 a year ago, and their finances were also improving, for the balance now to their credit was £97, against £63 last year. The club was sixth in importance amongst provincial clubs, and nearly all the members owned their own cars. They regretted that their indefatigable hon. secretary (Mr. C. J. Allin) had retired after five years' service, but were glad to know he still took great interest in the club, and that he had taken over the position of treasurer, and Mr. Fryer had taken the secretaryship.

Alderman W. Hart, J.P., next proposed "The Visitors," and on behalf of the members of the club extended a hearty welcome to the ladies and the visitors. He knew the Mayor had a lurking desire to be a motorist, and he hoped that after his pleasant experiences that night he would join the club, and become an ardent motorist. Mr. C. Hardy, president of the Notts A.C., responded, and said it was always a pleasure to him to come amongst the members of the Derby Automobile Club. When they came over to take part in their contests, including the hill climb, they knew they would be treated as sportsmen by sportsmen. They were not troubled in that neighbourhood with police traps on open stretches, and he wished it was the same in other places he knew. They had no objection to police traps in villages and towns, but they had to having them on open roads.

Mr. J. M. Briggs also responded, and on the proposition of Mr. Marsden Smedley a hearty vote of thanks was accorded the chairman for presiding and for his interest in the club.

AUTO-CYCLE UNION.

MR. F. STRAIGHT, secretary of the Auto-Cycle Union, writes to point out that at the recent conferences, representatives of clubs affiliated to the Union, and other clubs proposing to affiliate, showed a very strong feeling that the Auto-Cycle Union should itself do the work which it had hitherto paid the Motor Union to do for it. The Committee of the A.C.U. then pointed out the difficulty which existed owing to the agreement with the Motor Union, but stated that the matter would be brought before the council of the Auto-Cycle Union for consideration at an early date, when various clubs who were then outside the Union had had an opportunity of affiliating to the Auto-Cycle Union and themselves voting on the subject. Before, however, this period was reached, the dissolution between the Royal Automobile Club and the Motor Union gave an opportunity for the Auto-Cycle Union to resume the work which it had delegated to the Motor Union, and the A.C.U. is now prepared to carry out all business affecting the interests of motor cyclists. One incidental result of this is that it is expected the affiliation fee to the Union can be reduced from 2s. 6d. per head (which was necessary when affiliated to the Motor Union) to 2s. per head.

A MOTOR-CYCLE club is being formed for the owners and riders of motor-cycles in Horsham, Henfield, Cowfold, and West Grinstead. Mr. R. Measures, of the latter place, is interesting himself in the matter.

ON Wednesday, at the Harrogate and District A.C., an "impromptu discussion" was held on somewhat novel lines.

MR. A. J. METCALFE will read a paper on the treatment and formation of roads at the Society of Engineers on Monday next.

MESSRS. SPEAR AND JACKSON, LTD., of Aetna Works, Sheffield, who are well known as manufacturers of high-grade tools, have just brought out a new motor tool kit designed to supply, in a handy leather roll, all the small tools likely to be required for roadside repairs or adjustments to motor-cars. The kit, which has been named the "Mermaid," contains twenty tools, the makers having carefully studied every point so as to include all necessary appliances, and at the same time to ensure that they shall be of the highest possible quality and material.

THE ROADWAY SYSTEM OF FRANCE.*

It is generally recognised that the best and most complete road system in the world is to be found in France, where it stands as an enduring monument to the administrative greatness of Napoleon. French roads are good, not because of any superiority of raw materials, as the same materials exist everywhere; they are not good because of any special talent for road building, as the formula was furnished by an Englishman, and some roads just as fine may be seen in parts of the United States. The real superiority of the French highway system is attributable to the fact that it is under the constant intelligent supervision of an army of trained men, who discover within the organisation opportunities for advancement and professional distinction which no mere county administration can offer.

The proof of this assertion may be found in France itself. If the country has a wonderful network of great arteries of general communication called "national routes," there is also in every department or county a system of local roads connecting the small towns and villages, built and maintained by the local governments, and inferior to the national roads. The construction and maintenance of the local roads are affected by the same unfortunate influences which ordinarily attach to county effort in America and other countries, but in less noticeable degree. The French road type is therefore the broad and smooth national route, upon which in rolling country one good draught horse is expected to be able to travel 30 kilometres (18½ miles) per day, hauling a load of 30 cwts. Public opinion requires that the local highways be kept in sufficiently good condition not to interfere with the horse power efficiency here indicated.

The basis of the French highway administrative system is the *École des Ponts et Chaussées* (School of Bridges and Roads), one of the finest technical schools in the world, and, like all other French educational systems of importance, a state affair. It is intended to form the engineers, who afterward take positions in the highway administrative system. Ordinary students also are accepted, and are graduated with the diploma of a civil engineer. The course of study lasts three years, and instruction is gratuitous. The highway hierarchy in France is thus organised:—

- (1) Inspector-general of bridges and highways.
- (2) Chief engineers charged with the work of the single departments or communes.
- (3) Ordinary engineers charged with the work of single arrondissements.
- (4) Under-engineers, who may be compared to non-commissioned officers in the army, the grade being open to "principal conductors," and those who have reached this grade are charged with the work of single arrondissements.
- (5) Principal conductors, charged with the service of the sub-division.
- (6) Ordinary conductors (this category comprises several grades), charged with the service of the sub-division.
- (7) Piqueurs, who are foremen of construction gangs.
- (8) Clerks, employed at headquarters.
- (9) Cantonniers, each having from 4 to 7 kilometres of highway under his immediate supervision.

This vast and apparently complicated machine directs the building and maintenance of both national and local roads. The Government, co-operating with the local authorities under certain circumstances, has charge of the hydraulic works of France—that is to say, the supervision and erection of sea and river walls, ports, etc., and exercises surveillance over rivers and railways.

The point of departure in this system begins with the modest cantonnier, who lives on the line of his jurisdiction, and is responsible for the maintenance of his section of road at all times. He keeps the ditches open, carefully fills holes and ruts with broken stone when such are discovered, removes dust and deposits of sand and earth after heavy rains, trims the trees and bushes, and when citizens furnish labour in payment of their road tax, directs their work. When ordinary work is impossible the cantonnier breaks stone and transports it to points where it is likely to be needed. He is expected to bring to the attention of his chief any condition requiring special attention, and is the man on the spot in every emergency. Each cantonnier has a book, and in this the chief cantonnier, who passes over the road at least once a week, notes his instructions and checks the work accomplished during the preceding interval. Nothing is left to chance. The conductors go over the line at regular intervals also, and direct the chief cantonniers, and all reports are transmitted to the central authorities, who thus follow the prevailing conditions on every foot of national highway in France. Each year the conductors prepare estimates of necessary expenses for the following year, itemising them under the heads of maintenance, heavy repairs, and new work, and the parliamentary appropriations are based upon these carefully-prepared local calculations.

A national route in France, like a railway, must first be declared necessary by a special law. At the present time comparatively few new national routes are being added to a system that is already old and complete. Estimates are prepared when new work is contemplated, and the execution is let by contract. A standard roadway is much simpler than is commonly supposed. Experience has demonstrated that deep foundations and other expensive construction are far less important than a careful drainage system, and in providing this French methods

particularly excel. A standard roadway in France consists of what the engineers call a box, of earth, into which is deposited the hard material of the road surface proper. This "encassement," as it is called, is carefully shaped and rammed, the sides or driftways being wide enough to hold the hard material in place, and incidentally to serve as foot-paths. On each side of the driftway runs a ditch, unless the special conformation of the land renders a ditch unnecessary. In all cases the drainage scheme must be such that the road surface receives only its own rainfall. The ordinary proportions of these standard roads are as follows:—

| Total Roadway. | Two Driftways. ¹ | Road Proper. ² |
|----------------|-----------------------------|---------------------------|
| Feet. | Feet. | Feet. |
| 45.93 | 22.96-26.24 | 19.68-22.96 |
| 39.37 | 19.68 | 19.68 |
| 32.80 | 13.12 | 19.68 |
| 26.24 | 9.84 | 16.40 |
| 22.96 | 6.56 | 16.40 |

¹ Inclination, 1 centimetre (1.3917 inch) per metre (3.28 feet).

² Curvature, one-fiftieth to one-fortieth of width.

The national routes are divided into three classes, having 45.93, 39.37, and 32.80 feet width, respectively. In exceptional cases they are 65.61 feet in width, but only near large cities. Within the road box, when it has been rammed and convexed, is finally deposited the surfacing material of crushed stone, each stone being small enough to pass through a ring of 6 centimetres (2.36 inches) diameter. The depth of the crushed stone, when rolled, should be 20 centimetres (7.87 inches).

Years ago the process was more complex. It was then regarded as necessary to have three strata of material, beginning with a sort of pavement of large stones, upon which was superposed a layer of smaller stones, and a top dressing of crushed stones. Such a road becomes very rough ultimately, and at present a modified macadam system is in use. Whereas Macadam declared his formula to be invariable under



One of the public service vehicles in use between Soussa and Sfax, Tunis.

all conditions, French engineers do not hesitate to employ piles, stones, brush, or anything else requisite to establish a secure foundation, or to slightly increase or decrease the thickness of crushed stone where the soil or conditions present special characteristics.

As every roadway established directly upon a rock foundation is hard, likely to become rough and to wear out rapidly, when such a foundation is necessarily employed a considerable layer of earth is interposed between foundation and surface. The road materials being in place, consolidation of the surface is obtained by rolling with a cylinder of about 6 tons weight. The roadway is sprinkled continuously during this operation and a mixture equal to 10 per cent. of the volume of broken stone, consisting of sandy and clayey material, is thrown under the cylinder. The surfacing operation is limited usually to lengths of 200 to 400 metres (656.16 to 1,312.33 feet) at one time. The steam roller first travels over the moistened loose stones three or four times, after which the fine binding material is distributed in very small quantities, and the rolling then proceeds until a loaded cart leaves no trace upon the new surface. When the rolling is completely finished the highway is closed for about fifteen days in order to dry before being opened to traffic.

The most favourable moment for constructing a highway is at the beginning of spring. The materials most difficult to handle are pebbles and hard, unbroken gravel. When such material is employed there should be no hesitancy in using as much as 12 per cent. of aggregating earth and sand—the maximum prescribed. Broken limestone is most highly regarded for surfacing purposes, after which in the order given comes silicious material, such as quartz, when it is not friable; siliceous and granite when the cost of crushing is not excessive; basaltic material is mixed with limestone, pebbles, and gravel from mines or river beds. Limestone works up most readily, but harder materials, such as siliceous or granite, last longer and give less dust and mud. The best stone for

* Abstract of Report by Mr. R. P. Skinner, U.S. Consul at Marseilles.

road making contains vein stone of calcareous nature, which becomes manifest under compression, and provides much of the hardness and cohesion of the French roads. Applications of hot tar, well worked in with brushes, will aid in prolonging the life of any good road, and to that extent prevent the dust nuisance, often intolerable in these days of automobiles. It should be understood that coal tar baths will avail very little on old worn-out roads, and that dust itself is detritus arising from the disintegration of the road itself. Consequently, the only real remedy for dust affliction is to build roads that are virtually indestructible.

The chief concern in France is that all preliminary and necessary operations shall be thoroughly performed. When embankments are made the earthwork is built up 5.90 to 7.87 inches a time, and the successive strata are levelled, and in the neighbourhood of masonry rammed. Time and rain are given as little to do in the matter of procuring solid construction as possible. Similarly every ditch is very carefully cut at a proper angle, rammed, and if necessary, paved with stones. Every dangerous turn is protected by a stone parapet, and stone posts are planted 1 kilometre apart, with ten smaller stone markers at equal distances between the kilometre stones. At each crossroad there are signposts, always in order, and nowadays (thanks to the Touring Club de France) there are indicators to remind the traveller of dangerous curves, rapid descents, paved drains, and the like. Every railway level crossing is protected by a gate with a watchman in charge night and day.

There are in France 23,656 miles of national roads, which cost £60,795,000 to build. There are also 316,898 miles of local highways, built at a total cost of £61,760,000, of which the state furnished £16,212,000, and the interested localities £45,558,000. These various kinds of roads are classed as follows:—

(1) National routes, traversing several departments and connecting the important centres. (2) Department routes, connecting the important centres of a single department and crossing the national routes. (3) Highways of grand communication, scarcely less important than the previous class. (4) Highways of public interest, traversing a single canton, and connecting with other cantonal roads. (5) Ordinary neighbourhood highways, being narrow and unimportant roads connecting remote villages and groups of houses with the more important means of communication.

The advent of the automobile, with its destructive tyres, has placed increased tasks upon the French roadmakers. No method has yet been discovered of preventing the file-like action of the rubber tyres, often steel shod, upon the road surface. Coal tar baths do some good, especially in keeping down dust, or rather in preventing its formation, but are by no means generally applied, and only in or near centres of population. On the other hand, the permanency of automobile traffic is recognised, and wherever dangers present themselves to this method of circulation, efforts are made to mitigate them, either by directing public attention to their existence, or in mountainous regions by widening the zigzag turns. The destructiveness of the automobile increases in proportion to its speed, but practically no effort is made to limit speed beyond the confines of towns and cottages. The speed evil is correcting itself to some extent, owing to the perils it presents to the occupants of these vehicles.

By virtue of the law of May 30th, 1851, vehicles of all sorts may circulate in France without restriction as to weight of load or width of tyres. However, for police purposes prefects may establish certain rules. Thus, for example, a factory utilising a public road for testing or traffic purposes between given points, and subjecting it to an intense strain, might be required to take out some kind of a licence, or otherwise make up its excessive utilisation of public property. It is a recognised principle, however, that in no case shall agriculture be hampered by any prescriptions in regard to highway transportation tending to interfere with the harvesting, storing, or marketing of crops. Without any regulation by law, tyre widths in this country are greater than in the United States, and under ordinary circumstances have the effect of ironing out the public roads rather than of deteriorating them.

THE GRACILE MOTOR CAR COMPANY, LTD., have removed from 66, Great Russell Street, W.C., to 52, Regent Street, London, W.

AMONG the most recent purchasers of Siddeley cars in India are the Maharaja of Kotah and Nawab Sow Jung of Hyderabad, who have acquired 18-h.p. and 30-h.p. cars respectively from the Calcutta agents of the Wolseley Company.

MR. CHARLES POOSS, of Bournemouth, and Messrs. Hayward and Slade, Ltd., of Winchester, have recently been appointed agents for the county of Hampshire, and Messrs. Norbury, Ltd., of Manchester, have been appointed sole agents for all Asiatic countries for the "Stella" car.

It is not at all uncommon that a brilliant inventor is a very indifferent mechanic, and there can be little doubt that ideas worth thousands of pounds have frequently been abandoned because of their inventor's lack of ability, accommodation or opportunity to make models that would facilitate selecting the best of half-a-dozen pieces of mechanism for the performance of a certain function. Having these facts well in mind, Messrs. Panhard and Levassor have instituted at their Acton Vale works a new department devoted exclusively to the development, modification and general furtherance of inventors' ideas. They are prepared to set to work on an invention in any shape, make drawings or models, putting at the command of the inventor all the resources of a highly-trained and splendidly equipped staff of mechanics.

THE RATING OF PETROL CARS.

A MEMORANDUM by Mr. H. Myddleton Gavey for the Motor Union was submitted to the Chancellor of the Exchequer on this subject, in which he said he did not consider that the rating of the h.p. of petrol engines, for the purpose of taxation, by the measurement of their bore and stroke was a fair or accurate method of estimating this h.p. It would be noticed that almost all manufacturers of motor engines give two rates of h.p. to their engines; the one with the ignition retarded and the supply of petrol cut down to its minimum, and the other with the ignition fully advanced and the throttle fully open. But no manufacturer would undertake to say that under certain conditions he could not get less than the h.p. of the lower figure, or more than the h.p. of the higher figure, so that these figures were to a certain extent arbitrary. Was the petrol car, then, to be taxed on its reputed minimum or its reputed maximum h.p., neither of which was an absolutely stable quantity. Mr. Gavey tabulated the factors which go to increase or decrease the h.p. of a motor engine apart from the dimensions of the cylinder, and they do it to such a large extent as to render this measurement altogether an untrustworthy guide to the h.p. of the car.

Ignition.—(a) Rate of sparking; (b) Intensity of spark. **Coil and accumulator.** **Magneto.** **Carburation.**—(c) Mechanism; (d) Time of day; (e) Altitude; (f) Quality of fuel.

Condition of Engine.—(g) Hot or cold; (h) Age.

(a.) **Rate of Sparking.**—The rate of sparking alters the power of the engine to an incredible amount. As an instance: I was shown a car by a leading manufacturer whose h.p. they asserted to be 28-36; another car had a h.p. of 30-40, and was a hundred pounds more. Why, I asked, a hundred pounds more for an additional two h.p.? The answer was, the 28-36 car develops those powers when running at the rate of 700 explosions a minute, the 30-40 car develops that power when running at the rate of 600 explosions a minute; and we estimate her effective h.p. is twelve h.p. more than the 28-36, instead of two.

(b.) **Intensity of Spark.**—When an accumulator is freshly charged the h.p. of a car is very much greater than when it has been allowed to run down. By putting six volts through the coil instead of four, the power of the car is increased nearly one-third, as I have myself experienced. I have a car fitted with both forms of ignition. When the magneto is switched on, the car is capable of carrying heavier loads up steeper hills than on the coil alone. In addition to this, supposing a car to be running along a straight road on a magneto, and the levers be untouched, the spark will become more rapid and more powerful, and a car which was running at twenty will speedily run up to twenty-five without any alteration having been made, thus indicating an increase of horse power.

(c.) **Mechanism.**—There is no doubt that the mechanism of the carburation varies with the carburettor, and that if the engines of the same bore and stroke were fitted with different carburettors they would attain different results; this being due to the amount of petrol supplied and partly to the way in which it is aerated.

(d.) **Time of Day.**—No one who has driven cars much will deny that they run far better at sundown to the extent of several h.p. than at other times of the day. This no doubt is due to alterations of atmospheric conditions affecting the carburation.

(e.) **Altitude.**—I have a car which at 800 feet above the sea develops fully 5-h.p. more than on the sea-level, and even an altitude of two or three hundred feet produces a marked difference.

(f.) **Quality of Fuel.**—It is obvious that the specific gravity of the fuel used must exercise a considerable difference in the force of the explosions, and therefore the power of the engine.

(g.) **Engine, hot or cold.**—The h.p. of an engine starting cold is considerably under that of an engine which has been running for ten or fifteen miles; this, of course, is due chiefly to the nicer adjustment of the engine when warm, and, to a minor extent, to the more fluid condition of the lubricants.

(h.) **Age.**—The horse power of a car when delivered is not at its maximum, it becomes this when all the parts have worn themselves into their places, and as the car gets older the horse power again falls off, owing to wear and imperfect joints.

From all the above it will be apparent that to tax an engine upon the bore and piston stroke leads one into so many fallacies that this method can only be regarded as giving one quite a rudimentary idea of the power of the engine.

Two useful improvements have recently been embodied in the Napier Triple Air Compressor by Messrs. S. F. Edge (1907), Ltd. In ordinary inflators having pressure gauges the operator has to pump through the gauge at each stroke, thus submitting the gauge to the unnecessary strain of withstanding not only the pressure of air actually in the tyre but also the much greater pressure in the pump connecting tube. In the improved pump this is obviated by insuring that the gauge shall only be in use when it is desired to read the air pressure in the tyre, this being effected by fitting an optional by-pass. The second improvement, which will be appreciated by those motorists who find their tyres difficult to inflate, consists of a little plunger on the end of the brass connecting nipple (which screws on to the tyre valve). Pressure on this plunger drives a small wire rod into the valve and lifts the "dolly" off its seating, and makes a clear passage through the valve.

CASES UNDER THE MOTOR CAR ACT.

HELPING THE IDENTIFICATION OF THE DRIVER.

Mr. E. O. Quick, of Litcomb, Tiverton, Devon, has been summoned by the police, before Mr. Curtis-Bennett, at Westminster Police Court, for failing to give information in his power to lead to the identification of the driver of a motor-car of which he was registered as owner.

Mr. H. Muskett, prosecuting, said the police had been put to an enormous amount of trouble to trace the driver of a car most recklessly driven in the Fulham Road at 12.15 a.m. on December 4th last. The defendant on the 3rd inst. came to London in his car from Southsea with his chauffeur. Police evidence was given that at the time stated the car was driven at the rate of twenty-five miles an hour along a width of 10 ft. of roadway—all the space available consequent on excavation work being in progress. A constable succeeded in taking the number of the vehicle before it dashed off again. The defendant, of whom inquiry was made at his residence in Devonshire, at first gave the name of his chauffeur as the person in charge, but subsequently said he did not know the driver, and that he had misread the particulars as to the time of the complaint.

Mr. Muskett submitted that the defendant had given no information except that which misled everybody, and that his statements and letter were most contradictory.

After a long hearing Mr. Curtis-Bennett said of all the witnesses he had ever come across the defendant was the most unsatisfactory. His mind seemed to be blank about all that was material. There was no doubt in his (the magistrate's) opinion that he had intentionally failed to furnish information, and as he had given everybody so much trouble he would be fined £5 and £15 costs.

A LEGAL POINT IN SCOTLAND.

A judgment of interest to the legal profession has been given at Kilmarnock Sheriff Court by Interim Sheriff Laing. William G. Christie appeared on a charge of contravening the Motor-Car Act, 1903, by having driven a car at a speed exceeding twenty miles an hour on a control between Stanley Burn Bridge and Arran Place, Ardrossan, on January 16th. He made application to the Court for permission to engage an English solicitor from London, an expert in motor-car cases, to conduct his defence. The Sheriff intimated to accused's agent that he refused the application, and stated that his decision was given on two grounds—first, that it was an encroachment on the rights of Scottish solicitors practising in the Sheriff Courts of Scotland; and, second, that it was incompetent for any other than a qualified Scottish solicitor to conduct civil and criminal cases in the Sheriff Courts of Scotland. Accused pleaded not guilty, and was defended by Mr. A. Orr Deas, advocate, Edinburgh. Police evidence showed that the car had travelled over the "control" at a rate of twenty-eight miles an hour. The respondent gave it as his own opinion that he was not going at a speed of more than eight miles an hour, and it was argued on his behalf that it was impossible for the constables about half a mile distant to determine definitely when the car entered upon the control. The charge was found proved, and accused, who had been four times previously convicted, was fined in £15 15s.

£33 was the aggregate of the fines imposed on motorists at Kingston on the 20th inst. On the same day more than £20 was similarly obtained at the Marylebone Court.

COMPANY NEWS.

CLIFTON SPRING WHEEL COMPANY.—Capital, £2,000. To acquire the rights and privileges of Esther Murray, 5, Clifton Place, Glasgow, of and concerning her invention for improvement in wheels of cycles and motors. Registered office, 173, St. Vincent Place, Glasgow.

HENRY'S, LTD.—£1,000. To carry on the business of motor, motor-cycle, and accessory manufacturers, &c. Registered office, 42, Legge Street, Birmingham.

BRITISH MAGNETO COMPANY.—£1,000. Electricians, manufacturers of and agents for electrical apparatus for motor-cars, &c.

E.N.V. MOTOR SYNDICATE.—£4,000. As title.

MANCHESTER MOTOR-CAB COMPANY.—£500. As title.

LIVERPOOL MOTOR-CAB COMPANY.—£500. As title.

PHELON AND MOORE.—£3,000. To take over business of mechanical engineers and motor-cycle manufacturers carried on by J. C. Phelon and R. Moore at Valley Road, Cleckheaton, and elsewhere, as Phelon and Moore. Valley Road, Cleckheaton.

ITALIAN SPARE MOTOR WHEEL.—£40,000. To acquire Italian and other patents of the Stepany Spare Motor Wheel. First directors: T. D. Grimké-Drayton, R. A. Poole (managing director), R. L. Wood, and H. G. Norton. 2, Clarence Parade, Cheltenham.

BRIGHTON AND SOUTH COAST MOTOR CAB COMPANY.—£100. 44, Bedford Row, W.C.

POLICE TRAPS.

RINGMER, on the Lewes-Uckfield road, has its police trap.

THE Portsmouth road has its trap at Surbiton.

A POLICE TRAP is being worked in the Sheen road, Kingston.

ALLEGED OBSTRUCTION AT A BELFAST GARAGE.

In the Belfast Summons Court, Messrs. J. B. Ferguson, Ltd., automobile engineers and motor agents, were summoned for having, as alleged, caused an obstruction in Little Donegall Street by allowing a number of motor-cars to remain outside their works in that thoroughfare. Constable M'Clean deposed that on the 14th inst., while he was on duty in Little Donegall Street, he observed four motor-cars ranged along the street outside the works of Messrs. Ferguson, Ltd. In consequence of the position occupied by their vehicles a wagon which was passing down the street had to cross over to the right side. He spoke to Mr. Ferguson and the cars were removed soon after. Mr. M'Cutcheon, for the defence, said the company viewed the matter in a serious light, because they had always done their best to avoid causing any obstruction. The business in question was started by Mr. Ferguson on the Shankill Road in 1902, and at that time he only employed a couple of workmen; so successful had the undertaking proved that the company now occupied extensive premises and had a large number of hands in their employment. The present premises in Little Donegall Street were acquired in 1904, but the accommodation thus provided soon became too limited, and last year, on a complaint being made as to crowding in the street, extra premises were taken on the Shore Road as a depot and garage for the firm's hiring and second-hand cars, in addition to which premises were also secured in May Street. The company had gone to this expense and trouble with the object of relieving the pressure in their Little Donegall Street works. At the present time they were also erecting, within a stone's throw of that court, a large and commodious establishment, which would involve the expenditure of several thousand pounds, and which would make it unnecessary for any car to stand outside, even if the customer only required a gallon of petrol. He might mention that in other cities progressive industries had actually been driven away in consequence of nagging police prosecutions. Of the four cars in question, two were hiring cars,



A Case of Overheating!

"What are we stopping for, Jimmie?"
"Why, you see, the motor is so hot dat I can't start again till it cools off a little." (Lila.)

which had been brought to the works for a supply of petrol, and the other two were owned by local gentlemen—a doctor and a merchant. None of the four cars had come to the premises for repair.

The Chairman said the magistrate had been considering the matter, and he would throw out a suggestion which might save time. If Mr. Ferguson would pay the costs of the court and give an undertaking to keep the cars in they would not enter any record on the books. Mr. M'Cutcheon expressed his willingness to agree to this on behalf of his clients, but he added that it should be understood that that undertaking would refer only to Mr. Ferguson's own cars, as he had nothing to do with those belonging to customers. The Chairman said if cars remained in the street longer than they ought to do, it would be a matter for Mr. Ferguson to prove that he was not responsible for their being there. The case was then dismissed.

CARS AND THEIR NAMES.

TOUCHING the nomenclature of cars a good tale is going round. A certain local councillor rang up a garage from which he at times hired out a car, when the following conversation ensued:—

LOCAL COUNCILLOR.—"Hullo! I want the car to-morrow."

GARAGE MANAGER.—"I'm sorry, sir, she's not available; there's an M.P.—"

L.C. (indignantly).—"— the M.P.! Ain't my money as good as his?"

G.M.—"—I was saying, sir, there's an M.P. car I can let you have, and which I feel sure you'll be pleased with."

PEUGEOT cars will be shown at the forthcoming Cordingley Exhibition by the Earl's Court Motor Garage Company, Ltd.

FORTHCOMING EVENTS.

MARCH.

- 2nd (M.).—Annual meeting of the private members of the Auto Cycle Club at the Royal A.C., 7.30 p.m.
 5th (Th.).—Paper by Dr. W. Watson at the R.A.C.
 11th (W.).—Annual meeting of the Incorporated Institution of Automobile Engineers.
 11th (W.).—Mr. F. W. Lanchester on "Problems of Automobile Design," at the Incorporated Institute of Automobile Engineers.
 12th (Th.).—Annual meeting of the Royal A.C.
 Annual dinner of the Royal A.C. at the Covent Garden Theatre.
 18th (W.).—Annual dinner of the A.A. at the Hotel Cecil, London.
 19th (Th.).—Monthly meeting of the General Committee of the Motor Union.
 21st (Saturday)—28th (S.).—
CORDINGLEY'S THIRTEENTH INTERNATIONAL MOTOR-CAR EXHIBITION will be held at the Royal Agricultural Hall, London.
 21st (Sat.).—Annual general meeting of the Council of the Auto Cycle Union.
 29th (Sun.).—Opening Run of the Southend Motor Club to the White Hart Hotel, Witham.
 31st (Tu.).—Last day for receiving entries, at ordinary fees, for the International Touring Car Race.

APRIL.

- 11th (Sat.).—Annual open Flexibility Contest of the Crystal Palace A.C.
 16th—20th.—Easter Tour of the Motor Cycling Club.
 17th (Good Friday).—Lincs. M.C.C. meet at Mablethorpe.
 18th and 20th.—First meeting of the Brooklands A.R.C. for 1908.
 25th (Sat.) to May 25th.—Industrial Vehicle competition of A.C.F.
 26th (Sun.).—Southend M.C. run to Thatched House Hotel, Epping.

MAY.

- 1st (F.).—The Frome's Hill Climb of the Herefordshire A.C.—provisional.
 10th (Sun.).—Targa Florio Race.
 21st (Th.)—25th.—Reliability Trial of the Irish A.C.
 25th.—Industrial Vehicle Competition of the A.C. de France.
 31st (Sun.).—Southend M.C. run to Saracen's Head Hotel, Dunmow.

JUNE.

- International Aeronautical Federation conference in London.
 5th—8th.—London-Edinburgh twenty-four hours' run of the Motor Cycling Club.
 8th (M.).—Cars competing in the International Touring Car Trial will arrive at the depot.
 Start of the International Touring Car Trial of the R.A.C.
 9th (Tu.).—Touring competition for Prince Henry of Prussia's prize begins.
 15th—19th.—Scottish Reliability Trial.
 27th (Sat.).—Hill climb of the Midland A.C. at Shelsley Walsh.
 28th. (Sun.).—Southend M.C. run to Grand Hotel, Clacton.

JULY.

- The Land's End to John o' Groat's Trial of the Auto C.C. will be held.
 25th (Sat.).—Petrol Consumption Tests of the Motor Cycling Club.
 26th (Sun.).—Southend M.C. run to Coach and Horses, Quendon.

LIGHTING-UP TIMES—LONDON.

| | | | |
|---------------|----------|----------|----------|
| Mar. 1st—6.38 | 3rd—6.41 | 5th—6.44 | 7th—6.47 |
| " 2nd—6.39 | 4th—6.42 | 6th—6.45 | 8th—6.49 |

MACHINE TOOLS FOR MOTOR MANUFACTURERS.

In addition to its cycle and motor-car manufactories, Coventry is rapidly becoming known as a machine tool centre. One or two well-known engineering concerns have been established in the town for some years, while the number has been increased by the formation of the Centaur Motor and Engineering Company, Ltd., whose works are at West Orchard, Coventry. The Centaur Company has, of course, been established in Coventry for about thirty-five years as cycle manufacturers, and their productions in that direction are well known, but the new branch, although under the same capital control, is an entirely separate business. New works have been built, and a well-selected plant of the most modern machinery installed, and the whole has been placed under the management of Mr. A. W. Parkes, until lately with Messrs. Ward and Co., of Birmingham. In framing their programme of production, the new firm have particularly borne in mind the requirements of the motor trade, and propose to specialise upon capstan and turret work to begin with (though doubtless other branches of tool construction will be taken up in due course) and they set themselves a high ideal as regards efficiency and quality, their aim being to produce tools that will take their place in the front rank for design, precision, and durability. The series of capstan lathes above mentioned range in size from a bar capacity of $\frac{1}{4}$ in. diameter to $2\frac{1}{2}$ in. diameter,

through the automatic chuck or $1\frac{1}{2}$ in. when the chuck tube is withdrawn to allow of using a three-jaw chuck on odd work of large capacity with comparatively light tooling operations. No. 2 size, having a hole through the spindle of $2\frac{1}{2}$ in. diameter, is provided with a friction geared head. In this machine, and the larger size, the design permits of offering a good choice of equipments as regard saddles and turrets. Clients can choose between (a) a fixed cut-off rest; (b) a hand operated sliding saddle; and (c) a saddle operated by automatic feed from the change gear-box, and provided with removable leader screws and nuts for screw cutting. Turrets can be furnished either arranged to slide bodily on the bed shears or on a fixed base fastened to the bed. Automatic feeds and change gear-box for varying the same again are optional. The same remarks apply to the largest size, viz., No. 3, taking bars up to $2\frac{1}{2}$ in. diameter. On this lathe, however, the firm have developed a new style of hexagon turret mounted on a cross slide and provided with automatic cross feed, making the lathe exceptionally well adapted for chucking purposes as well as for bar work.

TYRES ON THE TRACK.

A DETERMINING factor in high speed racing is the tyre with which the car is fitted. The recent attempts at record breaking at Brooklands furnish ample evidence in support of this assertion, for on two occasions tyre bursts prevented the drivers (Messrs. Tryon and Jarrott) from attempting more than the fifty miles record set up by Mr. Clifford-Earp on December 10th last. On that date Mr. W. C. Earp, in addition, created the world's records for 100 miles, one and two hours. Palmer cord tyres were used, and Mr. Earp avers that at the conclusion those on the driving wheels had the appearance of never having been used—the edges of the ribs still retaining their original form. On Wednesday week Mr. F. Newton set up the new records given elsewhere in the present issue, and not once during the trials did the tyres give the slightest trouble, and they presented at the conclusion the appearance of having scarcely been used. Some idea of the wearing qualities of Palmer cord tyres will be gathered from the following weights taken before and after the trials:—

| | Start. | Finish. | Loss. |
|------------|---------------|---------------|--------|
| Off front | 30 lbs. 1 oz. | 29 lbs. 3 oz. | 14 oz. |
| Near front | 30 lbs. | 29 lbs. 4 oz. | 12 oz. |
| Off back | 39 lbs. | 37 lbs. | 32 oz. |
| Near back | 39 lbs. 7 oz. | 37 lbs. 8 oz. | 31 oz. |

Before starting for the records, the two driving wheel tyres had run 100 miles on the road and 100 miles on the Brooklands track.

The reliability of cord tyres must assure the motorist that the principle on which they are constructed is scientifically correct, whether they are used for high speed racing or touring.

BUSINESS NEWS.

THE body of the Napier car recently supplied to Captain Hamilton was built by Messrs. H. J. Mulliner and Co., of Bedford Park Works, Chiswick, and not at Northampton.

THE MOTOR HOUSE, of 314-316 and 366-368, Euston Road, N.W., has issued a special bargain list of motor-cars for sale at the beginning of the season.

THE CANADA CYCLE AND MOTOR COMPANY, LTD., Toronto Junction, Ontario, have been appointed Canadian agents for Smith's speed indicators.

THE DUNLOP PNEUMATIC TYRE COMPANY state that they have not received a complaint of the Dunlop rim with regard to the excessive wear of tyres. The secret of this freedom from harm is that the tyre lies in the hollow of a smooth continuous rim, instead of having to chafe against segmental irregularities, joints, studs and breaks in the rim surface, which would wear out any tyre in the course of a few hundred miles running.

THE Benz cars are now being handled in this country by a new concern known as Benz Motors, who are establishing a depot at Portland Court, 160 to 196, Great Portland Street, London, W., where a full range of models of the well-known Benz cars will be on view. Arrangements are being made to have experienced mechanics from the Mannheim works to carry out repairs on both old and new type models of the Benz vehicles, while, in addition, a complete stock of spare parts will be kept on hand.

RECENTLY the Dublin depot of the Sirdar Rubber Company, Ltd., was removed to 6, Harcourt Street. The Glasgow depot of the company is in an equally central position in that city, at 116, North Street. The North of England demand is supplied from 219, Deansgate, Manchester. The machinery at the mills of the company on the banks of the river Avon, at Bradford, Wilts., is of the latest type, securing the efficient construction of both pneumatic and solid tyres by the company, whose head office is at 34, Baker Street, W.

A VAST amount of interest is being created at the premises of the Motor Supply Company, Ltd., 111, Piccadilly, London, W., by the exhibit of a fine representation of the Farman aeroplane in full flight. The company have secured the agency for this machine, and are prepared to supply the aeroplane fitted with Renault, Antoinette or R.E.P. motors. Furthermore, the company state that they are willing to subject the aeroplane to a test of at least one mile in the air, and propose giving to purchasers the necessary advice and instructions, so as to enable clients to use the aeroplanes themselves after a comparatively short practice.

THE Motor-Car Journal.

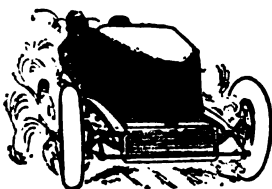
[VOL. X.]

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COMMENTS.



FOR the purpose of differentiating between competitors interested in the motor industry who have at their disposal the resources of factories and numerous workers, and the private individual who has no such resources, the committee of the Brooklands Automobile Racing Club have established a body called "Private Competitors," on the general lines of Gentlemen Riders on the turf.

As it seemed impossible to lay down rules governing all cases, the election of private competitors is subject to the ballot of the Committee, thus enabling each application to be dealt with individually, and the names of all private competitors elected will be published, and the Committee will have power to cancel registration at any time. Races will be arranged for private competitors; these contests will be of a nature that will allow private owners to use their ordinary cars, as the principal object in view is not great speed, but sporting contests suited to all. The principal essentials for eligibility as private competitors are that they have no direct interest in the motor industry, shall not race any vehicle which is the property of anyone connected with the automobile business, and shall receive no remuneration for entering or driving a car.

Naval Motorists.

ONE of the most active of the provincial motoring organisations is the Naval Motor Club, which is establishing its own garages in the various Home Ports. It is intended to ultimately possess a motor house at all the important stations in Great Britain, and hopes are high as to making them entirely self-supporting. Last summer a garage was started at Sheerness; on the 25th inst. a new garage will be opened in Wickham Street, Portsmouth, and a scheme for the establishment of a similar house at Portland will be brought out shortly. The head-quarters of the Naval Motor Club are at Portsmouth, and a proposal for putting the automobiles of members at the service of the Admiralty in case of war is being drawn up by the club.

The Exhibition.

A FORTNIGHT from to-day (Saturday), Cordingley's thirteenth International Motor-Car Exhibition will open its doors at the Agricultural Hall, London, and, judging from the interest already aroused, should prove highly useful to manufacturers and agents in opening the 1908 season with a good fillip for business. As before, social interests will be a strong feature. On the Thursday the Ladies' Automobile Club will hold what has come to be regarded as an annual re-union, when the ladies interested in motoring take advantage of the occasion to inspect the latest models of cars and the newest inventions in accessories. The Motor Union, too, which will hold its annual meeting in London on the 25th inst., will be largely represented, and in the current issue of the "R.A.C. Journal" the Motor Union notes drew attention to the fact that "the annual meeting of the M.U. falls during the exhibition week, thus rendering it possible for provincial members to combine attendance at this

gathering with a visit to the exhibition." The Automobile Association will also have an office at the exhibition where full information as to its system of working will be obtainable, and many of the engineering societies and associations are also paying official visits to the Agricultural Hall. These features will do much to ensure a repetition of past successes.

Interested Students.

ONE of the incidental impressions gained from behind the scenes in connection with the exhibition is the active desire on the part of those responsible for technical automobile instruction at the various engineering colleges and polytechnics throughout the country to secure the attendance of their pupils at the forthcoming display. Year by year this interest has been growing, and from many important provincial centres, as well as from all the London institutions that have become associated with the educational side of the movement, groups of students headed by their instructors are coming to the Show. The diffusion of knowledge thus secured cannot fail to be of ultimate advantage to the whole of the industry.

An Appeal to Mr. Burns.

SOME may have forgotten that last year a conference of road authorities was held, at which a committee was appointed to keep watch over the proceedings of other people in their advocacy of various road questions. This met a few days ago and resolved to approach the Local Government Board with a series of suggestions of a technical, as distinct from a purely financial, character. Among the road obstructions to be deprecated to Mr. John Burns are electric standards, tramway standards, lamp-posts, conveniences, monuments, and other obstructions in the centre of the highway (except refuges necessary for foot passengers), as such erections endanger the public safety and materially reduce the traffic capacity of the highway. Proposals for comprehensive experiments with regard to the mitigation of the dust nuisance are also to be laid before the representative of the Government.

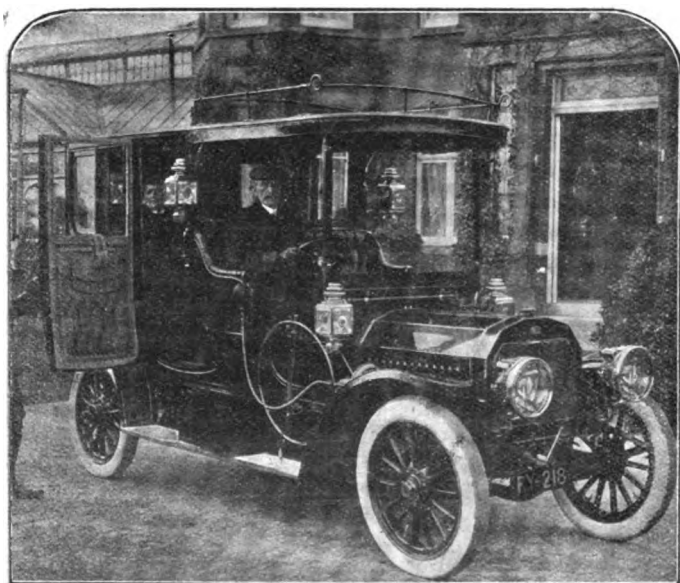
The Proposed Motor Road.

WE have always urged that it is impolitic to suggest that special roadways should be constructed for the particular and exclusive convenience of motorists. The great highways should be adapted to the purposes of locomotion. That is a principle dictated by a common-sense consideration of the case, and not by any prejudiced view. Otherwise, if speed is to be limited by bad roads, invention may be discouraged and the general welfare be thwarted. Consequently the proposed motor road has not aroused any enthusiasm among motorists. It has, however, succeeded in arousing an expensive and general opposition—disagreement being shown in public meetings in the districts which would be affected, and in petitions numerous signed by those who are opposed to such a sectional view of traffic contingencies. Now the London Council's Parliamentary Committee has recommended opposition on the broad principle as to whether the construction of roads of such a character should be sanctioned at all. They point out that "it may be urged, on the one hand, that this would be reverting

to the old system of turnpike roads long since abandoned, and that such a road being in its nature more like a railway would tend to check the development of the country through which it passes. On the other hand, such a road would undoubtedly prove of benefit in relieving the ordinary roads of a class of traffic which does the greatest amount of damage to them. It would also tend to save dwellers near the existing roads from the nuisance of dust and the depreciation of their property caused by motor traffic." Arguments will probably range between those two schools of opinion.

What is Suggested.

IN the meantime, it will be useful to set out the details of the London Motor Roadways Approach Bill, 1908, which is being promoted by the Roads Construction Company, Ltd., for the construction of the new roadway in the counties of London, Middlesex, and Buckingham for motor traffic. The roadway would commence at Wood Lane, Hammersmith, and, passing to the south of the Council's housing estate at Old Oak Common, Acton, would terminate at Eton by a junction with the Bath road, and would be about fourteen miles long. There



Mr. Peter Crook, of Newlands, Birkdale, Southport, at the wheel of his Dennis 35-h.p. Limousine.

is also proposed a new road, about a mile in length, from Latimer Road to Wood Lane, to lead on to the main motor road at Wood Lane. From inquiries the committee have made it appears that it is intended that the shorter road shall be a public road, open to traffic in the usual way, but the main road is intended for motor-vehicles only. The width of the main road is to be about 40 ft. and that of the shorter road 60 ft.

Things that Matter.

ELSEWHERE we give a synopsis of the paper which Mr. Mervyn O'Gorman read at the R.A.C. a few evenings ago. In the course of the discussion, Mr. G. M. Baillie gave his view that nearly all the paper pointed to the great necessity of shock absorbers. The greatest movement of the springs was always got after the car had met the object that gave the movement, and it was just that movement that the shock absorbers would prevent. Mr. J. Lyons Sampson referred to the loss in transmission, as to which he had been making a series of experiments. He had been trying experiments with a pair of gear wheels $\frac{1}{2}$ in. pitch, $\frac{3}{4}$ in. long on the tooth, and he loaded them with the pressure that they would have in practice. He found that with a pressure of 200 lb. on the teeth there was 10 per

cent. loss, and, increasing that pressure through to 500 lb., that loss came down to half that figure, or slightly over 5 per cent. At the 200 lbs. it would be under the same conditions as when developing 5-h.p., and at 500 lbs. it would be under the same conditions as when developing 12-h.p. He had not yet had time to complete those experiments as fully as he would like, but he thought that so far they showed a smaller loss than that gear was generally credited with. They knew that the loss was on the teeth only. The wheels in question were mounted on spindles set in five centres. Referring to the life of tyres, Mr. S. F. Edge said it depended more upon the stopping ideas of the driver than upon everything else, for they might give him everything possible, "but all was nullified by the fool who wanted to stop in one yard when he ought to take 300."

Friendly Authorities.

"PREVENTION is better than cure" is an axiom of proved value, and one upon which the Bridges and Roads Committee of the Kent County Council places some importance. The attention of that body having been called to the fact that some motorists have driven carelessly through its area, it is now seeking to restrain the ardour of enthusiastic speed merchants. Instead of setting traps to catch the careful and the careless alike, the committee has got into communication with the Automobile Association, as representing a large number of motorists, with the view of warning drivers of automobiles of the danger occasioned by the thoughtless driving of vehicles. Mr. W. B. Prosser, the clerk to the County Council, writing to the Automobile Association, points out that "in many cases when meeting horse-drawn traffic the motorist, instead of keeping to the near side of the road, keeps in the middle of the road, and thus drives straight at the approaching horses until within a few yards of them, causing the animals to be terrorised, and, in the opinion of the committee, such driving is fraught with considerable risk to the travelling public." Those who have familiarity with the road will agree as to the risks incidental to such a practice, which can only be indulged in by a purblind minority of those who motor.

The Kent C.C. and the A.A.

THE reply addressed to the Kentish authorities by Mr. Stenson Cooke on behalf of his Association should satisfy everyone as to the good work that can be effected through organisation, and, incidentally, should attract those who are not yet affiliated to any of the great motoring societies into one or other of them. Should the Kent County Council consider it necessary the A.A. will station one or two of their patrols at specially dangerous parts of the roads in Kent, for the purpose of regulating the speed of motor traffic, thus proving the contention that the Association's policy is really conducive to a proper observance of the law by those who use the highway. We may mention that the A.A. has already spent considerable sums on the employment of special patrols between London and Folkestone, particularly in the vicinity of Ashford, where the efforts of their men to repress inconsiderate or excessive speed have been keenly appreciated by local residents and the police alike.

A Trio of Dismissals.

THERE was much magisterial discomfiture at Grantham on Saturday, when the Spittlegate J.P.'s appeared to hear cases against three motorists for exceeding the legal limit on the Great North Road. Mr. Staplee Firth quickly detected a flaw in the indictment, and rightly urged the point for all it was worth, with the consequent dismissal of the summonses. The point, however, to which we would direct attention is concerned with the costly nature of such matters. For, although there was a readiness to grant a dismissal, the defending solicitor evidently thought it was useless to occupy time in asking for costs. If affairs were equitably conducted,

costs in such cases would be borne by the police, whose careless-
ness was, in the cases mentioned elsewhere in the present issue,
the cause of expense to others.

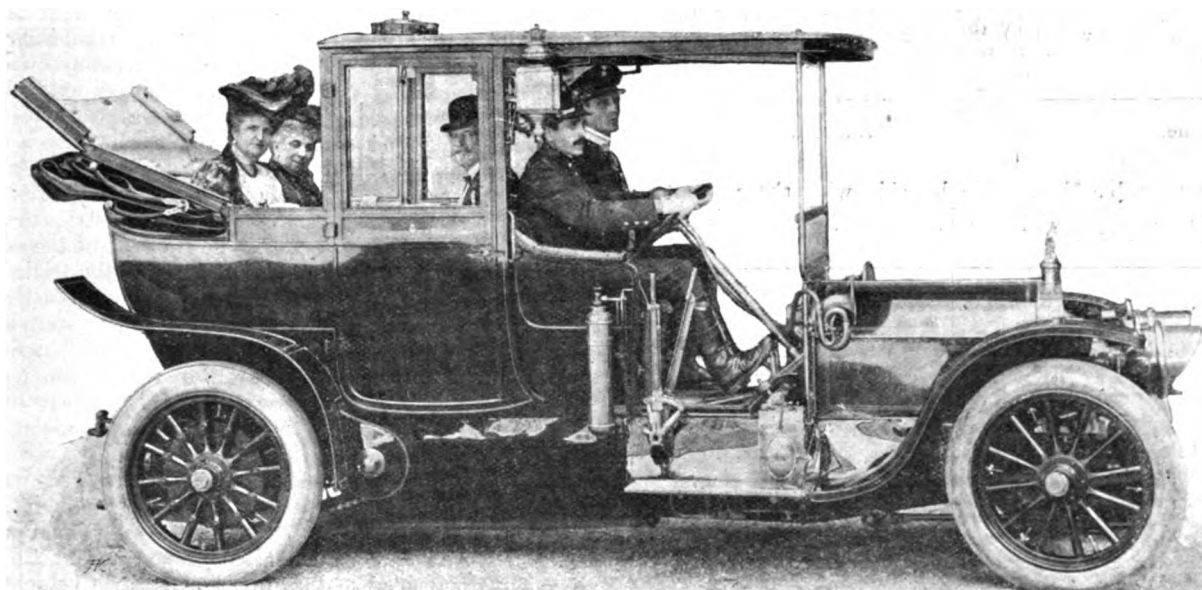
The Road Question.

ROADS continue to be the subject of discussion by learned societies, and on Monday the Society of Engineers had the advantage of a paper by Mr. A. J. Metcalfe. It dealt with the treatment and formation of road surfaces, and in introducing the subject the author referred briefly to motor-car construction, how it should be amended to mitigate the dust nuisance, then indicated several of the difficulties retarding the improvement of road surfaces, the intolerable conditions caused by dust, and the unsuitability of present-day roads for present-day needs. The Roads Improvements Association's recent tests and trials were discussed, and Mr. Metcalfe considered (a) palliatives, such as westrumite, akonia, calcium chloride; (b) preparations partly composed of tar or oil, such as crempoid, ermenite, hahnite, pulvicide, and emulsifix; and (c) preparations chiefly composed of tar, such as tar compo, marbit, dustabato, solidified tar, oil of tar, and tarvia, and a short description of

wish to drive with moderation will find that comparatively high powered cars will not entail any more expense. The point is an exceedingly valuable one, and will doubtless be raised by prospective motorists who call into the motor showrooms during the next few weeks. Another interesting comparison furnished by Mr. Jane has reference to the upkeep cost of a 10-14-h.p. car of 1903 and a 30-h.p. motor vehicle of last year's type. In the former case, 19.5 miles were run per gallon; in the latter 13.84. The speeds up a certain hill were 11½ m.p.h. and 28½ m.p.h. respectively. During six months with the earlier car there were eleven engine stops and none with the 1907 vehicle. Equally noteworthy was the behaviour of the tyres. In 1903 the worst cover ran for 2,056 miles, and the best 3,728; last year the mileages were 2,551 and 3,625 miles respectively.

The Taxation of Cars.

FOLLOWING the letters published last week concerning the probability of a revision of the present system of the taxation of automobiles, comes a further sheaf of communications from many leaders of the movement. Men like Sir David Salomons, Lieut.-Colonel Mark Mayhew, Mr. Dugald Clerk,



The Dowager Queen Margherita of Italy in her 40-h.p. Fiat Landulet.

[Allgemeine Automobil Zeitung.]

each mixture or material was given, together with their respective properties, actions, methods of application, cost, &c. In conclusion, the author maintained that the chief hindrance to the improvement of road surfaces was a financial one.

Motor Upkeep.

THERE are some controversies which seem interminable. Like Cromwell as a subject for discussion at debating societies, they present an ever present theme about which both wise and unwise things can be said and written. Unless embroidered with facts and figures, such debates lead to nowhere—a fact which has probably warned Mr. F. T. Jane to wander into tabular proof in his article in the current "World's Work" on the "Costs of Motor Upkeep." He was attracted to the idea that a small car can be maintained at a comparatively less expenditure than one of higher—though not necessarily greatly so—power. There was a theory as to a 12-16-h.p. car being fairly reasonable as regards upkeep, but that a vehicle of more than 20-h.p. meant more than double the expense of the first-named. Having put the problem to a practical and statistical test, he has come to the conclusion that "the theory about low-power meaning economy is all moonshine," and that those who

Mr. G. T. Langridge—to mention but a representative quartette of our correspondents—have done so much to foster the motor-car in this country that their views are likely to weigh well with other motorists throughout the country. Suggestions as to the basis of any new taxation are as varied as the weather, and that the point already raised as to the comparative use of the roads by motorists of different degrees is receiving attention is apparent from our correspondence. Unhappily the difficulties in the way of securing accuracy with regard to the consumption of petrol, the price of the chassis and other factors mentioned as the starting-point for revenue-raising are almost insurmountable.

The Irish Trials.

IN our issue of the 22nd ult., we published the itinerary of the Irish Reliability Trials, to be held from May 21st to 26th of the present year. On another page we give some of the leading points of interest in the regulations, copies of which can be obtained from the secretary of the Irish A.C. in Dublin. In addition to awards for the general excellence of performance, the Goff perpetual challenge cup for team competition will also be in the list of awards.

The Taxation of Motor Cars.

LAST week's references to this subject have called forth a large amount of correspondence, from which the letters given below will be of general interest.

Following the deputation to the Chancellor of the Exchequer the general committee of the Motor Union are now circulating a petition for the signatures of all interested in the prosperity of the roads and the advance of automobilism. This is worded as follows:—

Petition to the Prime Minister, the Chancellor of the Exchequer, the President of the Local Government Board, and the other members of His Majesty's Government. The petition of the undersigned sheweth—

(1) That there has been a large increase in the traffic on the main roads of the United Kingdom during recent years in consequence of the growth of the population and the introduction of new methods of road locomotion, such as bicycles and motor-cars.

(2) That there is a large demand from all classes of the population for an improvement in the highways which are in the care of local authorities whose revenues, mainly derived from local sources, do not enable them to spend the money necessary to maintain the roads in a satisfactory and dustless condition without placing an undue burden on the local rates.

Your petitioners, therefore, pray that all moneys derived from the taxation of motor and other vehicles using the roads shall be paid into a central fund and distributed as grants-in-aid to local authorities for the purpose of expenditure on the highways of the country.

Name.

Address.

The following table shows side by side with the present scale of taxation the scale proposed by the Royal Commission and also by the Motor Union.

| Vehicle. | Present Taxation. | Taxation proposed by | |
|--|-------------------|----------------------|--|
| | £ s. d. | Royal Commission. | Motor Union. |
| Motor-bicycles weighing less than 2 cwt. | 15 0 | 1 0 0 | 7 6 |
| Motor-cycles weighing 2 cwt. and less than 7 cwt. | 15 0 | 1 0 0 | 15 0 |
| Motor-cars up to 12 cwt. unladen | 2 2 0 | 2 2 0 | 1 10 0 |
| Motor-cars exceeding 12 cwt. and up to 15 cwt. | 2 2 0 | 3 3 0 | 2 0 0 |
| Motor-cars exceeding 15 cwt. and up to 20 cwt. | 2 2 0 | 5 5 0 | 3 0 0 |
| Motor-cars exceeding 20 cwt. and up to 25 cwt. | 4 4 0 | 5 5 0 | 4 0 0 |
| Motor-cars exceeding 25 cwt. and above (commercial vehicles excepted)... | 4 4 0 | 8 8 0 | 6 0 0 up to 30 cwt. and £2 for every additional 5 cwt. |

An examination of this table will show that the Motor Union ask for a reduction upon the taxes paid by the users of small powered motor vehicles.

Sir David Salomon, Bart., will always have a distinguished position among those who brought the automobile into prominence in the latter "red flag" days, for it was at an agricultural show near his place at Tunbridge that some cars from France opened British eyes as to the possibilities of the ungainly travelling machine of those days. His views should, therefore, have considerable interest for the great number of motorists who are following the discussion now going on in our columns. Writing what Sir David calls "a hasty line" from Paris, he thus condenses his view:—"1, I consider taxation enough now, and it should go to the repair of the roads; 2, cars do less harm than horses, except, of course, when fitted with studded tyres in wet weather; 3, hence a payment of 5s. per studded tyre might be added to the present taxes; 4, a reduction might be made to those who have many cars, since all are not in use at one time. In nine out of ten cases, for instance, a man may have a large, a small, a closed and an open car; 5, I should suggest that beyond

two cars, fifty per cent. reduction on the others should be allowed from all taxes. The first two cars to be fully taxed should be the largest ones, to avoid unfairness to the State."

One of the most novel suggestions we have received from readers is that from Sir Charles McLaren, Bart., M.P., who writes:—"In my opinion motor users ought to pay for the use of the main roads, which are largely kept up for their advantage, and the money ought to be applied to the improvement of these roads. I consider that the fairest tax that could be imposed would be a duty on petrol. In this way the payment to the Exchequer would be proportionate to the actual usage of the road."

Sir Edgar Boehm, Bart., who has motored in many parts of the world, is very "averse to the taxation of motor vehicles." From personal knowledge gained while on a motor tour in Austria-Hungary and the Tyrol he is able to add that "in Austria, where taxation is carried to a great extent, the effects both on the industry and on owners are beginning to tell in a disastrous way, and it would become just the same over here."

Lieut.-Col. Mark Mayhew was not only the founder of the Army Motor Reserve, but is head of an important industrial firm, and was one of the early leaders in the industrial as well as in the pleasure and military side of the motor movement. In his view "I do not think the idea of taxing motor-cars according to their power and weight is at all unreasonable, but such a tax should be certainly accompanied by an undertaking on the part of the Government that all the money obtained by it was strictly allocated to the main roads of the country."

Mr. Edward Kennard, J.P., who was one of the adventurous motorists taking part in the historic 1,000 mile trial, has strong views with regard to the increased taxation of vehicles. Already the way in which the present law is administered, with the expensive and vexatious risks that have to be run, compel him to seek the pleasure of travel in France, and the possibility of further exactions is apparently not to his taste. Referring to what we have already said on this subject, he writes:—"You ask for the opinion of motorists on the Highway Robbery Bill shortly to come before Parliament. Compared with similar sources of revenue, the motor tax as it stands is sufficiently onerous; its increase spells extortion. With equal wisdom the Chancellor of the Exchequer might propose to put £1 per ton on all yachts, or treble the duties on horse-drawn vehicles! If our pockets are to be lightened by the Dick Turpins of Downing Street, their ill-gotten gains should certainly be devoted to road maintenance, although it is the traction engines that are responsible, and not rubber-shod motor-cars, for any injury to our thoroughfares. Every year I am exiled to France to enjoy the pleasures of motoring, free from the vexatious and frivolous restraints we have to endure at the hands of our nervous legislators."

Mr. G. T. Langridge was for some years the Chairman of the Motor Union, and gave valuable evidence before the Royal Commission. He writes us:—"I have been a motorist, driving myself, for nearly ten years, and am in favour of a moderate increase in present taxation, say, on the lines recommended by the Royal Commission, but such increase to be applied as that Commission recommended, viz., to the upkeep and improvement of the roads. Taxation on locomotion as a help to Imperial revenue is obviously wrong in principle. Horse-power on the crude R.A.C. formula would be an unfortunate basis for taxation, as it must tend to an undesirable type of fast-running engine. I see Mr. Asquith thinks the weight basis has not proved a success so far, but with a proper definition this would be satisfactory. At present no one really knows how the weight is to be taken, hence few owners know within a few cwt. the running weight of their cars. From a series of exhaustive tests and observations over all kinds of roads in all weathers I am convinced that weight is the primary cause of road

damage, and that the non-skid stud, which in many districts is absolutely indispensable, when on such a flexible base as a pneumatic tyre is being unduly blamed by many eminent authorities. Had the present enormous increase of traffic not been self-propelled or carried on anything but rubber or studded rubber tyres the bulk of our road surfaces, as made by our present 2,000 English road authorities, would have become by this time to a great extent impassable."

Mr. Dugald Clerk, M.I.C.E., the well-known authority on internal combustion engines, was a judge at the 1900 motor trials, and has closely followed the technical advance of the industry, both before and since that date. He writes:—"It is always annoying to pay taxes of any kind, but undoubtedly the business of the country could not be carried on without them. If more money is really required by the Chancellor of the Exchequer, it is quite just that the burden should be placed upon those best able to bear it; and I, as owner of a rather heavy car, will not object to pay my share. There is a strong case, however, against further taxation of the light motor-car used by doctors and professional men and the commercial car used for business purposes. Extra taxation on such cars should be strenuously resisted on the ground that it is bad for the country at large to restrict a new and growing industry or to render the means of rapid locomotion more expensive than they ought to be. Any such restriction must operate against the general welfare of the country."

Major J. Bennett-Stanford, who has driven cars over some thousands of miles, is of the opinion "that motorists should pay very much bigger taxes on their cars to the Imperial Exchequer, and that the Imperial Exchequer should hand over to the County Councils a moiety of the sum raised in accordance with the number of miles of main roads there are in that county. I think that traction engines, which one constantly finds pulling five or six heavy trucks behind them, and which do an enormous amount of damage to our high roads, should be very heavily taxed. I also think that motor-cars should pay a sovereign per h.p. annually. I should not be in favour of any reduction being made to business firms, who are never satisfied with any percentage under 25 per annum; nor medical men, who generally charge two guineas for telling one nothing."

Mr. Tonman Mosley, J.P., the chairman of the North Staffordshire Railway Co., and whose experience at the Buckinghamshire County Council gives his views added value, is in favour of the nationalisation of all main roads, and also of the taxation of motor-cars up to 2 tons weight by h.p. On this point he writes:—"I see no reason why the taxation of cars should not be adjusted by horse-power up to 2 tons weight, and above that by weight alone. Height of clearance between road surface and axle should also be considered, as the dust nuisance is intensified by the low build of ordinary cars."

Lieut. M. J. Tuchmann, of the Army Motor Reserve, was one of the earliest enthusiasts for motor-cycling, and believes:—"My own opinion is that motor-cars and cycles are already sufficiently taxed, but that, if further taxation is unavoidable, it should be on the basis of weight, as it is the heavy cars which do damage to the roads, more especially when fitted with steel studded tyres and driven at excessive speeds. Light cars and motor-cycles should be exempt. I am strongly in favour of a central board for the control and upkeep of the national highways, and all taxes imposed on motor vehicles should be devoted to road improvement."

Mr. Ernest Estcourt was one of the first gentlemen of Norfolk to take to motoring, and was a pioneer of motor-boating on the Broads. "Although I am aware," he says, "that there is a difficulty in getting at the horse-power, yet it is a difficulty that, in my opinion, could be got over quite near enough for the purpose of taxation. I think horse-power much fairer than weight. A tax on tyres with an extra tax on steel-studded non-skids would be extremely fair. Weight is, in my opinion, most unfair. Fancy the present owners of our old 6-h.p. Daimlers paying on 23 cwt. and the owner of a 20-h.p. to 25-h.p. modern car getting off under the ton."

(Several letters are held over till next week.)

A NOVEL PETROL METER.

AN interesting and useful instrument, by which the amount of petrol used on a car can be accurately registered, has been put upon the market by the Donisthorpe Patents Company, of 5, Southampton Street, Strand, London, W.C. The device, which is known as the Donisthorpe petrol meter, indicates precisely how much petrol goes into the tank, how much is used each mile of the journey, and how much remains at the journey's end. The mechanism consists of a sheet metal rotary drum revolving on a steel spindle. The drum has four divisions, drawn radially, making four compartments, each having a capacity of one quarter of a pint. In each of the compartments there is a longitudinal float held by two rigid arms made of hard-rolled metal. On the extreme end of the arms there is a clutch, which protrudes beyond the circumference of the drum, viz., in the compartment which is uppermost, while across the frame there is a steel spindle, which arrests the drum after it has discharged the liquid from the loaded compartment. The action of the meter is as follows:—The liquid falls into the



uppermost compartment; the buoyancy of the float is so adjusted that it is capable of acting against the weight of the liquid which raises it; also against the friction which is caused by the stop. As the float rises the clutch leaves the stop, and as the drum is adjusted so that the centre of gravity falls within a certain point, the momentum is always given to the drum in one direction. As the drum revolves the next clutch comes into position and meets the stop just as the former compartment discharges its contents. To prevent any backward motion of the drum a ratchet and pawl device is provided on the spindle on which the drum revolves. The mechanism is contained in a rectangular metal case, which can be fitted on to any existing tank, and having in the glass-enclosed front three dials with small pointers, like those of a gas meter. The lower dial registers in $\frac{1}{4}$ pints up to 8 pints, the upper right hand dial by $\frac{1}{4}$ gallons up to 10 gallons, and the upper left dial registers up to 100 gallons, and then repeats. The petrol is passed in at the top through a funnel in the ordinary way, and falls into the small rotary drum referred to. Altogether the meter is an ingenious device and should prove a useful addition to the equipment of a car, enabling as it does a check to be kept on the fuel consumption.

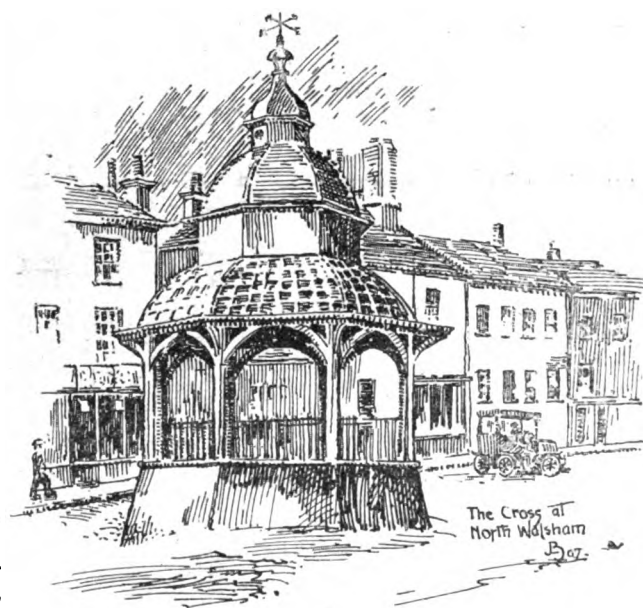
A JAUNT IN NORFOLK.

(Continued from page 10.)

A PRETTY route back to Cromer is by Gunton, with its glorious park, and then through Roughton; but, if time permits, there is a fine cross road that passes Felmingham and Aylsham, and so Blickling may be reached. Blickling Hall is a fine moated old brick mansion, with rows of clipped yew and lime trees flanking it in front on either side. Here Anne Boleyn lived, and it is said that Henry VIII. married her privately in the adjoining chapel. The rustics say that on the anniversary of her execution she revisits her home, dressed in white, with her severed head in her hand, in a carriage driven by headless flunkies, and drawn by similarly mutilated horses. In the Hall there are two wooden statues, one of Queen Elizabeth, the other of Anne Boleyn. The library contains a Coverdale Bible, and some of the portraits would alone repay for a balt, especially Lord and Lady Buckinghamshire by Gainsborough, and Reynolds's Queen Charlotte. In the grounds there are some fountains and statues which were brought from Oxnead. On leaving, the turning on the left should be taken to Wolterton, the seat of the Earl of Orford, and once the residence of Rubens's famous "Rainbow" landscape. An avenue of cedars attracts attention, and, still keeping to by-roads, Wickmere is reached; here a turning to the left leads to Barningham, and so to Edgefield, and thus by Barney to Fakenham, the town to which William the Lion, King of Scotland, brought the Lord of Galloway to make his submission to Henry II. The river Wensum, with a mill, and the reflection in it of the surrounding trees, is most picturesque. A good road leads to the Walsinghams, the old on one side, the new on the other, of the Stifkey. The streets are narrow and probably little changed since the time when pilgrims crowded the town to pray at the shrine of "Our Lady of Walsingham." The remains of the Priory are entered through an Early Perpendicular gateway, and portions of the guest hall and refectory can be made out; parts of the dormitory are included in the present owner's house. The shrine was probably in a chapel that was destroyed after the Dissolution. Erasmus, who visited the shrine, describes how pilgrims were admitted through a narrow wooden door, and that at the feet of the Virgin was a toad, indicating her victory over all evil, and that she was surrounded and covered all over with jewels, gold and silver. He was, I am afraid, rather a sceptic, as, on being shown the joint of one of St. Peter's fingers, he drily remarked, "Peter must have been a man of a very large size." A legend exists that the chapel was first put up near the Wishing Wells, and that it was removed by the Virgin herself to the site it eventually occupied. The wells still exist, one square and two circular, with a margin of stone, and the single wish of the drinker is supposed to be always gratified. Henry VIII. walked barefooted there to pray for his child who was ill. A turning on the left leads to Creak, where there are some interesting remains of an Abbey founded by Edward III.

If time permits, a stop should be made on the way at South Creak, where a sharp turning to the right is taken. Here the church contains an Easter sepulchre and a fine brass. Three miles northwards is Burnham Thorpe, the birthplace of Nelson. His father was the rector of this parish, but the rectory where the hero was born has been pulled down. Most people seem to go to the old church where so many of his relatives are interred, and the church is certainly worthy of a visit. The register can

be seen with his signature as a witness, as well as the old font in which he was baptised. The lectern is made of wood obtained from the old "Victory." The brook or "burn" is very pretty, and in the summer on its banks some beautiful forget-me-nots grow, and when pressed make an excellent souvenir of the trip. On leaving here for the first time my faithful car started to suggest that she was tired, she seemed suddenly to feel our weight, and to "pull badly" and moan loudly. An inspection revealed that one of the exhaust valve tappets had bent and slipped out of its guide, so that the exhaust did not open; that cylinder was asking the other one, not only to do her work, but also to pull her over compression. The tappet had bent and fallen out. It was soon found, and, a smith being handy, it did not take long to heat it, put it in a vice and straighten it. Five minutes after it was in position and we were turning to the left and in the park of the Earl of Leicester—Holkham. Once this was an open, barren country, producing on an average but five shillings an acre, but Mr. Coke changed this by ploughing, turnip growing, irrigation, and spotting the sandy waste land with pieces of sward; abundant crops of wheat and barley cover the land, and where but a few sheep and oxen could be fed thousands now are to be found. He even saw the launch of a ship built of oak from



The Cross at North Walsham.

acorns planted by himself. The Leicester monument commemorates his work; it is a lofty column, surmounted by a wheat-sheaf, and in the bas reliefs at the corners are shown a plough, an ox, a drill, and a sheep. The park contains some fine deer and is well wooded; the evergreen oak is prominent, and some of the specimens are over 12 ft. in circumference. Lady Leicester's flower garden is beautiful, and, if possible, permission should be obtained to walk through the grounds, by the lake, to the house. Kent built the mansion in 1744, and the whole is certainly vast and stately, but the bedrooms are somewhat out of proportion. As Walpole states, we are left to conjecture "whether the host and hostess sleep in a room 40 ft. high, or, like their guests, are relegated to a garret or an outhouse."

The hall, with a surrounding gallery on three sides, is a noble room. In it is a statue of the mother

of Nero. The drapery, part of which has been retouched, is most beautiful. A bas relief of William IV. signing the Reform Bill is worthy of inspection, containing, as it does, portraits of Thomas Coke and Lord Grey. In the north dining-room a colossal marble bust, found in the harbour of Nettuno, should be seen, as well as the Watteau tapestry in the red-and-yellow bedroom. Those who are interested in art will linger in the brown dressing-room. Here is a copy of Michael Angelo's "Call to Arms." This was executed in competition with Leonardo da Vinci for the great hall of a Florentine palace. It is a marvellous work and shows his knowledge of anatomy and foreshortening. The men are bathing in the river when news comes of a sudden attack by the Pisans; the various men, old and young, are hastening from the Arno to arm themselves, and the attitudes and forms are more than life-like. One can imagine that this artist carried out that celebrated "Last Judgment" in the Sistine Chapel; the men remind one of the boatman Charon and that portrait of Paul the Third's master of the ceremonies, who had offended him, and who as a punishment he represents as the judge Minos. Some of the ancient sculptures in the statue gallery must be seen, one of Neptune, of Parian marble, is of very good workmanship, as well as the Apollo and Venus. The drapery of the latter is a perfect model of Greek art. Those interested in landscapes will find

in the drawing room some of Claude's best works, as well as Poussin's poetical representation of a storm. In the saloon is a copy of Rubens's "Flight to Egypt," the original of which is at Blenheim. Among many other works worthy of inspection are Paul Veronese's Mary Magdalene anointing the feet of Christ, and Leonardo da Vinci's Head of Christ; these are in the northern state room, and in the state bedroom's closet there is an admirably painted Polyphemus, seated on a rock, and trying by his performance on a reed pipe to gain the love of Galatea, who is shown with two Nereids on the sea. There is, too, a carving of two woodcocks, said to have been killed by one shot by Chantrey when staying at Holkham. The feat is recorded by Mr. Hudson Gurney in this epigram:—

Driven from the north, that would have starv'd them,
This is the way that Chantrey sav'd them,
He shot them first, and then he carved them.

We spent longer than we intended over this marvellous collection of art treasures, and so decided to stay at Hunstanton, where we found an excellent hotel. On our way thither we passed the old Roman station of Branodurum. In the fourth century a large garrison was stationed here, and, if old stones could talk, many a yarn of pirates driven off would be revealed. It was to this town that the Old Peddar's way led, and in those days doubtlessly many officers on leave galloped by that road to the gay and festive Colchester, perhaps to hear an Atellane play, as the modern Policinello was then called, or, what most likely appealed more to the rude soldiery, that entertainment introduced by Laberius and known as the "Mimes," and which I am sure our modern county councils would not have licensed, but would have deemed that form of mimicry as bad as living statuary.

Hunstanton is a very pretty old place. On the cliff there are some remains of a chapel, said to have been founded by Edmund of East Anglia after his rescue when his ship was wrecked on the coast. The old church contains many tombs of the Lestrangle family, who for over eight hundred years have been owners of the manor, an interesting fifteenth century moated quadrangular house. The breeze along the cliffs is most exhilarating, and made one think of these lines:—

The wind has a language I would I could learn,
Sometimes 'tis soothing, and sometimes 'tis stern,
Sometimes it comes like a low, sweet song,
And all things grow calm, as the sound floats along.

To one's imagination it seemed to tell of a period when excursionists were not, and when gigantic forests stretched across the Wash and prehistoric man maybe lived here in caves and with stone implements hunted wild beasts.

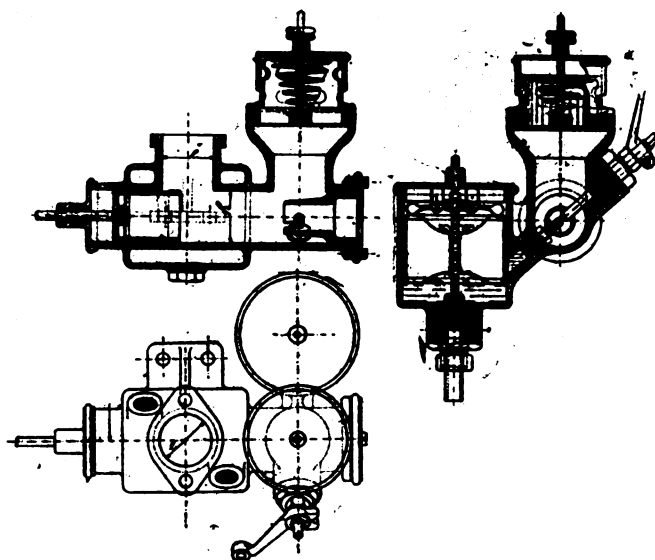
A good road leads through Heacham—famous as the home of the Rolles, one of whom emigrated to Virginia and contracted a romantic marriage with Princess Pocahontas—to Snettisham, over Ken Hill, and then on to Dersingham. After reaching this village the first turning on the left should be taken, and after passing the Early Perpendicular church, the second turning on the left leads to Sandringham House, through heath land. On Wednesdays, during the summer, when the King is not in residence, the public, on obtaining an order from the estate office, are admitted to the grounds. The main entrance is guarded by wrought iron gates, which were exhibited at the London International Exhibition of 1862, and were presented to the then Prince of Wales by the county. They are, indeed, a masterpiece of wrought iron. The public are admitted by the east gate. The stables are interesting. A dark chestnut named Empress, and a black cob called Violet, as well as two bays, Faithful Boy and Bay Lad, especially attracted us, motorists though we were. The motor sheds are close to their rivals, but are not shown to the public. The house is Elizabethan in style; the west front overlooks an ideal Italian garden, with grassy slopes, little paths, and flower beds set with stone baskets. Passing along the path, the canine cemetery is reached, where, close to a sundial, rest some of Her Majesty's favourite dogs. Further on is a stream, spanned by a rustic bridge resting on quaint boulders, and in a little valley we saw a most picturesque waterfall and whirlpool. The path can be continued past York-

House, the residence of the Prince of Wales, and beyond are the kennels, famous for their Clumber spaniels and Great Dane. If time permits, the Ammer road should be followed.

(To be concluded.)

THE TOURAND CARBURETTOR.

WE illustrate herewith a very interesting form of automatic carburettor which has recently been put on the market by Messrs. A. Tourand and Co., of Rue de Longchamp, Suresnes, Paris. As will be seen, a feature of the jet is that not only does it project at an angle into the vaporising chamber, but that it is provided with a needle valve, adjustable from the exterior, which, while it forms a spraying cone, also serves to regulate the amount of petrol permitted to pass out of the jet. This regulation once attained may be either fixed by means of a lock-nut, or the lever actuating it may be connected up to the dashboard to permit the petrol supply to be varied *en route* to allow for the exigencies of the roads over which the car is travelling. The main air inlet is arranged at right angles to the



jet; it is of a pre-determined size, narrowing towards the spraying nozzle, with the result that the air is drawn violently past the latter, the makers claiming that even when the engine is running slowly the motion is always sufficient to ensure good carburation. In the upper part of the device is the automatically-controlled extra air inlet, this being, as will be observed, provided with means of adjusting the tension of the valve-spring. When the motor runs fast it tends to create a vacuum throughout the whole of the carburettor, with the result that the automatic valve is drawn down, and a certain quantity of air admitted to the mixture formed in the vaporising chamber. The latter, which is provided with a throttle valve of the piston type, is also furnished with a hot-water jacket which renders the use of an extension of the main air inlet pipe to a point near the exhaust pipe unnecessary. A plug is fitted at the lower part of the jacket to allow the water to be drawn off in frosty weather. The petrol inlet to the float chamber, in which latter the level of the spirit is maintained at a few millimetres higher than the top of the jet, is provided with a filtering gauze, and is so arranged that it can be readily detached for cleaning purposes. The Tourand carburettor, which is being made in three sizes for engines of respectively 10 to 30-h.p., 35 to 60-h.p., and 65 to 100-h.p., is claimed to enable an engine to be run at speeds varying between very wide limits, that it instantly responds to any variation in the position of the throttle valve, and that it is extremely economical in petrol.

CONTINENTAL NOTES.

The International Congress on Roads.

It has been decided that the International Congress on Roads, initiated by M. Barthou, the French Minister of Public Works, shall be held in Paris during the week commencing October 11th next. The subjects to be discussed are divided into two main groups:—(1) Those dealing with the construction and maintenance, and (2), The effect of different classes of traffic, road signs, &c. In connection with the Congress, full particulars of which can be obtained from the Secrétariat général du 1er Congrès International de la Route, au Ministère des Travaux Publics, 24, boulevard Saint-Germain, Paris, an exhibition of material and machinery appertaining to roads is also to be held.

The A.C.F. Grand Prix Race.

Some particulars of the new cars which are being built for the A.C.F. Grand Prix race in July next are beginning to leak out. The Panhard racers will be of approximately 125-h.p.; the four-cylinder engines having a bore and stroke of 155 mm. by 170 mm. The cylinders are separately cast with copper

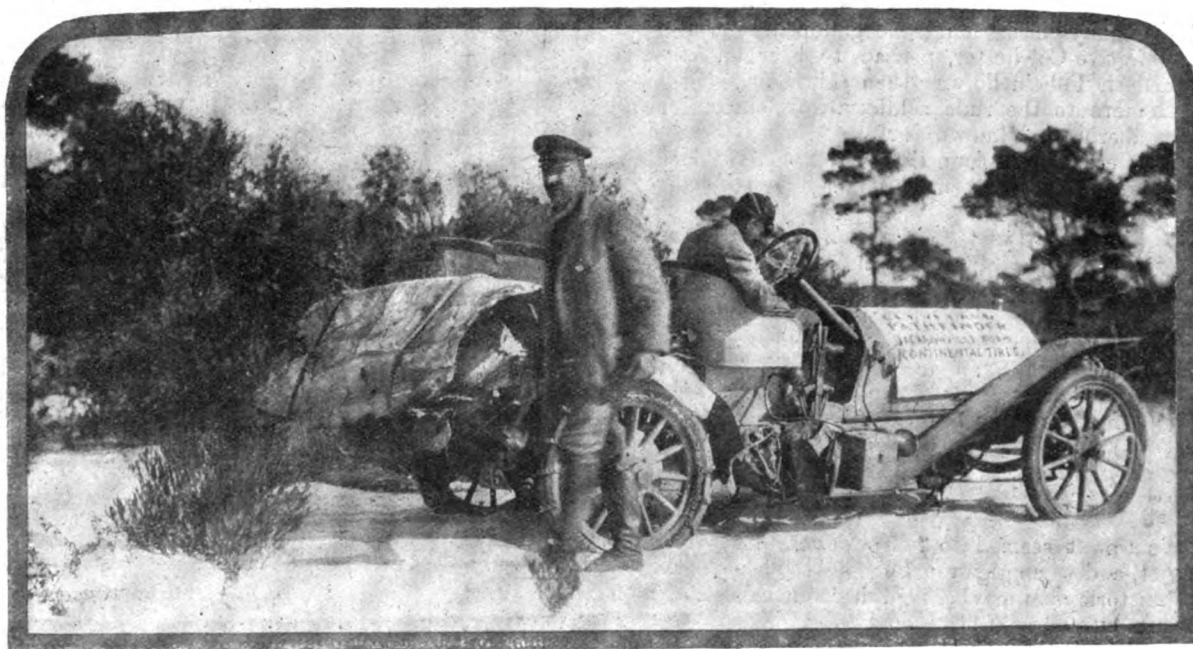
last, which only attained a value of £260,680, as compared with £363,360 in the first month of last year, and £427,680 in January, 1906.

Automobilism in Roumania.

The first motor-car was introduced into Roumania in 1889, and for several years it was the only car in the country. In 1895 three more were bought by private individuals, but until 1903 there was not any large increase in the use of motor-cars. Since then the number has steadily increased, eighty-three being imported in 1906, and eighty-eight in 1907. Not only the post office, but nearly all the Government departments make use of motor-cars for the national service, while in the recent manoeuvres there was utilised for the first time a corps of motor vehicles belonging to officers of the Reserve, which were requisitioned by the military authorities and which proved of great service.

Motor Cabs in Italy.

A company has just been formed in Rome to introduce a service of motor-cabs in the city. It is stated that a commencement will be made with twenty vehicles of the Brixia-Züst type



Motoring in Florida under Difficulties.

The American Automobile Association has sanctioned a 360 miles road race from Jacksonville to Miami, in Florida, to be held in the second week of March. A number of cars, including the "Cleveland" depicted above, recently started from Jacksonville to lay out the route through the swamps and everglades, over ground which the wheels of a car have never previously passed. The road, as far as Rock Ledge, has been traversed by a White steam car, but, beyond that point, there is a wilderness of cane-brake, swamp and sand, the illustration depicting a "pathfinding" vehicle on one of the many sand barrens.

water jackets. Perhaps the most noteworthy feature of the 1908 Panhard racing cars is the transmission, which will be by side chains in place of the cardan shaft system that has been employed by the firm during the past year or so. The racing cars which the Motobloc Company are building will be fitted with four-cylinder engines having a bore of 155 mm.; it has not yet been decided whether to adopt a stroke of 170 mm. or 180 mm. As in the standard cars, the flywheel will be carried between the two pairs of cylinders, while the engine base chamber is directly connected up to the gear-box. High tension magneto ignition will be relied upon; the change-speed gear will give four speeds forward and a reverse, and the final transmission will be by side chains.

French Motor-Car Exports.

The reports with regard to dulness in the French automobile industry, which have recently been current, are borne out by the returns which have just been issued with regard to the exports of motor-cars and parts from France during January

Miscellaneous Items.

The municipal authorities of Amsterdam have lately put in service a 24-h.p. Bussing motor lorry. It is intended for use in connection with the thawing of snow, the vehicle being fitted with a tank for the distribution of a concentrated brine solution. —A motor ambulance is shortly to be placed in service in Nuremberg, Germany. The body will be fitted to an Adler 30-h.p. chassis. —It is announced that at the completion of the heavy vehicle trials in May next the French Minister of War intends to place orders for a large number of motor lorries. —M. Lepin, the Chief of Police of Paris, has given orders for steps to be taken to prosecute motor-cyclists running their engines with free exhaust, or in any way that tends to frighten horses. —A new motor-bus service is being started between Levallois and Neuilly, near Paris. —The annual hill climbing competition for motor-cycles and light cars up Mont Cenis, Italy, is to be held on August 16th next. —Senor El Marques de Valladares, of Madrid, has purchased a Daimler 48-h.p. "Rugby" phaeton with Cape cart hood and glass screen.

A LARGE showroom has been opened on the Cowbridge Road, Cardiff, by Mr. John Norman, who is also fitting up a motor-car repair shop.

THE City of London Corporation has instructed its law officers to report on the powers of the local authorities and the police with regard to motor-'bus traffic.

At the annual dinner of the Essex County A.C. Mr. Burnett Tabrum, J.P., said that fewer licences to motor-car drivers were issued in the county in 1907 than in 1906.

At the half-yearly meeting of the Didcot, Newbury, and Southampton Railway Company, the chairman lamented the way in which their revenue had suffered in consequence of motor-cars, particularly in the neighbourhood of Newbury.

A PURREY 5-ton steam wagon, belonging to a mining company in Algeria, has been requisitioned by the French military authorities for transport service between Turenne, Valla Marguis and Oujda, in connection with the Morocco campaign.

THE Committee of the Liverpool A.C. have made an arrangement with Messrs. Chapman, Von Sobbe and Co., of Mulberry Street, Liverpool, at the request of the Automobile Club of America, to attend to the landing, clearing of Customs, storing, &c., of cars arriving at the Port of Liverpool from America, on a settled scale of charges.

MR. C. DOUGLAS PRATT, who has previously been associated with important concerns both as makers of cars and garage proprietors, has now opened a fully-equipped garage in the main Coventry road, Warwick. Motorists journeying through the Midlands will find Messrs. Pratt and Co. willing and able to be of assistance at all hours of the day or night.

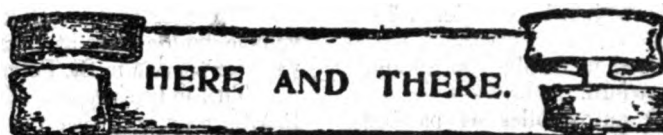
THE automobile race meeting on the Ormond-Daytona beach, Florida, commenced on Tuesday with a 100-mile race for the Minneapolis cup. There were only three starters—Cedrine on a 60-h.p. Fiat, Blakely on a 130-h.p. Christie, and Shefts on a 120-h.p. Hotchkiss. The contest was won by Cedrine, who covered the 100 miles in 1 hr. 50 min. 20 sec.

THE Avon India Rubber Company, Ltd., of Melksham, Wilts., have just issued a new catalogue of the Avon motor tyres, which are steadily growing in popularity. The list not only gives full particulars and prices of the studded, square and round tread tyres, but includes several pages devoted to the care of tyres. The Avon Company are also devoting attention to the repair of damaged covers and tubes.

ON the main road from Horncastle to Kirkstead, at Woodhall Spa, Mr. W. A. Dickinson has a finely-equipped garage with accommodation for fifty cars, and large stocks of tyres, spare parts, motor spirit, and everything that the motorist is likely to require. He has had a long practical acquaintance with the motor industry, and was the first motorist in the town of Woodhall Spa. His establishment is in the Broadway.

In the Commons, Mr. Sinclair, answering Mr. Cathcart Wason, has said that applications for a speed limit on motor-cars had been received since the Act came into force on January 1st, 1904, from seventy-five Local Authorities in Scotland, and in twenty-eight cases orders had been made, while in twenty-seven cases the application had been refused, withdrawn, or allowed to lapse, and twenty cases were at present under consideration.

LUBRICATION is one of "the things that matter," not only in the efficiency and economy of the car, but also in the appreciation it receives from the general public. In the early days the oil used by motorists was scarcely considered; now the most amateurish recognise the important part it plays. Recently that known as "Ilo" has commanded attention on its merits. The trio of letters is an abbreviation of International Lubricating Oil, and briefly express the high grade oil which Messrs. Easton and Melville, Ltd., of 85, Shaftesbury Avenue, W.C., are placing before motorists, after a series of tests which have demonstrated its exceptionally high flash point and uniform viscosity. The Ilo oil is prepared in light, medium, and heavy consistencies, and a series of tests to which it has lately been submitted have proved its excellence over several rivals.



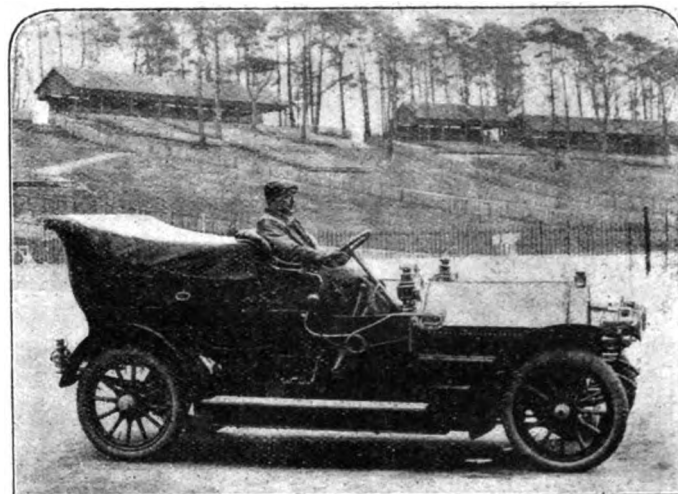
MR. H. WARD has taken premises at 24, Portmanmoor Road, Cardiff, which he intends to devote to the purposes of a motor repair shop.

A MOTOR-CAR that recently escaped a police "control" at

Kingston was trapped in an innocent-looking water splash near Ambercoul, East Molesey.

MESSRS. SPENCER BROS., LTD., report a large entry in the aeronautical section of the Cordingley Motor Show at the Agricultural Hall, London, at the end of the month. Airships, aeroplanes, balloons, kites and motors for aerial work are amongst the most interesting features of the display.

As briefly recorded in our last issue, a noteworthy series of records was accomplished on the Brooklands track on Tuesday last week by a group of Humber cars. There have been many records accomplished at Brooklands, but always either with specially built racing cars or by what are technically known as "stripped" vehicles, that is, chassis from which all the ordinary body has been taken off, and in other ways specially prepared for the test. In this instance, however, there was no such special preparation, each of the Humbers being ordinary standard cars, with complete bodies exactly as sold to the public. More-



The Coventry-Humber 30-h.p. Six Cylinder Vehicle which last week attained a speed of sixty miles per hour on Brooklands Track.

over, allowance must be made for the weather conditions. The gale which lasted over the week end prevented anything in the nature of trial spins at speed, and thereby made the test an even closer approach to anything that can be accomplished by an ordinary amateur driver of his own Humber under similar conditions. The team consisted of the principal makes of Coventry-Humber vehicles, the 10-12-h.p., the 15-h.p., and the 30-h.p. six-cylinder. The times of each of these, as officially certified, were as follows:—10-12-h.p., 37½ miles per hour; 15-h.p., 46½ miles per hour; 30-h.p., 60 miles per hour.

MESSRS. CROCKART, of Blairgowrie, who have been in the motor business for the past six years, have plans prepared for a new garage in that town. The building will be 128 ft. by 41 ft.; skilled motor mechanics will be employed, and a full stock of spares, oils, and tyres will be kept. They intend having cars for hire.

THE dangers of tram-cars were demonstrated the other day in Croydon, when no less than three trams met with accidents. In Norbury a car collided with a baker's van. Later, the same car, being driven by another driver, collided with a milk cart. In the Selhurst Road a car had a collision with a traction engine, and both were slightly damaged. Later, another car met with an accident near Selhurst Station, colliding with a pantechicon. Had the motor-car thus been running amok "Constant Reader" would have written to the papers.

Two petrol motor fire engines have just been ordered for the London Fire Brigade.

A NEW motor depot has been opened in Dublin—at 29 and 30, Dawson Street—by Mr. W. B. Crawford.

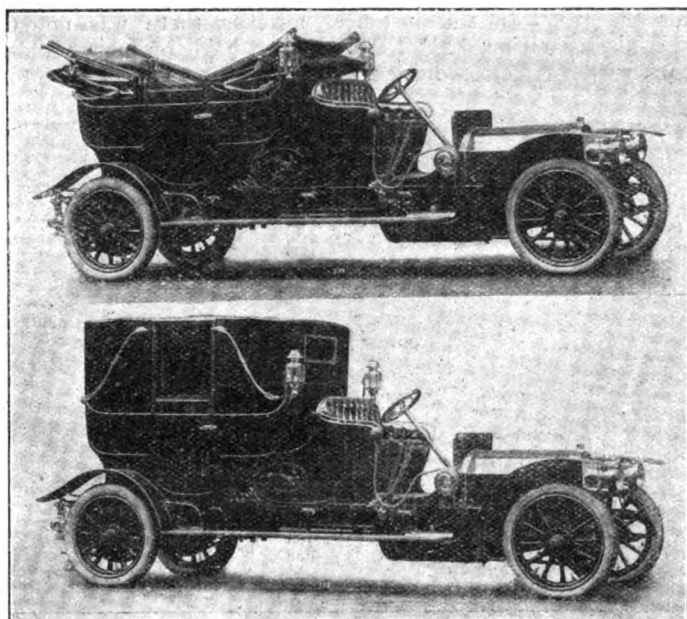
A LOCAL estimate records 6,000 automobiles as passing through Croydon on their way south on Sundays.

THE Daimler Company have received an order from Captain R. Dundas Orr, of Carron Hall, Stirlingshire, through the Ross-leigh, Ltd., Glasgow, for a 58-h.p. Hazlewood phaeton.

OWING to the bad condition of the roadway between Shepherd's Bush and Wormwood Scrubs, the motor-bus service between those points has been temporarily withdrawn.

MESSRS. TAMPLIN AND MAKOVSKI, LTD., have a well-fitted garage in Bell Street, Reigate, and are making a special feature of the repair of tyres by the H. F. vulcanizing process.

FROM the Coventry Motor Fittings Company, of Far Gosford Street, Coventry, comes their new catalogue of radiators, lubricators, and other specialities for the motor trade. Petrol filters and gauges occupy several pages of one of the most interesting catalogues of this kind that we have lately received.



The handsome State Landau built, and now being shipped, by Fiat Motors, Ltd., to the order of His Highness the Maharajah Scindia of Gwalior, Central India.

The car, the bodywork of which is by Messrs. Maythorn and Son, of Biggleswade, is painted a medium green, elaborately ornamented in gold, the interior being upholstered in dark leather, and having seating accommodation for six persons. As indicating the unusual proportions of the vehicle it may be mentioned that the wheelbase measures 12 ft. 9½ in., the overall length being 17 ft. The chassis is a 20-25-h.p. Fiat, the frame being specially constructed both as regards length and strength.

MR. J. J. KEATING has recently extended his motor garage in Dublin, and at the present time building operations are in progress at the rear of his premises in Lower Abbey Street, where he is fitting up a complete garage and repair shop.

MESSRS. SELIG, SONNENTHAL AND CO., 85, Queen Victoria Street, London, E.C., are introducing a handy little tool to facilitate the fixing of motor chains by drawing the ends of the chain together more quickly and easily than by hand. The spanner, which can readily be carried in the tool box, will deal with chains from 1 in. to 2 in. pitch.

A NEW vulcanising fluid, to which the name "Grip" has been given, has recently been put on the market by the South Western Motor and Rubber Company, Kew Gardens, S.W., for use in connection with tyre repairs, either to tubes or covers. The fluid is a secret preparation—the result of many years' experience in the general handling of rubber of all kinds. It is easily applied, and, while it effects a firm and immovable jointing, does not injure the rubber of the tubes. The fluid is also recommended for effecting repairs to waterproof clothing, &c.

WE hear that a well-known British firm of industrial motor vehicle builders are at present negotiating a large order of mail vans for service in St. Petersburg, Moscow and Kiev.

THE judges' report of the commercial vehicles trials of the R.A.C., together with the medals and trophies, are being presented on Friday, the 6th, at the Institution of Mechanical Engineers, Storey's Gate, St. James's Park, S.W. Mr. C. D. Rose will preside over the proceedings, which will commence at 4 p.m.

WE learn from the London and Parisian Motor Company, Ltd., that the Hotchkiss new model 16-20-h.p. car is rapidly meeting with favour in motoring circles. As we can testify from a short run we had on one of them the other day, not only is the car extremely quiet, but the engine, which has all four cylinders in one casting, is exceedingly flexible, the way the car slowly picked its way through the crowded traffic of the West-end, on its top gear, creating an excellent impression on our minds.

AT the annual meeting of the shareholders of Crossley Bros., Ltd., at Manchester, Mr. W. J. Crossley said they had just built and equipped one of the most modern works for the motor car business, and the machinery in this important extension is about to be started. Not only had they fitted up the most modern machinery, but they had secured the services of experts in motor-car construction. Arrangements had also been made to build light delivery vans and other vehicles of that character.

A NEW detachable wheel for use on motor-cars has just been introduced by the Coventry Motor Wheel Company, of Spon Street, Coventry. The wheel is built up on what may be considered a secondary hub, which is slipped bodily upon the true hub that carries the bearing upon which the wheel runs. In one form, as used for light cars, each side of the secondary hub is furnished with three small projections, standing out slightly taper about 3-16 in. from the flange face. The bearing tube, which forms the hub proper, carries a disc at one end, with depressions corresponding to the projections. On the opposite side is fixed another disc having similar depressions. When the disc is screwed firmly home and secured by the lock nuts, the secondary hub is held firmly in driving contact by means of the projections and sockets. By removing the lock-nuts and the outer flange of the hub proper, the secondary hub, with its attached wheel, can be instantly removed. For larger cars a slightly different arrangement is adopted, the hub proper being provided with three pins, which pass right through the secondary hub and take the drive.

MESSRS. L. RUSSELL AND CO., of Station Road, Bexhill-on-Sea, are making a special feature of adapting petrol cars to the thermo-syphon system of water circulation, thus obviating the employment of a pump. By careful tests and close examination as to the position and size of water inlets and outlets of nearly all the engines that have come under their notice they have found it possible to introduce a natural system of circulation, fitting, in most cases, a combined radiator and tank, together with a fan of their own construction. In some cars they have, of course, to alter the outlets and inlets, these being often not large enough and frequently not in the right place. Some idea of the success of the system is shown by an old 12-h.p. Daimler, with a Phoenix engine; some seven years old, which now runs successfully without a pump. They have also converted several other vehicles, including one with an old type Panhard engine, and another with a Mutel motor. The cost of converting cars to this system naturally varies; in the case of a modern vehicle which has got a fairly large combined tank and radiator, the alterations required are not very great, but in the older cars, where a new radiator has to be made and supplied, as well as a fan, the cost is naturally greater; this, it is claimed, being more than counterbalanced by the freedom from circulation troubles and the increased accessibility of the engine owing to the reduction in the piping. We may add that, in addition to this special branch, Messrs. Russell's works are equipped with tools to enable all classes of motor-car repairs to be carried out, and that a large assortment of spare parts, tyres, greases, petrol, oils, carbide, &c., is kept on hand.

Correspondence.

[Letters to the Editor should be addressed to the offices, 27-33, Charing Cross Road, London, W.C.]

DOES AN ENGINE RUN BETTER WHEN WARM?

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—As you are aware, there has been much discussion as to whether an engine should run better cold or hot. With a correctly designed motor there is not the least question that it should give more horse-power while running at a fairly high rather than at a low temperature. With a badly designed engine, however, the horse-power sometimes falls off, or fails utterly when the engine becomes hot, because the faulty design causes distortion or pre-ignition owing to individual parts becoming overheated. Some rather interesting tests have been carried out on the six-cylinder Napier engine, with temperatures of the water jacket varying from 56 deg. F. up to 212 deg. F. These tests show clearly that as the temperature of the water in the jacket increases, so the brake horse-power increases and the petrol consumption decreases—at any rate up to a certain point. Briefly, therefore, other things being equal, the hotter the engine is kept the more horse-power it will develop, the less petrol it will use, and the less it will cost to run. About 150 deg. F. appears to give the best results.

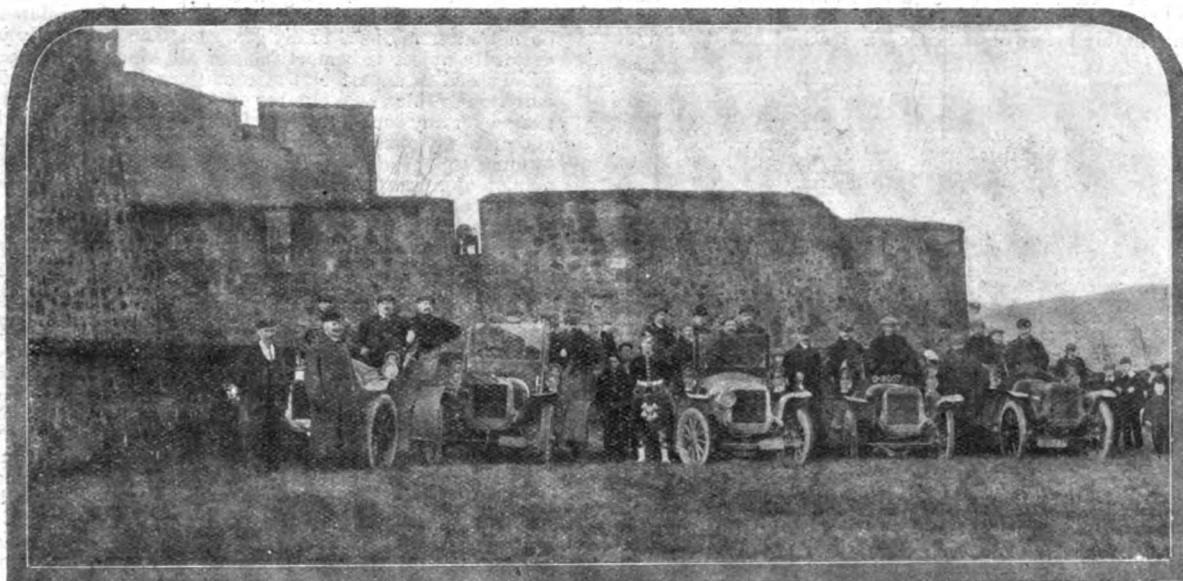
The tests in question were carried out on a 30-h.p. engine, and throughout the speed was kept constant or as nearly constant as possible,

THE TWO THOUSAND MILES TRIAL.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—With reference to the Royal Automobile 2,000 miles trial which it is proposed to hold this season, it seems to us that there is a point of very great importance which has hitherto escaped attention. We have brought this to the notice of the R.A.C. and believe it is to be considered by the Committee.

Taking the four leading causes of loss of marks in these trials, it seems evident that there are two which would be of very minor importance and two of very great importance. Taking as an example, two equally good cars, equally well driven, differing little in power and weight, in matters of reliability and hill climbing, accident barred out, these two cars can be counted on to approximate very closely to one another, and neither will be likely to gain much over the other. This leaves as the deciding factors petrol consumption and the speed attained in the race at Brooklands. Here again, if the cars were geared in identically the same manner, there would be probably very little to choose between them, but there is nothing in the regulations to stop one of these cars being enormously over-geared on its top speed, and it is to this question of the gearing that we have drawn the



Business and Pleasure.

After visiting the Argyl Company's Works at Alexandria, a number of English motor-car agents were recently taken a trip on Argyl cars to Stirling Castle, N.B., where the photograph reproduced above was taken.

at 1,100 revs. per minute. The engine was in every way standard, but obviously there was no attempt made to obtain the maximum horse-power the motor was capable of developing, the question being rather to ascertain what horse-power could be obtained at 1,100 revs. under varying conditions of temperature in the water jacket. The results of the tests show that the greatest horse-power and the lowest petrol consumption coincided, while the temperature of the water jacket stood at 149 deg. F. The results further indicated that a fall in temperature to 56 deg. F. in the water jacket showed the remarkable loss of 6.6 per cent. in brake horse-power.

The next column shows the results obtained in petrol consumption. At a temperature of 149 deg. F. the consumption was lowest, and at a temperature of 56 deg. F. it shows an increase of 11.5 per cent., whereas at this temperature the horse-power indicated a loss of 6.6 per cent. in brake horse-power.

| Water Jacket Temperature. | B.H.P. | Petrol Consumption. |
|---------------------------|-------------|---------------------|
| 149° F. | Highest. | Lowest. |
| 212° F. | 1.0 % less. | 55% more. |
| 186° F. | 6.6% less. | 1.38% more. |
| 115.7° F. | 3.64% less. | 4.8% more. |
| 56° F. | 6.6% less. | 11.5% more. |

These demonstrations seem to afford an interesting field for discussion. I give the results obtained, and leave the matter there.—Yours truly

S. F. EDGE.

R.A.C.'s attention, because it seems to us that the whole result of the trial will depend upon this. Obviously, if one of these cars is geared to forty miles an hour at 1,000 revolutions of the engine and the other car is geared to sixty miles an hour at 1,000 revolutions of the engine, the higher-geared car must use less petrol and must win the race at Brooklands; and it is, of course, not at all impossible, by means of a special gear-box, to arrange that a car shall be thus tremendously over-geared on the top-speed, while the speeds on the lower gears shall remain exactly as they would be on an ordinary standard pattern. Thus, as practically none of the timed hill climbs can be taken on top speed, nothing will be lost on hill climbing, and the abnormally over-geared car will be a winner and gain an altogether illegitimate amount of praise and advertisement.

If anybody has any doubt as to the effect of this overgearing on the petrol consumption, they have only to turn to the records of last year's Scotch Reliability Trial. In this trial two cars were entered by the same manufacturer. One car was enormously over-geared, and the other, of very much smaller power, was geared in the ordinary standard manner. The result was that the high-powered over-geared car very handsomely beat its smaller ordinarily geared sister in petrol consumption.

This abnormal gearing of the car will have far more serious results in the R.A.C. Trial, owing to the introduction of the 200 miles race, to the method in which the cars will be marked, and to the attempt to finish these trials in a cloud of glory at Brooklands in such a manner that the actual winner will receive an altogether undue amount of praise and advertisement.

It certainly seems to us that a 200 miles race at Brooklands is worse than useless. It means speeds which can never safely be attained on the roads, speeds which the public neither want nor ask for. Surely what is wanted nowadays is a first-class carriage which will carry its passengers about in a sensible manner, having due regard to the nature of the roads, in the most comfortable, convenient and silent fashion, and, as far as humanly possible, absolutely reliable and immune from breakdown; and we utterly fail to see the point of submitting a carriage which has to fulfil these conditions to a 200 mile scorch at Brooklands. It seems to us that it would have been far wiser to have fixed some reasonable speed limit for this special 200 miles race—a limit which would have most thoroughly tested the car's endurance, and yet not have introduced the objectionable features of the arrangement.—Yours truly,

NEW ENGINE (MOTOR) COMPANY, LTD.
J. C. Mort (Director).

THE SETTING OF VALVES.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—As the owner of a 16-20-h.p. car I have been very much interested in this discussion. I do not think that "Interested Enquirer" is justified in his condemnation of the sporting offer made by Larrad's Syndicate, as no better proof could be given of their confidence in their system. "I. E." writes that he has told them what happened to one engine which had valves overlapping—"the result was disastrous." I do not quite understand the case he refers to in your issue of February 8th. He says "the mechanic suggested opening the exhaust valve earlier, and closing it later." How can that be done by mere adjustment? If it opens earlier it must close earlier, unless you fit a wider cam. If the exhaust valve he refers to was made to open earlier it must have closed considerably before dead centre was reached, and that might



The 18-h.p. (1908 pattern) Minerva Car just supplied by A. W. Gamage, Ltd., to the Bishop of Bangor.

account for the result proving disastrous. The subject is most interesting, and your readers would welcome further discussion. Exhaust valves are made to open at distances varying from 30 to 60 degrees from bottom of firing stroke; which distance will give the best pulling results?—Yours truly,

YORKS.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—Re the letter in your issue of the 29th ult. I am not in the least offended by the £50 offer—I only regretted the principle—there seems too much of this sort of thing in the motor-car trade. Nor, on the other hand, am I mistaken as regards the instances I mentioned, however much the Larrad Syndicate may think so. I do not, either, cast the slightest doubt on the instances they quote. I quite believe the cars ran better, but there are points of interest in this valve setting that require more going into. In the first place there are certainly, and I am quite ready to admit it, several cars which are (1) not timed right and (2) in which the valves do not synchronise. Now the Larrad timer, as I understand it, irrespective of the special setting, sets all the valves alike, and that is a thing one rarely finds on any car. I had a car when living in France which to my idea was timed wrongly, and not only that, none of the four cylinders were alike. I queried the makers and they sent me a chart of the timing, and I found it was wrong according to their chart, so I altered it to their chart and found a very slight improvement. I had another go at it then. I marked the flywheel out with a protractor and set every valve dead accurate, and the difference was marvellous, which clearly proves that the synchronising of the valves was of far more importance than the actual altering of the timing. And this is why I fancy the Larrad Syndicate effect the improvement they talk of in other words. The improvement is due more to the synchronism than to the actual setting. Personally I take the

trouble to keep valves accurate on my own car, though most people certainly do not, and that is why I get very good results.

There is a drawback, if the Larrad Syndicate will permit me to say so, to their setting in a good many cars, and that is the very long exhaust period cannot be obtained without radical alteration to the cams, sometimes very costly. Take, for instance, an ordinary exhaust setting, opening about 35 deg. from the centre and closing dead centre and $\frac{1}{4}$ in. clearance between valve and support. To get the Larrad period will require a good deal of work, won't it? Do the Larrad Syndicate adopt the same exhaust setting for engines with automatic inlet valves? This is an interesting point, as they cannot claim that the incoming gas will sweep out the exhaust gases, as presumably the inlet will not open until the exhaust is closed. I thank the Larrad Syndicate for their invitation, and if in the neighbourhood I will with pleasure witness the trial; in all probability, however, unless it is soon, I shall be in France. I should like to mention *en passant* that, so far as internal combustion engines go, I have had practical engineering experience lasting over ten years.—Yours truly,

INTERESTED ENQUIRER.

HILL CLIMBING IN EDINBURGH.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—My letter about Frederick Street, Edinburgh, seems to have created a stir, which I regret. My purpose was to save my friend Mr. Richardson from misconception by those who know the place he wrote about. As to Mr. Richardson's suggestion for a contest between his car and mine, I must express my desire to be excused. 1st.—I never compete with anyone. 2nd.—My car is purposely geared for my own wants, and not for showing off on particular gears. 3rd.—Anyone who wishes to pass me at the speed I am on, I always allow to pass me, and do not alter my pace or my gear, not being naturally jealous. 4th.—I decidedly object to competitions of all kinds on the public highways, when speed is a part of the conditions for success. 5th.—I have no ambition to shine as a climber on the highest gear, and my car is not geared for any such purpose. I do not care what gear I climb by if I get up to my own satisfaction, and if others have satisfaction in performing top gear feats, they are welcome to do so, and to have any opinion of my car and myself that they please; I am sure it will be a good-natured opinion. Mr. Townsend kindly offers me an opportunity of driving his car up the gradient in question. I should not be happy in doing so, however well he may be insured. I never drive any car but the one for which I am myself responsible.—Yours truly,

J. H. A. MACDONALD.

DO PETROL CARS RUN BETTER AT NIGHT?

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—Every now and then during the past few years the question has cropped up in the correspondence columns of the motoring Press as to whether petrol cars run better at night than during the day. As a close follower of the various letters that have been published, I have yet to be convinced that they do. I was therefore somewhat surprised to read in the memorandum prepared by Mr. H. Myddleton Gavey for the Motor Union and presented to the Chancellor of the Exchequer as one of the arguments against fixing the basis of motor-car taxation in accordance with the horse-power of the engine, that "no one who has driven cars much will deny that they run far better at sundown to the extent of several h.p. than at other times of the day." The inclusion of such a statement in the memorandum gives it a sort of official cachet, and no doubt Mr. Gavey must have some authority for making it. In view of the great interest that has always been shown in the matter I am sure there are many motorists who would like to hear more from Mr. Gavey on the point.—Yours truly,

BASINGSTOKE.

THE INTERNATIONAL TOURING CAR TRIAL REGULATIONS.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—In November last the Society of Motor Manufacturers and Traders issued a circular, with which was an accompanying chart giving details of a "suggested" standard for touring cars. This circular was issued only the day before the Olympia Show opened, so that for the fourteen days' duration of the exhibition it was impossible for any person engaged in the industry to pay any attention to it. On December 21st we addressed to the Society of Motor Manufacturers and Traders, to the Royal Automobile Club, to every member of the Special Committee of the Society who had been engaged upon the above referred to production, and to every member of the Technical Committee of the R.A.C., a letter dealing with certain objections, from the small car point of view, to the projected touring car standards. On December 30th the secretary of the Society of Motor Manufacturers and Traders replied on behalf of that society to the said letter, when he stated: "The regulations for the proposed contest have proceeded so far that it is out of the question to even consider any radical alterations, even if the points involved are such as might have received special consideration if brought forward at an earlier date."

This means that in six weeks, two of which were occupied by the Olympia Exhibition, the suggestions of the society had become so in-

flexible that they could not be altered. Moreover, it is suggested that the contents of our said letter, which appeared in the press at the time, were of such a nature that, however early the letter had been received, no consideration would have been given. The chart, which was issued as above stated in November, divided cars according to R.A.C. horse-power rating into ten classes. Class 2 was for cars of R.A.C. horse-power from 6.4 to 12. When the regulations of the International Touring Car contest were issued last week it was found that the inflexible rules concerning which any suggestions for alterations could not be considered had in fact been altered so that Class 2 of the said competition is for cars of from 6.4 to 13 R.A.C. horse-power.

When the said chart was issued a good many remarks were made as to the reason why the increase of horse-power was not proportionate and constant in the progressive classes, and why the decimal point so frequently fluctuated. The R.A.C. and the S.M.M.T. no doubt can explain this, but it is admittedly beyond the reasoning of an average man. Upon the face of it, it may appear that to have altered Class 2 by increasing the maximum horse-power from 12 to 13 is insignificant. It is, however, very far from insignificant, inasmuch as it renders no less than at least sixteen cars, which would otherwise have had to compete in Class 3, eligible to compete in Class 2.

It has been stated that the small car particularly has been deliberately ignored or boycotted in organising the above-mentioned competition. Mr. C. Johnson has developed indignation at this suggestion, but if Mr. Johnson or anyone else can give any satisfactory reason:—

1. Why the inaccurate R.A.C. rating formula should be made standard;
 2. Why minimum weight for maximum horse-power should be made standard;
 3. By what unbiased and mathematically correct process the horse-power or "standard" classification was fixed;
 4. Why the above-mentioned alteration was made;
- then it is time for the supporters of the alleged rating formula and standards to speak up and clear the air.—Yours truly,

PERRY, THORNTON AND SCHREIBER, LTD.

STEAM CAR EXPERIENCES.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—In reply to "Amateur's" letter I am pleased to give him my experience with steam. I have driven petrol cars of various makes since the passing of the Motor Act, and have always had a hankering after steam, but for a long time hesitated to get a steam car owing to the general antipathy to them which, as "Amateur" says, seems to exist. However, upon analysing this antipathy I found that it existed almost exclusively among people who either knew nothing about steam cars or else had only had experience of the rubbishy little American cars that came over to this country in the early days of motoring.

About three years ago I bought a Serpollet, and have been driving one of these cars ever since, and must say I am thoroughly pleased with it. I certainly would not now go back to a petrol car. One soon gets into the way of handling these cars, but it takes a little time to get the best results out of them. Of course, steam cars have their drawbacks, among which it may be mentioned that it takes from ten to fifteen minutes to start from all cold, also the heat of the car, which some people object to, but which, at times, is very agreeable. As against these the beautiful flexibility, the splendid hill-climbing powers, and the absence of complications, such as clutch, change-speed gear, and electric ignition, more than counterbalance the disadvantages in my opinion.

Steam cars are not subject to those mysterious complaints which sometimes attack petrol cars and which baffle even the most experienced to diagnose.—Yours truly,

STEAM.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—I can assure "Amateur," whose letter appears in last week's *M.C.J.*, that he need anticipate no difficulties in the running of a Turner-Miesse car. I have had mine for close on four years, and quite expect it to be good for another four years at least. Although I do not own a petrol car, I have had enough experience with them to convince me that a change would not be for the better. I do not know why the prejudice against steam should still exist; it would be interesting to know what "Amateur" has in his mind, but I can assure him that I should not have run my car all these years had I had the trouble that he fears. In short, I consider that if "Amateur" wants a thoroughly reliable, simple, and economical car he cannot do better than get a Turner-Miesse.—Yours truly,

ERNEST A. LEATHER.

EXCESSIVE PETROL CONSUMPTION.

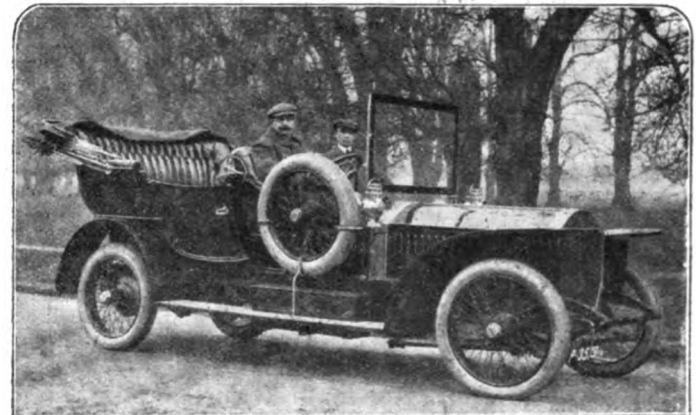
TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—I have recently taken over a 5½-h.p. Baby Peugeot which is in excellent condition and pulls well. I am an old motorist, and have found no fault at all with the engine or gears. My one trouble is petrol consumption. I understand that these cars have different carburettors. The petrol consumption is twenty miles to one gallon, and there is no shooting of the plugs. The reason I think I ought to get more per gallon

is that the engine still runs powerfully, with the spark fully retarded and air inlet wide open. One part of the carburettor is actuated by a pedal, and I believe it is really intended to be an accelerator. But when the pedal is pressed down it shuts off the gas and the engine pulls up quickly. It is very nice for slowing up, but there is plenty of control on the car without it; if you think this has anything to do with excessive consumption. For myself I think something wants doing to lower the level of the petrol in the float chamber and the nipple closing. I have not examined this yet, as I thought it best to have your opinion first. I have done a lot of tackling with carburettors in the past and never really did much good, so I thought it best to have expert opinion before proceeding to do anything. I should be glad if you will advise me as to how to economise petrol. There is just one other thing I should like explained, that is, when letting in the clutch slowly for neutral or any speed there is a loud jar and the engine takes up the drive; then as the clutch is let in further if the gear is in, it slows down; when finally the clutch is completely in the car moves very sweetly forward or backward as the case may be. I may say that the pedal pulls out the clutch before putting on the brake or should do so, but for some unaccountable reason this also stops engine.—Yours truly,

F. S.

[These little cars should run twenty-five miles on a gallon at least. The cause of the excessive consumption of petrol is, no doubt due to the hole in the jet being too large, or else the level of the liquid in the float chamber is too high. We advise closing the hole in the jet. First get a taper jet-reamer, and mark how far it will enter the hole, so as to serve as a gauge for the better regulation of the reduced diameter. The hole can be closed up by planing, or by a little solder. The pedal referred to by our correspondent is not an accelerator but a throttle pedal, and therefore pressing it will of course shut the engine down.]



The 30-h.p. Six-Cylinder Napier Car recently supplied by the Kingston Motor Works, of Kingston-on-Thames, to Mr. Robert G. Taylor, of Surbiton.

The main features of this car are the Rudge-Whitworth detachable wheels, Hopper patent hood and special body by Mulliner, London.

We do not think this in any way affects the consumption of petrol in this case.

Regarding the trouble with the clutch, we should think that it is out of alignment with the flywheel, and possibly also the leather is too hard. As to the pedal brake, this should be adjusted so as to release the clutch first, with which it is interconnected on purpose, but it should have no connection whatever with the carburettor, nor should it stop the engine. It is only a question of proper adjustment.]

ARE TWO IGNITIONS NECESSARY?

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—I see no need for two ignitions, provided one has magneto. I have one motor with high-tension magneto ignition, one with low-tension, and one with accumulators. I do not know which is the best, but the accumulators are decidedly the worst. I have had no serious trouble with the magneto; had both magneto and accumulator on a car, and found I did not want both, so took off the accumulator—this after three years' running. I had more trouble with accumulator in three months than with the others in three years.—Yours truly,

ERNEST ESTCOURT.

LIGHTING THE CAR.—Mr. J. A. Stephenson writes:—"I should be glad if those readers of the *M.C.J.* who have adopted electricity as a means of lighting the front and tail lamps on their cars would give particulars of the method they have adopted, what lamps do they recommend, and what source of current. If accumulators are used, what amount of light will, say, a 30 amp.-hour battery give?"

MOTORING IN THE SNOW IN DERBYSHIRE.

"Is the trip off?" said Mr. Percy Richardson, repeating a question put to him from our end of the telephone on Saturday morning; "not at all, if you're game for the run. We shall be able to show you what the car can do." A trio of us had accepted the invitation of the managing director of the Sheffield Simplex Motor Works to join him for a run over the Derbyshire hills in a powerful 45-h.p. six-cylinder car, but having regard to Thursday night's snowstorm, followed by the frost of Friday, and a further sheeting of flakes to hide the treacherous state of the roads, we had quite anticipated that Mr. Richardson would ask for a postponement of the trip. The idea that he might be desirous of emulating some of the feats of the Paris-New York racers, who are at present struggling with the snows of America, only occurred to us when the car stood at the "Independent" office entrance, and Mr. Richardson, thickly clad for the occasion, announced his readiness for departure, and promised us good sport. The car had not been specially prepared for the trip beyond having the ordinary tyres replaced by Kempshall rubber non-skidders. Mr. Richardson was himself to take the steering wheel, but he had with him a reliable lieutenant in Letzer, who for four years drove the King's car. Thus we made a party of five, and amid the curiosity of a small crowd which had gathered, attracted by the idea of a car going, apparently for a long run, on such a day, we swung out into Fargate, and were quickly away down Pinstone Street.

To the Millhouses car terminus it was a monotony of slush, with the damp air driving unpleasantly over our heads, and a splash of dirty snow occasionally coming over the wind screen. But our thought went forward to the high moorlands, where the snow must be lying deep and white. As we steadily ploughed our way up Totley Rise with the car, running on its second speed, going as smoothly and confidently as though the road were firm and clean, we had the panorama of the hills before us, and excitement began to generate as we realised we were in for both fun and adventure. At any season of the year the Derbyshire uplands have an attraction for the majority of us, but under a white mantle of snow they acquire a peculiar charm. Imagination, in fact, need not be placed at too great a tension to substitute an Alpine road for the mid-English country.

The air grew colder, sharper, more exhilarating as the road mounted towards Owl Bar, and on the moors we could see the snow being whirled aloft by the moderate north wind. "We shall be amongst it directly," said our man at the wheel. "You'll need your coat collars up." The country became more uniformly white, walls and hedges disappeared under huge drifted mounds, and only the gaunt branches of occasional trees stood in shivering black outline against the dazzling eye-straining expanse which rose up to the distant sky-line. Then we seemed to run into a mist, and faces tingled under a freezing blast. When it cleared we smiled at our coats, thickly sprinkled with fine snow, and at one another's dripping, shining faces. A glance at Mr. Richardson showed him gripping the wheel, passively unconcerned. The car had not been allowed to swerve an inch out of its course.

Not a soul was visible at Owl Bar. The Peacock Inn looked deserted, and the wind moaned as it raced past the house, and over the frozen wastes. Half a mile onward we plunged into a deep drift, which a couple of men were bravely trying to clear with the wind laying a fresh covering for every shovelful removed. "Is this where we get out and push?" we sang out cheerily as the car rushed into 18 inches to 2 feet of loose snow. There was no answer, but almost before we had spoken we were through the obstacle, and that, too, without a tremor or a bump. "Any more like this below?" called Mr. Richardson to the men on the road. "You'll just about get through," came the laconic answer.

Down the hill into Baslow the car rushed as easily, as swiftly, and as gracefully as a sleigh on an ice-run. Now and again we shot through another drift, and the snow spurted high above our heads as we drove through the powdery mass. The wind sang in our ears, and thin clouds of driven flakes hit at our faces until feeling was quietened into numbness. But it was all wildly exhilarating, and a laugh of exultation broke out afresh at every difficulty conquered. Gradually we began to gain the shelter of the rocks, and the frozen spray of the moors no longer reached us. The view of the valley as we sped towards the village was quietly beautiful. Two colours, black and white, predominated, and it was only when a clump of dead leaves clinging tenaciously to some stunted bush showed a momentary flash of dull brown that one noted a contrasting touch. The road softened as we got lower, and, despite more favourable conditions, we all instinctively longed to be high up again.

"Which way?" shouted Mr. Richardson. "Bakewell or Chatsworth?" "The park will be pretty," said one of our trio, and Chatsworth was the order. Round to the left went the car, and in a minute we were through the gates and in view of the noble palace of Derbyshire's duke. Here at last was colour. The bright sun shone full upon the house, and the rich stone glowed warmly against the cold stretches of the wintry countryside. I have seen Chatsworth in summer, when the grass has been green, but the skies lowering, and the place has appeared inhospitably imposing. This Leap Year day of February the mansion stood out magnificently inviting and splendidly picturesque. But we were whirled along, and a bank of virgin snow cut off the view. We had a chance to note that the park in its robe of white was bewitchingly lovely, that the sunshine set the untrodden, undulating expanse of

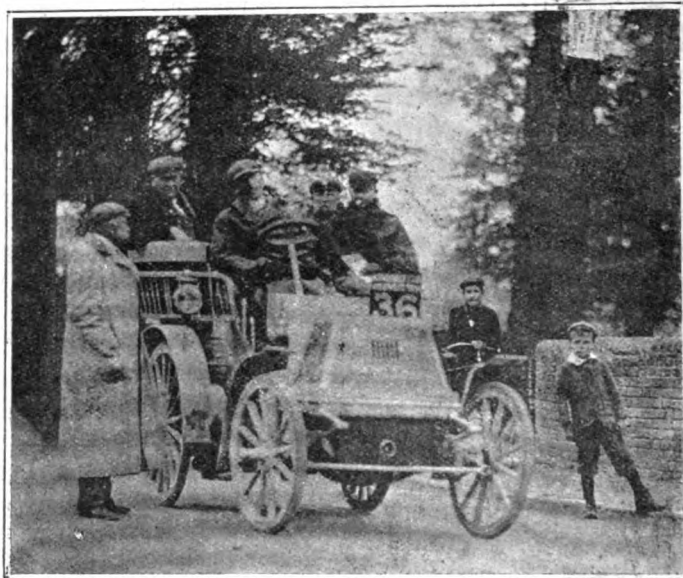
snow sparkling and quivering under the force of light, and that the river flowed sullenly and darkly between the gleaming white banks which confined it to its course.

No element, perhaps, is more impressionable to the weather than water; or, to put it more accurately, no element changes so greatly in its appeal to the mind as water. A little brook, which in the spring suggests joyousness, freedom, and mirth to the sympathetic observer, in the earlier months of the year seems a chilled, morose, imprisoned thing. The song of the running water alters from a major to a minor key, and strikes a note of discontent.

Through Rowsley and Darley Dale to Matlock interest slackened, and Mr. Richardson made good running through the sodden snow. The Bath had that atmosphere of dreariness which seems characteristic of a watering place on a winter's day, and we were glad of the comfort of the Royal Hotel.

Over lunch we planned the return route. As the car had behaved so well, the suggestion was made that we might take the risk of crossing to Wardlow Mires from Monsal Dale Head, as bleak and cold a passage perhaps as can be found in Derbyshire. Mr. Richardson was nothing daunted, and at three o'clock in the afternoon we were retracing our tracks past High Torr, and making for Haddon and Bakewell. The landscape of the Vernon country made a delightful winter picture, and there was infinite enjoyment to be found in the swiftly-changing panorama as we travelled rapidly through the vales.

The Wardlow Mires road gave us the finest ten minutes of the afternoon. The snow drifts were amazing, not merely in the matter of depth and extent, but in the fantastic shapes they had assumed under the rude architecture of the wind. Ridges had been thrown up during the storm,



Mr. P. Richardson at the wheel of the 6-h.p. Daimler Car he drove in the 1,000-mile Trial in 1900.

to be caved and hollowed and twisted by the freakish blasts, and while at one point on the road the surface would be almost clear, a few yards further on the snow would be piled in six and eight feet hillocks, which were continually being added to through acting as buffers to the scudding snow dust sweeping over from the north. Through the drifts a narrow track had been cut for vehicles, but it needed a steady and practised hand to keep us to the course, particularly when every gust of wind set the snow thrashing across the car. Once or twice we plunged into the banks, and really we expected to lose the footboards at every yard. It was a tribute to the strength and first-class workmanship of the Sheffield-Simplex cars that we came through without the slightest accident.

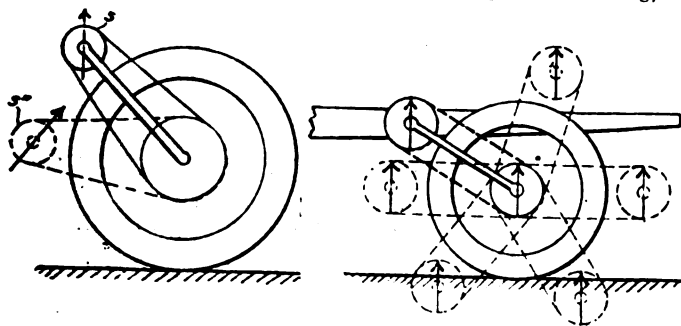
Strangely enough, it was on the ridge that we passed the only other car which seemed to be out on the hills on Saturday afternoon. The subsequent run through Middleton Dale to Calver, Grindleford, and Bamford was enjoyable, although we had left the fun behind on the hills. It had been our intention to return over Moscar top. A suggestion, however, that tea at Dore might be acceptable plunged every one in hearty accord; and after a call at the Marquis of Granby, we finished a splendid day by a sharp climb up to Fox House, crossing from there to Owl Bar, with the snow mists beating more fiercely than before, and a final glide down the freezing road to Totley. In the evening the sheeted fields were softer and more beautiful for the golden light of sundown, and the tints on the hills ranged from purple blue to a lovely rich cream.

Our vote of thanks to Mr. Richardson over tea was carried in ro formal spirit. The run had been a fine test of his pluck and skill. When we ventured to suggest as much, his answer was: "It's been a test for Sheffield steel, and I'd back that chassis to come through worse than we've tackled to-day."—L. A. N. in the "Sheffield Daily Independent."

A NUMBER OF THINGS: AND THEIR EFFECT ON TYRES.*

To make a back tyre live as long as a front one is one of a motorist's dreams, and when he has stated this wish categorically he has given himself an indication of a direction which research may usefully take. Let us take it, and so be led to consider certain effects which are known but rarely.

Many parts of a car seem to have nothing to do with tyres until one dwells upon their elementary functions. For example, nothing seems more inert in this connection than a distance rod. Considered as the piece through which the car is pushed forwards, it is known to be in compression and accordingly stiff. As being the piece which is connected both to the frame and to the axle it must be hinged at the fixing, and

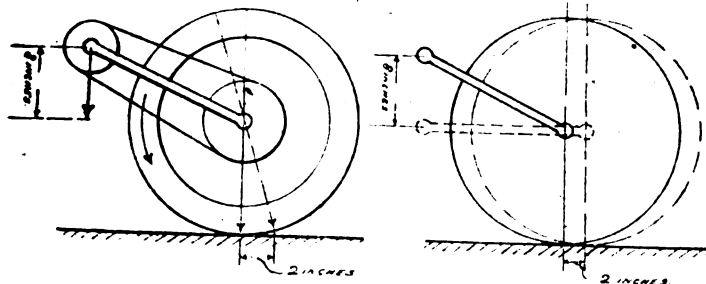


Figs. 1 and 2.

as the sides of a car often rise and fall unequally on the springs, the distance rod must also be pivoted for side movement at the hinge. A radius rod is handicapped in life by taking part in an impossible task, and accordingly it fails. What this has to do with tyres will be shown first as regards chain-driven and then, more briefly, for shaft-driven cars.

With a chain-driven car the distance rod is often supposed to prevent the taut side of the chain from varying in tightness when the car body moves up and down on its springs. If it fails in this the drive to the road wheels will be irregular, and the tyres will rub. Looking into detail shows us that it does fail, and the question to be answered is simply this: Is the tyre rubbing due to this cause negligible? To study this we will first suppose the car at rest, the back road wheels prevented from turning, and a very heavy weight put on to the chassis over one of the back springs. This lowers the chassis, and with it the front sprocket (Fig. 1) from position S1 to position S11, which we may suppose to be the extreme movement when the car "bumps," say, 8 in. to 10 in.

The distance rod prevents S1 from leaving a circular path round the back sprocket. The upper chain is carried round with it, and is obviously wound on to the stationary back sprocket. At the same time a certain amount of chain is, for a similar reason, wound off the moving one. If the sprockets were of equal size, the amount wound off one sprocket would equal the amount wound on to the other, and neither would turn on its axis, as shown in Fig. 2. But normally the front sprocket is the smaller, and accordingly it has to rotate as shown in Fig. 1. It is very important to appreciate the amount of this rotation, and its direction. If a small sprocket moves once round another having a larger circumference, a length of chain equal to that larger circumference will be wound on to the larger sprocket. If, then, the smaller



Figs. 3 and 4.

Wheel diameter, 34 in.; radius rod, 22 in.; large sprocket, 12 in.; front sprocket, 8 in.

sprocket is one-third smaller, as is common, it will have to rotate through one-half of a revolution, and proportionally for fractions of a revolution. The direction of its rotation will, as shown by the sloping arrow in Fig. 1, be clock-wise for a downward movement to the dotted position. It will be noted that this tends to turn the engine backwards, after taking up all the backlash or play in all the gears engaged, including the chain.

* Abstract of paper read by Mr. Mervyn O'Gorman before the members of the Royal A.C., on Thursday, February 27th, 1908.

In practice, when the car is not stationary, the converse is usually the case—namely, the front sprocket S is prevented from backward rotation by the engine or the foot-brake—and the back wheel must, unless the chain snaps, rotate forwards (the backlash having already been taken up by the engine pull). Every time the tyre rides over a lump this occurs in some degree, and when, as sometimes happens, the car body oscillates vertically over the full range of clearance of the springs, the movement is greatly exaggerated.

It is easy enough to calculate the amount of movement, but it is more convincing to illustrate this forward rotation by a model made to half scale of a chain drive and road wheel. The front sprocket of the model is locked, and the road wheel free to turn. Taking a vertical downward movement of the springs of 8 in., and the usual dimensions of wheel and sprockets given in Fig. 3 the wheel turns through such an angle that the tyre slips forward 2 in. Simultaneously, the radius rod, in moving from a sloping to a more horizontal position, pushes the axis of the wheel through an additional distance of 2 in., as shown in

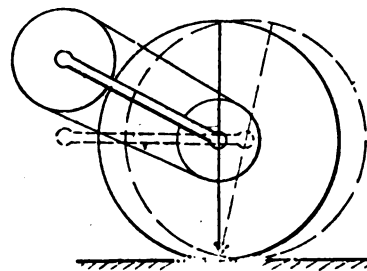


Fig. 5.

Fig 4. It is now necessary to see how long an interval of time this movement takes. If the time is very short, the inertia of the car and engine respectively will prevent their moving forward, and the wheel will consequently have to skid.

On an undulating road, at moderate speeds, it is possible to count on some cars as many as eight half oscillations in one second, but when a series of deep puddles is encountered, anyone carefully watching the axle of his car-bobbing up and down before him (the front axle is the easier one to watch for this purpose) will realise that one-fifth of a second is not an excessive time for a complete oscillation, or one-tenth of a second for a half oscillation. In the case of a raised "road-crossing," the complete half oscillation—i.e., the time between passing the crossing and feeling the bump—is certainly not much in excess of one-tenth of a second at high speeds of travelling. A simple calculation shows that a bad road hollow 2 feet wide traversed at forty miles per hour is passed in less than one-twenty-ninth of a second. Whether or not the wheel follows the profile of the ground on the first part of the down slope, it will be found in most cases that by the time it has struck the far side of the puddle and rebounds from it the car body will have started its downward movement. We have, therefore, the wheel moving up and the car body moving down with considerable velocity. As far as I could judge when noting this, the car had not moved three feet beyond the hollow before the bump occurred. At this speed three feet represents one-twentieth of a second, and during this short time the car would either have to be thrust forward 4 in., or the road wheels must skid round that amount.

To determine which must occur is quite easy, thus: To thrust a 3,000-lb. car forward 4 in. in one-twentieth second is to give it an added velocity of 80 in. per second or 6.28 ft. per second, or 4.4 miles per hour, and this would be done in one-twentieth of a second. Such a push, if continued for a whole second, would give the car a velocity of 88 miles

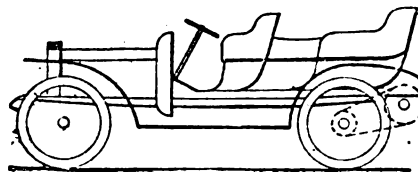


Fig. 6.

per hour (in one second), and would require a pull of 12,000 lb. This pull is seven or eight times the adhesion between the ground and the back wheels, so that we may safely say that the wheel skids, both at this speed and at speeds of one-half and one-third of this amount. The amount of the skid is 11 per cent., which represents work done in wearing and heating the road—raising dust and heating the tyre. The power to effect this work is derived from the engine, and is a loss. If we suppose that on the average this loss amounts to only 5 per cent., because the average travel of the springs may be taken at 4 in., we still find quite an important diminution of speed when the car is going all out. A remedy has occurred to me for this trouble in chain cars. I have two different sprockets from those we have been considering, both for the back and front. Contrary to normal practice, the small one is on the road wheel, and the large one in front. I will

recall that we had 2 in. of skid due to the sprockets and 2 in. more due to the radius rod, and all I propose to do is to work these two skids in opposite directions, and as nearly as possible simultaneously. This I show in Fig. 5, where at the end of the downward movement of the sprocket the two movements have, within a certain margin of error, cancelled out. In this particular case the sprockets are of the same diameters as were used before, their positions only have been exchanged.

It is clear that as the front sprocket turns slower for the same car speed, the gear-box ratios must be proportionally increased, and the front sprockets and their shafts, &c., made stronger. These inconveniences are matters of cost rather than technical difficulties, and I think them small compared to tyre bills. Moreover, 11 per cent. of skid, as has been shown, means 11 per cent. loss of power—a larger loss than that due to the increased gear reduction ratio. It is notorious that a car side-slips less when the clutch is out. This immunity arises chiefly, as is well known, because the engine is no longer pulling at the wheels, but also in a less important, but not negligible, degree, because the jerky efforts on the tyres due to the springs are now free to expend their malign influence on the light part of the clutch, which, having little inertia, can vary its speed very freely, and so relieve the wheels.

Before leaving the question of skidding and chain-driven cars, I would like to put forward for discussion a suggestion for placing the gear-box in a new position. This new gear-box position, which offers some merits, is at the rear, instead of in front of the road wheels, as shown in Fig. 6. Side sprockets in front of the doorways of the normal car are drawbacks which have sent many a buyer in quest of live-axle cars, especially for town carriages. The gear-box becomes more accessible at the back, yet it would not be any more prominently ugly than the tank which so often figures there. The tank, it is true, would be displaced to the popular position under the front or back seat, where it would obstruct nothing. A slight shortening of the wheel-base for a given amount of doorway space would result from moving the front axle, say, 6 in. back.

The reasons against it are not negligible, for I think there are many who will not abandon the "gate" change under any consideration, and this would seem necessary. Designers will object to the long rods required to actuate the distant spur wheels, and to the long propeller shaft necessary to reach the gear-box, though similar difficulties have been overcome in commercial cars and omnibuses.

As regards cars with propeller shafts, I will treat this section briefly, and begin by showing a model of a car like some that are now being made, in which there is only one universal joint behind the gear-box instead of two. This car has the curious property that, if fitted with a fine ratchet sprag, it can be caused to travel forward by the persons in the tonneau simply jumping up and down so as to work the springs, and illustrates the effect that a road shock has in causing the road wheels to turn forward, or, failing this, to skid.

From the point of view of the heavy unsprung weight on the back axle, the propeller shaft car should be substantially harder on tyres than the chain-driven vehicle, and in some cases it is so. In other methods of construction such care has been taken of what I have called the "radius-rod effect," that in spite of the above indicated disabilities they are actually less wearing to tyres. In the propeller-type car the following provisions must be made:—(a) A universal joint to allow the transmission to be flexible. (b) A push rod (corresponding to the radius rod of chain cars) to push the car along. (c) A torque rod, sometimes the springs, sometimes the propeller shaft itself, arranged to take the reaction of the drive; that is to say, a piece which tends to lift the front of the car when the engine exerts its power. Each of these provisions has problems incidental to it, which bear on the wear of tyres.

No self-respecting maker allows the propulsion or push forward of the car from the road wheels to take place through the propeller shaft, as this would throw an immense pressure on the universal joint, and on the bevels, consequently some form of push rod is provided. This rod is being used in compression, and should be of fixed length like the radius rod of chain cars. Unlike it, however, it may without inconvenience be made very long, so that the angular movement for a given play of springs is less. Still, however, both causes of wear mentioned in connection with chain-driven chassis are found here in some degree:—(1) The axle is forced backwards, because the horizontal projection of the push rod is increased. (2) The wheel is caused to rotate through an angle swept out by the push rod, and these two troubles are additive.

Lastly, in those numerous cases when the push is taken through the springs the flattening of the spring gives a further movement backwards to the axle, and this movement is again additive.

In the worst cases of propeller-shaft cars the effect of spring action is worse than with chain cars, but in the majority of propeller-shaft cars such precautions have been taken in one way and another, that they are better than chain cars as made at present in respect of "radius-rod effect." I am disposed to think that the superior kindness of chain cars to their tyres would long ago have become accepted, were it not for the much greater length of the push rod and propeller shaft in the live-axle type.

The torque rod does not affect the question of tyre wear, save in so far as it is through its agency that the engine causes the back wheels to take an increased share of the load or weight of the car, and to relieve the front wheels to a corresponding degree. Some torque rods act against a spring, and in this kindness is shown to the tyres at starting.

In the best type of live-axle cars employing two universal joints, a slide, and a parallelogram of radius rods, the effect we have been con-

sidering is reduced in practice to less than one inch of tyre movement for 6 in. of spring movement. All that is now wanted is that a demand should arise for cars which are *easy on tyres*, as against cars which are simply cheap in capital cost. A hundred pounds invested in this way in the car will very easily earn its interest.

In conclusion, I must admit that I have obviously only dealt with very few of the "numbers of things" which cause back tyres to wear more than front ones, so I will give a summary containing some remaining causes. Wear of tyres is ascribable to:—

(1) *Engine driving effort*: (a) Even if the turning moment is uniform. (b) Un-uniform turning moment exaggerates this wear somewhat, but the un-uniformity of the ordinary engine of four or more cylinders is smothered under the other un-uniformities introduced elsewhere.

(2) *Clutch*: (a) If fierce or let in roughly. (b) If fierce, especially when reversing, as the torque takes load off the driving wheels.

(3) *Radius-rod Effect*: (a) With chains I believe this to be practically curable by adopting my relationship between sprockets and radius rod. (b) With propeller curable by two universals, one slide, and a proper parallelogram of distance rods.

(4) *Transmission*: Part of the transmission often introduces an un-uniform conversion of speed—e.g., one universal joint (so does a chain, both in a small degree usually).

(5) *Weight* causes bending of side walls, and therefore fatigue of tyre. The drive of the engine transfers weight, say 100 lb., to the back wheels, and adds to this effect. Unsprung weight on back axle causes heavy blows on the ground, the momentum of which adds further to this effect.

(6) *Brakes* cause skid and wear. The effect of applying the brake is unfortunately to take weight off back wheels. Unbalanced brakes: Loss of adhesion by applying brakes to only two wheels, thus doubling the wear on them.

(7) *The Differential*, owing to its unfortunate property of turning the wheel with least adhesion.

Some of these causes of wear are important from the magnitude of the motion, and some are important from their frequent recurrence. An example of the one is the effect of a fierce clutch on reversing, and an example of the latter is the effect of an un-uniform turning engine, say, of two cylinders, or with an inadequate flywheel. But of all the above-named causes one stands out as combining frequent occurrence with fairly large movement, and I lay this charge to that part of the transmission in chain-driven cars, with which the radius rod is associated. There is reason for thinking that if this trouble of chain cars were cured, the great comparative lightness of their back axle—i.e., the absence of excessive unsprung weight if combined with a very gentle acting clutch—would render them so much cheaper to keep in tyres as to turn the tide of popular feeling strongly in their favour once more, even for cars of as small a power as the now prevalent 24-h.p. (R.A.C. rating).

AN INLAND REVENUE CASE.

THE Hon. Mrs. Henry Beresford, professionally known as Miss Kitty Gordon, has attended before Mr. Plowden, at Marylebone, to answer summonses by the Inland Revenue Commissioners for employing a male servant (chauffeur), keeping a motor-car, and wearing and using armorial bearings on the car without having taken out the necessary revenue licences for the previous year. Mr. Barry Cohen, solicitor, who defended, in explaining why Mrs. Beresford had not taken out the licences, said she had shared with the general public a mistaken idea that in paying the London County Council licences for the car and the chauffeur she had done all that was required of her. She had also been under the false impression that a chauffeur was not regarded as a male servant; and with regard to the armorial bearings, she fell into the common error that, having inherited a right to use them, she was not required to pay for them. Mr. Plowden ordered her to pay the amount of the licences—£7 1s. in all.

OWING to their increasing business, the Motor Supply Co., Ltd., have found it necessary to acquire the premises at 110, Piccadilly, London, W., adjacent to their present showroom and offices.

WE understand that the old-established firm of Geipel and Lange have changed their name to Geipel and Co., Mr. Lange having retired from the business some eighteen months ago.

THE 45-h.p. Mercedes which His Majesty King Edward has recently ordered from Messrs. Daimler Mercedes, Ltd., is to be fitted with a covered body. It will have two ignitions, Bosch low-tension magneto and high-tension coil and accumulator, and its driving chains will be protected by the new Mercedes chain cases.

APART from possessing an accessory which, to use a time-honoured phrase, meets a long-felt want, the success of the Stepney Spare Wheel Company is in no small measure due to the enterprise which has been shown in connection with the business. An excellent proof of this was afforded us one day last week by the arrival of a bundle of six catalogues, which, on examination, turned out to be each in a different language—English, German, French, Italian, Spanish, and Portuguese. As these catalogues are being widely distributed in the countries in which the respective languages are spoken, the reputation of the Stepney spare wheel bids fair to become world-wide at no distant date.

CLUBS AND ASSOCIATIONS.

ROYAL A.C.

THE arrangements for the entertainment to follow the annual dinner of the Club on the 12th inst. are in the capable hands of Mr. Frederic Coleman.

A French set of Customs papers recently issued by the Royal A.C. Touring Department to Lord Cairns bore the number 2,000, thus proving the popularity of that department.

AUTOMOBILE ASSOCIATION.

THE efficiency of the road organisation scheme of the A.A. was recently shown in the recovery of the lamp of a member that had been lost from his car while travelling on the Bath road.

Mr. Walter Gibbons is kindly undertaking the direction of the musical entertainment to follow the third annual dinner at the Hotel Cecil on the 18th inst.

AUTO-CYCLE UNION.

LECTURING to the members of the Auto-Cycle Union last week, Mr. H. G. Ball gave a forecast of the future of the movement, and touched on some very practical points. The two-speed gear in use on a machine effected a great reduction of the side-slip evil. Its existence on a machine permitted a slow speed to be maintained without any sharp "snappy" pulls on the back wheel, since the engine could be run at a fair speed though the machine's rate of progress was comparatively slow. Where the two-speed machine scored most of all, perhaps, was in hill-climbing when the roads were treacherous. The fast rush necessary on the single-gear machine, when one wished to ensure reaching the top, was attended by considerable risks. He was optimistic as to doctors, in particular, taking advantage of the assistance to them the light-weight machine afforded. They were almost invariably mechanically inclined, and quickly took up anything that assisted them. The chief merit of the light-weight machine was its hill-climbing quality, while their engines made little noise. The most remarkable point in connection with the light-weight machine was that instead of a demand having created a supply the usual position had been reversed.

THE ROADS IMPROVEMENT ASSOCIATION (INCORPORATED).

IN continuance of its investigations into the problem of dustless road construction the Roads Improvement Association has just issued a pamphlet giving particulars of the "Gladwell" system of construction and renewal of road surfaces. It contains a specification jointly drawn up by Mr. Arthur Gladwell, Engineer and Surveyor to the Eton Rural District Council, and Mr. G. W. Manning, Engineer and Surveyor to the Staines Rural District Council, with an introduction by Col. R. E. Crompton, C.B., M.I.A.E., M.Inst.C.E., Vice-Chairman of the R.I.A. Messrs. Gladwell and Manning show that, in their respective districts in Buckinghamshire and Middlesex, by following the system that they have specified they successfully laid lengths of road at a cost of, at the outside, 3l. per square yard in excess of the ordinary cost of repairing by the older methods, and when the increased durability and reduced cost of scavenging of the waterproofed surface is taken into consideration, the cost of maintenance, spread over a term of years, seems in a fair way of being reduced, in spite of the heavier traffic which is practically certain to come on all classes of roads in the immediate future.

THE INCORPORATED INSTITUTION OF AUTOMOBILE ENGINEERS.

THE first general meeting of the Graduate Section of the above institution was held at 1, Albemarle Street, W., on Tuesday of last week, over forty graduates and friends being present. Dr. H. S. Hele-Shaw took the chair. A paper was read by Mr. L. H. Baskerville-Cosway on "The Methods of Testing a Motor-car." The influence of design upon testing and the tests, the tests of materials and castings used in making a motor-car were the first two points dealt with. The "running in" of the gear-box and the back axle, the erection of the engine with the setting of the valves and ignition followed. Passing to the testing of the engine and defining the preliminary adjustments of the carburettor and ignition systems, the reader gave an idea of how the brake-horse-power could be determined by the dynamometer. The testing of the chassis on the road with further adjustments to carburettor, ignition and transmission systems were then considered, and the testing of the completed car and such points as the location of squeaks, efficiency of brakes, clutches and steering gear, &c., concluded the paper.

Discussion followed, in which Messrs. Taylor, Hubbard, Hopcraft, Hooper, Thomas, House, Power, Thompson, Bishop, Kennelly, Harvey, Birchall, Hounsfield, Harrison, and Bourne took part. The Chairman remarked that the paper and discussion had brought forth a number of points which would prove very interesting if they were read before the Section in the form of papers. He called for a vote of thanks to the writer for presenting such an interesting paper, and this was heartily responded to. Mr. Cosway briefly replied, and the proceedings terminated with a vote of thanks to Dr. Hele-Shaw for taking the chair.

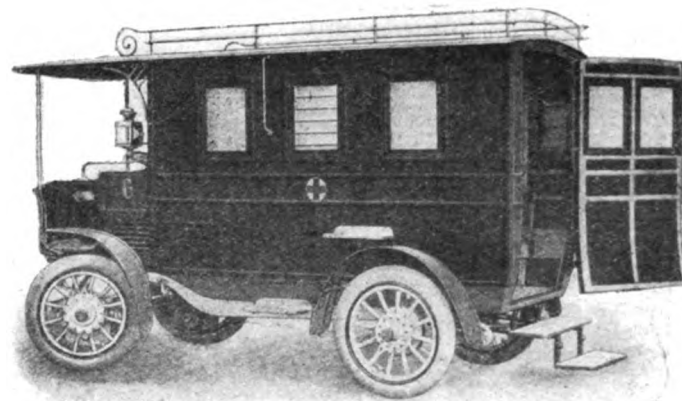
CRYSTAL PALACE A.C.

FROM the number of entries already received the forthcoming Open Flexibility Competition on April 11th gives promise of being a success. Several 8 x-cylinder cars which have not yet taken part in any events in England will be running, amongst others being the Porthos, of which two sizes are entered, one by Messrs. Colin Dafries, the other by Mr. Malcolm Seton-Karr.

LADIES'.

RECENTLY, Mr. Sedgwick Currie, M.I.A.E., addressed a number of the members of the L.A.C. on the subject of "Carburettors and Carburation." He dealt with this matter very fully and gave the members many important hints as to the care that should be taken of carburettors. Gears and gearing were also dealt with, and practical sketches and parts were shown or described of every known system of gearing. The following lesson was on "Differential, Cardan Shafts and Live Axles," which were concisely described, the descriptions being made interesting by the many parts which had been lent for the purpose of demonstration by Messrs. Daimler, London Motor Garage (Charron), and Adams.

Mr. and Mrs. Charles Cordingley have this year again invited the members of the L.A.C. to visit Mr. Cordingley's thirteenth International Automobile Exhibition at the Royal Agricultural Hall, Islington, and afterwards to take tea with Mrs. Cordingley in the club room. The invitations are for Thursday, the 26th inst. It is hoped that members of the club will be able to visit the Exhibition on that day.



The Electrical Motor Ambulance recently supplied to the Fire Brigade of Bremen by the Norddeutsche Automobil und Motoren Gesellschaft.

MOTOR YACHT CLUB.

THE annual general meeting of the Motor Yacht Club and of the Motor Yacht Club Proprietary, Ltd., was held at the Royal A.C. on the 27th ult. The Rear-Commodore, Commander Mansfield Cumming, R.N., took the chair, and there was a good attendance of members. Mr. F. P. Armstrong presented the annual report, which was carried unanimously.

The Duke of Sutherland, K.G., the Lord Montagu of Beaulieu, and Commander Mansfield Cumming, R.N., were re-elected the flag officers of the club, and Mr. Lionel de Rothschild was re-elected hon. treasurer. The meeting then proceeded to the election of the new committee, the result of the ballot showing that the following were elected:—Messrs. F. P. Armstrong, F. R. S. Bircham, F. H. Butler, E. J. Caldwell, Lorne C. Currie, Capt. R. T. Dixon, R.E., Commander Sir Hamilton Fraser Smith, R.N., Messrs. J. G. Knowles, H. W. Hutchinson, A. G. New, G. Foster Pedley, Bernard Redwood, J. A. Reanie, G. F. Sharp, J. D. Siddeley, L. R. L. Squire, T. Thornycroft, T. D. Wyna Weston, the Hon. A. Verney Cave, and Major S. F. Warren. Messrs. A. W. Barr and Co. were re-elected auditors.

IRISH.

SIR HORACE PLUNKETT, K.C.V.O., took the chair at the annual general meeting of the Irish A.C., which took place on Thursday week at the clubhouse, 34, Dawson Street, Dublin. The adoption of the annual report was moved by Sir Wm. G. D. Goff. The report reviewed at length the work done by the club during the past year, the examinations for driving and proficiency certificates, the holding of the Irish Reliability Trial and the recent show at Ball's Bridge, and the general work of the club for the benefit of the movement in Ireland. The report was adopted, and also the statement of accounts. Some slight alterations were made in the rules relating to the subscriptions of lady members, and the negotiations regarding an extension of the lease of the club premises were approved. The election of officers for the

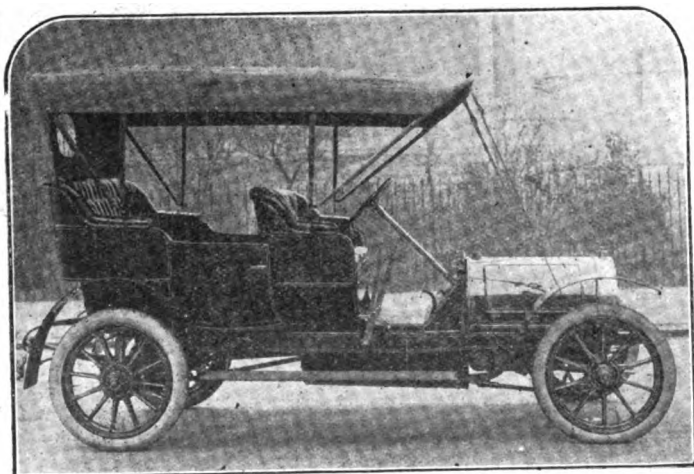
coming season resulted as follows:—Patron, His Excellency the Lord Lieutenant of Ireland; president, Right Hon. Sir Horace Plunkett, K.C.V.O., P.C.; vice-presidents, the Marquis of Waterford, the Earl of Drogheda, Viscount Iveagh, K.P.; chairman, Sir William G. D. Goff, Bart.; vice-chairmen, T. Talbot Power; hon. secretary, E. White; hon. treasurer, Walter Sexton. The ballot for the general committee resulted as follows:—Major E. H. C. Wellesley (Co. Wicklow); J. B. Denlop, jr. (Co. Dublin); R. J. Meccredy (Co. Wicklow); T. L. Plunkett, D.L. (Co. Dublin); F. W. Perry (Co. Dublin); Pryce Pescok, M.D. (Co. Dublin); Hum Bland (Co. Wicklow); J. C. Percy (Co. Dublin); H. S. Close (Co. Armagh); J. M. Davies (Co. Dublin); W. S. Hayes (Co. Dublin); G. O'Grady (Co. Dublin); F. M. Mooney (Co. Dublin); C. W. Hely, J.P. (Co. Dublin); T. Henshaw (Co. Dublin); F. Hall (Co. Dublin); J. E. St. George (Co. Dublin); Col. Chaloner Knox (Co. Kilkenny); Major P. T. M'Cammon (Belfast); W. P. Cairnes (Co. Louth).

A vote of thanks was proposed by Sir Wm. Goff to the Press, and the proceedings terminated with a customary vote of thanks to the chairman.

ON Wednesday of last week the Motor Club held a cheery house dinner, after which some seventy members adjourned to the Alhambra, where Messrs. Scott and Woodford show motor pictures on the bioscope. A motor gallop, specially composed and dedicated to the club by Mr. G. W. Byng, was played during the evening.

A MEETING of the Purley and District M.C. Club will be held on the 7th inst., at 8 p.m., at Messrs. Couldrey's Rooms, Tram Terminus, Purley.

THE Lewisham A.C. will hold its annual hill climb at Sevenoaks on the 4th prox. Mr. H. B. Renner, 31, Kidbrook Park Road, Blackheath, S.E., is the hon. secretary.



The popular model of the German 14-h.p. Car which has just been put on the market by Captain Theo Masul.

The vehicle is supplied complete with all accessories, and is fitted with a comfortable side-entrance body upholstered in leather.

MR. G. W. LITTLE, hon. secretary of the Middlesbrough M.C.C., is organising an inter-club meet of motor-cyclists at Ripon for Easter.

MR. HAROLD FULLER, of "Wivenhoe," Wyndale Road, Woodford, has been appointed general hon. sec. of the Essex M.C., Mr. A. G. Reynolds, financial hon. sec., and Mr. E. J. Bass, trials hon. sec.

A SMOKING concert promoted by the Southend M.C. was held on Wednesday last week at the Hotel Victoria, Southend-on-Sea. Captain J. L. Vivian Millett, chairman of the club, presided, whilst Mr. J. B. Caruthers, A.C.A., hon. treasurer, occupied the vice-chair. Parties from the West Essex A.C. and North London A.C., Nore Yacht Club and Essex Yacht Club attended the concert.

THE opening run of the Tottenham Cycling and Motor Club will take place on the 12th inst. Mr. R. Gregson has just been elected motor captain. The secretary's address is at Belvedere House, Willoughby Lane, Tottenham.

AT the annual general meeting of the Incorporated Institution of Automobile Engineers, to be held on Wednesday next, a membership of 258, including members, associate members, graduates and all associates will be reported.

MESSRS. BRAMPTON BROS., LTD., have removed their London offices to 138, Long Acre, London, W.C.

THE UNITED MOTOR INDUSTRIES, LTD., have just issued a circular on the value and use of an amperemeter, which they will be pleased to distribute to any of our readers who are interested.

A MATCH has taken place on the Brooklands Track between private owners of a 15-h.p. Ford and 14-18-h.p. Argyll. The former car was driven by Mr. O. L. Bickford, of Oxford, and over one lap the Ford won by 100 yds. at an average speed of 36 miles per hour.

CASES UNDER THE MOTOR CAR ACT.

EXCEEDING LEGAL LIMIT.

Before Mr. Harry Scarlett and other magistrates, at Lewes Petty Sessions, Charles Gazzard, chauffeur, 4, Tankervell Road, Streatham, has been summoned for exceeding the legal speed limit near Lewes gaol on February 2nd. Mr. Lawson Lewis prosecuted and Mr. E. T. Wellsted defended. In his opening statement, Mr. Lewis said the car was a 50-h.p. He then called Jeffrey Livesey, who said he was driving an 8-h.p. Rover towards Brighton that day and was going slowly owing to the large number of pedestrians about. Without sounding any warning, a large red car came tearing along and seemed to be coming straight into him. In consequence he steered into the ditch and stopped. When about ten yards off the big car was suddenly turned to its proper side and passed him at about forty miles an hour—a terrific pace—and a hand could not have been put between it and his car. He turned round "expecting to see several pedestrians lying on the road." Sergeant Waghorn said he came into possession of the number of the car and traced it to 48, Dover Street, where he saw defendant and the owner. Gazzard admitted being along that road on the day in question. The Bench imposed a fine of £10 and 9s. costs and three guineas for the prosecution costs—a total of £13 12s.

A LEGAL POINT.

At the South Western Police Court, before Mr. de Grey, Mr. Albert George Brown, residing at Bangalore Street, Putney, answered to two summonses, at the instance of the police authorities, for driving a motor-car at an excessive rate of speed and to the danger of the public.—Mr. Barker prosecuted for the Police Commissioner, while Mr. Staplee Firth defended. After hearing evidence Mr. de Grey would not say for a moment that the defendant, when saying that he travelled at the rate of twenty miles an hour, had been guilty of deliberate perjury. He imposed a penalty of £15 with £3 3s. costs in respect of the first summons for excessive driving, adjourning the second to consider a legal point raised by Mr. Firth that his worship could not record another conviction under an Act of Parliament that governed both offences.

A BATCH OF DISMISSALS.

The precautions taken by the Kesteven County Police to prevent motorists from driving their cars at an excessive speed on the Great North Road continue to result in prosecutions, and three more cases were dealt with by the Spittlegate (Grantham) magistrates on Saturday. The defendants were the Hon. Maurice Gifford, of Boothby Hall, Grantham; Charles Hay, of Manor Park House, Worksop; and Mario Resta, of 6, Mill Street, Hanover Square, London. The alleged offence was of driving at an excessive speed on the Great North Road on various dates. The latter, however, was charged with two offences in respect of the same date, the first being at Great Gonerby and the other at Great Ponton. The case against Mr. Resta was first taken, and Mr. T. W. Staplee Firth appeared on his behalf. The evidence in this case showed that the defendant was timed to cover four miles between Long Bennington and Great Gonerby in seven minutes, which worked out at 34.27 miles an hour. At the outset Mr. Firth contended that the summons was altogether wrong, inasmuch as there was no evidence of any excessive speed in the parish of Great Gonerby. The Bench, after a brief deliberation, dismissed the case. In the second case the prosecuting solicitor said the circumstances were exactly the same, more than one parish being concerned. The case was accordingly withdrawn, and Mr. Firth did not ask for costs. The other cases were dismissed without any evidence being called.

John A. Bell, Wellow House, Wellow, who was summoned at Retford for exceeding the speed of ten miles in Carolgate, Retford, got off on a technical objection. Mr. A. P. Williamson, who defended, raised the objection that the necessary three weeks' notice of intention to prosecute had not been given. The Bench upheld the objection and dismissed the summons.

FROM Messrs. Colin Defries, Ltd., Denman Street, Piccadilly Circus, London, W., comes a copy of the catalogue of *Passé Partout* cars the agency for which they have just taken up. Two sizes are being made—a 9-h.p. single-cylinder and a 14-h.p. four cylinder, each model being built in two lengths of chassis. These vehicles are very popular in France owing to their success in various speed trials and hill-climbing competitions held in that country last year.

An interesting test is this week being carried out at the Brooklands track under the observation of the R.A.C., for the purpose of demonstrating the perfect interchangeability of the various parts of the Cadillac horizontal-engine cars. On Saturday last three 9-10-h.p. vehicles were selected at the show-rooms in London of the Anglo-American Motor Car Company, Ltd., and from thence they were driven to Weybridge, where preliminary speed-tests were carried out on the track, each machine covering ten laps, representing a distance of about thirty miles. The cars were then placed in separate sheds, where they were dismantled and the parts all mixed up indiscriminately. The machines are now being re-assembled, the object being to show that the component parts of each are perfectly standardised and interchangeable. It is expected that the work will be completed by to-day (Saturday), after which the re-assembled vehicles are to be subjected to a 500 miles running test on the track.

THE IRISH RELIABILITY TRIAL.

THE Irish A.C.'s Reliability Trial for touring cars will be held from May 21st to 26th, 1908. The itinerary was published in our issue of the 22nd ult. Section I will be open, and vehicles may be entered irrespective of ownership and may be driven by anyone nominated by the entrant. The entry fees range from £6 6s. in classes A B and C, to £14 14s. in classes G and H. Section II. will be limited to private owners and the entry fee will be £3 3s. for those who are not members of the Irish A.C. They may enter at a fee of £2 2s. Entries close on April 7th and at double fees on April 18th.

The vehicles entered will be classified as follows:—

| | |
|-------|--|
| A ... | Selling price with tyres not exceeding £150. |
| B ... | Selling price between £150 and £200. |
| C ... | " " £200 " £250. |
| D ... | " " £250 " £350. |
| E ... | " " £350 " £450. |
| F ... | " " £450 " £550. |
| G ... | " " £550 " £700. |
| H ... | Selling price exceeding £700. |

The bodies must be ordinary touring bodies. In Class D all bodies must have a minimum width over panels at a height of 9 in. above the frame of 3 ft. 11 in., and a minimum length from the back of dashboard to the back of the back panel at a point 9 in. above the frame of 7 ft. 4 in.; and in Classes E, F, G and H the width as above must be 4 ft. 4 in., and length 7 ft. 4 in. In Class D the height of the back panel from the frame to the highest point of upholstery must be at least 2 ft. 7 in.; and in Classes E, F, G and H 2 ft. 10 in.; and these heights must be maintained for at least five-eighths of the width of the body.

The maximum number of marks obtainable for each day's run will be 160, from which will be deducted one mark for each minute or part thereof during which the vehicle is at rest between the time of being ordered to start in the morning and its due arrival in the evening, except in the case of (a) compulsory stops; (b) stops prescribed by the Committee or a duly authorised official; or (c) under special circumstances directed by the observers and subject as herein provided; (d) stops arising from tyre troubles.

The marks for hill climbing will be awarded in the following manner:—

$$\text{H.P. (I.A.C. rating)} = \frac{D^2 S^3 n}{150000}$$

$L = \frac{W}{\text{H.P.}}$ = lbs. per horse power (I.A.C. rating) of any vehicle.

Where D = diameter of cylinder in mm.

S = stroke in mm.

n = number of cylinders.

W = weight in lbs. of vehicle loaded.

$L + 105$ = Time ratio of any vehicle—i.e., the ratio of time the vehicle would do if its performance was relatively as efficient as that of the winning vehicle.

The vehicle showing the highest result obtained by dividing its time ratio by its hill climbing time will be awarded 100 marks, and the others marks in proportion.

The marks for speed test will be awarded according to the following formula:—

$L + 300$ = Time ratio of any vehicle—i.e., the ratio of time the vehicle would do if its performance was relatively as efficient as that of the winning vehicle.

The vehicle showing the highest result obtained by dividing its time ratio by its speed time will be awarded 50 marks, and the others marks in proportion.

WHEN CAR MEETS CAR.

IN an action in which the Cleveland Car Company, Darlington, claimed damages for negligence from Charles Fouda, a Belgian subject, Mr. Waugh, K.C., was for the plaintiffs, and Mr. E. Shortt for the defence. Counsel for the plaintiffs said the plaintiffs were dealers in motor-cars, and also lent them out on hire. The defendant was resident in France. On September 5th the plaintiffs lent out a car to a lady and gentleman to go from Neasham Abbey to York. They were provided with an experienced driver, who knew the road thoroughly. All went well till they reached a dangerous point called Blackman's Corner, four miles from Croft. The horn was sounded on approaching the corner, and immediately the car had rounded it a car was seen coming in the opposite direction, at an excessive speed and on the wrong side of the road. The car was being driven by the defendant. The driver of the plaintiffs' car saw that it was impossible to avoid an accident, but could not turn his car into the hedge because of a double telegraph post, and he stopped the car, practically within five yards. The defendant's car rushed on, and struck the plaintiffs' car. Counsel submitted, from the position of the plaintiffs' car after the accident, and the fact that the glass screen in front was not broken, that his client's car was practically stationary at the time of the impact. The damages plaintiff estimated at £144, and claimed that amount. There was a counter-claim for negligence, which counsel characterised as ridiculous. The jury, after a lengthy absence from court, found for the plaintiffs, and gave them £80 damages for the damage to the car, and £20 for loss of hire, £100 in all.

COMPANY NEWS.

BRIGHOUSE MOTOR COMPANY, LTD.—Capital of £1,000, to take over the business of a motor-car manufacturer, repairer and agent, carried on by Mr. J. H. Hoyle, at Calder Bridge, Brighouse, as "Hoyle's Motor Car and Cycle Depot." Registered office: Calder Bridge Mill, Huddersfield Road, Brighouse, Yorkshire.

TRACTION BATTERIES.—£1,000. 6, Victoria Avenue, Bishopsgate, E.C.

BRITISH BRASIER MOTORS, LTD., with a capital of £11,000, to adopt an agreement to establish agencies in any part of the world for selling and dealing with motors, vehicles, and accessories, and to carry on the business of manufacturers of and dealers in motor-cars, cycles and carriages, carriers of passengers and goods, &c. The first directors are S. A. Bird, E. L. Bennett, R. W. Blackwell, and G. E. Davies.

THE INTERNATIONAL TOURING CAR TRIAL, 1908.

THE following entries have now been received for this event, which takes place in June:—

Class 1.—8-h.p. De Dion (Messrs. De Dion Bouton (1907) Ltd.).

Class 3.—12-14-h.p. De Dion (Mr. J. W. Stocks).

Class 4.—10-12-h.p. Coventry-Humber (Messrs. Humber, Ltd.).

Class 5.—20-h.p. Beeston-Humber (Messrs. Humber, Ltd.); 15-h.p. Coventry-Humber (Messrs. Humber, Ltd.).

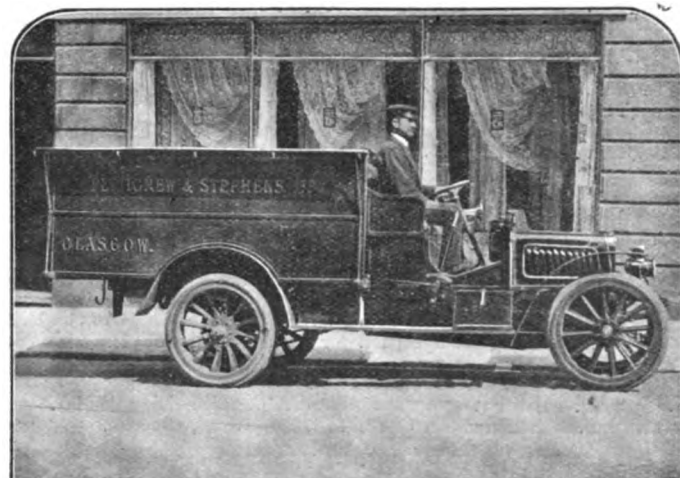
Class 6.—30-h.p. Beeston-Humber (Messrs. Humber, Ltd.).

Class 7.—40-h.p. six-cylinder Napier (Mr. S. F. Edge).

Class 9.—40-50-h.p. six-cylinder Rolls Royce (Messrs. Rolls-Royce, Ltd.); 40-50-h.p. six-cylinder Rolls-Royce (Messrs. Rolls-Royce, Ltd.).

Class 10.—60-h.p. six-cylinder Napier (Mr. S. F. Edge).

Also two White steam cars entered by Mr. Frederic Coleman.



The Albion 16 h.p. Van which Messrs. Pettigrew and Stephens, Ltd., General Drapers and House Furnishers, Sauchiehall Street, Glasgow, have had in use since May, 1907, during which time it has covered about 6,000 miles, and the firm calculate that it does the work of at least four horses and two drivers.

OBSTRUCTING THE HIGHWAY.

At the Chester-le-Street Petty Sessions, George Watson, Craghead, has been summoned under the Highway Act for having obstructed Dr. R. E. T. Johnson, of South Moor, on the Chester-le-Street and Craghead highway. Mr. J. A. Williamson, Newcastle, prosecuted on behalf of the Motor Union and the North-Eastern Automobile Association. Dr. Johnson said that on the day in question he was motoring from Chester-le-Street in the direction of Craghead. He was standing at the bottom of the bank which leads to Pelton Fell when the defendant and a number of other men passed him in a trap. Witness noticed that the defendant was under the influence of drink, and on resuming his journey witness kept a careful look-out as he thought it might be difficult to tell on which side of the road he would find defendant. When he overtook the trap it was hugging the side of the road on which witness ought to have passed. The horn was sounded, but no notice was taken of it. The man ultimately stopped his horse and backed it into the motor-car. Defendant, who said he had a nervous horse, was fined 20s. and the costs.

MESSRS. J. E. HUTTON, LTD., have secured the Old Lambeth Baths, Westminster Bridge Road, S.E., as new repair works, in order to cope with the amount of work they obtain in this department, the present establishment at King's Cross being too small. When the necessary alterations have been made, the new premises will form a large and handy shop, 160 ft. long by nearly 60 ft. wide, without pillars, and very lofty, with top light.

FOR COMING EVENTS.

MARCH.

- 11th (W.).—Annual meeting of the Incorporated Institution of Automobile Engineers.
 11th (W.).—Mr. F. W. Lanchester on "Problems of Automobile Design," at the Incorporated Institute of Automobile Engineers.
 12th (Th.).—Annual meeting of the Royal A.C. in the new premises.
 Annual dinner of the Royal A.C. at the Covent Garden Theatre.
 18th (W.).—Annual dinner of the A.A. at the Hotel Cecil, London.
 19th (Th.).—Monthly meeting of the General Committee of the Motor Union.
 21st (Saturday)—28th (S.).—
CORDINGLEY'S THIRTEENTH INTERNATIONAL MOTOR-CAR EXHIBITION will be held at the Royal Agricultural Hall, London.
 21st (Sat.).—Annual general meeting of the Council of the Auto Cycle Union.
 26th (Th.).—Ladies' Automobile Club Day at the Motor Car Exhibition at the Agricultural Hall, London.
 29th (Sun.).—Opening Run of the Southend Motor Club to the White Hart Hotel, Witham.
 31st (Tu.).—Last day for receiving entries, at ordinary fees, for the International Touring Car Race.

APRIL.

- 11th (Sat.).—Annual open Flexibility Contest of the Crystal Palace A.C.
 16th—20th.—Easter Tour of the Motor Cycling Club.
 17th (Good Friday).—Lincs. M.C.C. meet at Mablethorpe.
 18th and 20th.—First meeting of the Brooklands A.R.C. for 1908.
 25th (Sat.) to May 25th.—Industrial Vehicle competition of A.C.F.
 26th (Sun.).—Southend M.C. run to Thatched House Hotel, Epping.

MAY.

- 11st (F.).—The Frome's Hill Climb of the Herefordshire A.C.—provisional.
 10th (Sun.).—Targa Florio Race.
 21st (Th.)—25th.—Reliability Trial of the Irish A.C.
 25th.—Industrial Vehicle Competition of the A.C. de France.
 31st (Sun.).—Southend M.C. run to Saracen's Head Hotel, Dunmow.

JUNE.

- International Aeronautical Federation conference in London.
 5th—6th.—London-Edinburgh twenty-four hours' run of the Motor Cycling Club.
 8th (M.).—Cars competing in the International Touring Car Trial will arrive at the depot.
 Start of the International Touring Car Trial of the R.A.C.
 9th (Tu.).—Touring competition for Prince Henry of Prussia's prize begins.
 15th—19th.—Scottish Reliability Trial.
 27th (Sat.).—Hill climb of the Midland A.C. at Shelsley Walsh.
 28th. (Sun.).—Southend M.C. run to Grand Hotel, Clacton.

JULY.

- The Land's End to John o' Groat's Trial of the Auto C.C. will be held.
 6th (M.).—Grand Prix A.C.F. (Voiturette section).
 7th (Tu.).—Grand Prix A.C.F. on the Dieppe Circuit.
 25th (Sat.).—Petrol Consumption Tests of the Motor Cycling Club.
 26th (Sun.).—Southend M.C. run to Coach and Horses, Quendon.

LIGHTING-UP TIMES—LONDON.

| | | | | | | |
|---------------|-----|-----------|-----|-----------|-----|----------|
| Mar. 8th—6.49 | ... | 10th—6.52 | ... | 12th—6.56 | ... | 14th—7.0 |
| " 9th—6.50 | ... | 11th—6.54 | ... | 13th—6.58 | ... | 15th—7.1 |

THE KENLEY MOTOR FATALITY.

MR. JUSTICE WALTON, in charging the grand jury at the Surrey Assizes, alluded to the case in which Duncan Albert Brown, of Kenley, was charged with the manslaughter of Arthur Borer at Kenley on January 11th. He said the case appeared to be one that presented features of some difficulty. It was one in which a man walking along the road was knocked down by a motor-car and killed, the car proceeding on its way without stopping, and disappearing out of sight. There was a good deal of evidence that when the vehicle struck the deceased it was going at a somewhat reckless pace, but the most important question to be decided was whether the accused was the man who was driving it. The grand jury returned a true bill against the accused, who was indicted at the Assizes. On Monday, after a three days' hearing, the jury were discharged, having been unable to agree. The accused was bound over in £100 to come up for trial at the next assizes.

WITH regard to Miraculum, we are asked to mention that it should be clearly understood that the preparation as supplied for cycles, motor-cycles and cars is sold in three distinct grades, and buyers should specify for which purpose it is required. Even in cars there is a difference according to the size of tyres.

ROAD REPORTS.

CALDER.—The Calder District Committee has decided to ask the County Council to apply to the Secretary for Scotland for the imposition of a ten-mile speed limit for motor-cars in certain populous places in the district.

PORTSMOUTH.—The roads to the east side of Portsmouth are reported to be in a bad state, and flint is said to be frequently found in many places.

ROMSEY.—The county surveyor has completed the repair of the main roads in this district.

POLICE TRAPS.

REDHILL is again the centre of police activity against motorists, and a trap is in frequent operation near the 20th milestone from town.

THE police have a measured distance in Latchmere Road, Battersea. THE Staffordshire police are reported to be very watchful on the Lichfield road at Freeford.

BUSINESS NEWS.

WE are informed that the German Guide Book issued annually by the Continental Tyre and Rubber Company (Great Britain), will be published early in April. This book is replete with authentic information and contains maps, routes, &c., and in fact is essential to the motorist who contemplates touring in Germany.

A NEW motor spirit known as "P.G.R." is being put on the English market by La Société des Petroles de Grosnyi (Russie), of Leadenhall House, London, E.C.

ACER, LIMITED, motor and general engineers, Grosvenor Road, Hanwell, W., have laid down special machinery for internal and external grinding; they are also making a speciality of motor cylinder work for the trade, grinding out the bores and fitting new pistons with great accuracy, and undertake general motor trade repairs, such as gear cutting, &c.

A NEW motor spirit made from shale, and known as "Strathelyde," is being put on the market by Messrs. Clarkson, Thomson and Co., Kinning Park, Glasgow.

AMONG the novelties just brought out by the United Motor Industries, Ltd., 45 and 46, Poland Street, W., are the "Bomete" puncture repairing plugs, the "Alpha" compression valves, the "Castle" portable turn-table, and the new "Castle" cigar lighter with renewable top.

FOUNDED originally for the adjustment, overhaul and repair simply of automobiles, the Panhard-Levassor Engineering Works at Acton Vale have now come to be almost as busily employed on general engineering jobs as on work connected with cars.

THE Dunlop Pneumatic Tyre Company (Limited) inform us that French and German Dunlop tyres sold on the Continent are identical with the home made tyres. The material is of the same standard of excellence, the processes through which it passes are precisely the same, and the same scrupulous supervision is given to every phase of production. The sole difference, indeed, may be said to lie in the lettering moulded along the sides of the outer covers.

AN attractive pamphlet emphasising the motor victories that have been won on "Shell" motor spirit has just been issued. This should give confidence to many not yet using this spirit to give it a trial.

THE Bombay Motor-Car Company have just delivered a 28-h.p. Daimler, with body by Maythorn, to the agent to the Governor-General in Rajputana, the Hon. Mr. E. G. Colvin, C.I.E.

THE SOUTH WALES MOTOR COMPANY have lately opened a large branch depot at Monmouth Road, Abergavenny, and have one of the finest garages and workshop equipments in the district, accommodation being provided for twenty cars. Vulcanizing and accumulator charging are given special attention. The head office and works of the company are still at Cardiff.

TO CORRESPONDENTS.

All communications intended for insertion in this Journal or relating to Editorial matters should be addressed to THE EDITORIAL DEPARTMENT, MOTOR-CAR JOURNAL, 27-33, Charing Cross Road, London, W.C., and must be written on one side of the paper only. Letters must in all cases be accompanied by the name and address of the writer, as no notice will be taken of anonymous communications.

The Editors cannot undertake to return MSS. or drawings, although every effort will be made to do so in the case of rejected communications. Where such are regarded as of value, correspondents are requested to retain copies.

The Editors do not hold themselves responsible for the opinions expressed by their correspondents, or for statements and facts which do not appear in the editorial columns.

To insure insertion communications and contributions must be in the Editors' hands by Tuesday forenoon of the week in which the same are intended to appear. Disappointment may be caused by non-compliance with this rule, and to avoid this earlier receipt, if possible, is necessary.

Photographers, both professional and amateur, are invited to send photographs of current events or of motoring scenes and incidents. The fee, if any, required for reproduction should be stated in each case, otherwise no liability will be accepted.

THE Motor-Car Journal.

VOL. X.]

LONDON, SATURDAY, MARCH 14, 1908.

[No. 471.]

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COMMENTS.



ELSEWHERE we record an important decision by the Metropolitan Water Board with regard to the charges made to motorists for the water wherewith to wash their cars. Coming at a time when additional imposts from the Treasury are threatened the new charge seems absurd and wholly irrational. If there were a general conspiracy to drive the motorist from the road, the matter could scarcely have been better conceived. But, looking at this water charge alone, we trust the matter will be brought well forward by the motoring organisations. Apparently none have yet heard of the increased impost, or we should have been circularised on the subject. But now that we have given publicity to the matter, which seems to have escaped general notice, it is to be hoped that Lord Welby and his friends will be informed that to charge the private motorist £1 per car per annum for water is wholly out of proportion to the needs of the case. At the outset we do not like the system of preferential treatment as between the horsed and the mechanical vehicle. That is a plan not couched in the interests of the development of industry. The horse will not be saved by taxing the motor-car at a higher rate for its water. On the other hand, the man who contemplates buying a car will assuredly reckon up all his costs; and now, if in London £1 is to be added for water, his bill promises to grow beyond reason. Here again there is need of differentiation, for the middle class man who uses his car for week-end runs in the summer and keeps it in the motor house all the winter is not likely to seriously deplete the water supply. And yet he is to be called upon to pay this precious sovereign to a Water Board which has made the charge without any adequate discussion with practical motorists. What with the Water Board, the Inland Revenue, the County Registration Authorities, and other official bodies seeking to lighten the pockets of the motorist, a man of moderate means may be compelled to sell his car and resume acquaintance with Shanks's pony.

Motor Legislation.

WE have yet to hear from any motorist who will decline to assent from the clearly worded resolution in which the committee of the Royal A.C. have declared themselves on the financial proposals with regard to automobiles that are being hatched in the Treasury incubator. This is to the effect that the R.A.C. "sees no justification for any additional taxation being imposed upon motor-cars." Neither do we, neither does the man in the car. It is "the man in the street" who has been startled by the screeching of some ancient horn, or has been caused to run by the accelerated speed of a machine driven by a dare-devil chauffeur, who calls for further taxes on motor-cars. If he is a profane person, he prefaces the word "motor-car" with unprintable adjectives. The point of view of the Chancellor of the Exchequer is somewhat different to that of the pedestrian or the motorist. He wants money. Whether it comes from taxing monosyllables or motor-cars he cares little so long as the result runs into seven figures. But, apparently, it has become a matter of common acceptance that

the motor-car is in the centre of the Chancellor's target, and Mr. Asquith has the reputation of attaining his aim. Last year he hinted that he might seek the motorist; this year he will probably waylay him.

Reasons against Increase.

THROUGHOUT the year we have maintained the position that, (1) to increase the difficulties of a growing British industry in its early stages was inimical to the best interests of the country; (2) the motorist, by reviving the prosperity of the countryside, as is proved by the renovation of many hotels and other places on main roads, is doing much for the national welfare; and (3) that the present taxation and licences in connection with motor-vehicles is sufficiently high to warrant a policy of non-interference. This tripartite argument has been developed in various ways, and we have taken care that the views thus formulated have been brought directly under the notice of the Treasury officials, as well as those M.P.'s who follow the re-adjustment of the nation's financial affairs from time to time. Correspondence has proved the interest, and the result should have justified the care with which the education of the official mind has been unostentatiously undertaken.

No Further Taxation Necessary.

SUDDENLY, however, the calm consideration of the subject has been rendered impossible, and motorists find themselves in a whirlwind of opposing policies, in which the various sections of the motor movement are being blown about like the dust, and the issue is obscured. Our Letter Box — from which a selection has appeared in recent issues — testifies to the varied views entertained by those whose interests are above trade and party cries. The opinion has been practically unanimous against further taxation; and those who are inclined to the view that they should pay more are careful to suggest the use to which the extra taxation should be applied. Unfortunately, however, all precedent—save one solitary instance—is against such a policy. The Chancellor wants the money for the Treasury. He is not likely to hand over contributions to any other department for special purposes as the result of new impositions; hence the rallying cry of motorists should be against any further taxation. It is a mistake to overload the subject with technicalities that are confusing to the plain politician who has never seen a car dismantled. A clear issue should be presented to the conference which will be held next week, viz., that any proposed further taxation is unnecessary and should be resisted. Representations to that effect should be made to all M.P.'s without delay, and throughout the country motorists should write at once to their local members in support of such a view.

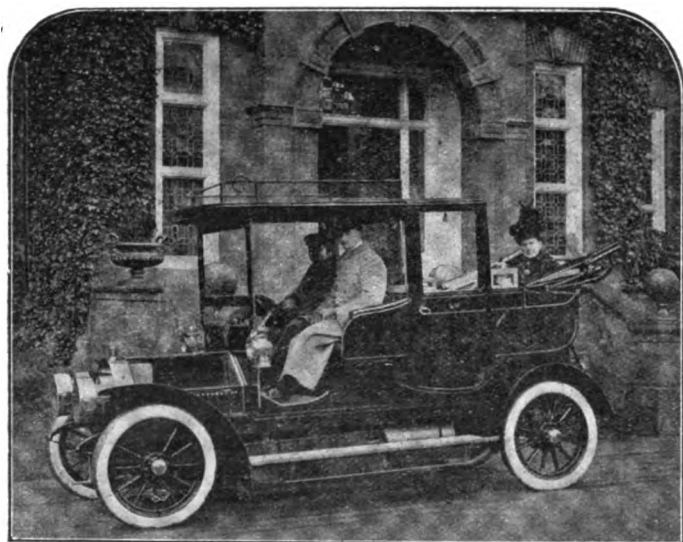
The Irish View.

MR. E. WHITE, the hon. secretary of the Irish A.C., has given the view of the matter as it presents itself to the automobilists of the Emerald Isle. He rightly asks:—Why should the industry be further taxed at the present juncture? and goes on to say that the members of his club have for a considerable time past been relieving the District Councils from the expense (imposed upon them by statute) of erecting signs

throughout the country, and "have been encouraging tourists and others to visit this country and spend their money here." That this good work would be impeded by taxation is a necessary consequence. The injustice of imposing further taxes must appeal to Irishmen of every shade of politics, and it is of the greatest importance that the interest of all members of Parliament representing Irish constituencies should be at once sought for by those interested in the motor movement, so that when the proposals of the Chancellor of the Exchequer are brought forward they may be met with strong opposition.

The Motor-Cab.

THE motor-car has conquered; the motor-cab and the motor-bus are now pursuing their way into the ordinary traffic of the streets of great towns. On Monday, round the festive board at the Holborn Restaurant, representatives of half-a-dozen motor-cab companies in London, Paris and New York met to congratulate each other on the position attained. The combined capital of the concerns is two millions sterling, and insurances against third party risks by one London company—the United—alone total £20,000 a year. Apparently the troubles of the motor cabby with the police are almost as great



Lady Edward (Spencer) Churchill on her Coventry-Humber 15-h.p. Landaulet. (Campbell-Gray. Photo by)

as those of the driver of the motor-car along country roads, for when a speaker advised the drivers to keep good friends with the police someone called out, "We can't; they won't let us." Then came the information from Mr. Edgar Cohen that he had recently interviewed Sir Edward Henry, the Chief Commissioner of Police, who suggested that the men should not smoke when on their cabs and that they should respond promptly to calls from the ranks. Complaints on both these points have been made; we hope an *esprit de corps* will be created among the men that will sustain the credit of the taximeter cab and render such suggestions unnecessary.

Commercial Vehicles.

AT length the last scene in the Commercial Vehicle Trials of the Royal A.C. has been enacted, and on Friday, the 6th inst., Mr. C. D. Rose, M.P., presented the distinctions that were won by some competitors. As will probably be remembered by many of our readers, fifty of the sixty vehicles entered completed their task. The judges stated that there has been improvement all round during the past few years, especially in the matter of wheels. For useful loads it was thought that the tractor was the most economical for general haulage, but when higher speed was required the internal combustion engine

lorry and rubber tyres became a necessity. A small engine could with advantage be employed where a high speed was not required. The regularity of running under reliability was remarkable, and the condition of the majority of the vehicles after the trials was on the whole satisfactory. The result of the trials has undoubtedly demonstrated the advantage of motor haulage and the great usefulness of some of these vehicles. Mr. Rose hoped that some sound practical commercial advantage would result to the competitors, a detailed account of whose fortunes in the Trials is given in the current "Industrial Motor Review."

A Lakeland Adventure.

MANY have been the motoring adventures that have taken place in the Lake District. Last week an exciting incident occurred to a party of musical folks who are attending rehearsals for the forthcoming Westmorland Musical Festival. About eleven o'clock one night the party started out to motor from Kirkby Stephen over the hills to Kendal, a lonely and uninviting journey of twenty-four miles. Snow lay to a great depth in the narrow moorland gorges, save in the beaten tracks, and, by some mischance, a wrong turn was taken on the wilds of Ashfell, with the result that the car became hopelessly embedded in an immense drift. All efforts to liberate the vehicle proved unavailing, so there remained no other course for the stranded party but to tramp back in the snow to Kirkby Stephen, where they arrived during the small hours of the morning.

Fire Dangers.

DURING last year thirty-one motor-cars were reported to the Metropolitan Fire Brigade as having been damaged by fire. Of these 21 were damaged while on the road. The causes of the fires were given as follows:—Overflow of petrol, 15; vapour of spirit coming into contact with flame, 5; defective electric circuit, 2; light thrown down, 2; defect in flue, 1; overheating of gas stove, 1; friction of machinery, 1; hot ashes, 1; spark from traction engine, 1; unknown, 2. The overflow of petrol also caused two motor-cycles to catch fire and two motor houses to be burned. A third motor house was burned owing to defective construction.

The A.A. and the Police.

Now and again rumours are heard as to the displeasure of the police authorities with those of the Automobile Association, who are desirous of checking too speedy motorists, and at length Captain Sant, head of the Surrey Constabulary, has sent an admonishment to Princes Buildings, Coventry Street, W. This has been duly considered by the committee of the A.A., which has offices there, and a categorical reply has been forwarded to the Chief Constable, which should disabuse his mind of evident misconception. If Captain Sant intended to suggest that the patrols were to "encourage reckless and inconsiderate driving," the committee "emphatically deny that any such object was present in their minds." Probably the better course for Captain Sant to adopt will be to accept the conclusions of the letter, and pursue his way with the co-operation of all law-abiding motorists. And the scouts of the A.A. can be extremely useful to the police if they will use them aright.

The 1908 Event.

FROM the paucity of the entries made thus far, it is evident that manufacturers are not wholly agreed as to the wisdom of many of the regulations for the Club event of the present year. We are of opinion that reliability is now so generally associated with automobiles that the old type of trial is no longer necessary; and, although it would not have given the popular advantage of a spectacular finish, the race on the Brooklands track might well have preceded the grand parade to the Highlands and back again. The purchaser of a car is now concerned

as to its silence, engine flexibility, brake power, consumption, economy so far as the tyres are concerned, and similar points of comparison between various types. There are many things among the objects aimed at in the forthcoming trial which, as in Euclid, the motorist now takes as granted, and among these is Reliability.

Motor-car Imports and Exports.

FEBRUARY proved a very quiet month as far as imports of foreign motor-cars and parts into this country are concerned, a decrease, as compared with February, 1907, of £10,678 being recorded. Of complete cars only 381 were imported during the month, of the value of £138,367. The number of chassis imported was 326, valued at £89,417, while parts were responsible for £141,814, giving a combined total for February last of only £369,598, as against £380,266 in the corresponding month of last year, and £396,422 in February, 1906. Turning

cations for extending the prestige of the concern were well shown in the avidity with which they studied the motor-car and its influence on the carriage builder soon after the "man with the red flag" had been sent to the "land of forgotten things."

The Bond.

HAVING regard to the way in which the Society of Motor Manufacturers has interpreted the Bond which many of its members have signed, the Motor Exhibition which will open at the Agricultural Hall, London, on Saturday next, the 21st, will be a revelation of the size to which the motor trade has grown. It will prove the need for the Cordingley Show and should cause some of those who have advocated "one show only" to realise that the industry is now too vast to be controlled and confined in some parochial area. More than that, many think with Mr. Henry Sturmev, that the Society of Motor Manufacturers and Traders has laid down the law in a most sweeping



MOTORING IN THE DUTCH EAST INDIES.

A 15-22-h.p. Spyker, a 40-h.p. Fiat Touring Car and a 40-h.p. Fiat Motor Lorry at Tosari.

[De Auto.

now to the section relating to the exports of British automobile productions, these also show a slight decrease—from, in the aggregate, £101,859 in February, 1907, to £99,920 last month. Altogether 187 complete cars (£68,211) and 8 chassis (£2,679) were despatched from this country in February, as well as parts to the extent of £29,080.

A Continuous Record.

MORE than many branches of industry the coachbuilding trades have maintained their personal character, and the successive ownership of important firms by several generations of a family is a familiar fact with regard to British carriage work. While admiring the fine new premises of Messrs. Thorn in the West End of London the other day this fact was brought conspicuously to our notice. The house was founded in 1824 by William Thorn, to whom succeeded W. T. Thorn, master of the Coach Builders' Company in 1865, and F. Thorn, who occupied that distinguished position in 1881. Since 1882 the partners have been Messrs. W. T., O., W. and F. C. Thorn, whose qualifi-

fashion with regard to the Bond. "Certainly in a more sweeping manner than was originally intended," he writes, "for it has made it to cover a much wider sphere of influence than, I believe, most Bond signers had any idea of when they first put their signatures to it, and, further than this, it has interpreted the Bond to read the same way for commercial cars as for pleasure cars." Anyhow, the forthcoming Show at the Agricultural Hall is again attracting most of the leading firms, and will present an appearance of varied interest to all concerned in automobilism.

DURING some motor-car races near Cairo on Tuesday, organised by the Egyptian Automobile Club, an accident occurred in the fourth race, owing to a driver trying to avoid a policeman on the course. The car swerved towards the crowd, killing, it is reported, one spectator, besides the policeman, and injuring six others. The Duke of Connaught arrived a few minutes later, but did not remain. The Khedive also left, and the races were discontinued.

A JAUNT IN NORFOLK.

(Concluded from page 29.)

THE Hillington road can be followed as far as Appleton, from whence a turning to the right enters the main road above Castle Rising. This fine Norman stronghold was built by William D'Albini, and Henry VIII. exchanged it for some Suffolk estates with the Duke of Norfolk, in whose family it still remains. It is surrounded by old Roman or British earth mounds, on which are some fine ash trees. After crossing a stone bridge, the remains of a Norman gateway give admission to the inner bailey. A flight of steps leads to an old room containing a famous old fireplace; in former days a door led from here to the great hall. Two logs of wood with chains attached are sure to claim attention. They were known as "Roaring Meg and Pretty Betty," and were utilised for the safe custody of prisoners, who were fixed to them by the chains, and were allowed to wander at their will provided they dragged or carried the wood blocks with them. Portions of the basement still exist, and in it the bases of supporting columns have been dug out. There is also a well, which in old days enabled the inhabitants to get water if besieged. From the battlements a fine view can be had of the sea, and the Lincolnshire coast can be seen. Queen Isabella, the mother of Edward III., was imprisoned here, and seemingly she was permitted to visit the Shrine at Walsingham, for in the Chamberlain's account it is stated that the Lynn Town Board had to pay certain sums for wine, bread and oats when she went on a pilgrimage there. The village green with a cross on steps should be seen; adjoining are the almshouses, the inmates of which wear a most picturesque attire—red cloaks, with high-peaked hats of James I. period. The church has a quaint steeply roof and is ornamented with twisted shafts and a kind of lozenge. Above the window of the west door are some fierce-looking heads surmounted by a small circular window; the carving of the font, too, is excellent.

The road from here is bordered by coverts belonging to Rising Hall, and crosses Ling Common. At South Wootton a stop may be made to visit the old church, where there is a fine Norman font, supported by circular shafts and having some gargoyle-like carvings at the angles of the bowl. Another four miles and the quaint old port of Lynn is reached. One might well imagine oneself in some old-fashioned Dutch or Belgian town, but in England No! Even in Saxon times Lynn was a flourishing port, and to-day, as a proof, the Guildhall, Custom House, Town Gate and old residences of its merchant princes still remain. Daniel Defoe, writing in 1722, says: "A rich and populous port-town, having the greatest extent of inland navigation of any port in England, London excepted, importing more coal and wine than any other port in the country, while its trade with the Baltic and Norway was immense." A walk should be taken along that well-wooded promenade, "the Walk," along the old mound to the Red Mount Chapel, the stone vaulting of which is of exquisite design. A little beyond is the only remaining city gate, near which are some quaint old houses with gables. At the end of the London road is the Greyfriars Tower, which is all that is left of a Franciscan tower founded in 1264. Not far off is the Grammar School, where Eugene Aram was an usher. He was arrested some fourteen years after his crime was committed. Those who heard the late Henry Irving recite Hood's lines will, I know, be interested in seeing the spot:—

Two stern faced men set out from Lynne,
Through the cold and heavy mist;
And Eugene Aram walked between
With gyves upon his wrists.

The Town Hall should be visited, and in the strong room can be seen, among other treasures, King John's cup. This was not the property of our King John, his plate probably still lies at the bottom of the Wash; the one in question belonged to John of France, who was a prisoner at Castle Rising. The figures on the lid and base represent a hunting party and are most beautifully cut. It appears that even in mediæval times dogs and cats were known to carry the plague infection, for among many quaint town documents preserved is one that orders the destruction of these pets during the time of pestilence. It's wording is interesting:

Forasmuche as it hath pleased the Allmightie God to begynn to send us His visitation of sickness amongst us, and that dogges and cattles are verie unfit to be suffered in this tyme, every inhabitant shall forthwith take all their dogges and yappes and hang them or kill them.

The church of St. Margaret must be seen, if for nothing else, anyway to inspect the brasses in the S.W. tower, one with the portrait of the merchant Walsoken and his wife, both clad in the costume of the period—1349. At the sides are the twelve apostles, and below is represented the gathering of apples on a monastic farm. The other, which is in a much better state of preservation, depicts Robert Braunchie, the mayor, and his two wives with eight weepers at the sides, each female having a little dog with a collar of bells at her feet. Below is the scene of the mayor's banquet to Edward III. The King has in front of him King John's cup, while females are bearing in the dressed peacock, and minstrels are encouraging appetite by their melody. In St. Ann's Street is another church, St. Nicholas. The beautiful roof and the elaborately decorated south porch, with a figure of the Deity on the central boss, should be seen, as well as the east and west windows. On the floor are some slabs in memory of various members of the Robinson Crusoe family. According to Mr. Walter Rye the poet Chaucer was a native of this town.

St. Margaret's Church, King's Lynn.

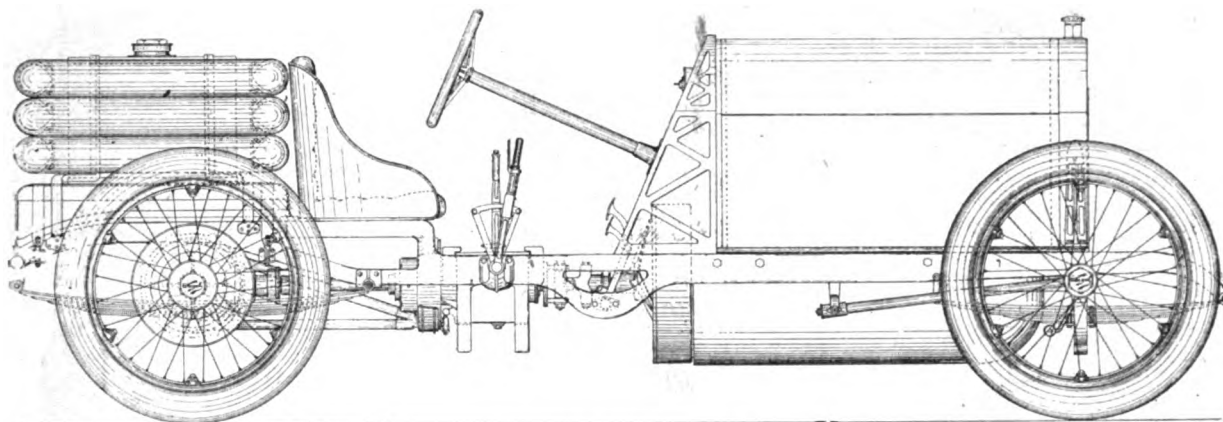
The return journey to Cromer may be made through Wootton, Massingham, Raynham, the seat of the Marquess of Townshend, and at whose mansion can be seen Salvator Rosa's Belisarius, which was presented to the Viscount Townshend by Frederick the Great, and is said to be the finest work of that master in this country. From here, *via* Fakenham and Holt, the main sea coast road may be picked up at Sheringham, passing Pretty Cromer on the way. C. T. W. H.

FIRST MOTORIST: "They tell me your chauffeur is an angel." SECOND MOTORIST: "I guess he is now; he lit a match last night to see if the petrol tank was full."

A NEW fire extinguisher, known as the "Phoenix," has lately been put on the market by Messrs. Henry Simonis and Co., of Norfolk Street, Strand, W.C. The apparatus combines many improvements, which should make it popular. Most extinguishers contain glass bottles of chemicals, which have to be broken before the apparatus can be used; the "Phoenix" is discharged by a steel cartridge containing liquid carbonic gas, which is hermetically sealed, and yet remains at all times controllable. There are, therefore, no sulphuric or other dangerous acids of any kind, and the apparatus is perfectly harmless, except to a fire, which it quenches with surprising ease, a horizontal jet of 45 ft. or a vertical jet of 30 ft. being thrown.

CONTINENTAL NOTES.

The event of the week in French aeronautical circles is the prizes which Messrs. Michelin, through the Aero Club de France, are offering to encourage the development of aeroplanes. In the first place, a £400 challenge cup is to be competed for annually, for ten years, the winner, in addition, securing a money prize of £600. The conditions have not yet been fixed, but one clause is to the effect that each year the distance to be covered will be doubled. The second part of the scheme is the offer of a prize of £4,000 for the first aeroplane which, starting from any point in the Department of the Seine or Seine et Oise, sails round the Arc de Triomphe, Paris, and then makes for Clermont



The example set by the Automobile Club de la Sarthe in keeping a comparative record of accidents caused by horse-drawn vehicles and motor-cars in their district is being copied by several other automobile clubs in France, among them being the A.C. du Rhone, and the A.C. du Gard. In the Sarthe department,

during the period from October 1st, 1907, to February 29th last, there were 118 accidents due to horse vehicles, causing the death of fifteen persons and injury to 115 others. During the same periods there were six motor-car accidents, none of which had fatal results, while only six persons were injured.

An Industrial Vehicle Trial in Russia.

The Moscow section of the Russian Automobile Club is organising a trial of industrial motor-vehicles for May 24th next. It will be held over a 72-mile course, and categories will be provided for (1) vehicles for loads up to 1.6 tons, (2) ditto from 1.6 to 2.5 tons, and (3) ditto over 3 tons. A hill-climbing test is comprised in the programme.

The French Industrial Motor Vehicle Trials.

The French Ministry of War is offering a number of prizes to the successful competitors in the reliability trial of industrial

Belgian Motor-Car Imports and Exports.

The imports of motor-cars and parts into Belgium during January last attained a value of only £5,020, as compared with £7,116 in the corresponding period of last year. On the other hand, the exports of motor-cars and parts from Belgium advanced from £15,496 in January, 1907, to £23,872 this year.

Miscellaneous Items.

A dozen entries have been received for the motor race to be held at Verona, Italy, on the 15th inst.—Messrs. Laurin and Klement, of Jungbunzlau, Bohemia, have just supplied two motor-cycles to the Mexican postal authorities for use in connection with the collection of the mails.—King Gustave V. has conferred his royal patronage on the Swedish Automobile Club.—It has been decided not to hold an automobile meeting at Scheveningen, Holland, this summer.—The Steiermark



Motor-Buses at a Race Meeting at Berlin.

vehicles to be held in France in May next. It is also announced that eight or ten of the competing vehicles will be purchased by the military authorities at the end of the test.

Motor Racing on the Ice.

The Royal Swedish Automobile Club has just held a series of kilometre races on the ice at Djursholm, near Stockholm. Twenty-three cars, divided into three classes, put in an appearance. The best time, 44 2.5 sec., was made by Mr. Lindström on a Darracq. In the 30-40-h.p. car section the winner was Mr. Hydens on an Opel (51 sec.), and in the light car category Mr. Hystrom's Dürkopp (49 sec.).

Public Services in France.

A public motor-car service has recently been established between Enghien, St. Gratien and Deuil. The round trip is only one and a half miles, but thirty-seven journeys per day are made. The vehicles employed are of the 12-h.p. two-cylinder type, and have accommodation for eight inside passengers.

Automobile Club is organising a hill-climbing competition for May 31st next on the Ries road, near Gratz, Austria.

ONE of the latest productions of the Crypto Electrical Company, of Bermondsey Street, London, S.E., is a continuous-to-continuous current transformer, which enables those motorists having an available source of continuous current electricity to charge their ignition or car-lighting accumulators in the most efficient possible way. Two sizes are being made, one having a capacity on the secondary side of 7 amps. at 15 volts, and the other 5 amps. at 10 volts, the primaries being wound for any voltage up to 250. The larger of the two machines is intended for use in public garages, and is capable of charging as many as nine accumulators at once. The smaller type, however, has been designed for charging the batteries in a private motorist's garage. It is very small and compact and substantially made and will work from any existing lamp holder, its capacity being sufficient to charge two motor-car cells.

THE SETTING OF VALVES.

THE article we published in our issue of January 11th last with regard to the setting of valves of petrol engines, in which we gave details of the practice adopted in seven different motors, has created considerable interest. In fact, we have received numerous requests to publish diagrams indicating similar information with regard to the engines of other well-known cars, a number of which accompany the present contribution to the subject. As we have already pointed out, there is a remarkable want of uniformity in the timing adopted by the different makers—no two firms having apparently exactly the same views on the subject. At a first glance it would seem that the question of correctly setting the inlet and exhaust valves of a petrol engine is no very difficult matter, since the functions of the cycle of operations—suction, compression, explosion and exhaust—are well defined by the position of the piston, and may readily be traced by anyone who understands the four-cycle principle of the internal combustion engine. There are, however, certain conditions which are likely to be overlooked by the amateur which have a considerable bearing on the action of the motor, especially when running at high speed. These are the size of the valves, the

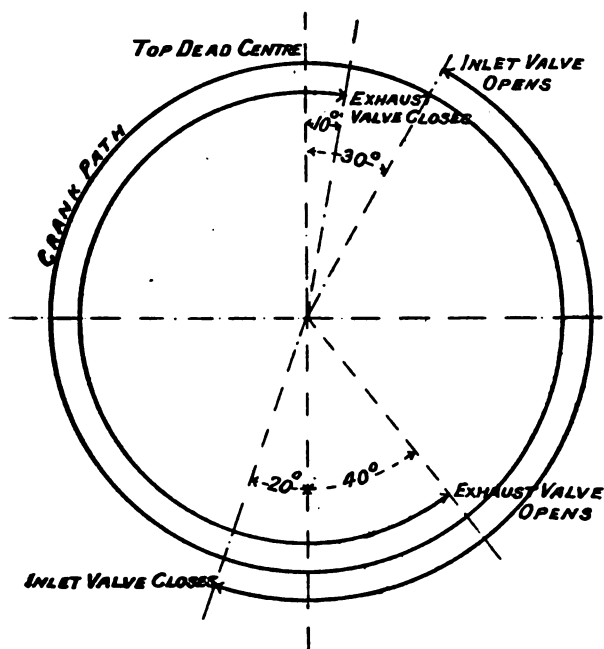


Fig. 1.—Diagram of Dennis Valve Setting.

time taken in opening and closing them, with the incidental momentary throttling of the mixture in consequence, the possible restriction of the gases in their passage through the ports, causing, in poorly designed motors, the phenomenon which is known as "wire drawing," and the inertia of the gases or their momentum, which is due to the velocity of their flow to and from the cylinder.

There are thus many considerations to be taken into account in fixing the points of opening and closing the valves, and, as motor designers have each their own pet ideas on valve setting, some time must elapse ere any great degree of uniformity can be expected. Hence, as the details given below are, in the majority of cases, now published for the first time, owners of the cars referred to will probably find it useful to make note of the timing of their particular engine in order to facilitate the work of re-erection should it become necessary at any time to dismantle it.

The Dennis Valve Setting.

Still another diagram is that which has been furnished us by Messrs. Dennis Bros., Ltd., of Guildford, of the valve setting they adopt on their 28-h.p. and 35-h.p. four-cylinder engines of a bore of respectively 110 mm. and 120 mm., the stroke in

both cases being 130 mm. As will be seen from Fig. 1, the inlet valve is arranged to open late—30 deg. down on the suction stroke of the piston, and to close late—20 deg. up on the compression stroke. The setting of the exhaust valve gives an early opening—40 deg. from the bottom of the explosion stroke while it remains open, 10 deg. beyond the end of the exhaust stroke—that is, 1 mm. down on the suction stroke.

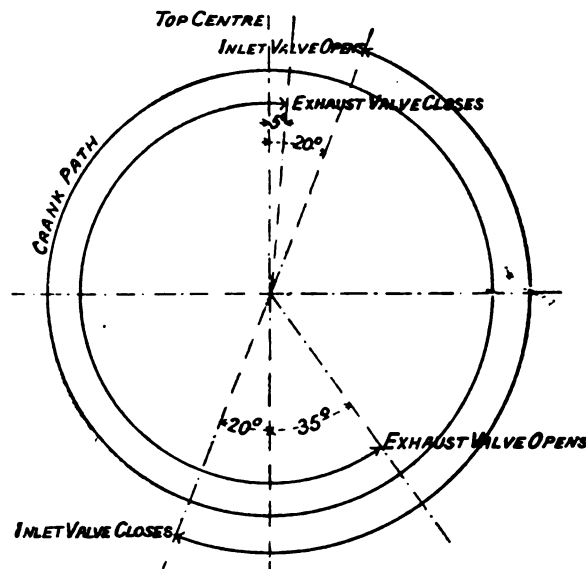


Fig. 2.—The Arrol-Johnston Valve Setting.

The Arrol-Johnston 24-30-h.p. Car.

The New Arrol-Johnston Car Company, Ltd., of Underwood, Paisley, have furnished us with a diagram (Fig. 2), showing the valve setting on their 24-30-h.p. four-cylinder car. It will be seen that in this instance the inlet valve is timed to both open and close late—20 deg. down on the suction stroke, and a similar distance up on the compression stroke respectively. As for the exhaust valve, this opens early—35 deg. from the bottom of the firing stroke, and closes late—5 deg. down on the suction stroke.

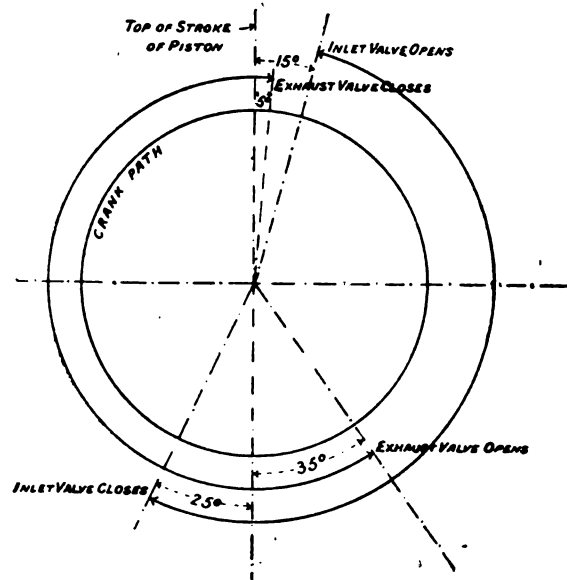


Fig. 3.—Diagram of Valve Setting of Daimler 28-h.p. and 30-h.p. Engines.

The Daimler Cars.

Fig. 3 depicts the setting adopted by the Daimler Motor Co., Ltd., for their 28-h.p. and 30-h.p. four-cylinder engines. From this it will be observed that the inlet valve opens late—15 deg. down on the suction stroke of the piston, and closes late—25 deg. up on the compression stroke. The exhaust valve opens early—35 deg. before the end of the explosion stroke, and closes late—5 deg. down on the suction stroke.

The Fiat Motors.

Fig. 4 shows diagrammatically the valve setting adopted on the engines of Fiat cars—one of the most successful in the principal races of last year. As will be seen, the setting closely approximates that adopted in the Star cars, the inlet valve being timed to open and close on the dead centre, i.e., at the top and bottom of the suction stroke respectively. The exhaust valve is

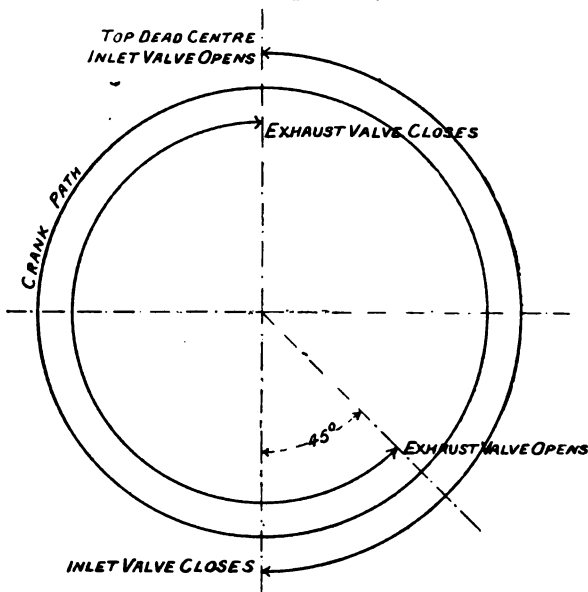


Fig. 4.—Diagram of Fiat Valve Setting.

arranged to open early, 45 deg. from the bottom of the firing stroke, while it closes on the dead centre at the end of the exhaust stroke.

The Vauxhall Cars.

The diagram of the setting of the valves of the engines in the Vauxhall cars, which has been furnished us by the makers, is one of the most novel of all that we have received. As will be seen, they have marked off the circle in divisions corresponding to those of a clock or watch face, and have shown the valves to open and close at points denoted by so many minutes. From

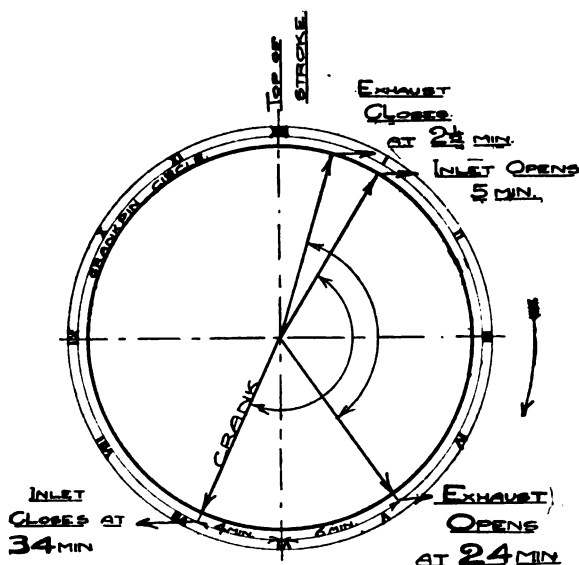


Fig. 5.—Diagram of Valve Setting of Vauxhall Motors.

this it is easy to deduce that the inlet valve opens late—viz., 30 deg. down on the suction stroke of the piston, and closes late—24 deg. up on the compression stroke. As for the exhaust valve, this is timed to open early—36 deg. from the bottom of the firing stroke, and to close late—15 deg. down on the suction stroke.

The Albion Cars.

The valve setting adopted by the Albion Motor Car Company on the engines of the Albion cars is arranged to give a long period of opening of both the inlets and the exhausts. Thus the inlet valve is open for 190 deg. of the circle, opening 10 deg. down on the suction stroke of the piston and closing 20 deg. up on the compression stroke. That a good scavenging of the exhaust gases from the cylinder should result is evident from the fact that the exhaust valve is open a full stroke of the piston plus 56 deg., the opening taking place at a point 48 deg. before the end of the explosion stroke, and the closing 8 deg. down on the suction stroke. In sending us these figures Mr. T. Blackwood Murray, B.Sc., adds:—"It is, however, to be clearly borne in mind that the valve setting must not be arbitrarily fixed the same for all engines, but must be fixed with due and careful regard to the size of the valves and proportions of inlet and exhaust pipes, and also with regard to the speed at which the engine is desired to give maximum power. For high speed it is necessary to retard the phase of the suction valve."

The Germain 14-h.p. Chainless Car.

Capt. Theo Masui, the British Agent-General for the Germain vehicles, has kindly furnished us with the accompanying diagram (Fig. 6) showing the valve setting adopted in the Germain 14-h.p. four-cylinder chainless car. The drawing has been prepared in a different way to the others that we have

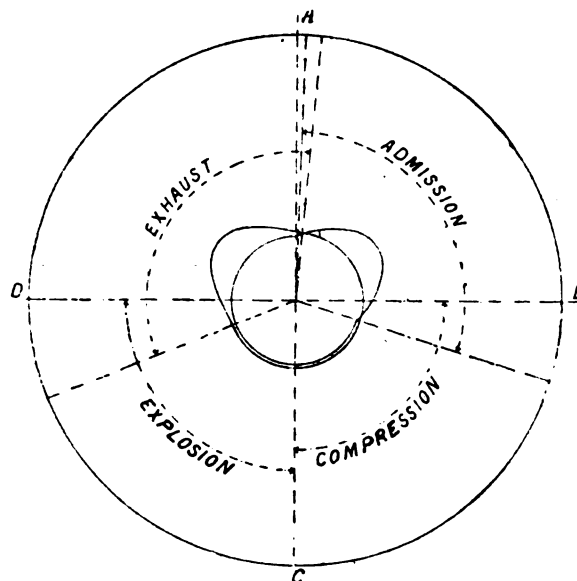


Fig. 6.—Diagram of Valve Setting of Germain Motors.

already published, but a careful examination of it will show that, as in the Larrad setting, which we illustrated in our issue of Feb. 1st, the inlet and exhaust valves are for a brief period both open at the same time. Unfortunately no dimensions are given on the diagram, but we have scaled it and find that approximately the inlet valve is timed to open late—4 deg. down on the suction stroke of the piston, and to close late—35 deg. up on the compression stroke. As for the exhaust valve, this is timed to give a long scavenging stroke; it opens 44 deg. before the end of the firing stroke, and closes 10 deg. down on the suction stroke.

The Ariel Cars.

In the engines of the Ariel cars the exhaust valve is arranged to commence opening 45 deg. from the bottom of the explosion stroke of the piston, and closes 5 deg. from top of suction stroke. The inlet valve opens slightly late, viz., 18½ deg. down on the suction stroke; it also closes late—42 deg. up on the compression stroke.

MESSRS. R. M. WRIGHT AND CO. have lately extended their premises at Newland, Lincoln, to accommodate several motor-cars, and add to the convenience of the premises.

SOME USEFUL NOTES.

IGNITION MAGNETOS are frequently so arranged on the car that the entire device may be detached by simply loosening one or two screws. Before it is removed, however, care should be taken to see that the driving gear is plainly marked to indicate the proper method of reassembling, as otherwise it may be practically impossible to replace it without going over the timing in exact detail.

It is a good plan to occasionally see that the nuts of the clips holding the springs of a car in position are tight. Loose spring clips are the cause of many broken springs, for they allow more stress to be thrown on the centre of the leaves than there should be. If the clips are perfectly tight the portion of the spring between them is practically a solid piece, but if one of the clips is loose there is much more individual movement among the leaves.

A CYLINDER that is becoming overheated, either from a stoppage of the oil supply or any other cause, makes its trouble known by a scraping, grating noise at each stroke of the piston as the dry metals rub against each other. A loss of power can also be noted, and the driver should get down at once and ascertain what the trouble is. To keep on forcing the engine to run may mean a badly scored cylinder as well as a seized piston, and the many difficulties resulting therefrom.

A USEFUL addition to the tool-box of a car is a ball of twine, or at least a quantity of it, say fifteen to twenty yards. About an eighth of an inch is the best thickness, though a larger size should preferably be carried in addition. One or two uses to which twine can be put are given below. There are still some cars in use in which the high tension leads are not encased, and whose users frequently suffer from short circuits due to chafing and consequent destruction of the insulation. When signs of chafing appear, twine should be wrapped closely around the part. It is cheaper to chafe out twine than to run down batteries. Twine will also be found useful in binding a steering wheel that shows a tendency to split; binding the rim with twine checks any tendencies in this direction, and forms a comfortable hand grip.

THE use of a poor quality of lubricating oil leads to a diversity of evils, apart from inferior lubrication. Carbon deposits will form on the combustion chamber walls, on the piston head, and on the points of the sparking plug. Ignition will be interfered with and finally stopped through short-circuiting across the insulation of the plug. The deposit may, in time, become so thick as to hold sufficient heat from one explosion to another to cause pre-ignition, which is liable to cause the motor to run with more or less "knock." If pre-ignition is suspected a test can be made by cutting out the ignition current. If this fault is not present the motor will stop; but if pre-ignition is occurring the motor will run without the assistance of legitimate aids to ignition. Shutting off the supply of fuel will bring the engine to a standstill.

USUALLY, after a car has not been out of the stable regularly during the winter months, the bright parts are all dull and tarnished; they may, however, be restored to their pristine brightness by the following cleaning and polishing method:—First, apply a weak solution of oxalic acid and water to the tarnished surfaces by means of a cloth upon a handle or stick. Any acrid accumulations are then loosened and may be removed by wiping. After this metal polish such as is ordinarily used for brass work should be applied with a linen cloth, and the polishing finished with soft woollen cloths. Tripoli powder applied by means of a piece of felt should be used if the surfaces are slow to respond to polish. A good carriage worker's metal polish is made of whiting, 20 parts; soda, 1 part; citric acid, $\frac{1}{4}$ part, moistened with water for use.

THE MICHEL CLUTCH.

WE illustrate herewith a new design of friction clutch for motor-cars known as the "Michel," which is being made by the Ateliers Rondet-Schor, of Rue du Banquier, Paris. The object of the designer has been to produce a clutch which shall not only be simple and able to withstand rough usage, but one which shall not require adjustment over a long period.

From Fig. 1 it will be seen that fixed to the flywheel of the engine is a hollow drum A, in contact with which

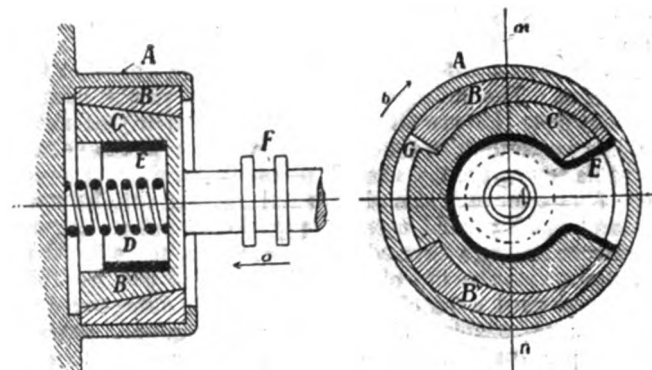


Fig. 1.—Sectional Views of Michel Clutch.

A. Outer casing secured to engine flywheel wheel.
B B'. Friction shoes.
C. Eccentric cone.
D. Helical clutch spring.
E. Plate spring.
G. Stop projection on cone C.

are two aluminium shoes B provided with fibre contact strips. The shoes are entirely independent of each other and are forced against the walls of the drum by the intermediary of a metal cone C on the shaft F, the surface of the cone being eccentric to the crank shaft. The clutch is held up to its work by a spring D, a second one E of a special form controlling the progressive engagement of the frictional surfaces.

With the drum rotating in the direction shown by the arrow there is a slight play between it and the shoes B when the clutch is disengaged. By releasing the pedal, which is connected with the collar on the clutch shaft, the cone moves to the rear, forcing the shoes into contact with A. The drive is, however, taken up without shock, as the shoes have a slight movement on the



Fig. 2.—Component Parts of Michel Clutch.

eccentric portion of the cone. It will be seen that the latter does not form a complete circle, but is broken away at one part to receive the powerful plate spring E, the ends of which are bent outwards to form a spring stop for the shoes in taking up the drive. It is claimed that when engaged there is no end thrust, while only a slight movement of the cone—less than $\frac{1}{4}$ in.—is necessary to entirely disengage the clutch, which operates in a mixture of thick oil and paraffin. Three sizes are being made, suitable for cars up to respectively 10-h.p., 25-h.p. and 50-h.p., the weight of the smallest type being given as 15 lbs.

COLONEL H. C. L. HOLDEN, Dr. W. Watson, Mr. G. H. Baillie, and Mr. Dugald Clerk have been appointed a sub-committee to report to the Technical Committee of the Royal A.C. with regard to a formula for ascertaining the horse-power of internal combustion engines of all types.

THE TAXATION OF MOTOR-CARS.

ELSEWHERE we give our views as to the need of protesting against any further taxation of cars. From the correspondence lately received on the subject we select the following letters as affording a representative opinion on the matter:—

Major C. Leveson-Gower writes:—"No doubt the deputation which approached the Chancellor of the Exchequer and put forward the suggestion of taxation on motor-cars by weight did so after mature consideration, but it appears hardly a fair basis of taxation, considering some people cover 10,000 miles in the year, while others, with the same weight of car, only do 2,000 or 3,000 miles. The mileage of a car can be pretty accurately calculated from the tyre bill, and it only seems fair that motorists should pay according to the mileage they cover in the year. To attain this result, the tax should be on tyres, viz., outer covers only. A rate for each size of tyre and a special rate for studded tyres and bands; solid tyres to pay double rates. Assuming the average mileage covered by the motorist to be 5,000 miles per annum, viz., the life of a set of tyres, and 815 by 105 the size of tyres used, a tax of fifteen shillings per outer cover would not be unreasonable, viz., £3 per annum—an extra five shillings per studded tyre or band; smaller tyres to pay, of course, less and the larger ones more. The tax to be collected from the manufacturer or importer, and each tyre Government stamped. A cheap tax to collect and a fair one to all."

The Rev. A. C. Hervey, M.A., of Colmer Rectory, Alton, Hants, is an enthusiastic motorist, and is "of opinion that any further taxation of motorists or motor-cars would be most unfair. Motor-car owners already pay more than their share in proportion to horse-drawn vehicles. The enormous damage done to the roads by motor-cars is assumed, but not yet proved. The real culprits are the heavy steam tractors which go about the country with agricultural implements, or with a train of trucks each loaded ten or twelve tons. I do not believe that the great body of motorists are in agreement with either the R.A.C. or the Union on this question. Any further taxation of motor-cars should be opposed tooth and nail."

Mr. R. W. Brewer, A.M.I.C.E., who has made a careful study of the fuel question says:—"My opinion upon the question of taxation is that this should be regulated according to the approximate horse-power of the engine, as the damage which the roads are subjected to is due to the wheels revolving at a greater or less rate than is proportional to the speed of the car in many instances—namely, principally when the clutch is let in or the brakes are applied to high power cars. In these cases, particularly with studded tyres, the abrasion which the road is subjected to is due to the horse-power being in excess of what would be proportional to the adhesion weight of the car."

Mr. R. W. Buttemer, M.A., was one of the earliest motorists, being a founder member of the R.A.C., and believes that "the most equitable and desirable tax on motorists is a tax on imported foreign cars, in my opinion (though I use one). Horse-power tax is impracticable, unless merely a heavy tax on cars over X h.p. (each voter placing X one h.p. above h.p. of his own car). Weight tax falls too heavily on owners of old cars, unless date of manufacture could be considered. Any graduated tax based on use of roads should be graduated to all road users, necessitating another Royal Commission to determine damage done by all classes of traffic."

Mr. J. T. Hereford, J.P., the chairman of the Herefordshire A.C., has long studied the motoring problem, and his contribution to our symposium is as follows:—"The taxes on carriages are: Four wheels, two or more horses, £2 2s.; four wheels, one horse, £1 1s.; less than four wheels, 15s. On motor-cars under 1 ton, £2 2s.; over 1 ton, £4 4s. A glance at the taxation (I am only concerned with the ordinary private carriage and car), shows how unjust the present system is. I maintain that 60 per cent. damage is done to roads by hoofs, and only 40 per cent. by wheels. When one also considers that

almost all light cars have plain rubber tyres, the damage they do must be infinitesimal. The whole system of the comparative taxation of motor-cars and carriages shows confusion of thought and prejudice. The only thing that can be urged against cars is the dust nuisance, but that might be largely overcome by improved methods of road construction. The extra taxation we pay compared with carriages goes to the Chancellor of the Exchequer, it ought to go to the improvement of the roads. Any further taxation of cars is ridiculous and unjust."

Mr. G. E. Bentall, of Haybridge, Maldon, says:—"If the Chancellor of the Exchequer desires to tax cars for revenue purposes, the cars taxed should only be those which are luxuries—that is, cars over a certain horse-power. Cars used merely in place of horsed vehicles, whether for professions, business, or for private persons, should not be taxed more than the horsed vehicles they displace."

Mr. E. Montague Edwards, J.P., one of the leading public men of South Essex, who has followed the motor movement from its early days, writes as follows:—"It will be readily admitted that motor traction both for commercial purposes and pleasure is rapidly displacing horse drawn vehicles and is obtaining a firm grip upon public favour. Up-to-date business houses are utilising motor traction not for its novelty but for the acknowledged economies effected. There can be no question as to the extra cost of maintenance of the highways imposed upon local authorities through the wear and tear caused by mechanically-propelled vehicles. This arises from two factors, (a) speed, (b) weight, therefore in endeavouring to reach a basis for taxation these should be amalgamated. Users of trade motor vehicles have demonstrated in several quarters the saving effected as compared with horse-drawn vehicles. Out of this saving they should readily agree to pay part of the cost of road maintenance. A tax to cover this, however, should be reasonable. To make same excessive would at once place an unwarrantable check upon an industry which as developed will add materially to the revenue of the State Exchequer. This will accrue from three distinct sources. (a) The tax upon the vehicles. (b) From the net revenue earned by motor manufacturers. (c) The increased profits of commercial houses using this means of transit. The first (a) should be appropriated in its entirety for road maintenance and reconstruction to resist abnormal wear. The revenue from this source would not be sufficiently interesting to the Chancellor of the Exchequer to warrant his including same in building up his Budget; (b) and (c) would fall into his hands as tax upon earnings from income."

I think a graduated basis of taxation should be instituted, the underlying principle being the actual weight of the vehicle ready for the road, but unladen, plus its nominal horse-power; both to be certified by the maker under a penalty for understating the actual facts of 10 per cent. of the gross list price, recoverable by the Excise department. In instances where a motor has been too long in use, to refer to the manufacturer; the same conditions to be incumbent upon the owner for the time being. Thus for the united units of weight and power vehicles used for transit of goods should be taxed at 1s. per unit per annum. Those used for public service or solely for business purposes by commercial travellers, 2s. per unit per annum, and cars used for pleasure purposes alone, 3s. per unit per annum.

The following examples will, I think, clearly illustrate the above. A motor for delivery of goods weighing 30 cwt., of 20-h.p., would be subject to a tax of 100s. per annum; business cars of 10-h.p. weighing 15 cwt. would pay 50s. per annum; public service cars subject to the same conditions, and for a purely pleasure car weighing 35 cwt. and 25-h.p. would stand to pay £9 per annum. This basic principle might be applied to all mechanically-propelled vehicles, including motor-bicycles.

The mode of distribution of the available funds accruing from the adoption of the above would be a matter for the Chancellor of the Exchequer to arrange, possibly by awarding grants in aid to local councils, regulated by the mileage in each respective area and the use the roads are subject to."

AT the present time there are about 120 licensed motor-cars in use in Shanghai, 75 per cent. of which are reported to be of American manufacture.

MESSRS. J. H. CHALMERS AND SON have a repair shop in Bridge Street, Kelso, and during the coming season will let cars on hire.

MR. W. S. CORT, of Church Street, Market Harborough, will make his first appearance as the agent for the Beresford rim at the Cordingley Motor Show, which opens on Saturday next, the 21st inst.

It is currently reported that measured distances are becoming more frequent in the Royal parks, where the constables are assiduously watching for those motorists who exceed the ten mile speed limit.

"VULCANISATOR" is an addition to the motorist's vocabulary, suggested by Messrs. Harvey Frost and Co., this being intended to designate an efficient operator of the well-known vulcaniser introduced by the firm.

CASTLEBAR, co. Mayo, has now an up-to-date garage, thanks to the enterprise of Messrs. J. Bourke and Sons. They also keep a large stock of motor accessories, and are in a position to assist motorists who may be in difficulties when in that part of Ireland.

THE London and North-Western Railway are running several excursions in connection with the forthcoming Motor-Car Show at the Agricultural Hall, and special cheap bookings are announced from Warwick, Coventry, Dudley, Wolverhampton, Walsall, and Birmingham.

A NEW Italian-built car is being introduced into this country by the Union Motor Car Company, 21, Denbigh Street, Victoria, S.W., who will exhibit it at the Cordingley Show. The vehicle, which is known as the S.M.B. (Societa Meccanica Bresciana) is fitted with a 20-h.p. four-cylinder engine.

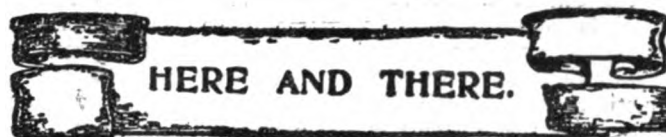
A MOTOR-CAR race was held in the Argentine Republic on Saturday last over 248 kilometres (155 miles). The winner in the racing category was Dr. C. Lamarca, who, on a 14-h.p. De Dietrich, covered the distance in 3 h. 35 min. M. Vaupelins, on a 40-h.p. Berliet, secured the first place in the touring car class in 3 h. 38 min.

AT the Newhaven Rural District Council meeting, complaint has been made of the fact that many motorists took out their licences in London and then used their cars on the country roads. Why not? The streets of the Metropolis would be crowded if all the automobiles registered at Spring Gardens were never to go beyond the old four mile radius.

OWING to the increase of trade, Mr. D. Sweetzer has transformed his business into a limited liability company. All kinds of repairs are a speciality, and they are making a point of improving old cars, as well as keeping new ones in running order. The title of the new company is the Reigate Garage, Limited, and it is intended to greatly increase the premises at an early date. Mr. D. Sweetzer is the managing director.

MR. R. S. TILLING, speaking as president of the Job-masters' Protection Association at the annual dinner on Tuesday, said the motor-car is not going to do away with the horse. As a matter of fact, the introduction of motor-cars is likely to do the horse trade some good, "for," he went on to observe, "the weary motorist, after sitting for days inactive in his machine, must have exercise for his liver's sake, and there is nothing so good for the inside of a man as the outside of a horse."

A SPLENDID addition to the motor showrooms of the West End of London is that of Messrs. W. and F. Thorn and Co., which has just been opened at Great Portland Street, W. The old premises were burnt out about a year ago, and on the site the firm have erected a showroom for their motor bodies which will rank among the architectural adornments of London. The building is well lighted and decorated with real artistic feeling, and on a floor area of 7,000 square feet Messrs. Thorn will have ample opportunity for displaying the high-class productions of their motor body works in other parts of the metropolis.



THE Leaborne Manufacturing Company, of Pinner Road, Harrow, are charging accumulators for local motorists on very reasonable terms.

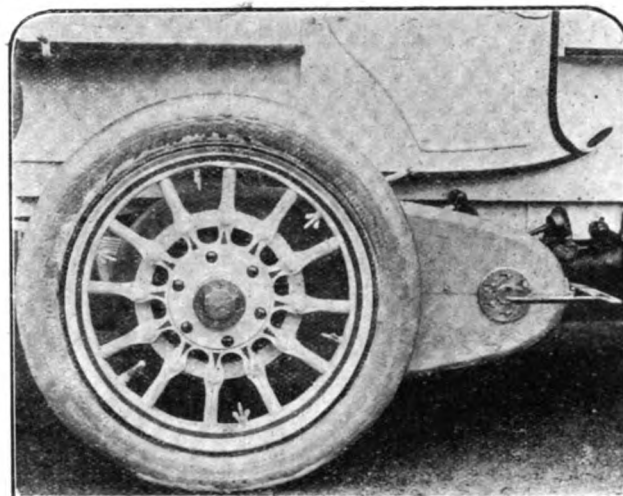
TENDERS for the motor-tricycle required by the Beckenham

District Council for Fire Brigade purposes should reach the Clerk by the 23rd inst.

IN the north of Scotland motor traders are hopeful as to the prospects of the coming season. Messrs. Junner Bros., of Elgin, have commenced spring business by supplying a 12-16-h.p. Argyll to a local doctor.

MESSRS. JOHN CROALL AND SONS, LTD., Edinburgh, propose placing four motor taxi-cabs on the streets of Edinburgh during the present month. They are four-cylinder cars of the landaulet type. The magistrates of the city have not yet fixed the fares to be charged, but have the question under their consideration.

THE new works of the Humber Company at Coventry, which cover an area of thirteen and a half acres, and give employment to 5,000 hands, are now completed, and on Thursday were thrown open to the inspection of a large number of visitors. We give elsewhere a view of one of the many departments of this most complete establishment.



The above illustration depicts the patent chain case which the South Wales Motor Company, of Cardiff, have lately designed for 1907 Daimler Cars.

The cases are dust-proof and oil-tight, and when fitted not only is the noise of the chains eliminated, but their life is greatly increased.

THE large and roomy garage situate at Belgrave Gate, Leicester, under the supervision of Mr. G. H. Wait, of the firm of G. H. Wait and Co., is one of the best arranged in the Midlands. The repair department is equipped with up-to-date machinery, and there is storage room for fully 50 or 60 cars.

AN illustration of the power of the motor-car was given the other day, when Mr. W. Raikes-Bell drove a 20-25-h.p. Werbell car to the top of the Law Hill, so well known to residents of Dundee. Mr. Bell made a flying rush up the path, and the car was soon on the top. The car was, after an interval, driven down again by Mr. Bell, with him being Mr. E. R. Bell. The performance was all the more meritorious from the fact that the ground was soft and wet with the morning's rain. The back tyres were fitted with Parsons non-skid chains.

DURING his recent visit to America Mr. G. H. Smith secured for the United Motor Industries, Ltd., the British agency for the K-00 lubricant for change-speed gears. It is largely used in America by automobilists, the great point being that it always travels with the teeth. It does not matter at what speed the gears are running, this always happens, and there is a film of lubricant perpetually between the teeth at the moment of their contact and during contact. This lubricant retains the same consistency, and is not affected by temperature.

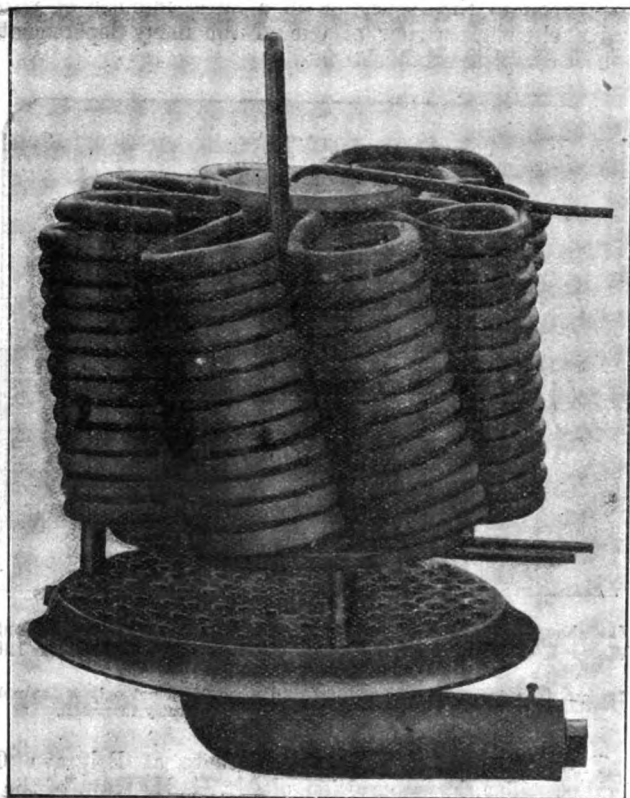
AMONGST the recent purchasers of Fiat cars in India is Mr. Dwarkadas Dhuramséy, the new Sheriff of Bombay.

DR. HELE-SHAW on Thursday commenced a series of three lectures on the Navigation of the Air, before the Society of Arts.

THE attention of intending competitors for the Daimler Engineering Scholarships is called to the fact that all entries must be received on or before the 31st inst.

THE Daimler Company have received orders from the Countess Dysart for a 36-h.p. "Stoneleigh" limousine; the Right Hon. Earl of Ellesmere for a 30-h.p. "Blackdown" landaulet; and Sir Robert Hermon Hodge, Bart., for a 30-h.p. "Birdlip" limousine.

WE illustrate herewith an improved semi-flash generator for steam cars and lorries, which has lately been introduced by Messrs. Bolsover Brothers, Ltd., Eaglescliffe, Durham. The generator consists of a 5 in. diameter vertical drum, which acts as a separator, and is surrounded by eight spiral coils inclined at an angle to the vertical. As the generator is welded throughout by means of the oxy-acetylene blow-pipe, it can be made red-hot without the least damage ensuing. It is claimed to combine all the strong points of the flash with those of the water level boiler,



while an idea of the rapidity of the steaming can be gleaned from the fact that a full head of steam can be raised from lighting the burner in 2 min. 15 sec. The makers inform us that the boilers, which are submitted to a cold water test of 1,200 lbs. before being sent out, are adaptable for fitting in Stanley or White steamers, when renewals are required, and that should the generator become dry through shortness of water no damage will result. The car merely stops until more water is supplied to the boiler.

At the annual meeting of the Cardiff Pilotage Board a petition signed by fifty-seven pilots against the introduction of auxiliary motors on two pilot boats was presented. It is reported that two local pilots are adopting motor-boats.

Of the thirty-five cars entered for the Trials of the Motor Union of Western India, twenty-eight started, no less than twenty-one being fitted with Dunlop tyres. These twenty-one cars got through the four days' running with only two pauses on account of tyre troubles—one "nip" and one bullock-shoe puncture. Five out of six of the first prizes awarded were won by Dunlop-tyred cars.

THE Egyptian Automobile Club will next month hold a motor-car race over a sixteen-mile circuit near Cairo.

MESSRS. GURNEY AND EWER, of the High Street, Pinner, have works at Ruislip for the repair of motor-cars, &c.

MESSRS. AFFLECK AND BROWN, drapers, Manchester, are now using a Belsize 20-h.p. petrol motor delivery van in connection with their business.

THE imports of motor-cars and parts into South Africa through the ports of Cape Colony and Natal amounted last year to a value of £115,251, as compared with £105,724 in 1906.

THE authorities of the Royal Naval Barracks, Portsmouth, have lately acquired a steam motor-wagon for conveying blue-jackets' luggage and stores from the barracks to the Dockyard.

MESSRS. WALKER BROS., of Pagefield Ironworks, Wigan, have lately supplied a petrol motor tower wagon to the Wigan Corporation for use in connection with the electric tramways in the town.

A GUIDE to Mersea Island, with a full account of the historical region roundabout, has been published by Messrs. Benham and Co., of Colchester. It should prove of considerable interest to motorists enjoying trips in that district.

IN connection with the coach-building business of Messrs. Stevenson and Sons, The Parade, Leamington, a motor garage is established with accommodation for about a dozen cars. The location of the premises is admirable for the convenience of visitors, while the facilities provided are all that motorists can desire.

AN interesting collection of books, newspaper cuttings, pamphlets, &c., relating to balloons, aeroplanes, and aeronautics, has just been placed in the new Library of the Victoria and Albert Museum at South Kensington. This will be of interest to all who are concerned with the Aero Section of the Motor Show at the Agricultural Hall, London.

A NEW automobile road from Mexico City to Cuernavaca, Mexico, was recently inaugurated, seven cars joining in the procession. The new road is considered one of the most picturesque to be found anywhere in the country. While many of the grades are very steep, the sands near Tlalpam are considered to be the part of the road which taxes the machines the most.

THE Crown Agents for the Colonies are sending to Nigeria two Siddeley cars, built by the Wolseley Tool and Motor Car Company, Ltd. One is a four-seated phaeton, fitted with Cape cart hood, and is intended for the personal use of the Governor, Sir Percy Girouard, R.E., K.C.M.G., D.S.O. The left-hand front seat is removable, so that the space can be occupied for sleeping or fitted with a stretcher for the purpose of carrying an invalid. The second car is to be used as a luggage cart, and for the attendant natives. Both cars are equipped with 18-h.p. four-cylinder engines, Elastex filled tyres, and are painted dark green. The upholstery is in khaki colour leather with removable canvas covers for protective purposes.

THE City Council of Newcastle-on-Tyne adopted a report of the Watch Committee recommending the making of new bye-laws in lieu of the then existing bye-laws as to lights on vehicles, which were repealed as from January 1st, 1908, by the Lights on Vehicles Act, 1907. The new bye-law provides that every person who shall cause or permit any vehicle to be in any street, highway, or road to which the public have access during the period between one hour after sunset and one hour before sunrise, shall provide such vehicle—(1) With a lamp or lamps in proper working order, and so constructed and capable of being so attached as when lighted to display to the rear a red light visible for a reasonable distance; and (2) in addition to the lamp on the off or right side of the vehicle, as required by section 1 (1) of the Lights on Vehicles Act, 1907, with a lamp in proper working order, and so constructed and capable of being so attached on the near or left side thereof, as when lighted to display to the front a white light visible for a reasonable distance; and if the lamp is so constructed as to permit a light to be seen from the rear, that light shall be red. Provided that paragraph (2) of this bye-law shall not apply to heavy and slow-moving vehicles.

Correspondence.

[Letters to the Editor should be addressed to the offices, 27-33, Charing Cross Road, London, W.C.]

THE SETTING OF VALVES.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—We beg to thank "I. E." for at last admitting there is something in our timers, viz., synchronization. That is what we have been trying to impress upon him and others. As regards position, as we have said before, if any one has a pet theory of his own, he can have our timers set to it, then he can get his position with accuracy, and obtain what he otherwise could not—absolute accuracy. He says he has set his valves by marking out the flywheel with a protractor. We should be glad if he will give us the position he has set them. Then we will send one of our instruments set to his position, and we are still open to offer him that £100 if he has got them absolutely synchronized.

We still maintain that our position is correct for all engines, and wish someone would take up our challenge to prove it. As regards the Clement car with the two-cylinder Aster engine, which was referred to in our last letter, this is now ready and has been tested on the hill mentioned, and did exactly what we claimed it would. It went up the hill on its second speed, taking the last 177 yards in 21 sec., which is over seventeen miles per hour, somewhat different to going over on its first speed, as it did till we altered the timing to our setting. The trial was witnessed by an independent engineer. On the track its fastest speed was 33 miles per hour.

We notice that "I. E." has come to the conclusion that to get the Larrad period will require a good deal of work on some engines. • Ye*,

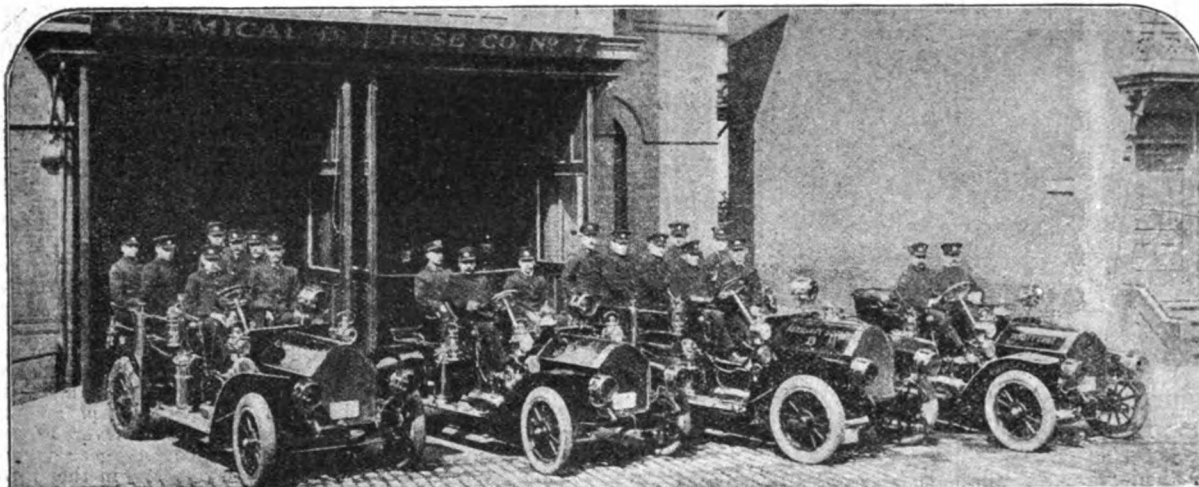
later. Of course this cannot be done on every car, as there is not sufficient clearance between the tappet and valve, but there was ample in this case. "Yorks" asks which position gives the best pulling effect. In my opinion, and with due deference to the Larrad Syndicate, who will assure me I am mistaken, it depends upon the engine and the exhaust valve. If the exhaust valve is undersized, as a good many are, a long exhaust—say 50 per cent. from centre and 7 degrees over, give very good results. Some years ago I made experiments with different exhaust settings and only found advantage from a very long exhaust where the exhaust valves were very small. I quite agree with "Yorks" that the matter is of absorbing interest, and I am anxiously waiting to see the particulars of other manufacturers. —Yours truly,
INTERESTED ENQUIRER.

THE ACTION OF SPRINGS.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—I notice in your issue of the 22nd ult. there appears a letter from Mr. J. E. Bishop, of Melbourne, who writes respecting a letter from myself which appeared in your issue of October 12th, 1907. Mr. Bishop puts two questions to me:—1, as to what I mean by the phrase "rapidity of action." 2, My authority for the figures given.

I will deal with the second question first, as it can be most quickly disposed of. The figures I give in my letter of eighty-six times per



The Fleet of Motor Vehicles used by the Fire Brigade at Springfield, Mass., U.S.A.

but the results will repay for the time and trouble taken. As regards engines with automatic inlets, we use the same setting for the exhaust, but naturally we cannot get the good results out of them as we do of the others; at the same time we should like "I.E." to see and hear how an old four-cylinder Star and an old four-cylinder Panhard, which have just been timed to setting, can run when timed to our setting. Their respective owners, Dr. Murdoch, Bexhill, and Mr. Garlich, St. Leonards, will tell him that these cars have never run so quietly, or developed the power that they do now, and on these, of course, it is only possible to get half the good results which can be obtained on engines fitted with mechanically-operated valves. As regards "I.E.'s" experience, this is nothing to go by, because often an invention is created by one who knows very little about the particular trade in which it will be used. Take, for instance, the inventor of this timer; Mr. Larrad, although a trained engineer, has had very little to do with internal combustion engines till he joined us, but he soon realized that something was wanted to synchronize the valves, and that only one position was correct, and subsequent events have proved that he was right, and to prove it we issued the challenge.—Yours truly,

LARRAD'S PATENT SYNDICATE.
H. Pulham.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—In reply to the letter in your issue of the 7th inst., I am very sorry that your correspondent considers it unjust for me to express an opinion.

With regard to the exhaust valve query raised by "Yorks," I am indeed sorry I did not make the Brussels incident clearer. The mechanic did extend the exhaust stroke by the very simple expedient of lengthening the exhaust valve, which would naturally cause it to open earlier and shut

minute for the best spring steel and ninety times per minute for rubber were stated to be approximate. The actual figures for these should read:—Spring steel ninety times per minute, and rubber ninety-five times per minute, but the slight discrepancy between the approximate figures which I gave and the actual figures would make no actual difference in the calculation for absorption of shock for which I suggested their use. My authority for the figures ninety times per minute for steel and ninety-five times per minute for rubber and 1,800 times per minute for air, is the late Lord Kelvin, who supplied these figures to a friend of mine interested in scientific data. For confirmation of them I can refer Mr. Bishop to Mr. E. B. Killen—one of my directors—who has had several experiments made in confirmation of same, with the exception that in these later experiments the figures for air show a slightly lower periodicity, being between 1,600 and 1,800 times per minute.

With respect to Mr. Bishop's first question, it is somewhat difficult to explain, except in technical terms, the meaning of the phrase "rapidity of action." I should define it as being the natural ability of the atoms composing a substance to "come and go" without premature exhaustion of such material and without undue absorption of power. It is solely from lack of knowledge of these figures or inability to grasp their true meaning, that so much time has been wasted over the impossible feat of producing a spring wheel or solid rubber tyre which will absorb shock at a speed of over eighteen miles an hour. Unless such wheel be made of gigantic proportions, it is physically impossible for it to absorb road shocks at high speeds. It is, of course, hardly necessary to state that vibration is only an extremely rapid recurrence of shock. Crystallization of steel (even in the form of laminated springs), under vibration is one of the results which immediately follow its lack of ability to absorb such vibration owing to its low rapidity of action. In rubber, also, excessive vibration and shock induces premature hardening and subsequently internal disintegration, because its rapidity of action is

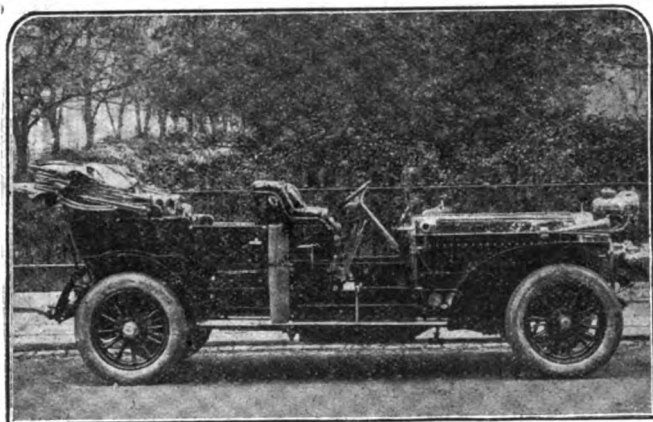
not sufficiently high to absorb such vibration. Given the data enunciated above, it is an easy matter to see that nothing but a combination of some resilient material backed by confined air can ever possibly give resiliency. A car travelling, say, sixty miles an hour covers 5,280 ft. per minute. Supposing the car to be shod with 32 in. tyres, the tyre will approximately have 8 ft. circumference. (N.B.—In travelling the diameter becomes shortened one inch owing to the tyre flattening half-inch at the point of surface contact with the road, due to the weight of the car). Thus it will easily be seen that if the length of the circumference be divided into the distance travelled in a minute, i.e., 8)5 280, a tyre of this size will have to absorb 660 shocks or depressions 660

when travelling at sixty miles per hour. From the figures given above it will at once be seen that the air proportion must be a little greater than $\frac{1}{3}$ air to $\frac{2}{3}$ of rubber to attain this speed without forcing the action of the rubber or air beyond its natural rapidity of action.

It must be noted that if rubber encloses and confines some substance with a higher rapidity of action, such as air, its rapidity of action will be increased as above. At the same time, I do not deny that a solid rubber tyre or spring wheel may be run at a greater speed than, say, eighteen miles an hour, but above such speed shock is not being absorbed and power is being wasted in attempting to force the rubber or steel above its natural rapidity of action.

If Mr. Bishop will let me have his private address, I will go into this matter with him at a much greater length than I could possibly do in the columns of your paper, which are too valuable to be devoted to a subject which—however interesting it may be to those of a scientific mind—is purely academic so far as the majority of your readers are concerned.—Yours truly,

THE "K.T." SYNDICATE, LTD.
A. Ernest Gelder (Manager).



The 60-h p. Six-Cylinder Napier Touring Carriage recently delivered to Sir William Avery, Bart., of Oakley Court, Windsor.

Sir William, who is a practical motorist, has suggested many special features which have been embodied in the car, as, for instance, Bramah locks on all accessible cupboards, extra folding steps, luggage grid at the rear of the car, umbrella basket, extra high hood, and special folding additional seats to the interior—all of which make for comfort and convenience.

THE ENDORSEMENT OF LICENCES.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—The other evening I had the misfortune to be stopped by a P.C. with the greeting "light out"; it was a boisterous night, and a lamp that had never failed me for over a twelvemonth played me false. To make matters worse, I had left my licence at home.

Accordingly I received two summonses. For the first offence I was let off with payment of costs, for the second fined one shilling and costs. For this serious (!) offence I have had my licence endorsed.

What I want to know is, is this right according to the Act; this is my first offence. Can they endorse a licence for so trivial a matter?

Thanking you in anticipation for your reply to my enquiry.—Yours truly,

A. D. K.

[Yes, the endorsement is strictly within the letter of the law; we do not suggest it is in accordance with common sense.]

THE AUTO TYRE INFLATOR.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—I notice illustrated on page 1,127 of your issue of the 22nd ult. a very interesting little tyre inflator. This problem seems to have evoked a considerable amount of interest of late, and we have had illustrated in the technical Press several designs, some of them of extreme interest and ingenuity.

At the first glance the Maxfield inflator appears to possess a considerable number of advantages, but on looking closely into it, and

scaling off the diameter of the friction wheel, assuming that it is driven from a flywheel of an ordinary car at the ordinary speed the engine runs, it appears to me that this inflator will have to rotate at 3,000 revolutions per minute. This speed seems excessive, and my experience of ball valves tends to show that these valves would not close in the time available, and consequently the efficiency of the pump would drop to such a low point that it would be of no practical service.

I should be glad to know if a pump has been constructed, tested and found satisfactory, made in accordance with these drawings, and I should also be glad to know how the air is admitted to the cylinder and what the delivery valve V is connected to. The delivery valve V1 is, of course, obviously for connecting to the tyre, but I cannot see any connection for the delivery valve V.—Yours truly,

PHILISTINE.

TYRE SIZES.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—We are fully in accord with the opinion expressed by Mr S. F. Edge during the discussion upon Mr. Mervyn O'Gorman's paper on "A Number of Things: Their Effect on Tyres," read before the members of the Royal Automobile Club recently, to the effect that "The time is not far distant when tyres with a cross section of 8 in. or 9 in. will be quite a commercial proposition."

We have realised this for some time, and in view of the remarkable results obtained with 6 in. Palmer cord tyres, we about six months ago put in hand a pair of automatic cord laying machines, capable of producing Palmer cord tyres about $7\frac{1}{2}$ in. or 9 in. in cross section. The machines are now approaching completion, but it will probably be next year before tyres of this size are ready for the market.

We think it advisable that the designers of new cars should allow clearance for much larger tyres than formerly, as it is certain that, owing to their greater economy and increased comfort, much larger tyres will be used in the future.—Yours truly,

THE PALMER TYRE, LTD.

STEAM CAR EXPERIENCES.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—In reply to "Amateur's" letter in a recent issue, I would like to advise him that there is no occasion for him to be "nervous to venture," as he phrases it. There is no car to come up to a good steam car. I myself drive both petrol and steam cars daily, and I much prefer the steamers. For traffic work they take first place easily, and I have often noticed that while another man is coaxing his engine, slipping his clutch or changing speed behind other vehicles, I with my steamer have just to open the throttle a little, and I shoot by him and the other traffic out of sight before he can get under weigh. The steam car I am alluding to is the White; a 10-h.p. car of this make is, I feel sure, as good as any 20-h.p. petrol car, and the latest 10-h.p. White must be about three years old. I have had several of them, 10-h.p. and 15-h.p., and in fact during the last four years I have never been without one. The absence of the gears and consequent gear vibration and the immunity from electric troubles is greatly in the favour of steam cars, while the enormous exertion required at the starting handles, with its attendant risks, is dispensed with. In most steam cars, any way as far as driving is concerned, the car and the engine are a unit, that is to say that when the car moves the engine must also move. In some of the steam cars the engine has been adapted to run free for the purpose of pumping water and air, but the car is not driven with a clutch like a petrol car, and when a steam car stops, engine and all stops, and there is nothing to worry about, no winding up when you want to move on again.

Now, imagine a petrol car, a three or four year old one, in a busy thoroughfare, with carts in front, and say 'buses behind, all stationary for a few minutes. The driver of the petrol car must keep his engine quiet; he retards ignition, perhaps. His engine begins to "sweat," steam hisses out of his radiator, he is a bit worried; when he stopped he was probably on top speed, waiting his opportunity with his clutch depressed, now he endeavours to move. One, two, his engine has stopped; he hears some gibes, he jumps out to start up again. One, two, stop, bang, he is nearly run over by his car, having left his gear in. A mad rush for the lever, a cab has drawn close up to the off-side. Another mad rush to the other side and in the car, puts the lever to neutral; once more to the handle, and the engine starts (perhaps). Up he jumps again while the cabbie whistles "Home, Sweet Home," first speed now, carefully, two or three pops and the engine stops again. Alas! he has left the brake on. A carter shouts, "Borrer my nose bag, guv'nor." Once more he tries, and this time succeeds, accompanied by the recherche language and merry tunes of the 'bus-drivers. Behind there is the lucky man with the steam car; he shut off his steam some minutes ago, nothing worries him, and when the traffic moves he opens his throttle and glides on. Steam cars, none of them, are, however, so simple that a child could look after them; a man needs to be a bit of an engineer. The man in the street knows something of the petrol car, but nothing of the steamer, although he will ask you, "Ar'n't you frightened of the boiler bursting?" Even then he only shares the opinion of hundreds of others. It is almost impossible to burst these generators; they being, in most steamers, a series of coils of steel piping about $\frac{1}{4}$ in. bore, there is no

danger even if this did burst, being in comparison like opening a valve and letting the steam go.

I very rarely have an involuntary stop on any steam car, and they are so kind to tyres that these do not give half the trouble as experienced in a petrol car, while the great charm is the way they go up hills; if anything they go better than on the level; one could almost imagine the car being hauled up by an invisible cable, so silent and athletic is the power given to the wheels behind you. The generators rarely give any trouble, and dirty water has no effect on them. There is no smoke and no smell after starting. I think the White, Stanley, and Turner-Miesse are among the most easily manipulated steam cars on the market.

I do not want to say that there are no petrol cars to be compared with steamers, but I assert that if half the money and a quarter of the brains spent on petrol cars were devoted to steamers, we would have some very speedy and reliable vehicles on the road. A rooted prejudice still exists in the minds of the car buying public that steamers are dangerous and unreliable. I shall always maintain, and am willing to prove, that the maximum power and speed, the minimum weight and complication, the least destructive effect on machinery and tyres, is attained in the steamer. The public are kept conversant with the accomplishments and improvements of the petrol car, but they are ignorant and unable to form any valuable opinion while they adopt a hostile and non-sporting attitude with regard to the steamer. It is positively a revelation to the "petrolman" when he has his first ride in the steamer, and I am sure he will testify to the luxurious and buoyant riding, such as is only experienced in a petrol car costing about twice the price of the steamer.

The public need have no fear about them, and there are plenty of them. There is no comparison between them and the petrol cars of double their power, considering the way they work and the way they do it, without chattering or grumbling. Steam cars are becoming now almost entirely automatic; in fact, I believe "they will soon drive themselves," and a thorough knowledge of these automatic parts and their particular functions is all that is required for one to be quite *au fait* with the steam car.

Some more correspondence and mechanical analysis, as I said in my previous letter, published of steam cars now and then, accounts of their construction, accomplishments, and failings, if any, would tend to familiarise people and show the great possibilities of steam as the motive power for road vehicles. Many admit their superiority in hill-climbing, but maintain that the cars cannot stand the pace, that they are soon worn out, and are a great deal of trouble. Do not believe it. As I have said elsewhere, I am willing to prove all I say in regard to my favourites, the steam cars.—Yours truly,

HERBERT J. CHAPMAN.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—Replying to your enquirer "Amateur" I have been driving Turner-Miesse cars for the past five or six years. I bought the first one second-hand, and, after driving it four or five years, handed it to the makers in exchange for one of their later models, as I wanted one of somewhat later type. My repairs for the fifth year, bar tyres, amounted to £1 11s. They are quiet running and very powerful. The flexibility of steam is one of the great features in its favour; so great is it that you can run at any pace you like from a crawl up to thirty miles per hour.

I took over the car after only one day's tuition, and I think the best proof of my opinion after five years' use is the fact that I purchased another one. If I were a rich man I should have all sorts and powers, but the bulk of them would be Turner-Miesse cars. I can confidently recommend "Amateur" to purchase. I should strongly advise him to communicate with the manufacturers, who generally have one or two second-hand cars which they have taken in part exchange for new ones, which I believe they offer thoroughly overhauled and subject to the same guarantee as new cars.

I have no connection whatever with the firm except as a satisfied owner. I may say I have always found the company extremely prompt and courteous in all their dealings, and I shall be glad to answer any questions if your correspondent cares to write to me direct.—Yours truly,

E. H. O. SANKEY, M.A., M.B., B.C.

TO THE EDITOR OF *The Motor-Car Journal*

SIR,—I fully concur in the remarks of your correspondent "Steam" as to the flexibility, ease of control, silent running, hill climbing powers, and absence of complications in a properly managed steam car. I have owned and used one of these handy little cars for more than five years, and have driven same over 10,000 miles, without having been once held up or failing to get home.

The prejudice that has existed so long against steam cars is due more to ignorance and mismanagement than anything else. I use my car constantly and can run 90 miles on one fill of petrol, and with the spare engine and boiler, and other parts that I have of a similar car, expect to go on for several years yet, and to outlast many petrol cars.—Yours truly,

LOCOMOBILE.

ARE TWO IGNITIONS NECESSARY?

TO THE EDITOR OF *The Motor-Car Journal*.

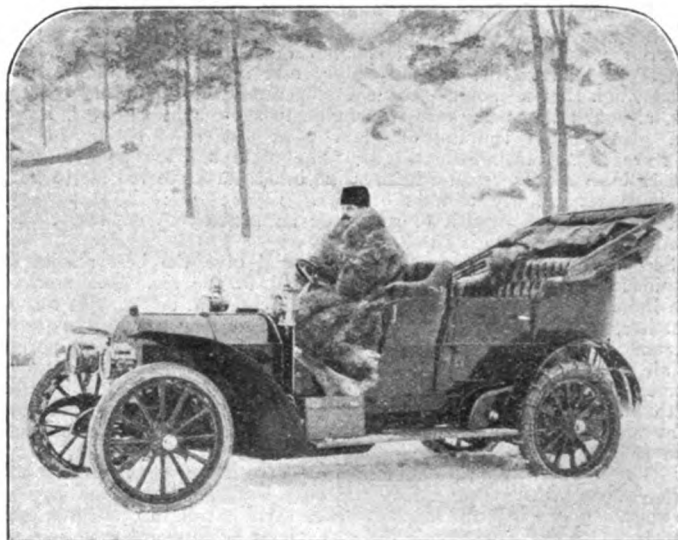
SIR,—With reference to the numerous letters now appearing in your journal on the advisability of fitting two ignition systems, I should be glad to testify to the extreme satisfaction which the Simms high tension magneto which I have fitted to a 30-h.p. Rhodes car has given me, it being my only form of ignition. I have never experienced misfiring of any kind, or had occasion to look at the plugs, even, and the engine always starts at the first or second pull over, although I am running on benzole, and using the car in all sorts of weather.

I may say that I have absolutely no interest in the Simms Company, but should like to record my appreciation of their magneto, which has proved perfectly satisfactory and reliable in practice. One little incident is perhaps worth recording. On a recent occasion, through an oversight on my part, one of the water connections was left loose, with the result that after the car had been running for a short time it converted the interior of the bonnet into a sort of amateur shower bath, but, contrary to my expectations, the engine continued to pull as well as ever, which I think speaks volumes for the way in which the magneto is constructed and its more vital parts protected from damp.—Yours truly,

L. T. BISHOP.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—“Chauffeur” is evidently pleased with himself that he has both systems of ignition fitted to his car. As to seeing several cars towed home that are fitted with the low tension magneto, well, that ought not to be if the men understand their work. When the tappet gets deranged on the low tension, and the firing is all wrong, it requires



Herr Salmon on the 28-40-h.p. Fiat Car on which he won the recent Gothenburg-Stockholm Race.

experience to set them right again, and I well remember in the early days of the magneto the “timing” was considered a trade secret. I have never once taken a magneto off its bed to correct firing, and yet, with my knowledge of magnetos, I find it impossible to get a berth. If those benighted chauffeurs were to get a practical and sociable mate in their district he could assist them out of their difficulties.—Yours truly,

LOW TENSION.

ELECTRIC LAMPS FOR MOTOR-CARS.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—In reply to the query by Mr. J. A. Stephenson in the *M.C.J.*, March 7th, 1908, the method I have been using, and which I consider the most efficient and simplest, is as follows:—

Put a 4-volt Osram lamp in the rear lantern and a 2-volt Osram lamp on the dashboard and connect them up in series, and it will be found that the 4-volt rear lamp is very nearly as brilliant as it would be were it alone in the circuit, and the 2-volt lamp filament is a bright yellowish red, which is exactly what one requires. The advantages are obvious: (1) only one 4-volt battery is required; (2) the current consumption is rather lessened than increased.

The lamp on the dashboard is placed in front of the board and shows its light through a small (half-inch) disc of red glass placed over a hole in the dashboard.

The current consumption of the two lamps in series is 7 amperes. So that the 30 amp. accumulator would give rather over forty hours' light.

If Mr. Stephenson would call upon me I should be pleased to show him my arrangement.—Yours truly,

G. WASHINGTON ISAAC.

THE CARBURETTOR AND ITS FUNCTIONS.*

THE carburettor is the lungs of the engine, and large power, long service and efficient action depend upon this device. Many varieties have been offered, and the road to the patent office is busier to-day than ever with people who think they have carburettors superior to former designs. With a fixed gas no carburettor is necessary, but air and gas adjustably proportioned are permitted to mix on their way to the cylinder with good results. The earlier inventors generally attempted to provide the gas by drawing air in some manner through a tank containing petrol, which permitted the air to absorb petrol vapour and issue from the tank practically saturated with vapour. This over-rich mixture was then diluted by the admission of air to form the proper mixture. In one form wicks of cotton served to distribute the vapour through the air. In another form the air was drawn down into the liquid and, bubbling up through it, became saturated. Other inventors seeking simplicity admitted the petrol directly into the air passage, trusting that it would be sprayed or vaporised and mixed with the air before the end of the compression stroke. Still others provided a spray nozzle, past which the air is drawn with sufficient velocity to break the liquid into a spray. This form is now in almost general use to the exclusion of other types. Each is usually called a carburettor, but the present form is more appropriately an atomiser, or, since its essential service is to mix liquid fuel and air to form what is universally called a "mixture," I prefer the short, simple, expressive word, "mixer."

PETROL MOTORS.

A number of facts concerning petrol engines must be kept in mind when considering the mixing device if the engine is to give superior results. First, the mixer must perform its function to the fullest possible extent, and intimately mix the air and liquid. It is not enough that it should provide a proper mixture at high speed only, for, although this will cause the engine to show a high power, it will not give smooth running or great power at slow speeds. If the mixture is not intimately mixed, some parts are too poor to burn, others burn slowly because lean, while other parts are too fat to burn, or burn very slowly because over-fat. The result is little power, a hot engine, much deposit of soot, and an ill-smelling exhaust that is distinguishable at a distance.

Second, in order to have full power and give the best results the liquid fuel must be properly proportioned to the air. Too much or too little liquid produces slow-burning mixtures and undesirable results. Further, although during each cycle the engine may receive the proper amount of air and liquid for the perfect mixture, if the early portion is air and the latter portion largely liquid, it is quite evident that a homogeneous mixture will not be produced, and that proper ignition with perfect engine behaviour cannot follow. It is therefore necessary that the air and liquid be proportioned constantly in a proper manner, and this may be rightly termed the second great requirement.

Third, it is also evident that different sized engines will have different requirements, and that a mixing device suited to one may not be suitable when fitted to another. The same is true in connection with speed. A proper mixture at one speed may be completely thrown out of proportion, or may be improperly mixed at another speed. Engines nowadays run at rotative speeds from 20 to 2,000 r.p.m., and the perfect mixer must meet these requirements. Since at high speeds full charges are usually used, while at the low speeds the throttle reduces the charge admitted, it is quite evident that the service required of a mixing device is not adequately represented by the proportion of ten to one, but that it is probably more nearly twenty to one, and possibly may vary as much as fifty to one. Such wide variation increases the difficulty of maintaining proper proportions and making a perfect mixture, and renders it necessary that the mixer should automatically adjust itself to the varying requirements.

FAULTY CARBURETTOR CONSTRUCTION.

These three features are the basic ones which must be kept in mind while considering the minor but important points of the perfect mixer. Most mixing devices heretofore constructed have aimed to provide for these three points, but more often than not each provision has been an imperfect one, and the results not of superior quality. The typical mixer of to-day takes air from the atmosphere at practically constant pressure, and liquid from a float chamber presumably having a constant level. Since, however, the quantity of air required is about fifteen hundred times greater in volume than of the liquid, and since the speed under a given suction is much greater than the speed of the liquid, it will be seen that wide opportunity for improper proportion exists. Add to this the facts that at very slow speeds the liquid may not be sprayed, but may be simply drawn from its nozzle in large drops, or even in a stream running down the outer walls of the nozzle, while at very high speeds the air inlet may be too small to admit a sufficient quantity of air, and the difficulty of maintaining a proper proportion under such wide variation will become apparent. To meet this difficulty the perfect mixer must automatically enlarge the supply of air and vary the liquid to maintain it proportionate to the air as

the needs of the engine grow greater. To do this with certainty it should have a diaphragm acted upon by the suction of the engine, which diaphragm should be large enough to respond to slight variations, and thus prevent high vacuums, with consequent reduced power at high speeds.

This method of providing for wide range is the only correct method. The mere opening of the usual auxiliary air port cannot perform this service, for the suction must increase considerably before the air port will open, and there is seldom or never provision made for securing either intimate mixture or proper admission of proportionate amounts of air and liquid with this auxiliary device.

This necessary automatic adjustment should not only be operated by the suction, but it should be sensitive enough to prevent much variation in vacuum between high and low speeds, and the mixer at high speeds should have openings large enough to admit the fullest possible charges, while at low speeds the opening should be so small as to secure sufficient air velocity to make a perfect mixture, that is, a fine spray of the liquid properly proportioned and intimately mixed, even when turning the engine over by hand. This can only be attained by permitting a large diaphragm to vary the size of the passage or passages under increased suction, and consequently proportionate to the speed.

BALANCE OF THE FLOAT.

The float chamber should be concentric with the liquid inlet, so that inclination in any direction will not cause more or less liquid to be admitted. The float should be surrounded by a substantially concentric volume of liquid that will support and balance the float, with the result that sudden vertical movements, such as jolts, are without effect. This arrangement is superior to floats balanced by weights, in addition to the column of liquid, for, owing to their different densities, the liquid and the weight may interfere in their duties and destroy the perfect balance sought for. The float should be a single piece, preferably without working joints, and particularly without frictional contacts with levers, which may sooner or later wear through its thin metal and cause it to leak. The float should be constant in weight and buoyancy, and is therefore preferably of metal. The float point should be adjustable, so that the level of the liquid may be maintained at the most advantageous point to suit the vacuum necessary to make the proper spray, and also to overcome the effect of different heads of petrol which may be used. The float point may be of such taper and size as to in some degree vary the petrol level in action, giving a higher level and better mixture at slow speeds.

(To be concluded.)

WATER FOR MOTOR-CARS.

A SCALE of charges for water supplied for washing motor-cars was decided upon by the Metropolitan Water Board last week. In future 20s. per annum must be paid for each private car, and there is no fixed scale for trade motor vehicles. The Appeal and Assessment Committee proposed the following scale of charges:—Horses, private, 6s. each; horses, trade, 4s.; carriages, private, two wheels 5s., four wheels, 10s.; carriages, trade, two wheels, 2s. 6d. each, four wheels, 5s. each; motors, private, 10s., trade, dependent upon horse power, &c. The Finance Committee, however, arrived at the conclusion that these proposals would involve the Board in a loss of income of £17,000 per annum, and Lord Welby, on their behalf, moved that the charges be increased to 8s. each for private horses, 6s. each for trade horses, and 20s. each for private motors.

Lord Welby gave particulars of the charges made for washing purposes by the water companies, and said the scale proposed by the Assessment Committee would result in a serious loss of income. Motor-cars required considerably more water for cleaning purposes than horse carriages.

Mr. Dove objected to a distinction being made between horse vehicles and power driven vehicles. He thought all carriages ought to be charged alike.

Mr. Norris described the proposal to charge more for motor-cars as class taxation. Motor-cars were already sufficiently heavily taxed by Parliament. It had been suggested that a motor-car consumed a certain amount of water in the radiator. As a matter of fact the loss by steam was less than half a pint in 400 or 500 miles.

Col. Collins: A great deal more water is used for cleaning a motor-car than a carriage.

Mr. H. Karlake: Infinitely less water is used for a motor. He described the scale of charges as an attempt to tax motor-cars for the benefit of the water consumer.

Lord Welby's amendment was, however, adopted as the future policy of the Board.

THE Bombay Motor Car Company have received a letter from Professor Dawson, Principal of the Victoria Jubilee Technical Institute, and Joint Honorary Secretary of the Motor Union of Western India, eulogising the performance of the 28-h.p. Daimler car which he drove in connection with the recent Indian motor trials. As the car was only received a few hours before the commencement of the trials, there was no opportunity of tuning it up, yet there was no hitch of any kind whatever, and the vehicle made an absolutely non-stop run. The petrol consumption worked out at 13.2 miles per gallon.

*Abstract of Paper read by Mr. C. E. Duryea before the American Society of Motor Engineers, Buffalo, N.Y.

CASES UNDER THE MOTOR CAR ACT.

ON THE FOOTPATH.

For driving a motor-car on the footpath alongside of the highway leading from Perth to Methven, a motorist has been summoned by the Perth County Council. He was fined 10s. and costs.

NO LIGHT.

The Newport (I. W.) magistrates have dismissed a summons against a motorist charged with driving a car without a tail-light in consideration of the fact that the offence occurred on a stormy night.

DANGEROUS DRIVING.

Mr. John Winter, physician, of Montpellier Road, Brighton, has been summoned at the Brighton Borough Bench for driving a steam motor-car at a speed dangerous to the public in North Street. The police estimate of the speed was eighteen miles per hour. The defendant said he was not going at a speed of more than ten miles per hour, and he and the chauffeur mentioned that they slowed up to pass a funeral. The pressure of steam was shown to be low; but the magistrates convicted and fined the motorist 40s. and costs.

A LEGAL POINT.

Mr. Albert George Brown, of Putney, answered at the South-Western Police Court, on Tuesday, to an adjourned summons at the instance of the Police Commissioner for driving a motor-car in Portsmouth Road at a speed dangerous to the public. This particular summons was issued originally conjointly with another charging the defendant with driving the car at excessive speed, and Mr. Barker, for the Commissioner, sought to obtain a conviction in respect to both offences. When the case was first before the court, as reported in the last issue of the *M.C.J.*, the police evidence proved that the defendant travelled over a measured furlong at a speed exceeding fifty miles an hour, and for this offence Mr. de Grey imposed a penalty of £15, with costs. Mr. Staplee Firth, the defendant's solicitor, argued that it would be irregular to punish a man twice over for this, which would be the case were the magistrate to convict on each of the two summonses issued under the same Act of Parliament and embracing the same offence. Mr. De Grey, who had taken time to consider his decision, upheld the objection on Tuesday. The chief element of danger was, he said, the speed, and if he were to convict, he would be convicting twice over. The summons was withdrawn, Mr. De Grey refusing an application for costs.

THE RENEWAL OF LICENCES.

On Tuesday, Mr. Philip Paddon, of Albemarle Street, W., was summoned by the police at Westminster, before Mr. Horace Smith, for driving a motor-car without a licence and without a front identification number plate. P.C. Payne deposed that on the afternoon of the 13th ult. he stopped the defendant at Hyde Park Corner as he had no plate on his car. Mr. Paddon said that he was out trying the machine, and that the plate had dropped off. Requested to produce his licence, he showed one that had expired the previous month. Mr. Curtis-Bennett, counsel for the defence, said the L.C.C. were about the only licensing authority who did not give notice to licensees as to the expiry of licences. They took enormous sums from motorists, and might very well adopt the principle of the Inland Revenue in sending out reminders to business people, for convictions under the Act and endorsements meant a serious penalty for forgetfulness. Mr. Horace Smith said that motor-car people were supposed to be persons of some business-like method. They were different to many people who held dog licences, to whom the Inland Revenue gave notice.

Mr. Horace Smith observed, with regard to the other offence, that he was always being told that the identification plate fell off. He hardly thought this could be so. Surely it was not such a difficult thing to hammer on a plate so that it did not fall off. There would be small fines of 5s. and 10s. respectively on the summonses, with costs, but he would not endorse the defendant's licence.

The Stepney Spare Wheel, Ltd., is now offering an excellent little contrivance in the form of a Stepney mudguard, which rolls up into very small compass, so that it is quite out of the way when not in use, and whenever the Stepney has to be called into requisition it effectually prevents any splashing of the mud.

MR. J. F. BEST, of Messrs. Inglis Bros., Christchurch, New Zealand, reports that of the two 12-h.p. Star cars competing in the reliability trials from Christchurch to Dunedin and back, one secured 998 and the other 994 marks out of a possible 1,000, neither having any mechanical or tyre troubles.

FROM the London and Parisian Motor Company, Ltd., comes a copy of the 1908 catalogue of Vulcan cars, which gives full particulars of the five models, 10-12-h.p. two-cylinder, 14-h.p., 20-h.p., and 25-30-h.p. four-cylinder, and 35-h.p. six-cylinder, which are being turned out. The list also gives illustrations of the different models as well as of the engine and other parts of the chassis, while several pages are devoted to testimonials from satisfied users of Vulcan cars.

THE DAVIS PARAFFIN CARBURETTORS COMPANY, of Shawford, Hants, are exhibiting at the Cordingley Show their patent paraffin carburetors, designed for commercial vehicles, cars, marine motors, and stationary engines. The exhibits will include models of all sizes, ranging from carburetors suitable for engines of from 2 to 100-h.p., and a "Blake" marine motor will be on the stand fitted with the Davis carburettor.

MOTORING IN ABYSSINIA.

THE interesting photograph here reproduced has been received from Mr. B. J. F. Bentley, of whose experiences in Somaliland and Abyssinia some particulars have already been given in these columns. The photograph was taken when within a few miles of Adis Abeba, at the end of a long hill climb of six and twenty miles, with a rise of 3,700 feet. It shows not only the loose and stony state of the so-called "road" but also the dreadfully barren condition of the country through which the Siddeley car and its passengers made their way. When the photograph was taken they had been nearly four months on the journey. Some of their troubles on the way are thus described by Mr. Bentley:—"We crossed the Hawash and Belin rivers famously in 4 ft. 6 in. of water (in places 5 ft.), having first covered the radiator with my Burberry coat; the magneto, petrol valve, and carburettor I covered with special waterproof canvas which I carry for the purpose. Really it was quite a feat. But crossing the Chasm river was another story altogether. The banks on either side were frightfully steep, and very soft; moreover, we had to deal with five feet of water and a soft mud bottom. This was one of the worst water crossings we have had, and required quite a lot of consideration as to the best method of getting the car across. We had not enough lashings for a bridge, so we unloaded the car of all kit, &c., and decided to try and rush through, having covered up radiator, magneto, &c., as in previous case. We succeeded in getting the front wheels on the opposite bank and then we stuck fast. Half the car was in four feet of water, and the back wheels up to the hub caps in the mud bottom. Drag ropes were useless, we could not move her one inch.



There was only one way out of the difficulty, and that was to get the body off as quickly as possible and carry it up first. This we did, working in four feet of water, and a very difficult job it was under the circumstances. Wells worked splendidly, and by our united efforts we had the body off in under an hour and a half. By the time we had got the body up the bank it was getting late and the water was too cold to work in, so we made the car fast and abandoned further work until the morning. The following morning we started as soon as the water was warm enough to work in, and by twelve o'clock we had got the chassis up the bank and refitted the body and left for Daji-Malca.

"Later followed what is undoubtedly the most remarkable hill-climb that any car has undertaken. As soon as it was daylight we started climbing and reached Chobra at 5.30 the same evening with only one stop of 2½ hours at mid-day. The distance was twenty-six miles, and the climb 3,700 feet. The gradients on some of the passes were very narrow and precipitous, and the surface very loose and stony, while in places 1 in 2½, 1 in 3, 1 in 3½, 1 in 4. The engine is running perfectly and is as quiet if not quieter than the day we left London, and up to the present time has not needed an adjustment of any sort, as also the main working parts. Considering the country we have gone through this speaks volumes, and I maintain that up to the moment of writing the car has done the equivalent of three years' hard touring."

THE March list of Sirdar tyres shows that the company are giving motorists the benefit of the recent fall in the prices of raw materials.

CLUBS AND ASSOCIATIONS.

ROYAL A.C.

At the meeting of the committee of the Royal A.C., held on Wednesday of last week, there was a long discussion on forthcoming legislation in regard to motor vehicles, and the following resolutions were passed:—1. That the Royal Automobile Club sees no justification for any additional taxation being imposed upon motor-cars. 2. That the Royal Automobile Club considers that the fundamental basis for a calculation of taxation should be "R.A.C. rating." The chairman pointed out that the Club had not sent a "deputation" to the House of Commons to interview the Chancellor of the Exchequer, but had sent representatives of the Club and the trade to lay facts and figures before Mr. Asquith to assist him, so far as lay in their power, in regard to the proposed taxation of motor vehicles on a new basis. These representatives in no way constituted a deputation, as they laid no definite proposition before the Chancellor in regard to motor legislation. The findings of the Royal Commission had been the basis of discussion, and the arguments for and against the several bases of taxation applicable to motor vehicles had been carefully investigated.

The resolutions were endorsed at a meeting of the General Committee held on the following day, when the following sub-committees were formed:—Organising Committee, Legal Committee, Legislation Committee, and Touring Committee. The Organising Committee will consist of twenty-six members in addition to the chairman.

The R.A.C. will elect six representatives and individual associates will be represented by three members, to be co-opted later. The terms

been raised in previous lessons was touched upon, such as the position, accessibility and design of the various parts. Mr. Currie spoke highly of the new induction pipes and the Metallurgique clutch, and explained to the members the new system of aeration of water—which was first seen at the Paris Salon—by means of which radiators are done away with. He also explained the Gillet-Lehmann control and pointed out how much better spherical joints in steering are than the old time pin.

At the last meeting of the committee of the club, Miss Colgate and Mrs. Moreton Frewen were elected to membership. There are now only twenty-two vacancies in the membership list, as it was decided a short time since to limit the number of members to 425.

CYCLE AND MOTOR TRADES BENEVOLENT FUND.

MR. W. A. STANDRING presided at the March monthly meeting of the executive committee of this fund, when a balance of £414, irrespective of £8,000 invested, was reported. Ninety-six subscribers, twenty-six members, one life member, and one life governor were elected and nine applications for pecuniary assistance were considered.

LANCASHIRE.

MR. S. BRIGGS-BURY, of Accrington, has been elected president of the Lancashire A.C., and on the new committee are Messrs. C. F. Bury, J. Briggs-Bury, Dr. J. V. Fox, H. Lonsdale, W. Smith, Havelock Lonsdale, and J. D. Lonsdale. According to the balance-sheet there was a



The Dennis Motor Char-a-Banc supplied to Dr. Vivers, of Sydney, Australia.

of reference to this committee include the encouragement of the co-operation of individual motorists by clubs and other means and the consideration of the assistance that may best be rendered to associated clubs in increasing their membership and conducting their operations.

New members include Earl Beauchamp, K.C.M.G., Mr. S. M. Samuel, M.P., Major E. H. C. Wellesley and Lieut.-Col. J. H. Hodgson.

AUTOMOBILE ASSOCIATION.

MR. WALTER GIBBONS, who is undertaking the direction of the entertainment which will follow the third annual dinner of the Automobile Association at the Hotel Cecil, London, on Wednesday next, has lost no time in securing what promises to be an unique programme. Over 200 artistes will take part, and the secretary will gratefully accept any offer of help in the way of motor-omnibuses for the conveyance of a few troupes to and from their respective variety theatres during the evening.

LADIES.

On Wednesday of last week Mr. Sedgwick Currie, M.I.A.E., addressed the members for the sixth time on the subject of "Petrol Motor-cars." The lesson itself dealt primarily with the 1908 improvements on both petrol and steam cars, but almost every point that had

balance on last year's working of £39, making a credit balance of £77 19s.

LINCOLNSHIRE MOTOR CYCLE.

THE opening event of this club for the season will be the hill climb on Easter Monday—probably at Waddington.

Capt. W. V. R. Fane has been elected president, Mr. A. W. Foster chairman, Mr. A. W. Nissler, 285, High Street, Lincoln, hon. treasurer, Mr. G. J. Wilkinson, 18, York Avenue, Lincoln, general hon. secretary.

The Grimsby centre will hold a pace judging competition from Grimsby to Mablethorpe on Good Friday.

SHEFFIELD.

DISTRICT hon. secretaries have been appointed at Hathersage (for Derwent Valley), Rotherham, and Doncaster.

As the result of representations from the club, certain tramway stopping places in the city have been more conveniently arranged by the authorities.

SCOTTISH MOTOR TRADE ASSOCIATION, LTD.

A MEETING of the Council of the Scottish Motor Trade Association, Ltd., was held in the Royal Hotel, Dundee, on the 25th ult. There were

present Messrs. Thomas Shaw (Dundee), W. L. Sleigh (Edinburgh), J. H. Paterson (Aberdeen), James Gibbon (Glasgow), A. G. Rennie (Glasgow), John Love (Kirkcaldy), Thomas Campbell (Glasgow), and Wm. Rutherford (Edinburgh).

The Council agreed to form local centres of the Scottish Motor Trade Association, Ltd., as follows:—

Edinburgh, under the convenorship of Mr. W. E. Townsend, of Messrs. Middleton and Townsend, Edinburgh.

Glasgow, under the convenorship of Mr. A. G. Rennie, Glasgow.

Dundee, under the convenorship of Mr. Thomas Shaw, Dundee.

Aberdeen, under the convenorship of Mr. J. H. Paterson, Aberdeen.

Fife, under the convenorship of Mr. John Love, Kirkcaldy.

Dumfries, under the convenorship of Mr. A. C. Penman, Dumfries.

THE South Devon A.C. will, in future, be known as the Devon and Cornwall A.C.

MR. G. A. HICKLING presided at the annual meeting of the Burton and District Motor Cycling Club at the George Hotel, Burton-on-Trent.

MR. E. G. MAWBEY was elected an honorary life member of the Leicestershire A.C. in token of the many services rendered to the club during the five years he has been president.

ON Wednesday a paper on "Some Problems Peculiar to the Design of the Automobile" was read at the Institution of Mechanical Engineers before the Institution of Automobile Engineers by Mr. F. W. Lanchester.

BROOKLANDS.

THE following gentlemen have been elected private competitors of the Brooklands A.R.C., in accordance with the scheme outlined on page 23 of our issue of last week:—Viscount Churchill, G.C.V.O., Earl of Lovelace, Sir George W. Abercromby, Marquis de Mouzilly St. Mars, Hon. Lyndhurst Bruce, Capt. J. Bennett-Stanford, Capt. H. H. R. White, Lieut. H. C. Halahan, R.N., Messrs. Clement Hobson, Geoffrey Bird, H. R. Oldfield, Anthony Hoboken, Granville M. Kenyon, J. Stanley Phillips, F. N. Lloyd, Ernest J. Edwards, R. C. Priestly, Morton Stuart, Ernest Owers, G. Curnock Sawday, Thomas A. Scully, E. Campbell Muir, Algernon H. Moreing, J. Stuart Paton, Tom Faulkner, W. C. Bersey, Sidney a'Court, Jas. C. Madeley, E. H. Cozens-Hardy, J. H. Bell, Jairus E. Withers, G. Russell-Miller, O. L. Bickford, C. A. Bird, Howard Hollingsworth, and Herbert Musker.

ROAD REPORTS.

EAST SUSSEX.—£2,000 has been voted by the East Sussex County Council towards the cost of treating the surface of the main roads with tar. This will be divided among the localities that contribute one-half of the cost of the treatment.

CRIEFF.—The Crieff Town Council some time ago petitioned the Secretary for Scotland to restrict the speed of motor-cars on the various roads and streets within the burgh to a speed not exceeding ten miles per hour. Certain objections were lodged by the Scottish A.C. and others, but after some negotiations an amicable arrangement was come to, with the result that practically on all the streets within the burgh the running of motor-cars will be reduced to a speed not exceeding ten miles per hour. Mr. Alexander Stuart, advocate, Edinburgh, who is the Commissioner appointed by the Secretary for Scotland to examine all roads where such petitions are made, has just visited Crieff, and, after going over the list of roads and streets scheduled, he expressed himself as satisfied with the arrangement that had been made, with some slight modifications in the case of several roads in the suburban parts of the burgh.

ORMSKIRK.—A local correspondent informs us that a police trap is likely to be laid down on the Rainford, Mosborough and Ormskirk roads during this week-end.

FOOTS CRAY.—At Maidstone road, Foots Cray, is a police trap which has just resulted in several motorists attending the Bromley (Kent) Petty Sessions.

BROMLEY.—There is a police control from the milestone near the public library at Bromley, to the next one at Mason's Hill.

From Monday next, the 16th, a ten mile limit of speed will, by sanction of the L.G.B., be enforced on the following thoroughfares in Bromley, Kent:—So much of the main London road (including High Street and Mason's Hill) as extends from its junction with Tweedy Road to its junction with Prospect Place; Beckenham Lane, extending from its junction with the main London road to the boundary of the borough; Market Square; East Street; so much of Widmore Road as extends from its junction with Tweedy Road to Market Square.

THE new "Midland" studded tyres, introduced by the Midland Rubber Company, Ltd., are reported to be wearing very well indeed, and a motor hiring firm at Bristol proposes to fit them to all the wheels of their cars on hire, as soon as the present tyres are worn out.

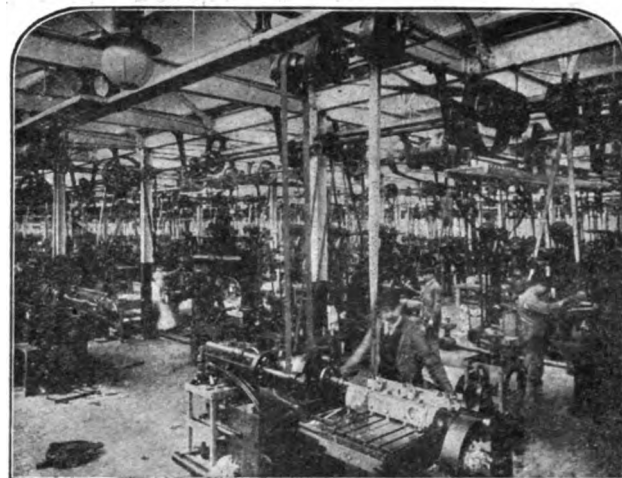
MESSRS. HUMBER, LTD., have been appointed official repairers to the Red Cross Indemnity Association (Lloyd's insurance) and repairs to any make of car up to £15 can be commenced immediately by any of the company's works or depots. Messrs. Humber have also just arranged with the same firm to issue a special Humber car policy at low rates.

THE IRISH RELIABILITY TRIAL.

WITH reference to these trials, which take place in May, and full reference to which was made in our issue of the 22nd ult., we would point out that the differences in the Irish trial of 1908 as compared with last year are not great. The petrol consumption has been taken out of account, because of the difficulty of dealing with it, more especially in checking the exact amount used, as Observers cannot always be relied upon to do this correctly. A prize has been offered for the team of cars which performs best as regards reliability. The formulae for the cups are very much the same; they really worked out most satisfactorily last year. Without any formulae at all, nine out of ten men could have selected the cars which deserved to win; they could also have put their fingers on the runners-up. The experience of last year, needless to say, has been invaluable in suggesting improvements in the formulae. The speed test on Magilligan's Strand will this year form an actual part of the trial.

MOTOR RACING IN FLORIDA.

AS mentioned in our last issue, the annual race meeting on the Ormond-Daytona Beach, Florida, commenced on Tuesday, last week, when Cedrino, on a 60-h.p. Fiat, won the 100-mile race for the Minneapolis Cup in 1 h. 50 min. 20 sec. On the 4th inst. the principal event was an 125-mile race for amateurs. There were only three competitors. Kelsey on a 50-h.p. Christie, Stevens on a 60 h.p. Fiat, and Bergdoll on an 80-h.p. Benz, the latter winning in 1 h. 53 min. 20 sec. On Thursday, the 5th inst., a 256-mile race for the Automobile Club of America's Cup was run. Cedrino, on the Fiat, proved the winner, his time being 3 h. 21 min. 27 2-5 sec. Cedrino went on to establish a record of 300 miles, which he covered in 3 h. 53 min. 27 2-5 sec.—an average



A View of the Boring and Drilling Shop at the Humber Company's New Works at Coventry.

speed of about seventy-seven miles per hour. Cedrino also won the mile race in 35 sec. The meeting was brought to a close on Friday with a 100-mile record race, the competitors being Stevens on the Fiat and Bernin on a 1907 Grand Prix Renault, the latter winning in 1 h. 12 min. 56 1-5 sec., reducing the record for the Beach track by nearly 2 1/2 min.

COLLISIONS AND CLAIMS.

SHERIFF-SUBSTITUTE GUY has issued from Edinburgh Sheriff Court two judgments of interest to motorists. In the one, in which the Scottish Motor Traction Company (Limited) sued Thomas William Wright, Roslin, in connection with a collision which occurred on the evening of September 26th last, on the Penicuik road, between New Pentland and Clippens, the Sheriff decides in favour of the defender, and finds the pursuers liable in expenses. In a note, he says that if the van had carried lights the collision would not have occurred, but as it was no contravention when proceeding at a walking pace not to have carried lights defender was not to blame. When motor-cars trespassed upon what might be the wrong side of the road it was at their own risk. The other case arose out of a collision between two motor-cars on the Queensferry road in July last. The pursuer, Mr. Charles D. Macandrew, 22, London Street, Edinburgh, raised the action against Mr. Henry Cotterill Tillard, M.A., Cramond Bridge. The Sheriff finds the pursuer liable to defender in expenses, having come to the conclusion that the collision was caused both by the fault of defender's driver and the contributory negligence of pursuer's driver.

MR. R. SCAIFE, of Winchester, Mount Armley, Leeds, will be pleased to place his services at the disposal of any motorists who may require assistance when in the locality.

FORTHCOMING EVENTS.

MARCH.

- 18th (W.).—Annual dinner of the A.A. at the Hotel Cecil, London.
 19th (Th.).—Monthly meeting of the General Committee of the Motor Union.
 21st (Saturday)—28th (S.).—
CORDINGLEY'S THIRTEENTH INTERNATIONAL MOTOR-CAR EXHIBITION will be held at the Royal Agricultural Hall, London.
 21st (Sat.).—Annual general meeting of the Council of the Auto Cycle Union.
 25th (W.).—General Conference of Automobilists under the auspices of the Motor Union, to consider the question of motor-car taxation and other Parliamentary proposals affecting motorists.
 26th (Th.).—Ladies' Automobile Club Day at the Motor Car Exhibition at the Agricultural Hall, London.
 29th (Sun.).—Opening Run of the Southend Motor Club to the White Hart Hotel, Witham.
 31st (Tu.).—Last day for receiving entries, at ordinary fees, for the International Touring Car Race.

APRIL.

- 4th (Sat.).—Auto Cycle Union dinner to road-menders on the Ripley road at the Anchor Hotel, Ripley.
 11th (Sat.).—Annual open Flexibility Contest of the Crystal Palace A.C.
 16th—20th.—Easter Tour of the Motor Cycling Club.
 17th (Good Friday).—Lincs. M.C.C. meet at Mablethorpe.
 18th and 20th.—First meeting of the Brooklands A.R.C. for 1908.
 25th (Sat.) to May 25th.—Industrial Vehicle competition of A.C.F.
 26th (Sun.).—Southend M.C. run to Thatched House Hotel, Epping.

MAY.

- 1st (F.).—The Frome's Hill Climb of the Herefordshire A.C.—provisional.
 2nd (Sat.).—Impromptu pace judging competition of the Sheffield A.C. at Ollerton.
 9th (Sat.).—First provincial meet of the R.A.C.—to be held at Nottingham, by invitation of the Nottinghamshire A.C.
 10th (Sun.).—Targa Florio Race.
 21st (Th.)—25th.—Reliability Trial of the Irish A.C.
 25th.—Industrial Vehicle Competition of the A.C. de France.
 31st (Sun.).—Southend M.C. run to Saracen's Head Hotel, Dunmow.

JUNE.

- International Aeronautical Federation conference in London.
 5th—6th.—London-Edinburgh twenty-four hours' run of the Motor Cycling Club.
 8th (M.).—Cars competing in the International Touring Car Trial will arrive at the depot.
 Start of the International Touring Car Trial of the R.A.C.
 9th (Tu.).—Touring competition for Prince Henry of Prussia's prize begins.
 15th—19th.—Scottish Reliability Trial.
 20th (Sat.).—Meet of the Hull Auto Cycle Club and the Lincolnshire Motor Cycle Club at Brigg.
 27th (Sat.).—Hill climb of the Midland A.C. at Shelsley Walsh.
 28th (Sun.).—Southend M.C. run to Grand Hotel, Clacton.

JULY.

- The Land's End to John o' Groat's Trial of the Auto C.C. will be held.
 6th (M.).—Grand Prix A.C.F. (Voiturette section).
 7th (Tu.).—Grand Prix A.C.F. on the Dieppe Circuit.
 25th (Sat.).—Petrol Consumption Tests of the Motor Cycling Club.
 Annual Open Hill Climb of the Midland A.C.
 28th (Sun.).—Southend M.C. run to Coach and Horses, Quendon.

AUGUST.

- 29th (Sat.).—Meet of the Lincolnshire Motor Club at Lincoln.

LIGHTING-UP TIME—LONDON.

| | | | | | | |
|---------------|-----|----------|-----|----------|-----|-----------|
| Mar. 14th—7.0 | ... | 16th—7.4 | ... | 18th—7.7 | ... | 20th—7.11 |
| „ 15th—7.2 | ... | 17th—7.6 | ... | 19th—7.9 | ... | 21st—7.12 |

Secretaries of automobile clubs are invited to forward their programme of fixtures as soon as arranged.

INTERNATIONAL TOURING CAR TRIAL, 1908.

THE thirteenth entry for the trial is a 12-16-h.p. Vauxhall (Mr. Percy C. Kidner), Class 4. The Daimler, Straker-Squire, Deasy, Armstrong-Whitworth and Clement-Talbot firms have the matter under serious consideration. The thirteen cars already entered and the entries from the above firms bring the number up to twenty-five.

IN addition to the teams of Austins and Italas, the three Motobloc cars entered for the Grand Prix are using Dunlop tyres on detachable rims of the same make.

CHARGE OF MANSLAUGHTER.

AT Islington Coroner's Court, on Monday, Dr. Danfield Thomas held an inquest on the body of Charles Cox, a labourer, employed by the Finchley Urban District Council, of Hamilton Road, East Finchley, who died on Thursday in the Great Northern Hospital from injuries received through being knocked down and run over by a motor-car on Cherry Tree Hill, Finchley, on Wednesday of last week.

The evidence showed the deceased was employed as a flagman in connection with a traction engine working on the road at this point, and a motor-car driven by John Kitchener, in the employment of Mr. George Glanfield, of South Hampstead, came down the hill at what witnesses variously described as a pace of something from fifteen up to thirty-five miles an hour. In passing the traction engine the car came into collision with a lamp standard in the centre of the roadway, and skidding round caught the deceased and knocked him down, the rear wheel of the car passing over him. The driver Kitchener has already been charged at the police-court with manslaughter. The jury pronounced a verdict of "Manslaughter" against Kitchener, who was committed for trial on the coroner's warrant.

BUSINESS NEWS.

FROM Messrs. Humber, Ltd., we have received an interesting photograph depicting the testing of a crank shaft at Beeston, Notts. Each crank shaft goes through this test and a certain pressure is applied. The crank shaft then goes back on the lathe, and on the least sign of it being out of truth it is scrapped.

THE DAIMLER COMPANY have sent us a photo of the depot they have recently opened at 3, Plaza Celenque, Calle Arenal, Madrid, where the latest types of their well-known car are on view. These premises are in addition to the establishment opened some time ago by the Daimler Company at San Sebastian.

THE AUTOMOBILE CONTRACT COMPANY, LTD., of 51, Conduit Street, desire us to state that they are in no way associated with the company known as the Times System Automobile Company, Ltd., recently trading as Huntley Walker and Co., Ltd.

THE Victoria Street Garage and Showrooms, 94, Victoria Street, London, S.W., has been appointed sole concessionnaires for the United Kingdom for the "Royal" motor delivery vans, which are favourably known in France.

THE FITTON ENGINEERING COMPANY, of 664, Old Kent Road, London, S.E., are undertaking the welding of cracked cylinders, differential cases, &c.

STAREYS AND WOOLLEYS, LTD., is the name of the firm formed by the amalgamation of Messrs. Stareys, Ltd., of Nottingham, and Messrs. John Woolley and Sons, the motor-car body builders, of the same town.

AMONG recent purchasers of Weigel cars is Captain James Persitz, of the Russian Imperial Political Police. He has acquired a 40-h.p. limousine, which has been placed by him at the disposal of the Dowager Empress of Russia, during her stay in England.

MESSRS. DAVID MOSELEY AND SONS, LTD., of Ardwick, Manchester, have issued their 1908 motor-tyre catalogue. Several improvements have been introduced into the "detachable" tyres, to test which the firm have six of their own cars constantly running in all weathers.

THE thirteenth of the series of motor-car exhibitions promoted at the Agricultural Hall, London, by Messrs. Cordingley and Co. will be opened on Saturday next, the 21st inst., and will continue throughout the following week. Several new automobile features of importance will be introduced to the motor world. As was the case at the 1907 Show, the aero section will be of considerable popular interest.

TO CORRESPONDENTS.

All communications intended for insertion in this Journal or relating to Editorial matters should be addressed to THE EDITORIAL DEPARTMENT, MOTOR-CAR JOURNAL, 27-33, Charing Cross Road, London, W.C., and must be written on one side of the paper only. Letters must in all cases be accompanied by the name and address of the writer, as no notice will be taken of anonymous communications.

The Editors cannot undertake to return MSS. or drawings, although every effort will be made to do so in the case of rejected communications. Where such are regarded as of value, correspondents are requested to retain copies.

The Editors do not hold themselves responsible for the opinions expressed by their correspondents, or for statements and facts which do not appear in the editorial columns.

To insure insertion communications and contributions must be in the Editors' hands by Tuesday forenoon of the week in which the same are intended to appear. Disappointment may be caused by non-compliance with this rule, and to avoid this earlier receipt, if possible, is necessary.

Photographers, both professional and amateur, are invited to send photographs of current events or of motoring scenes and incidents. The fee, if any, required for reproduction should be stated in each case, otherwise no liability will be accepted.

The Editors and Publishers beg also to state that they will accept no responsibility for unsolicited contributions, even if used, unless payment for same is directly specified in forwarding, and the terms arranged before publication.

THE Motor-Car Journal.

VOL. X.]

LONDON, SATURDAY, MARCH 21, 1908.

[No. 472.]

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COMMENTS.

The Cordingley Show.

WITH reference to the thirteenth motor exhibition promoted by Mr. Charles Cordingley, which will be opened at the Agricultural Hall to-day (Saturday), the *Daily Telegraph* says:—"Visitors will find there many cars and accessories that have not previously been shown in this country. There are a large number of exhibitors who have taken space in the hall. This exhibition always is the closing event of the motor show season, and, coming at a time when the buying public wish to have early delivery of their cars, usually produces many orders for the motor-car manufacturers and agents."

To Warn or not to Warn.

ONE of the Local Government Board regulations with regard to motor-cars is that every such vehicle shall carry an instrument capable of giving audible and sufficient warning of its approach. Now the Coroner for Sheffield questions the wisdom of motor-cars having horns, as he thinks if they had not drivers would be much more careful in steering their cars. These remarks followed a suggestion that motorists having sounded their horns thought they had accomplished the whole of their duty. We demur to this rendering of the general practice of those who drive automobiles. They regard the horn as a warning to the members of the public who persist in wandering about the roadways; but that does not take from them the responsibility for careful driving. The public must be warned, and motor drivers must continue to be careful.

The Renewal of Licences.

ELSEWHERE we refer to the question of the renewal of licences to drive motor-cars, and would here take the opportunity of reminding our readers that such official permissions to drive are only available for one year, and have then to be applied for again. They are operative for twelve months from the date on which they are granted, and must then be renewed. The onus of remembering the date on which to renew is apparently left by the Legislature to the licensee—the practice thus differing from Inland Revenue matters. Fortunately, in many places, memories are supplemented by reminders from the registering authorities, and the motorist thus saved a little worry.

The Frome's Hill Climb.

CONSIDERABLE interest has centred around the Frome's Hill Climb in recent years, and the attempt to repeat the event has aroused considerable concern in the locality, where it is viewed from two diametrically opposed aspects. The Bromyard District Council recently appointed a committee to consider the matter, and they have reported unanimously against trials being held on Frome's Hill, a decision that has been communicated to the Herefordshire Automobile Club. Several local people have complained of the damage done to the fields near the hill by the public, whose attendance certainly was all

that could be desired on the score of numbers on the last occasion. It is understood that the objections of the local authorities are not entirely shared by the county police and the authorities of the city of Hereford, who have always shown a sportsmanlike attitude towards this event. Should it be found impossible to hold the contest on Frome's Hill, efforts may be made to secure a private road in one of the many parks in the county, but we doubt whether a more suitable venue can be found. The matter is under the serious consideration of the Herefordshire A.C., and the sooner it is settled the better for the prospects of the meet, should it be decided to hold the same this year.

The Motor-'Bus.

At the half-yearly meeting of the London Road Car Company, to be held on Tuesday next, reference will be made to the competition of the motor-cabs having adversely affected the jobbing department of the company. During the past half-year 270 horse and 160 motor 'buses were running, the number of passengers carried being 40,499,532. The earnings per car mile run have fallen off 1d. per mile in the case of the motor-'buses as compared with the corresponding half-year of 1906. With regard to the motor-'buses, the total cost per mile was no higher than was anticipated at the commencement of the operations; but in the case of horse 'buses there was an increase, largely due to the higher cost of forage. The continuance of the upward tendency in the latter connection should prove a helpful factor to the motor-'bus.

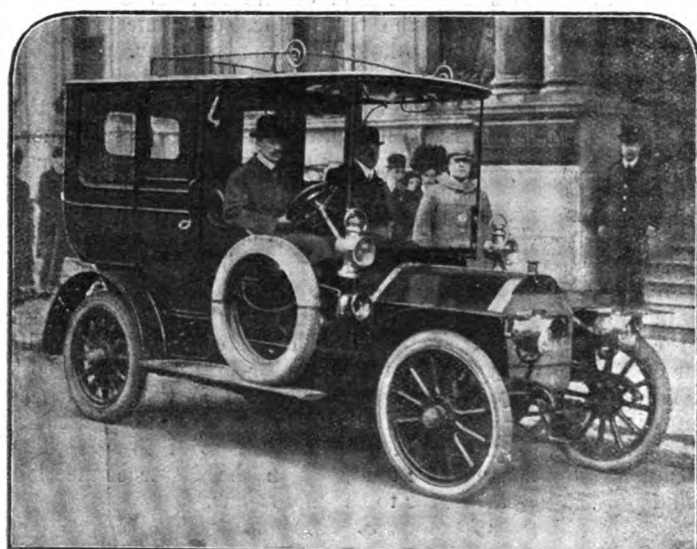
The Roads Improve- ment Association.

THE annual report of the Roads Improvement Association naturally draws attention to the Tar Trials, which were held early last year, and to the various efforts made to keep the subject well before the public. Insistence is again given to the idea of a central department for the main roads of the country, and mention is made of many instances where complaints as to the condition of particular roads were brought before the notice of the proper authorities with satisfactory results. There are now 322 individual members of the Association, and a number of organisations subscribing to its fund, while its Council is representative of many of the leading organisations in which motorists predominate. The Association intends to take a prominent part in the forthcoming International Road Congress, which will be held at Paris early in November, and anticipates that much useful information will be diffused by its means.

Motoring v. Medicine.

MOTORING as a health exercise is a subject that has scarcely received the attention it deserves. Although every motorist has had experience of the exhilarating effect of a run into the country on a speedy motor-car, there are many persons inclined to invalidism who are unaware of the bracing tonic that can be brought to their doors. Mr. J. H. Riddle, in the columns of a morning contemporary, deals with the matter in an observant fashion. In the great majority of morbid conditions the motor-car can be used with benefit as a

health restorer, and only in a few restricted classes of disease can it be said to be harmful. A great point in its favour is that whereas every other branch of sport requires robust health at the commencement, such is not a *sine qua non* for the enjoyment of the pastime of motoring. Accepting as a scientific fact the assertion that 90 per cent. of the chronic ailments that the flesh is heir to are primarily induced by the victim allowing himself to become "run down," Mr. Riddle points out the value of automobiling in such condition. The most marked effect of regular moderate motoring is on the blood, and improvement has generally been noticed in anæmic cases. Neurasthenia is another disease in which motoring has been beneficially prescribed. There are, however, certain nervous states and hysterical and epileptic conditions where indiscriminate motoring might not be wholly advisable. However, as the morbid conditions are few and rare in comparison with those in which distinct benefit from the sport has been recorded, it is not too much to say that motoring holds an unique position in the pharmacopœia of to-day, both from the pleasure which may be got during the treatment and in the multiplicity of ailments in which it has been shown to be of value.



Prince Constantine de Tschernischeff, the private and confidential secretary of the Dowager Empress of Russia, at the wheel of the 40-h.p. Weigel Limousine which has been in the Imperial service since the Empress arrived in London.

On the Trial Route.

THE Committee engaged in the inspection of the routes to be followed in the Scottish Reliability Trial have been hampered in their work during the last few weeks by the severity of the weather, and by the fact that a very considerable number of the northern roads are closed to traffic owing to snow blocks. As an illustration of the conditions up north, we learn that as late as Wednesday of last week the Glenshee road, even on the low-lying portions, was absolutely closed, and that a coach belonging to the Invercauld Arms Hotel had remained embedded in the snow between Finegand and Lair for about a fortnight. There is no prospect of this route to Braemar being available for cars for another month.

In the House of Lords.

REPLYING to Lord Montagu in the House of Lords on Tuesday, Lord Allendale, on behalf of the Government, "strongly suspected that if the Chancellor of the Exchequer contemplated at all getting increased revenue from the taxation of motor-cars, he would wish to keep in his own hands the disposal of that increased revenue, and would not

allow it to be intercepted for the purpose of grants-in-aid." Lord Montagu had asked whether the Government would, in considering any further legislation or taxation relating to motor-cars, bear in mind the recommendations of the Royal Commission on motor-cars and the Royal Commission on London traffic, and take such steps as might be necessary to create a national road authority, by whom the main roads of this country should be managed. The fact that there were no fewer than 170 road authorities between London and Carlisle showed clearly how very necessary it was that a national road authority should be established.

No National Authority.

COMMENTING on the speech, the spokesman of the Ministry, taking advantage of the fact that the subject was mixed up with money matters, pointed out that considerations of finance rarely came within the province of the Lords. The Government had not in contemplation any general legislation on the subject of motor-cars, although it was recognised that an amendment of the law was desirable in some directions. The Royal Commission of 1906 did not recommend that there should be a national road authority, but a central department, by whom the proceeds of licence duties should be distributed. Such a department would have to exercise some control over the maintenance of the roads, but the management would remain with the existing authorities. The Government could not promise to establish even such a body as that, because it would be inconsistent with the policy of local government and decentralisation which had been adopted in this country.

Legislation Postponed.

FROM the speech of Lord Allendale and that of Lord Fitzmaurice who followed with the admission that the multiplicity of road authorities was a great evil, it is evident that little will be done in the direction desired by many motorists, at least, during the present session of Parliament. Apparently the revision of motor-car legislation is to be postponed indefinitely, and the immediate matter of interest centres about the Treasury. The feeling against increased taxation is undoubtedly growing, and should find emphatic expression at the meetings to be held in the coming week.

Motor Lifeboats.

MOTOR-BOATING for utilitarian purposes has been prominently to the front in Wales and Scotland of late. At the meeting of the Cardiff Pilotage Board the question of pilots making use of motor-boats has been discussed, and at a meeting at Dundee on Friday of last week reference was made to motor-lifeboats, Commander Cunningham Graham, R.N., Deputy-Chief Inspector of Lifeboats, explaining that the motor-lifeboat experiments being carried on by the Royal National Lifeboat Institution were not yet complete. The difficulty was as regards the engine or engines which might prove most suitable for installing in lifeboats. He further mentioned that there were only four motor-lifeboats in use by the Institution, that the first one introduced had been the most successful, that it was not the expense which was delaying motor-boats being introduced, as the Institution were determined to keep up with the times, and that he considered the Tay a very suitable station for a motor-boat. Local speakers strongly expressed their views as to the enormous advantage of having a motor-boat stationed on the Tay, and hoped the parent Institution would take the first favourable opportunity of having a boat placed there. The meeting requested the Deputy-Chief Inspector to bring the views of the Committee forcibly before the parent Institution, whose headquarters are immediately opposite the offices of the M.C.J. in London.

**Club
Interests.**

LOCAL circumstances being so widely different are responsible for the varying fortunes of the clubhouses of the numerous automobile organisations throughout the country. At the annual meeting of the Lancashire A.C. reference was made to the poor attendance of members at the club's headquarters. The rooms have been furnished at considerable cost out of money provided by some of the members. Mr. Parker (Preston) expressed great appreciation of the rooms, and Mr. Ashworth and others made suggestions for lectures or other forms of attraction of members. Dr. Stephenson also urged members to use the rooms which the committee had gone to so much trouble to place at their disposal. He also spoke of the meagre support which members gave to the events which had been organised. If members would take more active interest in these events the committee would never begrudge the great amount of time and trouble which they had to spend upon them. Elsewhere we have heard of similar exhortations to members to

premises and a man is employed to wash the cars of members, so that those who motor into Cardiff in the morning may return in vehicles properly washed at the end of the day. The enterprise of the South Wales Club in this matter has proved a great factor in its prosperity.

**Islands in the
Roadway.**

WHILE motorists have been denouncing the centre standards and similar impediments that electrical and other companies have erected in many of the main avenues of traffic, several of our contemporaries have been proposing the installation of other roadway inconveniences. The "Lancet," constituting itself the organ of the puzzled pedestrian, is advocating that, in view of the growth in the number of motor vehicles in the streets, more "islands" should be arranged in the wide thoroughfares of the City, to which those who journey on foot should run for protection when attempting to dodge the rapidly moving vehicles that now abound. By such an arrangement the dangers



The Annual Dinner of the Royal Automobile Club.

encourage the committees of these organisations; and we would add our testimony to the fact that the good work done by those responsible for the management of automobile clubs merits appreciation.

**A South Wales
Club House.**

IN some parts of the country motoring club men are keenly interested in their organisations, and we recently referred to what was being done at Basingstoke with regard to practical matters. Now we learn that the establishment of a motor-house at West Wharf, Cardiff, by the South Wales and Monmouthshire Automobile Club has been a great success. Mr. J. Thompson Willows, the hon. sec., informs us that the establishment has fully justified the expenditure, as members use the motor-house frequently, not only for the purpose of garaging their cars during the day when in town on occasional business or pleasure, but a good revenue is derived from the storage of cars at fixed rates for the month. Members who have not accommodation for their cars at their residences find this feature of the club a very useful one. A caretaker is kept on the

of the streets would be minimised, and the risks of accidents necessarily lessened. The idea is excellent, but its promiscuous adoption might easily prove an aggravation of the congestion already apparent in the Strand and similar important Metropolitan thoroughfares. Probably the solution of the matter will ultimately be found in the institution of the system of subways, such as are found outside the Mansion House. These, located at all the points of greatest traffic, would serve a similar purpose to the bridges across the river; but experience has shown that, even at the Mansion House, people will run the risks of the road rather than go down the stairs and through the tunnel that undermines the street.

AT the annual meeting of the New York State Association of Postmasters, recently held in New York, the chief of the New York post-office gave his personal endorsement of the motor-car, and suggested its use as a solution of one of the present dilemmas of the department, which arises from the difficulty of securing prompt deliveries of periodicals in the residential sections of the city.

THE RENEWAL OF LICENCES.

LAST week, in our notes on cases under the Motor-Car Act, we recorded an instance at the Westminster Police Court, when a motorist was summoned for driving a motor-car without a licence. It transpired that his licence had expired some days before the police requested its production, and his counsel, at the police court, said that the London County Council were about the only licensing authority who did not give notice to licensees as to the expiry of licences. This is done in the case of Inland Revenue licences, and the man with a dog is more courteously treated by Officialdom than is the man with a car. The London County Council, which issues more licences to drive automobiles than any other registering authority, conducts its business in most primitive fashion. The applicant ascends to the office in a small lift, and, having duly filled in the form, makes a descent to see the cashier. Then he returns to the first office to secure the licence, and has again to employ the lift to find his way out. The disposition of the various departments is most tedious, and, to the applicant for the licence, absurd. Fortunately the officials are courteous; their patience under the present



Touring in Belgium.—A View on the River Sambre near Namur.

circumstances deserves recognition when the new County Hall is erected.

The magistrate at Westminster having apparently upheld the L.C.C. in its practice of not sending notice of the approaching expiration of driving licences, we have made a few inquiries as to the plan followed elsewhere. There is no uniformity—although a preponderance of councils wisely notify drivers when the time for payment is drawing near. This was done at West Ham at the end of the first year of the operation of the Act, but the results obtained did not justify a continuance of the practice. Similarly the County Council of Shropshire for the first two years after the commencement of the Act reminded drivers by advertisement in the local papers of their necessity for renewal. The authorities at Edinburgh, Coventry, Bradford, Leicester, Bristol, and Liverpool do not inform motorists of the expiration of their licences.

Although the Bristol local authorities do not give direct notice to holders of motor-car or motor-cycle licences of the expiration of the same, attention is occasionally drawn in the local papers to the risks motorists run in driving without a licence, and this, we are informed by the Town Clerk of the city, "acts as a reminder to many, who forthwith renew their licences." It is the practice to always notify the licensee when his licence has expired at Glasgow, Dublin, Belfast, Manchester,

Burton-on-Trent, and Croydon. The same course is also followed in the counties of Berkshire, Glamorgan, Nottingham, Hereford, and Norfolk. Although the Warwickshire County Council does not inform drivers of the date when their licences cease, the clerk sends them a form of application for the renewal of their licences about a fortnight before they expire—a timely reminder that should be appreciated, and might well be imitated by those authorities that do nothing in the matter.

It is the practice in Leeds to forward a circular to the holders of motor-cars and motor-cycle drivers four or five days before the licence expires, reminding them of the date of expiry, and asking for the production of the licence at the office of the Hackney Carriages Department in the city. A similar form is used by the Oxfordshire County Council, which, in the event of the actual licence not being sent for renewal, issues a separate form of renewal to be attached to the original licence. One of the neatest forms of reminders is that used at Birmingham, as follows:—

Birmingham City Police.

Public Carriage Department,
Coleridge Passage,
Birmingham,

Sir,

"Renewal of Drivers' Licences, Motor Car Act, 1903."

I have to inform you that the Licence to drive a motor car, granted you under the Motor Car Act, 1903, will expire on the and to inform you that if you desire to renew the said licence it will be necessary for you to fill in the particulars required in the enclosed form, and forward same, together with your old licence, to Inspector Burton at the above address, who on receipt of a fee of five shillings will return the licence renewed for the ensuing year.

I am, sir,

Your obedient servant,
CHARLES HAUGHTON RAFTER,
Chief Constable.

Hitherto it has been the practice of the Surrey County Council to forward to every holder of a driving licence, within one month before the expiration of his licence—the time within which a licence may be renewed—an application form, addressed envelope, and letter with full instructions, and stating that the form must be filled in and returned in the event of the applicant desiring to renew his licence. This practice, though not obligatory under the above Act, entails a considerable amount of extra time and work, but it saves the applicants the trouble of writing to the office for the application form. Notwithstanding this care on the part of the authorities, the number of motorists who take no notice of it is surprising. They either send their licence without the form, in which case the form has to be written for, or they send the form and licence a day or week after the stipulated time, which latter case necessitates the sending of another form and the issuing of a new licence altogether, owing to their licence having expired. Under these circumstances we believe the Council are considering the question of discontinuing the above practice and allowing motorists to make their applications in the first instance.

From this cursory review it will be seen that the responsibility in the matter really rests with the motorist, who should not forget that his licence is only available for twelve months from the date of being taken out, and that the onus of renewal rests with himself, without any previous notification from the licensing authority.

MESSRS. SKILMAN AND CO., of the Colchester Motor Works, Osborne Street, Colchester, have sent us a copy of a circular they have lately issued showing a comparison of the relative costs of running horsed and motor vans. On one side is shown the capital outlay for two vans and six horses (£310), and the annual running expenditure, including interest and depreciation (£499). Each two-horse van is estimated to run an average of thirty miles per day for 300 days in the year, giving a total mileage of 18,000. On the opposite page the first cost of a 12-14-h.p. 20 cwt. van is set down at £410, and the annual running expenditure (sixty miles per day for 300 days annually) at £364 10s. A saving of just over £135 per annum is thus effected.

The Cordingley Motor Show.

CORDINGLEY'S thirteenth International Motor Car Exhibition opens to-day (Saturday) at the Agricultural Hall, London, and will be the great attraction in motoring circles during all next week. Below we commence our review of the stands forming this representative Exhibition. This will

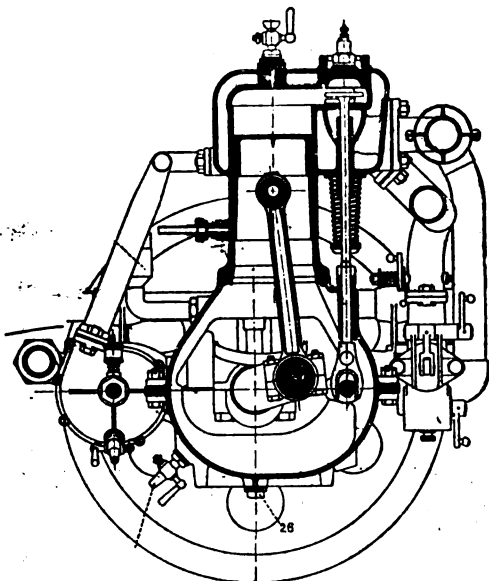


Fig. 1.—Cross Sectional View of F.N. 14-16-h.p. Engine, showing "desaxe" crankshaft.

be concluded in the following issues, and the complete report will form a good introduction to the 1908 season.

The F.N. 14-16-h.p. Car.

A Belgian-built car which makes its first public appearance in this country is the F.N., built by the Fabrique Nationale d'Armes de Guerre, of Herstal, near Liege, the makers of the well-known F.N. motor-cycles. Apart from their relative low price combined with excellent construction there are many points of interest in the new vehicles, which are to be seen at the stand of

A feature of the design of the engine is that the crank shaft, which runs in three long bearings, is slightly *desaxe* or off-set. The base chamber is so constructed that the bottom half can be removed without disturbing any of the bearings. The ignition is by a high tension magneto, gear driven off the half time shaft, while the carburettor (Fig. 2) is of the automatic single jet variety with piston throttle. The clutch pedal is also connected

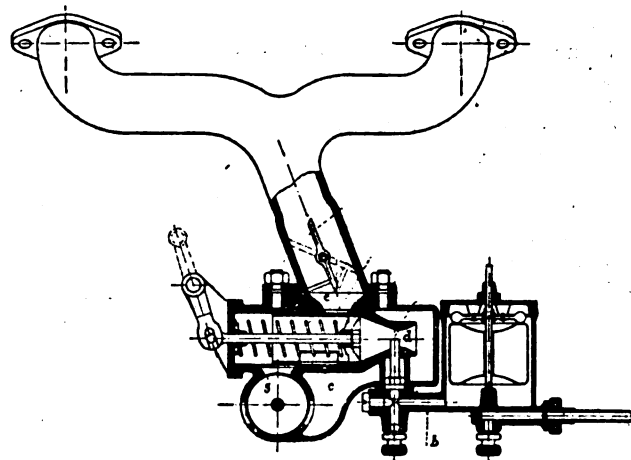


Fig. 2.—The F.N. Carburettor.

up to a separate butterfly valve in the admission pipe in such a way that when the clutch is withdrawn to change speed or at any time, the speed of the engine is automatically cut down. The lubrication of the motor is effected by a pump which forces the oil to a gauge on the dashboard, whence it flows to the different bearings. The water circulation is maintained by a gear driven pump and framed ribbed tube radiator with fan.

As regards the transmission, the clutch is of the leather faced coned type. A flexible joint is introduced in the shaft between the clutch and gear-box to allow for any want of alignment between the two parts. The change-speed gear is adapted to give three speeds forward and a reverse with a direct drive.

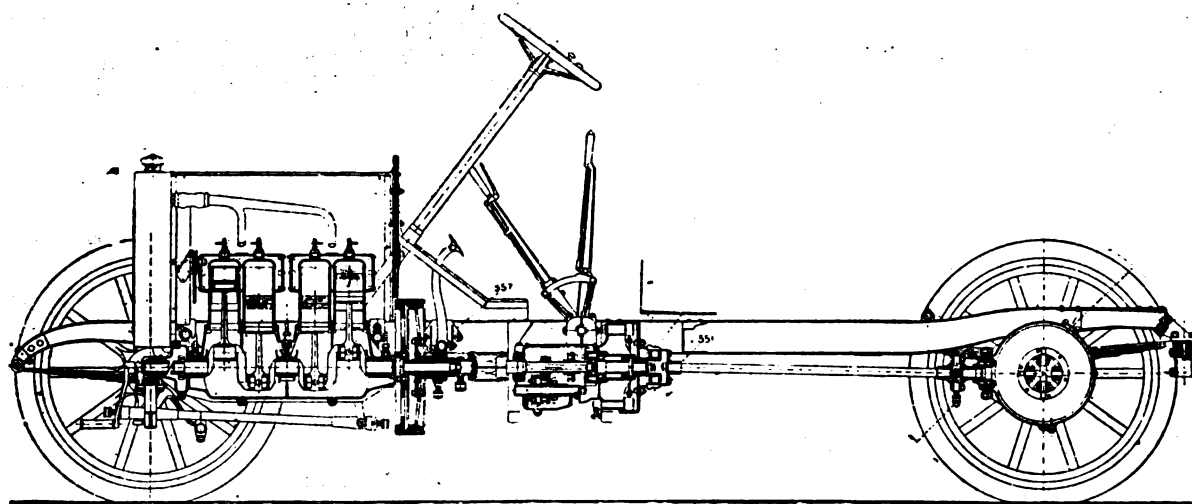


Fig. 3.—Elevation of Chassis of F.N. 14-16-h.p. Car.

the F.N. MOTOR AGENCY. The frame is of pressed steel narrowed in front to increase the steering lock, and raised at the rear to give clearance for the differential casing; the suspension is by means of five semi-elliptical springs. The engine (Fig. 1) comprises four cylinders cast in pairs, with the inlet and exhaust valves all located on one side and operated off a single cam shaft.

on the top speed, the side shaft then being entirely out of gear. The final transmission is by a double universally-jointed propeller shaft and bevel gear to a live axle. A view of the latter is given in Fig. 4 from which it will be seen that the design is such that it should give satisfactory results in practice. The differential casing is of steel, made in two halves, which bolt

together in a horizontal plane. The road wheels run on the axle-casing, the power being transmitted to them by jaw clutches on the ends of the live shafts. By removing the hub caps the shafts can be withdrawn, enabling the differential gear to be readily removed when necessary. The bevel driving pinion is provided with a bearing both at the front and rear.

The front axle is of H-section steel, while it may be added that the brakes, both hand and foot operated, are of the internal expanding variety, and that ball bearings are fitted throughout, except to the engine. The chassis, which has a wheel base of 8 ft. 9 in., which enables any type of body to be fitted, weighs only 13 cwt. Altogether the F.N. car is well worthy of inspection.

The Stella Cars.

Some excellent specimens of Swiss automobile engineering are to be seen at the stand of the STELLA MOTOR COMPANY, LTD., who are exhibiting a Stella 16-20-h.p. chassis and a complete car of a similar power with side-entrance Roi des Belges body to seat five persons (Fig. 5.) These vehicles, which are made by La Compagnie de l'Industrie et Mecanique, of Secheron, Geneva, comprise a number of interesting features. The engine is of the four-cylinder type, cast in pairs (90 mm. bore by 120 mm. stroke), with the valves set on opposite sides. One of the most interesting features of the cars is the carburettor, which can not only be quickly detached, but is of the multi-jet type. There are

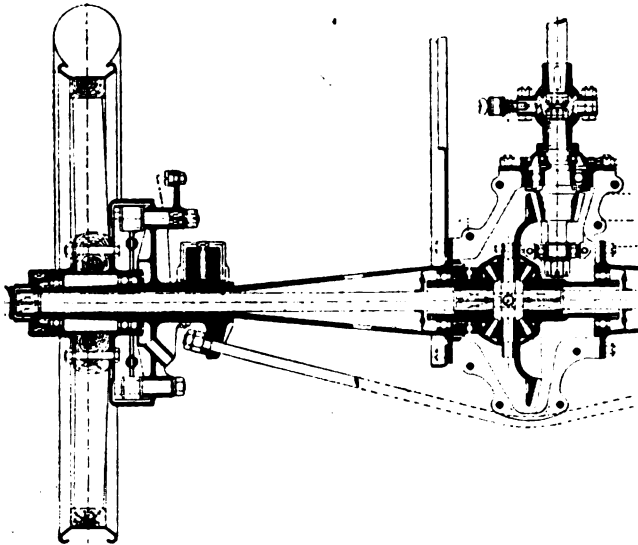


Fig. 4.—Sectional Plan of Half of Back Axle of F.N. Car.

altogether four jets, the small outlets in which vary in size; these are so arranged that as the speed of the engine increases the supply of petrol to the vaporising chamber is rendered proportionate to the air. The main inlet for the latter is through holes in the body of the device at the side of the jets, while the additional supply is through an automatic valve below. The ignition is by low-tension magneto, the tappets being so arranged that they can be readily adjusted. The bottom half of the base chamber is so fitted that it can be detached without disturbing the crank shaft or its bearings, while the bracket for the support of the starting handle is an integral part of the motor. No mud-protecting shield of the usual pattern is employed, the base chamber being extended at the sides so as to serve the same purpose. The flywheel and clutch are also provided below with an aluminium shield, this being bolted at the forward end to the crank case. The change-speed gear is gate controlled, and gives a direct drive on the top third speed. The final drive is by a cardan shaft and bevel gear to a rear live axle. A useful feature of the sleeve surrounding the latter, and of the differential casing, is the plane surface, any necessary webs being inside; thus there are no corners in which mud and dirt can collect. Very long dumb irons are provided at the rear, which enables springs of good length to be fitted. The clips which connect the springs to the axle casing are not rigidly fitted to the latter, but are free

to move to a slight extent to allow for any variation in the relative positions of the two parts. Needless to say, ball bearings are fitted to all parts except the engine.

The Standard Steam Wagon.

A new-comer in the steam wagon world is Messrs. T. J. RAYNER AND SONS, of Rayleigh, Essex, who show for the first time the "Standard" machine, which has been designed by one of the first steam wagon designers in the country. Two speci-

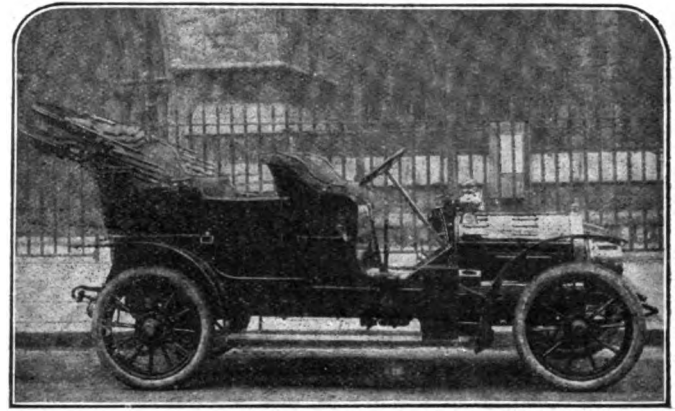


Fig. 5.—The Stella 16-20-h.p. Car.

mens of the "Standard" steam lorry are exhibited. One is of the firm's standard design for general work, and carries a load of five tons. The other is specially built for Colonial work. The road wheels are made of an extra large diameter, 4 ft., and of steel, in order to prevent risk of shrinkage in hot climates. The tread also is of extra width, in order to bear up the wagon when it is passing over soft grounds. In other respects the Colonial wagon is similar to the standard home pattern. The platform area available for the carriage of goods is seventy-five square feet, the flat body being 12 ft. 6 in. in length and 6 ft. 6 in. wide. The overall length of the machine is 19 ft. 3 in. The engine is sufficiently powerful to propel the vehicle up hills of 1 in 7 with ease. A trailer with an extra load of three tons may also be used with the lorry. The engine is of the horizontal type, compound, and reversing. The cylinder dimensions are 4 in. by 7 in. and 6 in. stroke. A normal speed of 500 revolutions per minute is provided for. Slide valves are fitted. The reversing gear is of a new type designed by the firm; it gives a variable "cut-off" with a constant lead. The method of transmission is from the crankshaft through two spur wheels to a second motion shaft, these wheels giving changes of speed. Thence the drive is

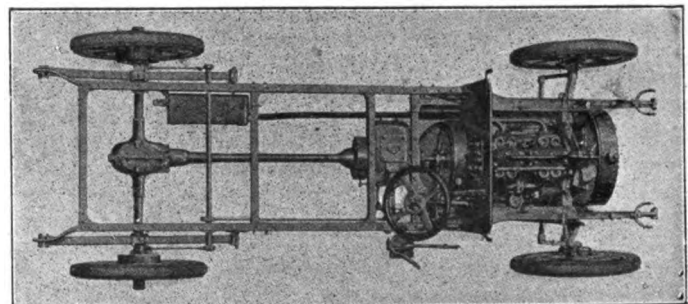


Fig. 6.—Plan of Chassis of Stella 16-20-h.p. Car.

to the differential gear and by Renold side chains to the rear road wheels. The engine and gearing are entirely enclosed in a dust-proof casing and run in an oil bath. Accessibility is a strong feature of the running gear, all of it being easily got at without the removal of any portion of the load. The boiler is of the locomotive pattern, horizontally and longitudinally fixed. The frame is of strong channel steel section, 6 in. by 2½ in., and is well supported by cross members of similar section, all well

riveted and gusseted. The main springs are of the semi-elliptical laminated pattern, and of a nicely-judged length to ensure easy riding. The steering is irreversible, and all the thrust is taken on a ball-bearing. For home use, artillery pattern road wheels are used. The water tank at the rear rests over the back axle. It has a capacity of 170 gals. The boiler feed-pump is driven from the crankshaft, and an auxiliary steam pump is also fitted, together with an injector.

The Yorkshire Steam Wagon.

The YORKSHIRE STEAM WAGON COMPANY, of Hunslet, Leeds, are exhibiting a steam wagon (Fig. 7) similar to that which successfully carried off a gold medal in the recent Industrial Vehicle Trials. We cannot do better than extract the particulars

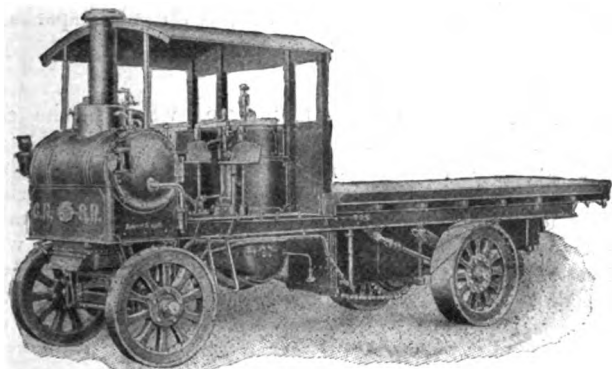


Fig. 7.—The Yorkshire 6-ton Steam Wagon.

of the points of the "Yorkshire" steam 6-ton wagon from the tabulated information given in the report of the trials:—The steam motor is of 35-h.p. Channel steel is entirely employed in building up the frame. The engine is of the compound type, the diameter of the pistons in inches being $4\frac{1}{2}$ and $7\frac{1}{2}$ respectively. The length of the stroke is $7\frac{1}{2}$ inches. Normally the number of revolutions of the crankshaft per minute are 350. The method of transmission of power from the motor to the rear road wheels is by a single chain. The full load which the vehicle is constructed to carry is, as already mentioned, six tons. Two speeds are provided for. Unladen, the wagon weighs 4 tons 19 cwt. In deciding upon the merits of the Yorkshire steam wagon, the trials judges took into consideration the fact that the total number of days it ran during the trials was twenty-two—the full period. The total distance run was 688 miles. Coal and coke were used as fuel in the following quantities, viz., coal, 3 cwt., coke, 108½ cwt., and wood, 270 lbs. The consumption of coal per mile was accordingly 18.25 lbs. In the way of lubricants, the wagon used—oil, 98 pints, grease, 1 lb. Time occupied by all stoppages other than those caused by traffic, or which were compulsory, 9 hrs. 43 min. As with all steam wagons, the greater proportion of this time was occupied in taking in water. The vehicle was highly commended for its adequacy of platform area, adhesion, finish and workmanship, freedom from smoke, general appearance, hill climbing, steering gear, and cost per net ton-mile; and commended for accessibility, brakes, and condition after trial.

The Foden Steam Wagon.

One of the most prominent exhibits in the industrial vehicle section of the Show is that of Messrs. FODENS, LTD., of Sandbach, Cheshire. It comprises two steam wagons, both of their well-known and remarkably successful traction type. Messrs. Foden have had many years' experience in building traction engines, and are as well conversant with the requirements of a traction engine as any traction engine maker in England. When they took up the manufacture of steam wagons to deal with loads which traction engines could not profitably carry, it was but natural that they should adopt the general design of a road engine which had been evolved from many years' experience. Accordingly, the Foden lorry is a small traction engine, having an overtake engine—that is, the

engine is mounted over the boiler, which is of the locomotive pattern. Of course the drive had to be transmitted to the rear road wheels, and it was inadvisable to slavishly follow the traction engine with its direct spur gear of large diameter. The firm therefore decided to use a heavy roller chain to take the drive to the rear road wheels, and the experience of users with Foden wagons proves the wisdom of the decision. Both the vehicles exhibited are designed to carry loads of 5 tons, and this they will do with ease at a minimum running cost. One is an eighth repeat order from Messrs. Joseph Rank, Ltd., millers, of Bury, London and Hull. The other Foden wagon is a third repeat order from Messrs. Wright and Son, millers, of Ponders End, London.

The Savage Steam Wagon.

Messrs. SAVAGE BROS., LTD., of King's Lynn, Norfolk, exhibit a steam wagon similar to that which secured a gold medal at the recent Industrial Vehicles Trials. The salient features of the vehicle (Fig. 8) are as follows, viz.:—Motor, 35-h.p.; frame, channel steel; front tyres, steel, 36 in. by 6 in.; back tyres, steel, 42 in. by 10 in.; number of cylinders, two; diameter of piston in inches, $4\frac{1}{2}$ and $7\frac{1}{2}$; length of stroke in inches, 6; number of revolutions of crankshaft per minute, 450; method of transmission of power from motor to wheels, spur gearing and side chains; full load which the vehicle is constructed to carry, six tons; number of speeds, two; weight unladen, 5 tons 3 cwt. 2 qrs. The points for which it was awarded the gold medal in the trials above referred to are summarised below. Total number of running days, 22; total distance run, 688 miles; nature of fuel used, coal; quantity, $74\frac{1}{2}$ cwt.; wood, 220 lbs.; lubricants, oil 30 pints, paraffin 8 pints; time occupied by all stoppages for water and other than those caused by traffic, or which were compulsory, 5 hrs. 47 min. General remarks:—Highly commended for—Accessibility, adhesion, condition after trial, ease of manipulation, finish of workmanship, freedom from smoke, quiet running, steering. Commended for—Cleanliness, cost per net ton-mile. Messrs. Savage also show one of their "Little Samson" tractors.

The Universal Tractor.

A machine which can be used as a tractor or lorry and runs on three wheels is shown by Messrs. SAUNDERSON AND CO., LTD., of Elstow Works, Bedford. The principal feature of the

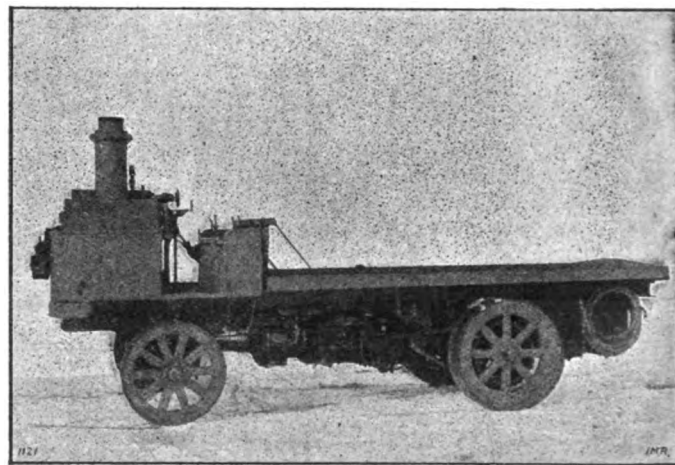


Fig. 8.—The "Savage" Steam Wagon.

"Universal Tractor," as the machine is known, is the driving of each road wheel—the single central rear wheel by a chain and the two front (steering) wheels by positive bevel gearing. The tractor is well adapted for agricultural work, such as ploughing, mowing, reaping, and threshing, while for hauling it has a sound reputation. The engine is very powerful, and has a reserve of energy which will carry it as well through a day's ploughing on tough land as on lighter soils. Paraffin fuel can be used, and this is an important point for farmers to remember, as the cost of operation is brought to a very low figure.

A New Agricultural Motor.

SHARP'S AUTO-MOWER AND TRACTION COMPANY, of York, are showing the lightest agricultural motor built in England. It drives (not trails) a 5 ft. 6 in. mowing machine, and will cut thirty-five acres in ten hours. It ploughs at the rate of five miles per hour, using a 3-gauge plough. It is fitted with a pulley for driving practically every machine found on a farm. It will

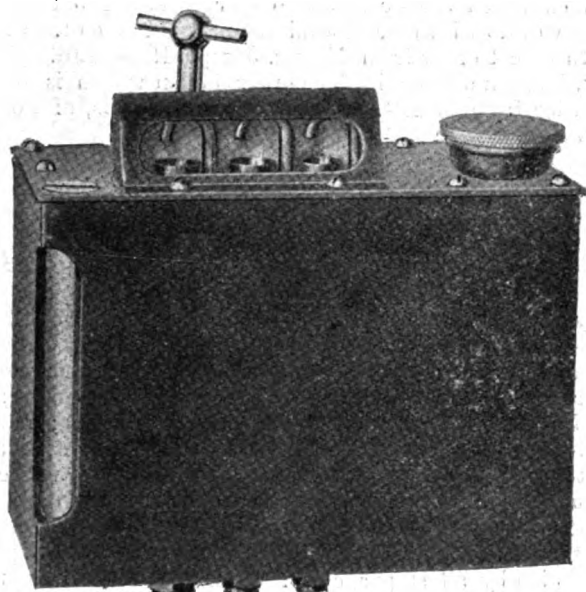


Fig. 9.—The McCord Lubricator.

also haul two tons over a field and three tons on a road rising 1 in 8. The cost of fuel is very low, paraffin at 5½d. per gallon being used. The machine consists of a substantial channel steel frame, on which is mounted a 12-14-h.p. engine. Power is taken through the usual leather-lined cone clutch to a gear-box which contains the forward and reverse gears and spur differential; only one forward speed is provided for. For working the cutter, an

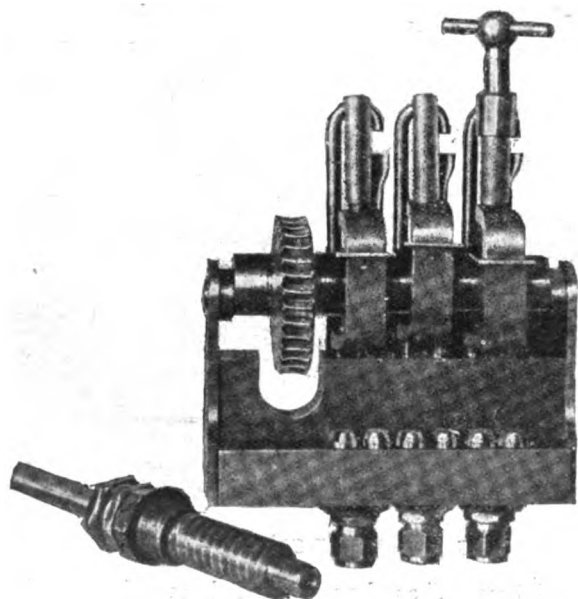


Fig. 10.—Details of the McCord Lubricator.

eccentric running on a ball race drives the cutter bar. All the bearings on the transmission shafts are of the Hoffman ball type.

A New Plug.

Messrs. S. and F. STEPHENSON, of Canning Place, Liverpool, who are agents for the Jeffery-Dewitt Company, of Newark, New Jersey, are showing a sparking-plug which will be of general interest. In the Reliance Spark Plug, as it is called, the insulated sparking point is a platinum wire, entirely protected

from corrosive action by being baked in and brought flush with the porcelain insulator. The spark in leaving this minute point is concentrated and intensified to such a degree that the heat and scouring action, being directed against the surface of the insulator, instantly destroys any short-circuiting matter surrounding the point. Thus it is possible to utilise the entire energy of the battery and coil to produce the maximum heat in the spark, ensuring regular and perfect ignition. The action is purely electrical, no moving parts or valve actions being employed, the plug requiring absolutely no cleaning or attention. Mechanical details have received attention, and the porcelain, which is of a new heat-proof composition, is flexibly supported by asbestos wicking compressed within a metal sheath, making the porcelain, packing and sheath one element. The merits of the plug are demonstrated by the water test, as the plug sparks as readily in the water as in the air.

The McCord Lubricators.

Messrs. EASTON AND MELVILLE, LTD., who are the concessionaires for the McCord lubricators (Figs. 10 and 11), are exhibiting examples of these well-known devices as well as of their Ilo lubricating oil, which is favourably known among motorists. The lubricator is well made and can be obtained with any number of feeds as desired. The reservoir is of sheet brass reinforced with cast frames, ensuring rigidity as well as strength. The supply is regulated above the cover of the reservoir directly behind the sight feeds. The central feature of the McCord lubricator is the pump. Each pump has two plungers, a suction and a delivery. On the up-stroke of the suction plunger oil is drawn from the reservoir through a screen or filter; on the downward stroke the

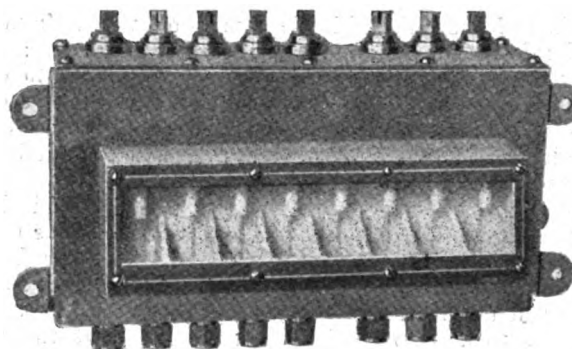


Fig. 11.—Class "O" McCord Lubricator.

oil is forced up to and drops through a sight feed. At this point the second or delivery plunger, on the up-stroke, draws the oil out of the sight feed and on the down stroke pumps it to the bearings. Although for the sake of clearness the movement of the oil is thus traced through the two pumps separately, in reality the two pumps are operated simultaneously, consequently the oil is taken from the reservoir and delivered to the bearings at the same time. Steel balls are used as valves, operating automatically with the upward and downward strokes of the plungers, thus pressure or vacuum in the engine have no effect on the lubricator, which continues in either case to constantly deliver the amount of oil for which it has been regulated. Each pump is regulated separately to force any required amount of oil, from a fraction of a drop to a stream, and once having been adjusted will not get out of adjustment. The lubricator "Class O" (Fig. 11) is also shown, in which the action of the pumps is the same as that already described, but is designed to fit directly behind the dashboard, the sight feed only appearing through for the driver's convenience. With this type an auxiliary oil tank is necessary, which is placed on any part of the chassis found most convenient. The action of the pump draws the oil from this auxiliary tank without the aid of any outside pressure. Several other motor specialties add to the interest of the display by Messrs. Easton and Melville, Ltd., whose headquarters are at 85, Shaftesbury Avenue, London, W.C.

(To be continued.)

GOSSIP FROM PARIS.

M. BARTHOU has presented to the Chamber the long-talked-of Bill—I was going to say against automobilists, but I will keep to the official wording and call it a Bill for the regulation and control of the traffic by mechanically-propelled vehicles. Why the Minister of Public Works should have been entrusted with the preparation of such a measure, and why the Minister of the Interior, who is responsible for the safety of citizens on the road as well as in their houses, should have contented himself with countersigning it with the Minister of Justice, is a mystery. It may be that M. Clemenceau foresaw the discontent it would create. In any case, though the full text of the proposed measure is not yet published, the official note concerning it reveals enough to show that it is an exceptional measure. Consequently, apart from every other consideration, it must be pronounced bad. In addition to proposing to make a law against a special category of citizens, the Bill, if adopted by Parliament without modification, would create a category of "suspects." One of the leading stipulations of the Bill is that the right to withdraw definitively or temporarily the licence of an automobile driver who may have infringed the regulations governing auto-traffic is to be transferred from the prefectural authority to the judicial authority. A person who may have committed a breach of those regulations, punishable with three days' imprisonment, will be liable to be deprived of his right to drive during a period varying between eight days and two months. In the case of a fatal accident or serious injury to persons the motor-car driver could be deprived of his licence for a whole year. Then comes, as the French say, "Le bouquet." A special register is to be kept at the Ministry of Public Works for the inscription of the names of all those persons whose licence has been withdrawn altogether or temporarily. That will be the list of "suspects." Even those who approve the severity of such stipulations must admit that if they are to be applied to automobilists they should also be applied to the drivers of horse-drawn vehicles. How, indeed, could the case be decided when a collision occurred between a motor-car and a horse-drawn vehicle? The respective drivers would not be subject to the same jurisdiction nor punishable with the same penalties. Again, an automobile driver who should accidentally run over a pedestrian, killing or seriously injuring him, would be deprived of his driving licence at once, even before trial; whereas if a butcher's boy should, by furious driving, accidentally kill an old lady or a child, he could not be prevented from driving the same cart the very next day and all his life afterwards. It is true M. Barthou's Bill has not yet been discussed, and there is every reason to anticipate that before it becomes law it will be seriously modified; yet in automobile circles there is a general outcry against it. The discontent is all the stronger because even the official statistics show that, though between 1903 and 1906 the automobiles in France tripled, the number of accidents caused by them increased only one-fifth. M. Barthou's Bill contains numerous other vexatious stipulations which it is unnecessary to insist on at the present moment. Nearly all the automobile firms have already protested strongly against the proposed law, which would, they contend, be a very serious blow to their industry, which is even now so hard pressed by foreign competition. The Automobile Club of France itself raised the cry of alarm, and has sent out copies of a petition against the proposed measure to every town, village, and hamlet in the country. 200,000 copies of the document have been distributed, and when they are returned to the Club covered with signatures, they will be laid on the table of the Chamber by Marquis De Dion, vice-president of the Club, and deputy for Nantes.

Even the existing regulations concerning automobile traffic are incoherent and vexatious. An Englishman touring in France in his motor-car would scarcely imagine that if by chance, in traversing Paris or any other large town, smoke should escape from the exhaust pipe, or if his vehicle should not be provided

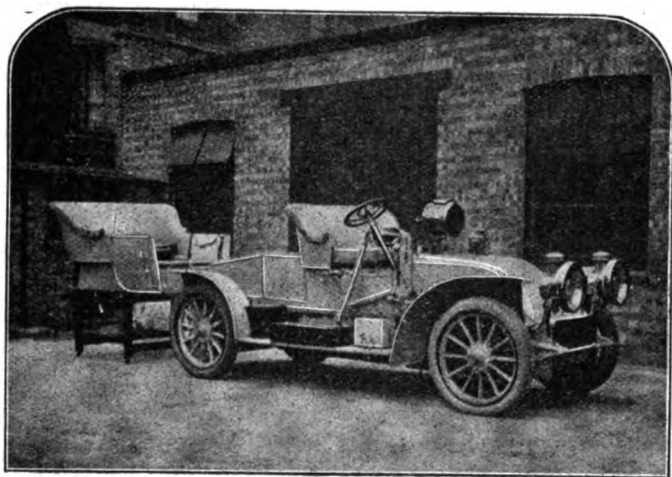
with the regulation lights after dark, he would be liable to imprisonment as well as fine. Such is, however, the case. And, what is more extraordinary, he would be condemned if he were not in the car and did not even know it was in the street. I cannot say that is the law, but it is the police regulation, and the so-called offence may be noted without the driver being aware of it. The automobile police often content themselves with taking the number of the car as it passes, and the unfortunate owner receives a summons to appear before the police tribunal, which always condemns him without listening to what he has to say in his defence. The jurisprudence adopted in the case of a breach of the regulations concerning the lamps or the escape of smoke is that the owner must be condemned to prison and the driver to a fine. Of course, as the owner is civilly responsible for his driver, it is he who also pays the fine and the costs of the case. On appeal this sentence of the police magistrate is almost invariably quashed, but the legal proceedings cost dear, and the motorist's patience and urbanity are put to a severe test.

WHILE the wind was blowing and the rain was pouring down in torrents, about a week ago, a select party of aeronauts were consoling themselves with a dainty dinner at the Café de la Paix for the inclemency of the weather, which had for so long compelled them to keep the doors of their aeroplane sheds hermetically closed. The excuse for the meeting was the settlement of bets which had been gained and lost in connection with Mr. Henri Farman's flight on January 13th at Issy-les-Moulineaux. M.M. Archdeacon, Charron and Santos Dumont, having been the winners, were the hosts, while among the guests were the Duc Decazes, M.M. Henry Kapferrer, Rene de Knyff, Louis Renault, Michelin, Georges Besancon, Jacques Faure, de Blest-Gana, A. de Siguera, Captain Ferber, Henri Farman, Gabriel and Charles Voisin, Loyse, Prade, &c. The dinner was delicious in itself, and the generous wines of France had driven away the melancholy thought that probably many days would elapse before the flooded parade ground at Issy would be dry enough for aeroplanes to take their flight from it, when conversation became general concerning the prospect of further great progress being made in the Conquest of the Air during the coming season. The bewildering results already achieved inspired high hopes, and another bet, which will entail a further dinner at the Café de Paris at the latest at the end of a year, was made. M.M. Archdeacon, Henri Farman, and Santos Dumont bet M. Charron £240 to £480 that an aeroplane carrying two persons, the driver and a passenger (the latter weighing at least 132 lbs.), will fly a kilometre before the expiration of twelve months. They naturally hope the dinner will not be delayed long. In any case, it may be relied on that both Henri Farman and Santos Dumont will do their best to place M. Archdeacon and themselves in a position to issue the invitations for the dinner at an early date. Fortunately, the weather cleared up quickly, and a couple of days' March wind dried the parade ground at Issy sufficiently to permit the aviators to resume their experiments sooner than they had expected. Mr. Henri Farman was out the first with his old aeroplane, improved and fitted with a 50-h.p. Renault motor. On the first day the machine left the ground easily, but certain defects which made it lean on one side had to be rectified. The following day Mr. Farman flew pretty easily, veering without difficulty. M. Delagrangé, who possesses an aeroplane very similar to that of Mr. Farman, last Saturday succeeded in flying about a quarter of a mile. A number of other inventors are also ready to commence their experiments. M. Louis Blériot has reconstructed and improved his monoplane, which had been wrecked so often, while M. Pischoff is about to resume his experiments at Issy les Moulineaux. The monoplane built by Comte de la Vaulx is ready for trial, as well as that invented by M. Henry Kapferrer. M. Esnault-Pelterie is building a machine with which he hopes to obtain grand results. There are several other persons who have constructed aeroplanes during the winter, and are waiting to try them till they are allotted space for their sheds on the ground at Issy, of which the Aero Club of France has obtained the concession.

MARNEY.

THE WINDHAM DETACHABLE MOTOR BODIES.

SINCE we last described the Windham detachable and interchangeable motor bodies, about a year ago, several detail improvements have been effected in the system, which, judging from the large amount of work we saw in hand when recently visiting the works of the company at 22B, St. John's Hill, Clapham Junction, S.W., is enjoying considerable popularity. Briefly, the system consists in fitting to the side members of the frame of the chassis a small and light steel flitch plate, which, when in position, forms an L-shaped guide. The



A C.G.V. Car with Racing and Side-Entrance Bodies on the Windham System.

lower edges of the sides of the rear part of the interchangeable body, which are provided with a long brass strip, are made of corresponding shape, so that the latter may slide into position from the rear. The guide plate is at intervals slightly countersunk, to receive rollers, which facilitate the sliding action of the body. The fit is so accurate that it is impossible to detect that the body is of the detachable type; the extreme forward portion of the bottom part of the body is cut aslant, and abuts closely to the rear ends of the woodwork of the front seats. When quite "home" the body automatically locks itself in place by means of two special catches, in such a way that there is no danger of its becoming accidentally detached or rattling. Another recent improvement is a safety catch in connection with the side doors, which prevents the body being slid back unless these are locked, so that there is consequently no danger of the varnish of the door panel or the mudguards being inadvertently damaged. Usually the front seats are fixed, but where those of a side-entrance body are of such a form as not to correspond well with the lines of a landaulet, they can be made so that the whole of the open body can be removed and replaced by a complete covered one. Apart from the advantage of a detachable body in giving access to the gear-box, to differential shaft of chain-driven cars and to the live axle of gear-driven vehicles, its main feature is, of course, the facility it affords of converting a car to different purposes. Thus, with one chassis a motorist may have on hand a side entrance double phaeton, landaulet for town use, or shooting brake body, any one of which can be placed in position in less than a minute, or a luggage-carrier can be fitted converting the vehicle into a two-seated touring car. Again, for tradesmen's use, the pleasure body, either closed or open, may be readily replaced by a delivery van, the spare bodies all being stored on their own castor-fitted legs, or special carrier in the case of heavy bodies, the height of which is so adjusted that the lower edges of the bodies are on a level with the flitch-plate guides on the chassis. The illustration given herewith depicts a C.G.V. car which has recently been provided with two detachable bodies—racing and side-entrance—on the Windham system. While it is impossible to detect where the rear part is joined up with the forward fixed

section, by simply opening the tool chest at the rear and lifting the safety catches it is possible to pull the detachable portion to the end of the guides and on to the supporting legs in a few seconds, this without the use of any tools. In fact, one body can be taken in less than half a minute and the second placed in position in an equally short space of time. Altogether the Windham arrangement is a step forward in motor-body construction, and one that has already met with recognition at the hands of all the leading carriage builders, over sixty of whom—in addition to the Humber Company, Ltd.—are now constructing motor-bodies on the system under licence from Capt. Windham. We may add that it is applicable to all sizes and types of chassis, and that existing bodies can be adapted to the sliding detachable principle.

In connection with the bodies a brief reference may also be made to the method of fixing the mudguards, these being so fitted that not only can they be readily detached from the car, but they can also be adjusted over a Stepney spare wheel when, owing to tyre troubles, it has been found necessary to place this in position.

A NOVEL TYRE PUMP.

AMONG the novelties at the recent Paris Show was the ingenious tyre inflator illustrated herewith; it has been introduced by Messrs. Gronvelle and Arquembourg, of Paris, the well-known makers of radiators, carburettors and other motor components. Reference to the illustrations will show that the apparatus comprises a short steel cylinder mounted at one end on a stout wooden handle. Within the cylinder is a gunmetal piston or plunger connected by a rod to the crank pin of a disc held in a stout fork at the other end of the pump barrel. The rim of the disc is leather-faced like the wheel of a friction-driven water-circulating pump. The tyre inflator is fitted with a non-return valve and a pressure gauge; the air delivery tube



Fig. 1.

from the pump is connected to the tyre valve in the ordinary way when it is desired to inflate a tyre. All that is then necessary to pump up the tyre is to take the device by the handle upon which it is mounted and press the leather-rimmed disc against the periphery of the flywheel when the engine is running light, and hold it there until the pressure gauge shows that the tyre is sufficiently inflated. It is stated that with a pump disc 6 in. in

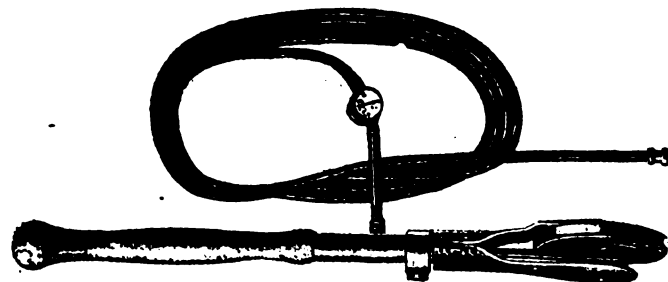


Fig. 2.

diameter pressed against an average sized flywheel a 120 mm. tyre can be fully inflated in four minutes. The overall length of the apparatus is 26 in., so that it can be readily stowed away on the car.

A HISTORY of the parishes in the county of Kerry, together with many authoritative notes on the antiquities of the district, has been published by Mr. J. King, 302, Anfield Road, Liverpool. In alphabetical order the various points of interest are described, and those who take part in the forthcoming Irish Reliability Trials can add to the interest of their stay in Kerry by previously perusing this interesting little volume.

THE ARIEL-SIMPLEX 20-H.P. CAR.

THE new 20-h.p. car recently introduced by Ariel Motors, Ltd., and of which a few brief particulars have already been published in the *M.C.J.*, differs from the other cars of the same company in the adoption of a sloping bonnet and in the placing of the radiator at a lower level than usual. This is a reversion to a style which was popular some years ago, and one which is still preferred by many motorists, if only by reason of the greater accessibility of the engine which it affords. In producing the new medium power vehicle, not only has the object of the designer been to reduce the weight to a minimum consistent with maintaining strength and rigidity—the 20-h.p. chassis turns the scale at 17 cwt.—but also to render the vehicle of a simple character by keeping the number of parts as low as possible.

The frame is built up of channel pressed steel braced together by cross members of similar material. The side-members are narrowed in front to give a wide steering lock to the front wheels. At the rear the side-members are curved upwards to allow plenty of play for the rear axle while keeping the centre of gravity low. The engine, which gives 23-h.p. at a speed of 1,300 revolutions per minute, and 22.8-h.p. according to the R.A.C. rating, comprises four cylinders, $3\frac{1}{2}$ in. bore by $4\frac{1}{2}$ in., cast in pairs, and having the valves all operated off a single cam shaft, located, as will be seen from Fig. 1, on the left of the engine, thus leaving ample space for the steering gear and carburettor on the right. The two-to-one gear wheels are enclosed in an oil-tight casing which also serves to support the starting handle and to carry the magneto and water pump; the

As already mentioned, the water circulation is maintained by means of a gear-driven pump and framed ribbed tube type of radiator, the latter being supplemented by a water tank attached to the front side of the dashboard under the bonnet. To assist the cooling of the water the periphery of the flywheel is fitted with vanes to act as a fan in drawing a current of air through the radiator and around the engine. In order to avoid the possibility of a smoky exhaust the lubrication of the engine is effected automatically. A small gear pump driven by skew gearing from the cam-shaft draws oil from a reservoir in the engine base, and delivers it under pressure through a strainer to the three main crank-shaft bearings, and through holes drilled in the crank-shaft to the connecting rods and cylinder walls. A pressure gauge, which, by the way, is the only dashboard attachment, indicates the proper working of the engine lubrication, and a relief valve is provided which is adjusted so that only a sufficient quantity of oil is supplied to the engine at all speeds, and no excess of oil is thrown on to the cylinder walls.

The clutch is of the inverted leather-faced cone type, special springs being fitted under the leather to allow the drive to be taken up very smoothly. No adjustment is provided for the clutch spring, which is adjusted once for all at the factory, but adjustment is provided in the actuating mechanism

for correcting the position of the pedal in the event of the leather wearing in course of time. A double universally jointed shaft connects the clutch with the gear-box, to allow for any want of alignment between the two parts, and to allow either to be dismantled without disturbing the other. The gear-box, which is adapted to give four speeds forward and a reverse, with direct drive on top, is very short and

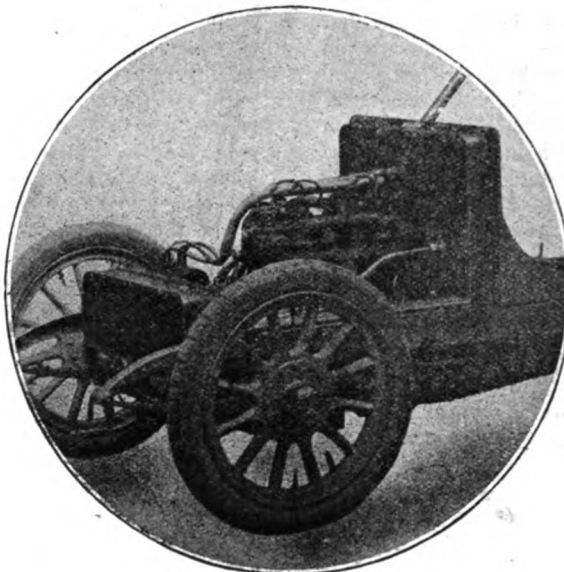


Fig. 1.—View of Front Part of Chassis of Ariel-Simplex Car, showing new position of radiator.

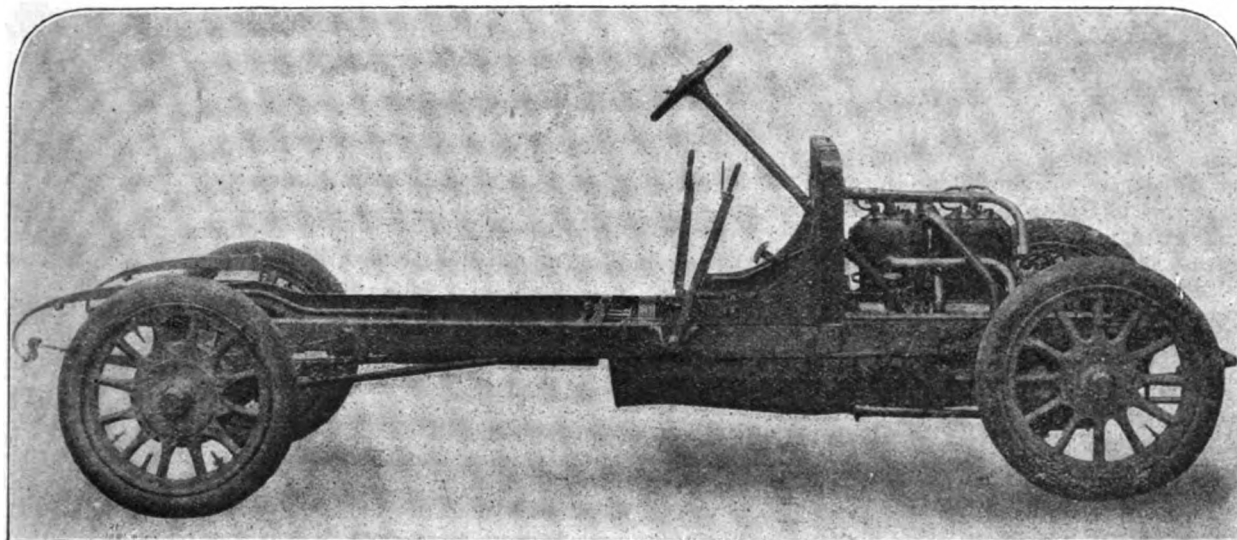


Fig. 2.—Chassis of Ariel-Simplex 20-h.p. Car.

latter are arranged transversely in front of the engine, being driven by skew gearing off the camshaft. The gravity-fed carburettor is of the automatic type, while the ignition is of the Simms-Bosch high-tension magneto variety. The inlet pipe is brought from the off-side between the tops of the two pairs of cylinders, branching to left and right. Both the inlet and exhaust pipes are held in position by yokes, so that, when necessary, they can be quickly detached.

compact; it is carried on two cross stays of channel section in the same way as the engine. The gear-wheels are specially designed for quiet running, and the sliding members are carried on shafts of the castellated type, ensuring accuracy of the centreing of the gears. It may be added that the reverse pinions are idle on all forward speeds. The change-speed lever is of the fulcrum type and works in a "gate" quadrant. From the gear-box the power is transmitted to a live axle by a cardan

shaft, which has a universal joint at the forward end and a combined telescopic and universal one at the rear. The live axle is of strong design; the weight of the vehicle is supported on the sleeves, the internal rotating shafts transmitting the power to the hubs of the road wheels through dog clutches on their outer ends. The differential gear is of the spur wheel type. The casing enclosing the differential and bevel gearing is jointed horizontally, enabling the latter to be readily inspected. A double tubular torque rod, the forward end of which is anchored universally in a spring box slung from a cross member of the frame, resists the axle torque and relieves the transmission gear and springs from undue starting and braking stresses.

The usual brakes are fitted, one behind the gear-box, actuated by a foot pedal, and one working in drums on each of the hubs of the rear wheels, all being of the internal expanding type. A simple compensating device causes an even action on the rear brakes, while all are provided with easy means of adjustment. The steering gear is of the worm and sector type, adjustable ball joints being provided to the side steering rod. The control of the engine speed is effected by a single lever, working across a fixed quadrant over the steering wheel, and by a small pedal; either the lever or pedal controls the full range of the throttle, so that the foot or hand method of driving may be employed as desired. The time of ignition is fixed for running, but may be slightly retarded for starting only, by means of a small lever situated near the magneto.

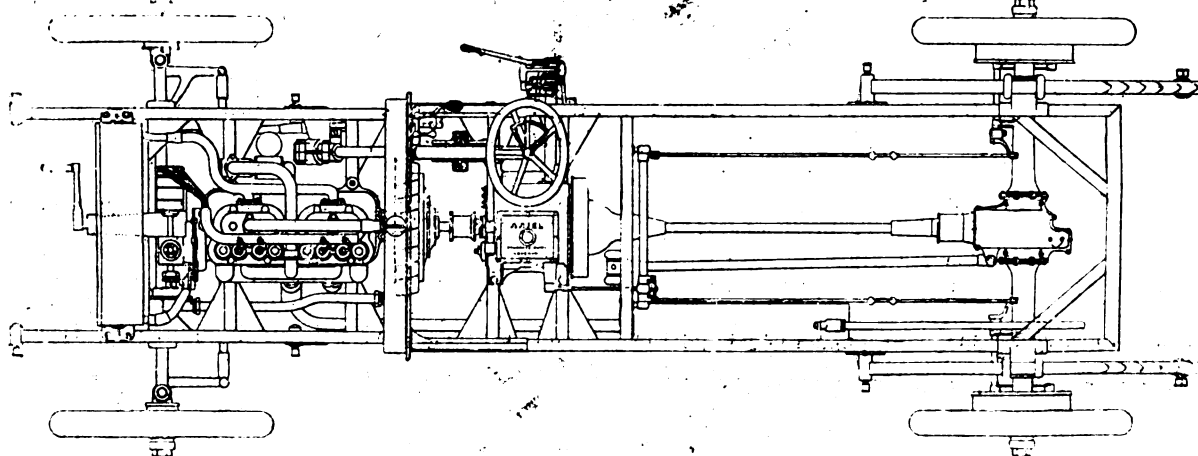


Fig. 3.—Plan of Chassis of Ariel-Simplex 20-h.p. Car.

The chassis is supported on long springs—semi-elliptical at the front, and three-quarter elliptical at the rear. The spring shackles are arranged so that they are always in tension, while the shackle bolts are drilled and grooved and fitted with caps for forcing grease into the spring eyes. These greasers cannot come loose through vibration, the screwed base of each being part and parcel of the bolt. The car runs throughout on ball bearings, with the exception of the engine, where white metal is employed. The wheel base of the vehicle is 10 ft. and the track 4 ft. 3 in., while the distance from the dashboard to the rear member of the frame is 8 ft. 4 in., allowing a very roomy body of the closed or open type to be fitted. Altogether the new car is on up-to-date lines, and should prove successful either as a town carriage or touring vehicle.

MECHANICAL noises in one or more cylinders of a petrol engine due to looseness of the moving parts are extremely annoying to a sensitive driver. Faulty lubrication of a piston pin or crank pin, differences in wearing quality of the bearing parts or the slackening of the bearing cap may bring this about, the obvious remedy being the readjustment of the bearings. A loosening of the bolts holding the cylinder to its crank case section may give rise to sounds which add an undesirable accent to what should be the uniform steady purr of the engine's running. Unless the motor is mechanically tight and fit in all its parts smooth action, identical for each cylinder, is not to be expected.

SOME USEFUL NOTES.

USUALLY after the rubber matting on motor-cars has been in use for a time its uniform colour disappears, the oil and grease collecting upon it from boots and by dripping tending to rot and discolour it. To prevent the destruction and discoloration the matting should be painted with lead coloured paint, which when dry gives a varnished surface. Not only is this oilproof, but it gives a bright look to the mat, and renders it easily cleaned by means of a cloth.

REPLACING pistons in their cylinders is sometimes attended with considerable trouble, due to the difficulty of starting the rings into the cylinder bore. If too much force is used the rings may be injured. A turn of fine steel wire should be taken around each ring, and its ends drawn together so tightly that the ring is compressed below the level of the piston surface. After the edge of each ring has entered the cylinder the wire can be clipped off.

AN easy way of replacing valve springs consists of compressing each spring in a vice until short enough to easily go into place and allow the holding key to be inserted, and, when in this compressed condition, tying it with wire so that it cannot expand. After it is put in place and the key is put in the wire is clipped and removed.

If difficulty is found in causing a bolt holding together two parts to fit their holes with ease, the chances are that the two pieces are displaced angularly, and it should not be attempted to put the bolt in place by brute force. The condition should be examined and rectified if found wrong. A great many bolts and studs and their nuts are damaged by carelessness in starting the nuts cross threaded, and then using a wrench forcibly to turn them on. Nuts should be started carefully with the fingers, and one should be certain that the threads "take" properly.

BOLTS are very often spoiled in driving them out from the parts in which they are located. If they do not start readily one is often tempted to use the hammer upon them, with the result that the ends of the threads are frequently burred over. A stick of hard wood, or still better, vulcanised fibre, used between the hammer and the bolt end will prevent damage of this kind.

ABOUT a year ago we gave some particulars of the method of repairing cracked and fractured cylinders and other castings introduced by Messrs. Lea and Son, engineers, Runcorn. At that time the repaired cylinders showed a slightly raised appearance along the position where the fracture had been; we now learn that further improvements have since been introduced, with the result that the work is now absolutely smooth with the remainder of the casting, and that it is practically impossible to locate the repair.

THE taxi-cab has made its appearance in Brighton.

At Brighthouse, Messrs. Hoyle Bros., Ltd., are putting motor-cabs into public service.

THE addition of one or two spoonfuls of olive oil to the reservoirs of paraffin lamps is stated to be beneficial in preventing the lamps from smoking.

MESSRS. PEARSON AND PEARSON, LTD., have been appointed official repairers to the Naval Motor Club, whose garage in Wickham Street, Portsmouth, will be opened towards the close of the month.

A COMPANY has lately been formed in Madrid to establish a service of motor-lorries between Vilcher and Santa Elena for the transport of lead ore and coal from the mines of the Carolina and Navas de Tolosa Companies.

THE export of motor-cars and parts from the United States during January last attained a value of £81,130, as contrasted with only £75,293 in the first month of 1907. The United Kingdom heads the list with £38,960, Mexico being second with £9,519.

THE regulations for what will probably be known as the "Four-Inch" race for the Tourist Trophy are practically concluded. Although the race will not be held until October next, it is the present intention to publish the regulations at the end of this month.

MR. J. A. KUNER, motor engineer, has removed to new premises at Crouch Street and Wellesley Road, Colchester—on the main London road at the entrance to the town. The garage is fitted with an up-to-date plant, and capable of dealing with all kinds of repairs.

THE Kings County Hospital of Brooklyn, U.S.A., has acquired a White steam motor ambulance, consisting of a standard 30-h.p. chassis, with a body similar to those of the ambulances furnished by the White Company to the U.S. War and Navy Departments.

SUPERINTENDENT MARKS, who is said to have secured convictions of motorists which have added over £1,000 to the funds of the Court, has been presented with a timepiece and a purse of gold by the residents of Walton and district, on his promotion to the new division of Woking.

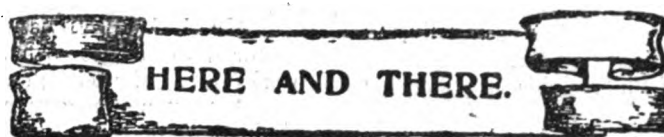
WE understand that the officials of the Thames Conservancy Board are favouring a plan to unload motor spirit from ocean steamers at Purfleet. This has the sanction of the local licensing authorities and of the War Office, and its adoption would be welcomed by the Anglo-American Oil Company.

MR. H. J. MELDRUM has opened a garage on the Manchester Road, Altrincham. This has a floor space of 1,100 square feet and an inspection pit. It is fitted with appliances for all classes of repair work, including tyres. Mr. Meldrum is the district agent for the Riley cars, and keeps a stock of spare parts, &c.

"In my opinion," writes Mr. E. Gordon Learoyd, hon. sec. of the Huddersfield branch of the Yorkshire Automobile Club, which has now 143 members. "motorists ought not to object to a slightly higher tax being placed upon them, but I certainly do think the tax should be devoted towards repairing the roads which are used by the cars."

MR. L. H. STRAKER, the proprietor of the West Bournemouth Motor Company, has opened a garage and motor works on the West Cliff, Poole Hill, Bournemouth. The premises will accommodate between forty and fifty cars, and when completed will have ten private lock-ups. Facilities for washing under cover and generally performing all operations under the best conditions are also provided.

At the usual weekly meeting of the L.C.C. recently, the Fire Brigade committee reported that the De Fornier non-skids obtained for certain motor fire appliances under the authority of the Council had proved satisfactory, and it was desirable that similar non-skids should be obtained for the front wheels of two motor fire escapes in the brigade, and for two spare wheels for motor fire engines. The council agreed that the non-skids should be purchased as recommended.



A MOTOR cycling section of the Legion of Frontiersmen is being formed.

A SALE of motor-cars by auction will be held at Dundee on Tuesday and Wednesday next.

THE North-Eastern Railway

Company intend to run a service of motor-buses during the summer months between Whitley Bay and Blyth.

ON Monday next Sir J. H. A. Macdonald, K.C.B., will read a paper at the meeting of the Royal Scottish Society of Arts at Edinburgh, on "Recent Developments in Power Traction on Roads."

It is reported that motor mail van drivers on the Epping and Bishops Stortford route have been granted permission by the Postmaster-General to be armed with revolvers, owing to the road being lonely and dangerous.

THE interesting standardisation trial of three 9-10-h.p. single-cylinder Cadillac cars, carried out under the observation of the R.A.C., was brought to a successful issue on the Brooklands track on Friday last week. The test consisted of running the vehicles for five-and-twenty miles to prove the evenness of their performances one with another, entirely dismantling the machines, mixing up the parts, withdrawing some, ordering fresh parts to take the place of those withdrawn, reassembling the three cars



The Completion of the Cadillac Standardisation Trial on the Brooklands Track.

with only the use of a spanner, and, finally, running the three vehicles a distance of 500 miles on the track. On re-erection not only did the motors start up on the first turn of the handle, but the trio of cars completed the 500 miles running test at an average speed of 34 miles per hour. The trial is the first of its kind that has been held, and demonstrates to a remarkable degree the thorough standardisation of the components of the Cadillac vehicles.

THE Motor House has secured the new Gilbey Hall, in connection with the Agricultural Hall, London, for the purpose of auction sales on Saturday, the 28th. The cars will be on show for sale by private treaty, and any cars remaining unsold on the last day of the Cordingley Exhibition will be offered by auction. Two special sales will be held at twelve o'clock noon and at six o'clock p.m., on the 28th, and the innovation should prove an attractive feature.

MESSRS. DENNIS BROTHERS have sent us a photograph of a group of three motor ambulance vans which they have recently supplied to the Metropolitan Asylums Board. This is a repeat order from the Board, and makes twelve Dennis vehicles which they have in use at the present time. Messrs. Dennis have also lately delivered a motor lorry to the Bradford Dyers' Association, a motor lorry to the Barnsley Co-operative Society, and a van to Messrs. Lever Brothers, of Port Sunlight.

THE first Weigel six-cylinder 60-h.p. car has been delivered to the Rt. Hon. the Earl of Wilton.

THE Quaker City Motor Club, of Philadelphia, is organising an American motor volunteer corps.

JOSEF HOFFMAN, the well-known pianist, has invented an ingenious road indicating device, which has been patented in Germany.

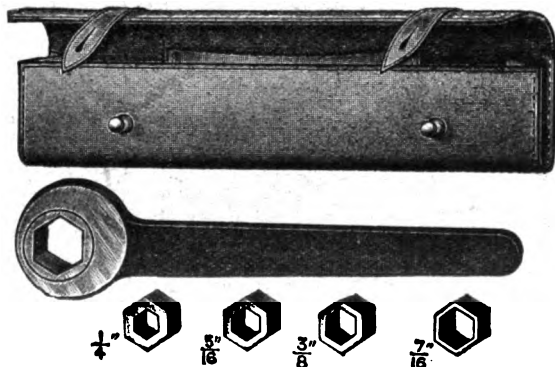
MESSRS. LESLIE PORTER, LTD., are opening new premises at 22A, Howard Street, Belfast, where they will have garage accommodation for about forty vehicles.

AT Coulsdon, Surrey, Messrs. Thacker and Andrews have a motor repair shop. It is situated on the Brighton road, and the firm will be able to assist motorists in difficulties.

COMMANDER NORMAN, R.N., Cheviot House, Berwick-on-Tweed, is the treasurer of a committee which has been formed to present a motor-car to the Bishop of Newcastle.

THE Great Northern Railway is running special excursions in connection with the Cordingley Motor Show on several days next week, from the leading centres on its lines, including Manchester, Nottingham, Grimsby, Lincoln, Doncaster, Derby, Peterborough, Grantham, Stamford, &c.

WE illustrate herewith a new patent auto ratchet spanner, which has been placed on the market by Messrs. Avery and Roberts, of 64, Stanley Street, Liverpool. This spanner is constructed on the "free wheel" principle, viz., pawl and ratchet internally fitted. Therefore, when the spanner is placed on the nut, it is unnecessary to remove it until the operation of tightening or loosening, as the case may be, is completed, thus saving both. One of the many advantages of the spanner is that it can



be used in confined places, as the slightest movement of the handle is sufficient to either tighten or loosen a nut. Furthermore, as the spanner makes a dead fit on the nuts on all sides, it is impossible to slip or damage them in any way. To meet the requirements of motorists, the tool has been put up in a handy leather case as illustrated. The set comprises a $\frac{1}{4}$ in. ratchet spanner with four adapters, sizes from $\frac{1}{4}$ in. to $\frac{7}{16}$ in., each separately fitting in the spanner, and taking five sizes of nuts. The adapters are also made in French sizes.

MOTOR-CAR instruction is now being provided for prospective Irish motorists at the headquarters of Argyll Motors (Ireland), Ltd., in Chatham Street, Dublin. Mr. R. T. Adams is the lecturer.

THE attention of the Roads Committee of the Bournemouth Town Council having been called to the danger to the traffic caused by certain clumps of trees planted by them in the centre of various roads, have now arranged that these are to be cut and kept down to the level of the neighbouring fences.

THE London and South-Western Railway Company are running several excursions to the Cordingley Motor Show next week, and specially cheap fares have been arranged from Yeovil, Sherborne, Salisbury, Andover, Southampton, Winchester, Bournemouth, and other important centres on their line.

MOTORISTS in the West End desirous of making a trial of benzole in the engines of their cars will be interested to learn that the Petrolie Motor Company, 12, Windmill Road, Chiswick, are keeping a stock of the new fuel in addition, of course, to petrol and accessories. The firm are also in a position to undertake all kinds of motor repairs.

MR. J. M. BOYD is the managing director of the Border Motor and Cycle Company, Ltd., who have a garage and repair works in the Market Square, Galashiels.

A NEW motor garage is being opened in Market Place, Faringdon, Berkshire, by Mr. T. Anna, who will be able to charge accumulators, execute repairs and vulcanise tyres.

BROOKLANDS track will be closed for a few days, so as to get the course into thorough order for the Easter meeting. Mr. Charles Jarrott's attempts to regain the fifty-mile and one-hour record on Friday last week were hampered by a series of tyre troubles.

MR. J. BAXTER has opened premises at 146, Milton Road, Gravesend, where there is accommodation for about thirty vehicles. He has also facilities for the repair of cars. Mr. Baxter was one of the pioneer motorists of the town, and his new enterprise will doubtless be appreciated by those who own cars in the district.

FROM Messrs. Donne and Willans, Ltd., of Gillingham Street, Victoria, S.W., comes a copy of the new catalogue they have just issued of the Piccard-Pictet cars, for which they hold the British agency. The list is not only an artistic production, but gives a very complete description of these Swiss-built vehicles, the main components of the chassis, such as the engine, gear box, and live axle, being illustrated by means of half tone blocks. Four models are being made:—12-16-h.p., 18-24-h.p., and 28-40-h.p. four-cylinder, and 28-40-h.p. six-cylinder. While following the usual lines of live axle cars, there are several interesting features in the details, among which may be mentioned the double set of satellite pinions in the spur differential gear.

WHEN the increasingly popular puncture stop Miraculum was first put on the market it was necessary for motorists to send the tubes of their motor-car or cycle tyres to the depot for treatment. The E. M. Bowden's Patents Syndicate, Ltd., who control the preparation in this country, have, however, now satisfied themselves that this is no longer necessary, and are now supplying Miraculum made up in collapsible tubes, by means of which motor-cyclists can treat the air-tubes of their machines themselves. The tube, which contains sufficient of the compound to properly charge one air-tube, has a nozzle threaded to fit the stem of the air-tube valve, so that the whole operation of charging can be readily done by the purchaser. For the proper charging of the inner tubes of motor-car tyres, a special injector apparatus is required, and arrangements have been made to supply all motor-car dealers and agents with same, so as to enable them to treat tubes upon their premises, thus saving delays to customers. In this case the preparation is made up in tins of various sizes, each containing sufficient for one tube, the quantity ranging from 24 oz. for tyres up to 85 mm., up to 56 oz. for those of 135 mm. to 150 mm.

THE Luna patent steel inspection pits, manufactured by Messrs. F. W. Besant and Co., of Broadstone, Dorset, have since their introduction met with considerable success. The experience gained as to the most suitable style of pit for general purposes has led the firm to bring out an improved form. The new pit is now heavily galvanised both externally and internally after manufacture, while, by a special process, the corrugated side sheets are bent to form the corners, so that no leakage can occur, it being now both water-tight and non-corrodible. While a standard size of 6 ft. long, 3 ft. wide, and 4 ft. deep has been adopted as the most suitable for work under an ordinary car, special sizes can be made to suit requirements. The Luna pit is constructed of heavy corrugated steel at sides and ends, with a steel bottom stiffened with angle irons, and is fitted with two steel steps and a light removable wooden floor, forming in itself a complete inspection pit which can be easily put in the ground by unskilled labour. It is claimed that the reflected light from the internal corrugations enables work to be done underneath the car which would be otherwise impossible without artificial light. One great advantage of the device is that no foundations are required, all that is necessary for erection being to excavate a hole large enough to receive the pit, and to lower it into the hole, afterwards filling in the ground round it.

CONTINENTAL NOTES.

The A.C.F. Grand Prix Race.

Preparations are well in hand for the A.C.F. Grand Prix races on the Dieppe circuit in July next. The plans of the grand stand and car enclosures, to be established at the starting point, which have just been issued, show considerable alteration from last year. The "re-victualling" stations of each of the competitors will this year be directly in front of the grand stand, but located in a long pit in such a way that their sloping roof is only slightly above the track, the latter forming, as it were, a shelf on to which the attendants place any tyres or other articles required by drivers. In front of the grand stand there will be practically two tracks side by side and separated by a railing. If a competitor does not need to stop when completing a circuit he will travel straight along. If he has to halt for any supplies he will run into the re-victualling track. In this way the spectators will have an excellent opportunity of watching every phase of the great race. The Mercedes cars for the contest are already on the road. No details have so far been made public, but it may be said that the vehicles have a speedy appearance. They are driven

The Nice Automobile Week.

The annual automobile meeting at Nice opens on Sunday, the 22nd inst., with a series of flying kilometre speed trials, for which about twenty entries have been received. On the 23rd inst. there will be a "Raid du Printemps"; on the 25th, an appearance competition at Monte Carlo; on the 29th, a flower fete, and on the 31st inst. an automobile paper chase.

The Cannes Automobile Meeting.

An automobile meeting was held at Cannes last week, the first item on the programme being a series of flying kilometre speed trials on the level, the best time (38 1-5 sec.) being made by M. Ragusa on a Darracq. This was followed by a flexibility contest consisting of two runs of 500 metres, one as fast as possible and the other as slow as the car could travel. The first place in this case was taken by an 18-h.p. Peugeot, driven by M. Rouff. On Wednesday, the 11th inst., a brake competition took place, the competitors after travelling a certain distance, and on a given signal, being required to pull up their cars by means of the hand brake. Ragusa, on the Darracq, was the victor in this instance, he bringing his vehicle to a



Touring in Spain.—A Daimler Car outside a Spanish "Venta."

by side chains, while, to keep the centre of gravity low and still use relatively large wheels, the frame curves slightly upwards both front and rear. The exhaust pipes pass out through holes formed on the left side of the engine bonnet. The cars will be driven by Herr W. Poge, Herr C. Lautenschlager, and Herr O. Salzer. The Renault cars will have the same external appearance as those employed last year. The engines will comprise four cylinders, 155 mm. bore by 160 mm. stroke; ignition will be high-tension magneto, and the water circulation, as usual in Renault practice, on the thermo-siphon system.

Motor-Car Regulations in France.

In addition to the provisions with regard to the suspension of licences, referred to elsewhere in the present issue, the new Bill which has been drafted by M. Barthou, the French Minister of Public Works, with regard to the use of motor-cars in France requires every vehicle capable of attaining a speed of nineteen miles per hour to bear an identity plate in front and rear, and these plates are to be fixed in such a manner as to render them immovable, and thus prevent the abuse of changing them. Moreover, after dusk the car will have to be lighted in the rear in such a manner as to make the number appear in luminous characters, so that it may be read as easily as in the daytime.

standstill in 44 ft. In the afternoon a petrol consumption test was held, one litre (1.76 pints) of spirit being served out to each competitor. The longest distance (7½ kilometres) was covered by M. Durand on a 24-h.p. Bayard-Clement.

Motor Racing in Italy.

A series of motor races were held on a 27-kilometre circuit near Verona, on Sunday last. In the 110 mm. bore four-cylinder section the winner was Franchini, on a Bianchi (time 20 min. 23 sec.). Selvatico, on an Itala, won the 120 mm. bore class in 19 min. 51 sec.; and Muzio, on a Junior, the 130 mm. category in 16 min. 32 sec. During the race two cars collided, but without serious damage, while Piccoli, on a Spa, ran into a wall at one of the sharp turns.

Miscellaneous Items.

The French Post and Telegraph Authorities are about to invite tenders for the conveyance of the mails between Le Mans and St. Calais (Sarthe) by motor vehicles.—A scheme to construct a motor-track, 9½ miles round, in the neighbourhood of Spa, Belgium, is under consideration.—A service of motor-cabs is being started in Wiesbaden, Germany. The vehicles are of the Opel 8-14-h.p. type.

Correspondence.

[Letters to the Editor should be addressed to the offices, 27-33, Charing Cross Road, London, W.C.]

ENGINE RACING THROUGH ROAD SLIP.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—I have noticed several articles and paragraphs stating the engine of a motor-car "races" through the wheels leaping off the ground on rough roads at high speeds. With a view to settling this point definitely I had some interesting experiments carried out at Brooklands recently. The results obtained seem to rather dispose of the idea that the engine "races." At any rate in the six-cylinder Napier car, with its steady, even drive, system of springing and road equalisers, both back wheels do not, apparently, leave the ground together.

With regard to the question of the part played by the springing of the car, this is rather an important point, because some have suggested that it was impossible to construct a car with a transverse spring at the back, with the luxury and comfort that accompany this, without having the serious drawback of the wheels not holding the ground. The results definitely show that this luxury can be, and is, obtained in the Napier car without this drawback. It is very comforting to the ordinary user

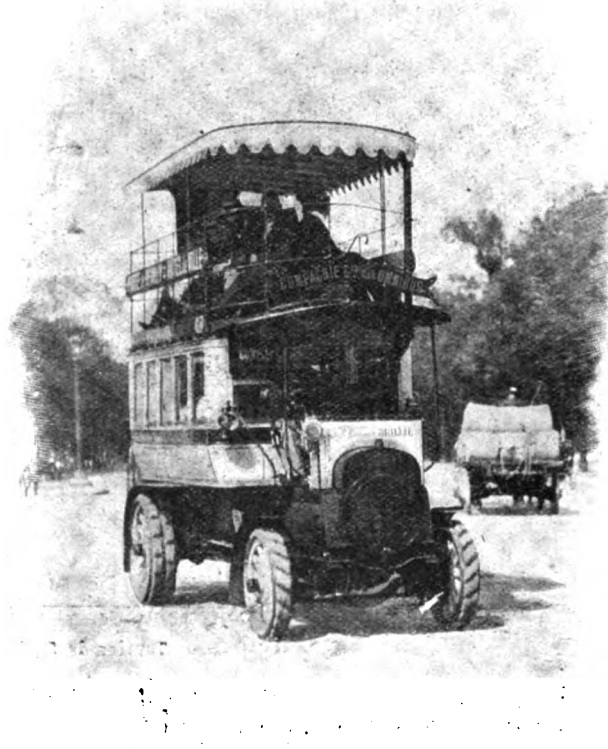
be seen, the engine made only seventy more revolutions in a complete lap at sixty miles an hour than it did when being towed. This, of course, is practically almost a negligible quantity.

It is evident from this, first, that on a six-cylinder Napier, at high speeds, or over rough grounds, the back wheels do not both leave the ground together, otherwise this would be shown by a greatly increased number of engine revolutions over this fixed distance. One cannot, however, believe that at mile-a-minute speeds one or other of the back wheels do not at times jump off the ground, because even with the scientifically designed Brooklands track there must be some places in it where the curves of the banking do not absolutely synchronise with the speed of the car, and therefore, at these points, one wheel at a time must leave the ground. Evidently, the differential gear looks after this variation of wheel speed.

The next test to be carried out will be to fix a registering device to each of the four wheels, and then find out exactly how much each wheel varies in relation to the others. The present tests, although they do



The Old and New Style of Omnibus in Paris.



[La Locomotion Automobile.

to know this, as it means to him not only more comfort, but a decrease in his tyre bill, as any form of "racing," or unequal drive, means an early decease to the tyre, and grist to the tyre maker's mill.

The test was carried out as follows:—The top gear was engaged, and the car was then towed a complete lap at Brooklands, or a distance of approximately 2.5-3 miles, and the number of revolutions of the engine was found to be 3,732. The car followed the 50 ft. line of the track, and throughout the whole test kept as near as possible to the same line. The car was then driven at varying speeds, as given in the tabulated list:—

| Test. | Distance (about 2.5-3 miles) | Speed in m.p.h. | Engine (in engine revs.) | Total slip (revs.) |
|--------|---------------------------------|--------------------|--------------------------------|-----------------------|
| 1. ... | 1 lap 2.5-3 miles | car towed | 3,732 | — |
| 2. ... | " | driven very slow | 3,748 | 16 |
| 3. ... | " | driven 20 m.p.h. | 3,776 | 44 |
| 4. ... | " | driven 30 m.p.h. | 3,772 | 40 |
| 5. ... | " | driven 40 m.p.h. | 3,770 | 38 |
| 6. ... | " | driven 50 m.p.h. | 3,780 | 58 |
| 7. ... | " | driven 60 m.p.h. | 3,804 | 72 |

This list gives a speed up to sixty miles an hour, and, as will

not apparently show us very much, are really exceedingly satisfactory, as showing how the designer of a motor-car, by getting the correct design, helps to eliminate tyre wear.—Yours truly,

S. F. EDGE.

A SPEED LIMIT SUGGESTION.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—As an ardent believer in motor-cars, I think that some move should be made either by the Motor Union or the District Councils with regard to the pace of motor-vehicles through the towns, not from a danger view-point, but in order to prevent people (ladies especially) getting their clothes spoilt. During recent wet weather a motor-car going at any pace covers everything with mud on both sides of the road, and I am sorry to say there are some drivers who seem to think it a joke, and just sit back and smile.

It is this ungentlemanly conduct that gives cause of complaint, and in order to overcome or lessen the nuisance I would suggest that at every town before and after where the danger posts are or should be, that each sign should have in the centre 6 or 5 m.p.h. according to the width and danger of the road, and the pace set by the danger post would stand till the one out of the town had been passed. The speed limit

has been so often proved an absurdity that I would do away with it, except where marked on the posts and at the roads and cross-roads. There are many places where fifty miles an hour is not so dangerous to either public or drivers as twenty miles an hour in other places. Automobiles have come to stay, and the sooner the authorities realise it and have their roads properly marked the better for all parties.—Yours truly,

T. W. HANMER.

ECONOMY IN CHAINS.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—I have had a sprocket wheel cut for my car. It has the same number of teeth, but on a sprocket $\frac{1}{2}$ in. larger, so that each tooth is as far apart as the links of a worm chain. I can now put the worm chain on one sprocket, the new one on the other, and so save about half the cost of chains. The old chains run just as well as new ones.—Yours truly,

ERNEST ESTCOURT.

STEAM CAR EXPERIENCES.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—I see in your number of March 14th a letter signed by Mr. Chapman giving advice and his experiences with steam cars to another correspondent, viz., "Amateur." Now, nothing is further from my mind than to lay down the law as to which is the best; personally I prefer petrol, but that is only a matter of opinion. But what I do want to point out is that the picture which Mr. Chapman draws of the petrol car and driver in traffic is, though of course partly possible, so exaggerated as to be of no earthly use as a comparison. The man Mr. Chapman describes, unless it be his first attempt to drive a car, should not be in charge of any make of self-propelled vehicle, steam or petrol, as he would be a curse, and probably a danger, to the public, as well as a nuisance to himself and any unfortunate being who happened to be in the car with him. Finally, I should like to point out that in this amusing little picture of the petrol car and driver an obvious lack of knowledge is apparent. Mr. Chapman says: "When he (the petrol driver) stopped he was probably on top speed, waiting his opportunity with his clutch depressed; now he endeavours to move, one, two, his engine has stopped, he hears some gibes, he jumps out to start up again. One, two, stop, bang, he is nearly run over by his car, having left his gear in. A mad rush for the lever, a cab has drawn close up to the off-side. Another mad rush to the other side and in the car, puts the lever to neutral. Once more to the handle and the engine starts (perhaps). Up he jumps again while the cabby whistles 'Home, Sweet Home'; first speed now, carefully, two or three pops, and the engine stops again. Alas! he has left the brake on."

Now, firstly we will presume that the car is one in which the act of putting on the side brake automatically withdraws the clutch; well, what happens? According to Mr. Chapman, after many trials the driver is ready to proceed, he carefully puts in the first speed, then he stops his engine by letting in his clutch with the brake on; but this is impossible, as the act of putting on the brake in the first place put out the clutch, and this cannot be let in unless the brake is first taken off.

Secondly, we will say that the brake and clutch are not connected in any way. What have we then? An apparent Hercules, who is not only able to turn the starting handle against the compression of the engine, but also by the same movement to propel the car forward, as the clutch is engaged and the top speed in; and, lastly, to do this despite the retarding effect of the brake, which I presume is not an absolutely negligible quantity, as Mr. Chapman makes it stop the engine. I merely point these errors out in order that the uninitiated may not be led into thinking the petrol motor such a weird and complicated thing as Mr. Chapman's letter would seem to make it.—Yours truly,

L. ASPINALL.

TO THE EDITOR OF *The Motor-Car Journal*

SIR,—Your correspondent who signs himself "Locomobile" says he has used one of "these" little cars for a long time. It seems to me he implies, of course unintentionally, that all steam cars are Locomobiles. Further on he adds that the prejudice that has so long existed is due more to ignorance and mismanagement than anything else. Quite right! But I feel inclined to add the vehicle he names, for, although there were some good little cars of this make, I have no hesitation in saying that they were originally responsible for the prejudice that still exists against the steam car. There is no doubt, however, that the little Locomobile, if properly looked after, will be running when some of the petrol cars of its age will be on the scrap heap. I would like to point out for the benefit of the uninitiated, that the spares or spare parts usually carried on a steamer are very few and very light, because there is no necessity to take a lot of stuff about on the car. Even if one does have some little troubles on the road, they are very rare, and I have never known an instance of its happening that one cannot get home. One other thing I would like to point out, there are plenty of motor schools and firms who profess to teach motoring, and they do so, but I do not know of any firm, and up till now I have not heard of any school, where a knowledge of the steam car may be attained; and I believe that after the vendor has completed with his customer, the latter is left almost

entirely to his own resources, there being, I believe, no manuals or such-like issued to help him.—Yours truly,

HERBERT J. CHAPMAN.

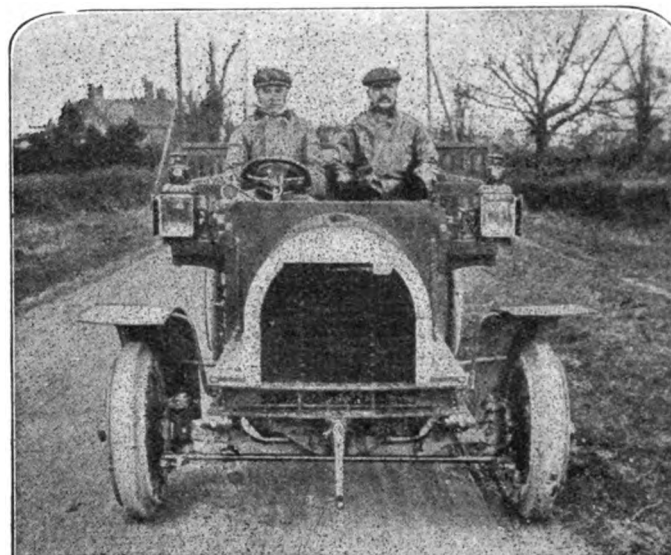
- THE AUTO TYRE INFLATOR.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—In reply to your correspondent "Philistine," re Maxfield's Auto Tyre Inflator, in your issue of the 14th inst., the speed of the inflator is governed by the operator, the friction wheel being designed so that the pump rotates, with ignition of engine retarded, at about 1,000 revolutions per minute. Tests have been conducted with speeds varying from 500 revolutions to 5,000 revolutions per minute, and flywheel diameters varying from twelve to twenty-four inches, with most satisfactory results.

Re ball valves closing at the high speeds mentioned, the writer some seven months ago conducted a number of tests of the inflator at various firms throughout the country, and at a demonstration in Coventry tests were conducted with a car the flywheel of which measured twenty-four inches diameter, tyres 880 by 125, inflated to a pressure of 90 lbs. per square inch. First test—Engine ignition fully retarded, time four minutes; second test—Engine running normal speed, same pressure and tyre, time two and a quarter minutes. This is a convincing test as to speed and results. A large number of these pumps have been sold with satisfactory results. The valve V is the intake valve, the air entering through the parts shown by dotted lines.—Yours truly,

A. J. B. MAXFIELD.



The 40-h.p. Motor Lorry recently supplied by the Mandalay Motor Company, Ltd., to the War Office.

This vehicle is designed to carry three tons of goods, and it will be used principally for the transport of foodstuffs for the men and fodder for the animals.

THE 2,000 MILES RELIABILITY TRIALS.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—We have read the articles in your paper with regard to the above trials with great interest, especially with reference to the unfair conditions which would apply to small cars. To fix the daily distance for cars of 6-h.p. or 8-h.p. to be the same as cars up to 60-h.p. seems to be unreasonable. It is more like expecting a pony to do the same amount of work as a cart-horse; one has a hard task and the other a mere pleasure jaunt in comparison, and one has to be straining its sinews all the time while the other is trundling along with the throttle only slightly open. We think the better plan would have been to arrange a longer route for the larger cars daily and a shorter route for the small ones, so as to bring the work almost equal in the same way that the distances were varied in the Commercial Vehicle Trial.

The same thing applies to the race at Brooklands track. Imagine a small car covering 200 miles on that track and the high power cars doing their distance at the same time; then again the case of entrance fees, the number of the small cars which would have to be sold to recoup for the expense of the trials, having regard to the comparatively small profits on them, is all against the small cars. To the distance as a trial we do not object, because if the motor is not capable of running 2,000 miles in the hands of a competent driver it is not fit to sell to an ordinary customer, although, as everyone who has experience of trials knows, there is a great element of luck in these matters, because a mishap such as happened to Miss Levitt in the very last stage of the Hereford trials in 1904 may occur, which may not happen again in twenty years' running.

We certainly think the matter of total disqualification of the car in case it stopped on a hill and had to turn the passengers out is unfair, as the driver, on account of over anxiety, may give the engine excess of lubricating oil before the hill-climb, which might cause difficulty with the plugs and consequent mis-firing. For other matters we think the rules should be made more elastic.

For the above reasons we have decided to enter a Clyde car for the Scottish trials only, as we think that the conditions to be filled in this trial are sufficient to test any car, especially as it includes the hardest part of the 2,000 miles run.—Yours truly,

G. H. WAIT.

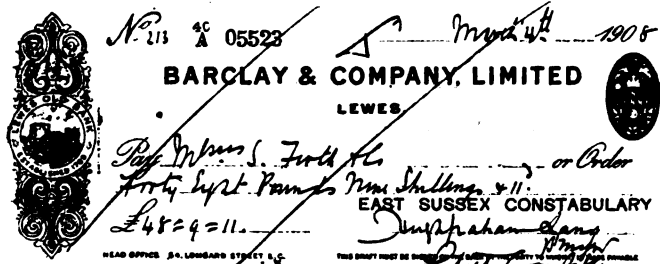
TAXATION OF MOTOR-CARS.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—In my opinion the tax should not be increased for any car, large or small, any more than it is at the present time; but, if the authorities are determined to make motorists pay an increase on their already high tax, I consider it ought to go towards the County Councils for the repair of roads.

This, perhaps, might lessen the objectionable fines levied on the victims to police traps, which, I am told, help to relieve the rates of the parishes where the fines are paid. If the authorities still persist in levying fines and heavy taxes from the motorists, they will do more to stop and put down one of the most thriving trades in Great Britain, and surely in these bad times trade ought to be encouraged and not thwarted as this motor trade seems to be.—Yours truly,

OSWALD MOSLEY.



Facsimile of the Cheque paid to Mr. Staples Firth by the East Sussex Constabulary.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—I have been reading with interest the number of views taken by your correspondents on what should be the proper taxation under the new Act. I hope you will let me give my opinion on same, having been a motorist since the very commencement.

As far as I can see, the idea of a further taxation on motor-cars is in order to compensate the damage done to the roads by the motor-car. If this is so, surely the taxes ought to be put on to those who use studded tyres. My experience over a great many years' motoring tells me that a car fitted with plain treads does not do very much harm to the surface of the roads, but what causes the mischief is the studded tyres, and this is entirely responsible for the cutting up of the roads, and causing the enormous amount of dust in the summer time.

If the cars were taxed according to the number of studded tyres they had on the car, this would go a very great way towards defraying the expenses on the upkeep of the roads, which is undoubtedly caused more through the tyre than through the weight of the car or anything else.—Yours truly,

W. G. WINDHAM (Capt.)

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—I am a country medical man of very limited means. The practice is a scattered one, the country extremely hilly, the roads bad. Three years' experience of light, high-grade, single-cylinder cars proved that they would not long stand the heavy work and they rapidly wore out.

I now use a 12-h.p. two-cylinder car weighing nearly 25 cwt. My means being limited, I was obliged to purchase a car which many people would consider out of date. It is four years old at least, cost originally £600, and was bought by me for less than £100. It is heavy, not very fast, but most reliable.

If cars are to be taxed by weight I must pay considerably more than my neighbour who uses a 40-h.p. two-seated racing car capable of enormous speed, using steel studded tyres, and costing him ten times as much as I could afford to pay. His car, owing to its speed, must cause far greater damage to road surface than my car. Why should people who can only afford to use obsolete, heavy, slow cars (such as a 6-h.p. Daimler or 10-h.p. Benz) pay more than people using modern light high-powered cars? Why should people who can only afford to buy second-hand cars pay as much as the people who buy new cars of similar quality?

Could not cars be taxed according to market value or on the sum

actually paid for their cars when bought, a liberal allowance year by year being made for depreciation?

I look after and drive my car myself; my neighbour owning the high-powered racer can afford to pay a skilled driver and a very heavy tyre bill—yet he will pay a smaller tax than I do if cars are taxed by weight!

Why not put a duty on each tyre sold. The tyre bill is the heaviest expense of motoring, and the man who can afford the largest tyre bill is the man who can best afford to pay the tax. Tyre makers are no numerous, and the duty could be levied on the maker, who could have a customs stamp branded on each tyre sold.—Yours truly,

HEAVYWEIGHT.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—Personally I am strongly against any further taxation on cars. My income is strictly moderate, and it is only by exercising extreme care, and by doing what repairs I can myself, that I am able to run a car at all. I feel sure there are many in similar circumstances, and any increased taxation will entail the cars being given up. We must do some good in circulating money while away from home, if it is only for tea during a Saturday afternoon drive. If more money is needed, why not tax yachts and steam launches, and any other form of expensive pleasure which now goes free? Then, again, a small tax on bicycles would bring in a considerable amount.

I know it may be said the poor man's carriage should not be taxed, but the use of a bicycle enables him to live in the country in many cases, where rents and food are cheaper. At present the working-man seems to gain everything and give nothing. How would it be for the Motor Union or local clubs to make a postal vote of their members, or get a petition signed by them against increased taxation, for presentation to the Chancellor of the Exchequer? It certainly does not seem desirable that a young and growing industry should be throttled or taxed out of existence, and it behoves all motorists to stir themselves up before it is too late. What tax does a four-in-hand pay? If we are to be taxed by weight or horse power, why not that also?—Yours truly,

W. H. B. (Wilts.)

PRACTICAL EXPERIENCES OF MOTOR-BUS DRIVING.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—Before being entrusted with a 'bus every man in our service has a month's tuition in the shops, thus getting an idea of the construction and also repairs and adjustments. Some of our best drivers to-day were three or four years ago driving horse 'buses; they have become so used to motors that they have almost forgotten how to handle the reins.

After a new driver has put his "bill" at Scotland Yard, and the blue badge that he wears, he is put out with an older hand and has a lesson in driving under ordinary service conditions. The time varies according to his quickness in getting used to the vehicle and route, generally about three weeks is the length of time of this driving lesson. After he has driven a 'bus and shown his ability to change gear, reverse, &c., he is given a regular vehicle of his own.

Our company have given preference to the old horse 'bus hands, and in eight cases out of ten these men have got used to motors and their management. The exceptions are the unmechanical, the men who cannot be grafted into handling tools, &c. For instance, we had one man who, after being out for a month with the drivers, was given a trial. He quickly picked up the steering, but had not the remotest idea of gear changing or working the clutch. Well, the first day he was entrusted with a 'bus he had not done half the first run before he tried to change gear with the clutch in! It stripped the differential and gear, and after that he was given up as a bad job.

Suffragettes remind me of a very unusual form of breakdown that occurred on one of our 'buses over three years ago, when they were hardly out of the experimental stage. On this vehicle the cardan became loose and one end went clean through the floor boards. There were four passengers inside (ladies) who did not seem to be put out at the occurrence. They asked: "Has there been a breakdown?" as though the floor was a matter of course. The driver and his mate could not help laughing, though it was no laughing matter. The ladies were not the least flurried, although the floor of the 'bus looked as if it had been through an earthquake.

Whilst Brooklands racing finds out any weak spot in design, lubrication, &c., I think it is admitted that public running conditions, such as a London 'bus undergoes, is equally severe a test. Take lubrication alone. All systems, automatic pressure and mechanical, are tested, but our engineers long ago found by experience that extra hand or pump lubrication to the engine was essential. They found this out years before drivers of racing cars at Brooklands did.

Coming to carburation, more is learnt by motor-buses than a dozen T.T. races, for every form of carburation is tested on its merits, and you may be sure that any really improved carburettor or economical device is tested on a 'bus pretty soon after it is known. As regards ignition, a great deal has been learnt from the motor-bus. I believe the splendid results we got with the low-tension magneto only on the old Milnes-Daimlers years ago was responsible as much as anything for the magneto now being universal. The old M.-D.'s did wonders in ignition trials, and remember they were run under the most trying conditions, and the magnetos were exposed to the oil flying about. In my opinion two magnetos for slow and high speeds is the ignition of the future.

A loss of power on one of our engines was due to an unusual cause, and the engine being new (it had not run three weeks) it puzzled the mechanics. On test it was seen that the compression of the third cylinder was bad, it was blowing very badly as though the rings were a poor fit, so the cylinder was removed, and then a crack (barely half an inch long) was seen on the piston head, and examination made it clear that a flaw in the casting was the cause.

In changing speed on a rising road, and when the engine speed has decreased, it is no easy matter to change gear without something of a jerk, no matter how quickly it be done, and unless the clutch is in good condition it is an impossibility. I have seen some stripped gears and differentials in some of the newer 'buses running, and in my opinion the driver was not altogether to blame. One of the worst stripped bevels I ever saw was on a vehicle with a metal-to-metal clutch, which, although it may give good results if properly adjusted and lubricated, will cause trouble if these things are not attended to. From what I have seen, stripped gears and pinions occur more on gear-driven than on chain-driven cars, for the reason that the gear drive is more positive, hence bevels are put to a sharper and more severe strain when the clutch is let in or in gear changing.

Sometimes one reads in the motor papers about instances of bad driving of motor-buses, the fact being ignored that generally it is not the driver's fault. I would like to see any of these writers on a motor-bus under some of the trying conditions we get. They would quickly see it is far from pleasure driving, especially when, as sometimes happens, the clutch is a bit fierce (or the other way about), a gear or two does not engage as it ought, and a knock somewhere in the engine that causes a headache to a sensitive driver, and as likely as not streets so slippery that you are not quite certain whether the next second the bus will try and

THE INTERNATIONAL TOURING CAR TRIAL.

THE suggestion has been approved by the full Trial Committee that Class 2, which corresponds to Standard No. 2 of the table of Touring Car Standards (6.4 to 13.0-h.p. by R.A.C. rating), should be divided, the divisions to be known as Class 2a and Class 2b.

Some alterations have been made in the "Supplementary Regulations" issued on February 5th, 1908, which should be carefully studied by competitors. Standard No. 2 is to be sub-divided as follows:—

Class 2, (a) Engine rating between 6.4 and 9.4-h.p., seating capacity two persons, weight all complete, &c., not less than 15 cwt.

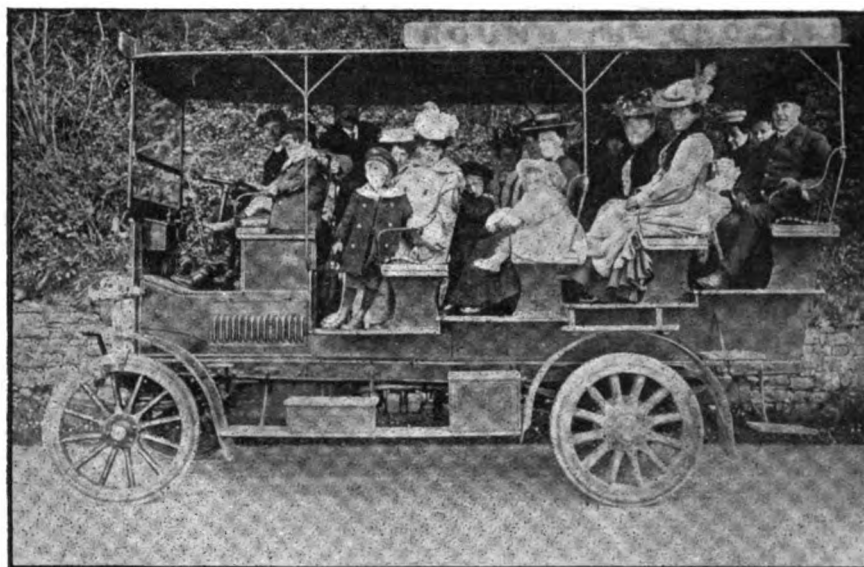
Class 2, (b) Engine rating between 9.4 and 13.0-h.p. seating capacity two persons, weight all complete, etc., not less than 17 cwt.

Regulation No. 10.—For "Class 2," read "Class 2, (a) and (b)."

Regulation No. 15.—At end of first paragraph add: "Provided that if a vehicle fail to carry its full complement of passengers along any part of the course other than a timed hill climb, the car shall on the occasion of each such failure be penalised ten minutes in respect of each passenger alighting. The car shall not complete the stage until any passenger so alighting has resumed his seat, and such passenger in the interim shall proceed along the course on foot. This penalty shall not be reckoned in determining the car's actual maximum or minimum time for the stage, but shall be debited against the car at the end of the day."

COMPANY NEWS.

FORDER MOTORS, LTD.—Registered with capital £100, in sixpenny shares, to acquire the freehold and leasehold properties in Wolver-



An Argyl Char-a-banc at Gourick.

turn round and face the direction from which you have just come. In my opinion every R.A.C. trial, such as an engine non-stop, should include a few hours' London traffic driving, then the drivers would get some idea of the work a London bus and driver have to do every day in the week.

I will conclude with a few things every driver should remember. Engine firing after switching off or throttling down is generally caused by carbon deposits on cylinder. Popping in carburettor is due to either the valve sticking in guide, a bent valve, or (if with automatic inlet valves), weak inlet spring. Gradual slowing of engine may be due to choked petrol pipe or carburettor, no pressure to petrol feed, or feed giving out. Overheating results from either the water circulation or pumps not working properly, poor compression (through rings, plugs, or valves), not properly lubricated, or poor quality oil. Backfires in silencer arise because of faulty ignition; see to magneto plugs and terminals. If low-tension magneto, clean accumulator and brushes.—Yours truly,

A MOTOR-BUS DRIVER.

LOST GLOVE.—A motor glove of some value picked up in Weston-super-Mare on the 3rd inst. is in the possession of the Superintendent of Police, who wishes to find the owner.

A STEPNEY wheel, size 880 by 120, fitted with new Dunlop ribbed cover and inner tube, number of wheel 27811, has been lost in London, and information will be welcomed by Lt. Hon. W. S. Leveson-Gower, H.M.S. Coquette, Portsmouth, or Messrs. Rose and Co., Southsea.

FROM Mr. C. D. Fennell we have received a copy of his letter of protest addressed to the Motor Union of Western India in connection with the decision come to as to the awards in class 4. Apparently in this competition there were many breaches of the rules, and Mr. Fennell suggests that the trials should be run over again.

hampton known as Forder's Royal Hansom and Carriage Manufactory and to carry on the business of manufacturers of and dealers in motor cabs, cars, omnibuses, &c. Registered office, Ardmore, Eynsford.

DEFIANCE MOTORS, LTD.—Registered with capital £100, to adopt an agreement with the Laystall Motor Engineering Works, Ltd., F. T. Bersey and S. C. Eade. Registered office, 27-9, Laystall Street, Rosebery Avenue, E.C.

PADDON AND SOPWITH.—The directors recommended a final dividend of 35 per cent., free of income tax, on the ordinary shares, making 42½ per cent. for the year, and a dividend of 20½ per cent. on the deferred shares of the company.

ROAD REPORTS.

OCKHAM.—A measured quarter of a mile is being worked by the police at Ockham.

CHESHIRE.—At Wilmslow, an Alderley motorist has been summoned for having no rear lights showing on his motor-car. He complained of the roads, and said he had passed over a length between Handford and Wilmslow which was bad enough to shake any lamp out. A small fine was imposed.

SUSSEX.—Among the roads under repair are those between Bolney and Ansty, Rottingdean and Brighton, Lewes and Ringmer, and Frant and Tunbridge Wells.

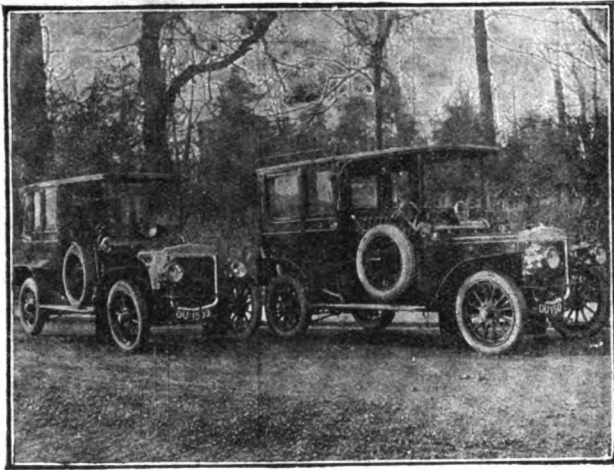
ISLE OF WIGHT.—The Isle of Wight Motor Association is warning motorists visiting the island that many of the roads on the island are particularly narrow and winding, requiring special care being taken.

SUBSTANTIAL reductions are notified in the new catalogue of the Dunlop Pneumatic Tyre Company, Ltd.

THE CARBURETTOR AND ITS FUNCTIONS.*

(Continued from page 58.)

The float point should be easily ground so that it may be kept tight and in perfect working order. Further, the motion of the vehicle should tend to move the float point to some degree, even though slight, which movement serves to force away any particles of dirt that may lodge on the point during the passage of liquid. On this account it is best if the float and point are fixed one to the other, so that the point partakes of the motion of the float and liquid in the chamber. The petrol should enter the float chamber from a single direction, either up or down, so that no pockets exist in which water or dirt may gather. It is best to feed the chamber by gravity from a tank above the float chamber and with downwardly extending pipe, without pockets, leading into the chamber near the top, with float point upward, such point being attached directly to the float without levers, weights or other unnecessary parts. The float chamber should open at the bottom for automobile use. This facilitates removal of any water, ice, or dirt, and removal of float itself, without opening the top and permitting dirt to fall in from above. The float and removable bottom can be replaced with a stream of petrol flowing upon them, which will wash away particles of dirt, if any accidentally get on the parts while being replaced. With top opening, ice in the bottom of the chamber may not only support the float and prevent its falling to admit petrol, but may also bind the float so firmly that it cannot be removed to permit removal of ice, which may prove an unpleasant predicament it away from means of warming the mixer. The float chamber should have an air vent to permit proper action, and this vent should preferably terminate above the petrol tank, so that if for any reason



His Majesty the King of Spain is a firm believer in the Stepney Wheel, and never travels without it. The above illustration shows two of His Majesty's Daimler Cars with the ever-ready Stepney by their sides.

the float fails in its duty the petrol rising in the vent tube will not rise higher than the tank level, and so cannot escape. Where convenient, the "ticker," or device for depressing the float and flooding the mixer, should pass down this vent tube. This arrangement, in connection with a needle that closes the nozzle when the motor is stopped, prevents danger from leaking petrol, and possibly fire. It is more reliable than a tap, for the operator will grow careless about the latter, but will, if needed, adjust the nozzle daily to secure best results under prevailing weather conditions for that day.

EQUALISATION OF FUEL FLOW INTO THE MIXER.

All petrol entering the mixer should be strained through ample gauze, so that particles likely to clog the nozzle may be kept from entering. Such gauzes are usually provided at the opening of the tank or in the funnel; but this is not sufficiently certain for the best results, and the perfect mixer should be self-protected from this certain cause of trouble. The outlet from the float chamber, usually termed the jet, should be nearly concentric with the chamber. If centrally located, variations in angle do not affect the level at this point; but it is some advantage to have this point slightly behind the centre, so that going up hill or accelerating the action of the vehicle automatically raises the level of the liquid, and thus slightly increases the flow, making the mixture slightly more fat and powerful. This arrangement permits the normal mixture to be lean, insures perfect combustion, great economy, and no odour, yet automatically brings the mixture to maximum fatness and power when power is needed.

Since liquid has considerable weight, and consequent inertia, the passage to the nozzle should be both short and large, for large passages

do not clog easily, and, if short, the liquid can flow quickly, and will likewise cease flowing without delay when the suction ceases. If large, the friction is less and no particle of liquid need acquire high momentum. If, on the other hand, this passage is long, the liquid does not get started until a large volume of air has passed the nozzle, making the early part of the charge too lean, while, as the suction decreases and the air flow ceases, the inertia of the liquid causes it to continue to flow, making the latter portion of the charge overfat, and leaves between charges probably unsprayed drops of liquid, which fall upon the walls or are drawn into the motor.

UNSPRAYED LIQUID SHOULD NOT BE ALLOWED TO WASTE.

Such liquid as remains in the passage unsprayed should be retained, and not permitted to run into the motor or upon the ground. This liquid should also, by the shape of the passage or by other suitable means provided, be broken up, sprayed or finally divided at the next suction stroke, so that it may properly serve its purpose within the engine. If, because of a faulty float, the nozzle should flood, the air passage should not fill with petrol, for, when attempting to start the engine, this would result in a large volume of liquid being drawn into the cylinder, making its contents too fat to ignite. To prevent such flooding, the air passage should have an opening at a proper distance above the bottom to permit the escape of excess liquid, in case such exists.

The nozzle should be closed from above by an adjustable needle, for the inverted conical point of such a needle assists in making a fine spray. This needle-adjusting handle should terminate near the driver, and permit him, while operating the vehicle, to vary the proportion of the mixture, and thus secure the greatest power by trial, as well as accommodate the device to the temperature and humidity of different days, and also to the gravity and composition of different fuels. No adjustment while the vehicle is standing can compare with adjustments in actual road service in point of accuracy. Further, the mixer should be adjustable at low speeds, to secure certain ignition and steady running. Gas engines are particularly prone to misfire at their limits, and the perfect mixing device for motor vehicles will provide superior conditions at these limits in order to secure the most satisfactory range of service. This necessitates provision also for adjustment at normal or high speeds, and by inference the device should automatically compensate at intermediate speeds. Most present-day devices are adjustable for one speed only, and depend for automatic adjustment upon considerable variation in the suction vacuum, and so cannot give good results at widely varied speeds from that to which they are adjusted. This defect need not, and most certainly should not, exist.

That the largest possible charges may be drawn into the motor at high speeds, it is self-evident no needless friction should be caused the air as it passes toward the engine. On this account a single air passage is better than several, because there is less wall surface and friction. It is also evident that the air passage should be easy, and not tortuous or broken. It is undoubtedly true that the tortuous passage will break up the particles of petrol and help to form a homogeneous mixture, but this is done at the cost of increased suction and of some loss of volume and consequent needless loss of power from the motor, particularly at high speed.

PROTECTIVE GAUZZES AND THEIR FREQUENT CLEANSING.

Since some engines may occasionally backfire through their inlet valves, the mixer should be provided with escape for explosion, for if this is not done the pressure may force into the float chamber and will more certainly interfere with the next succeeding charges than if allowed to escape into the atmosphere freely and promptly. To prevent such explosions from igniting anything on the outside, the pipe entrance should be provided with a gauze strainer, which mainly serves to keep out particles of dirt that otherwise would enter the engine and likely stick to the walls and cause rapid wear and pre-ignition. Much of the carbon deposit so common in automobile engines is caused by road dust, with enough oil to bind it together.

The rapid evaporation of the liquid not only takes heat from the passages in which the evaporation takes place, but frequently causes a deposit of moisture, which in the presence of low atmospheric temperature becomes ice and clogs the passage. This freezing may be prevented and a more perfect evaporation, with consequent intimate mixture, secured by heating the passage where the mixture is taking place. I therefore favour a heating jacket outside the mixture passage, through which hot gas from the exhaust or hot water from the circulating system may flow, and I consider it advisable to place within the mixture passage at this point one or more gauzes of large area to positively intercept large particles of liquid and prevent their being carried into the cylinder. All gauzes should be removable for cleaning purposes, and frequent attention to the various details of this most necessary part of the vehicle is necessary to insure perfect work.

(To be concluded.)

THE alterations at Messrs. R. M. Wright and Co.'s garage at Lincoln enable at least fifty cars to be garaged, besides the repair cars.

THE West End show-rooms of the Acetylene Illuminating Company, Ltd., of 268-270, South Lambeth Road, S.W., are at 20, Long Acre, W.C. The carbide is now supplied in 1 lb. enamelled tins as well as in larger quantities.

*Abstract of Paper read by Mr. C. E. Duryea before the American Society of Motor Engineers, Buffalo, N.Y.

THE NEW HUMBER WORKS AT COVENTRY.

CONSIDERABLE excitement prevailed in Coventry on Thursday, last week, when a fleet of thirty Humber cars lined up at the station to convey a large party of representatives of the Press to inspect the immense new works which have been established by Messrs. Humber, Ltd., just outside the City of Spire. The business of the company has so increased within recent years that factory after factory has been acquired until the manufacture of Coventry-Humber cars and cycles was spread over six or seven separate works, naturally adding greatly to the difficulties of management. It was to bring the whole of the operations under, as it were, one roof, and to provide for further expansion, that the establishment of the new plant was decided upon.

Within the space at disposal it is impossible to fully describe the new works, but some idea of their enormous extent may be gathered from the fact that the buildings alone cover 13½ acres, that employment is given to 5,000 hands, and that the productive capacity is equal to 150 motor-cars and 1,500 bicycles per week. The works have been built under the personal supervision of Mr. Walter Phillips, who has been the Coventry manager of the company for sixteen years, and who has brought to bear on the building and equipment a unique knowledge of the peculiar requirements.

The works have been erected for an annual output of upwards of 75,000 cycles and 7,500 motor vehicles, and for the most part consist of

plant and machines are carried on, and the engine, back axle, and gear-box fitting shop. The latter covers 21,600 superficial feet and employs about 300 hands. At one end of this shop are the stores of finished machine work, which have been received direct from the examiners, whence the fitters receive the hundreds of parts which are required to build an engine, gear-box, or axle, according to which section the fitter belongs.

Especial interest was taken in the engine test shop (100 ft. by 40 ft.) where seventy hands are engaged on engine testing alone. Instead of using the old method of testing with a rope round the fly-wheel, the use of the water dynamometer, which does away with all unpleasant smell, smoke, and grease, has been adopted. The chassis erecting shop covers no less than 22,000 superficial feet, and as one sees the never-ending rows of frames gradually evolving into cars, one cannot but express astonishment at the large scale of the undertaking. Following in close order come the car frame erecting shop, the brazing department, the riveting shop, the polishing room (area, 15,400 feet), the plating section, the coppersmiths' shop, the radiator and sheet metal department, and the hardening shop. Another interesting department passed through is that devoted to experiments, where a careful examination is carried out of all patents that are granted upon matters relating to motors and cycles.

The body-building portion of the works also calls for mention. It begins with the timber-seasoning stores, standing on an area of 15,000 ft., where something like 2,500 tons of the best brands of timber are stored. Saw mills adjoin the stores. The body-making shop covers a superficial area of 36,000 sq. ft., and finds employment for no less than 350 hands. The upholsterers', painting, and varnishing departments are on an



The Lunch at the Opening of Messrs. Humber, Ltd.'s New Works at Coventry. Three Interior Views of the Works are given in the small round illustrations above.

single-storey buildings, designed to give the greatest efficiency in production, combined with low cost of manufacture and comfort for the employees. The buildings are built entirely of substantial red brick, and have glass and slated roofs, northern light, and several shops have lantern roofs. The floors are all cemented, on a bed of concrete; but in certain shops, for the purpose of particular work, wood and tiled surfaces are provided over the concrete. Surrounding the main portion of the works are roads 30 ft. wide, intersected with 20 ft. roads, with a dust-proof finish, by Tarmac, Ltd.

The offices, which are two storeys in height, are entered by a main central hall, having a wide central staircase, with side staircases leading off from right and left into a balcony corridor running round the central hall. A most elaborate and yet simplified telephone system, whereby easy communication is made with all sections of the works and trunk lines, has been installed. Leading from the main hall we come to the car-examining and despatch department, with 18,000 square feet superficial area. Here the newly-finished cars wait to undergo their final examination before taking the road or being despatched by rail. Hurrying through the rough stores and examining shop we come to the machine shop, in which 700 hands are employed, and where are rows of machine tools stretching almost as far as the eye can reach, extending 340 ft. in length. There are over 1,000 machine tools arranged in sections, all in close touch with each other. Passing the grinding and tool departments we reach the millwrights' section, where the repairs to

equally large scale, as are also the car-trimming and car-finishing shops, and the car stockroom.

The power station and gas producer plant (the latter adjoining the station) contains eight gas engines of 100 b.h.p., each running on suction producer, manufactured by Grice's Gas Engine Co., Ltd., Birmingham, and Carnoustie, Scotland.

Altogether the new factory ranks among the largest in the world, and equipped as it is with the most modern machinery it forms a notable addition to this country's industrial assets. In the preceding remarks no mention is made of the cycle building portion of the plant, which is not yet fully completed, while it should also be added that the large plant at Beeston continues, under the direction of Mr. T. C. Pullinger, to turn out large numbers of Beeston-Humber cars and cycles.

After the inspection on Thursday last week, the guests to the number of nearly 300 were entertained to lunch by the directors. Mr. E. Powell presided, and in responding to the toast of Humber, Ltd., gave a summary of the progress of the company, which is now sending motor vehicles to every country of importance throughout the five continents. Cars are going daily to the English dependencies, and even the high tariff wall erected by the United States cannot keep out Humber cars. Mr. Powell gave a number of instances which showed the world-wide character of their trade. The sales for the week ending March 7th exceeded by £3,000 the largest sales of any week up to two years ago.

CLUBS AND ASSOCIATIONS.

ROYAL A.C.

THE annual meeting of the Royal A.C. was held at the Old War Office (the site for the new club buildings), Pall Mall, London, S.W., on Thursday of last week, when there was a good attendance. The chair was taken by Mr. C. D. Rose, M.P., Chairman of the Club, supported by the Hon. Arthur Stanley, C.V.O., M.P., Sir David L. Salomons, Bart., Sir Henry Norman, M.P., Col. H. C. L. Holden, R.A., F.R.S., Mr. Robert Todd, Mr. T. H. D. Berridge, M.P., and Mr. W. Worby Beaumont. In moving the adoption of the annual report, the chairman referred to its salient features, particularly the Commercial Vehicle Trials, the termination of the agreement with the M.U., and the action of the committee in securing the site of the Old War Office for the new club building. As regards the accounts and balance-sheet the Chairman explained the chief items and pointed out that, although there had been a heavy expenditure on the Commercial Vehicle Trials, the Committee of the Club had decided to carry out the trials in view of their great importance. The annual report, the accounts and balance-sheet, and the budget for 1908 were passed and adopted. The general council of the club was re-elected, with the addition of the name of the Marquis A. Ferrero Ventimiglia (president of the Automobile Club of Italy). Alterations in the club rules necessitated by the club's scheme for the acquisition of new premises were approved and the president and vice-presidents of the club were re-elected. A vote of thanks to the chairman for the able way in which he had conducted the club during the year 1907 was moved by the Hon. Arthur Stanley, C.V.O., M.P., seconded by Sir Henry Norman, M.P., and carried with acclamation.

The postal ballot for the election of twenty-five members to fill the vacancies on the committee of the club resulted as follows:—Capt. F. E. Dyke Acland, Messrs. A. Armitage, T. H. D. Berridge, M.P., A. Bird, H. E. B. Bruce-Parker, E. H. Cozens-Hardy, Lieut.-Col. R. E. B. Crompton, C.B., Charles Hardy, Dr. H. S. Hele-Shaw, F.R.S., E. M. C. Instone, G. C. Ashton-Jonson, Major F. L. Lloyd, R.E., E. Manville, J. R. Nisbet, J.R., Wilson Noble, J. F. Ochs, Mervyn O'Gorman, Lionel de Rothschild, W. E. Rowcliffe, J. D. Siddeley, Stanley Spooner, H. W. Staner, the Hon. Arthur Stanley, C.V.O., M.P., Dr. J. Hopkins Walters, and Claude Watney.

The annual dinner of the Club was held in the evening at Covent Garden Theatre. A top table was arranged near the stage, a number of long tables were extended across the floor of the house, and circular tables to seat eight each were dotted about in other parts of the building. The number sitting down to dinner was 446; for the subsequent conversation 150 tickets were issued, and eighty private boxes were occupied by about 300 visitors, the total present thus exceeding 900 during the latter part of the evening. Mr. C. D. Rose, M.P., the Chairman, proposed the toast of "The King, our Patron," and the only other toast was that of the health of the Chairman himself, proposed by the Hon. Arthur Stanley, C.V.O., M.P. Among the guests were the Greek Minister, the Swedish Minister, the Hon. Arthur Stanley, C.V.O., M.P., General Sir John French, G.C.V.O., Mr. Roger W. Wallace, K.C., Lieut.-Col. Mark Mayhew, A.M.R., Sir David Salomons, Bart., Lieut.-General Sir C. W. H. Douglas, K.C.B., Major-General C. E. Heath, C.V.O., Sir Henry Edward, K.C.V.O., Mr. W. Joynton-Hicks, General the Hon. Sir N. G. Lyttelton, G.C.B., Col. Sir E. W. D. Ward, K.C.B., K.C.V.O., the Chinese Minister, Lord Montagu of Beaulieu, the Hon. Sir H. Trelawny Eve, Brig.-General A. J. Murray, C.V.O., Sir Forest Fulton, K.C., Brig.-General R. M. Ruck, Col. H. C. L. Holden, R.A., F.R.S., and Mr. Whitaker Thompson, L.C.C. An excellent entertainment took place from 10 p.m. to midnight.

MOTOR UNION.

THE annual meeting of members of the Motor Union is to take place on Wednesday next at the Victoria Hall, Hotel Cecil, London, following the general conference of members of any recognised automobile organisation to be held at the same place, at three o'clock, to consider the position of motorists as regards Budget taxation.

Motorists attending these events will be able to visit on the same day the exhibition of all classes of motor vehicles at the Agricultural Hall, London, and arrangements have been made by which members of the Union can obtain entrance free of charge on presentation of their 1908 cards of membership.

Arrangements are being made by the Signs and Notices Committee and the Touring Committee of the Motor Union for the issue of enamelled signs for recommended hotels and recommended repairers. The principal features of each sign will be the word "Recommended," "Hotel," and "Repairer," and the M.U. monogram badge.

Up till Tuesday morning the Union had received notifications that 154 local authorities had passed and forwarded to the Chancellor of the Exchequer the subjoined resolution or resolutions in similar terms:—

"This Council is of the opinion that it is desirable that the money raised from the taxation of motor and other vehicles should be paid into a central fund, from which grants shall be made to the local authorities towards expenditure on the roads."

AUTOMOBILE ASSOCIATION.

MEMBERS of the A.A. will be admitted to Cordingley's Motor Show at the Agricultural Hall any day during the Exhibition on presentation

of their member's ticket. The Association will also have a stand on the ground floor of the Hall, where the secretary and some of the staff will be in attendance to meet members and answer general enquiries. As in former years, appointments may be made and letters, telegrams, messages, &c., addressed for the convenience of members, c/o Automobile Association, Cordingley's Exhibition, Agricultural Hall, London.

The third annual dinner of the Association was held on Wednesday in the Grand Hall of the Hotel Cecil, London.

LINCOLNSHIRE MOTOR-CYCLE.

AT the meeting of the committee of the Lincolnshire M.C.C. on Saturday the question of the taxation of motorists was considered, and it was unanimously decided that the club inform the Motor Union that it regrets being unable to assist that union in its taxation movement, because of the belief of the committee that it is unfair that a particular class of the users of the roads should be singled out for taxation, and that it is wrong for the principle of users of the roads being singled out for their upkeep being introduced.

It was arranged to have the hill climb at Waddington on Easter Monday, and the round-the-county reliability trial on Whit-Monday. Mr. Brooke, the chairman of the Scunthorpe centre, offered a cup for a team trial, for teams of six, and Mr. Foster, the chairman of the club, announced his willingness to give a trophy for competition. Mr. Brunning, a vice-chairman, also offered a prize. It was decided to have a long distance trial, and from Lincoln to Yarmouth and back was suggested.

BROOKLANDS.

On Saturday, the 18th prox., and Easter Monday, the 20th prox., an important programme will be run by the Brooklands A.R.C. Nomination circulars and entry forms can be obtained upon application to the club at Carlton House, Regent Street, S.W.

The events will include the third 28-h.p., 40-h.p., 60-h.p. and 90-h.p. races of 150 sovs. each; the second Surrey stakes of 5 sovs. each, the Continental stakes of 50 sovs.; the Junior plate of 50 sovs. each; the sprinters' selling stakes of 5 sovs. each; the Naval and Military Cup, the Brooklands Cup and the Easter Handicap sweepstakes of 5 sovs. for acceptors.

Most of the races will be over a course of about three miles; the longest being the 60-h.p. race, which will be of a distance of 19½ miles.

THE INCORPORATED INSTITUTION OF AUTOMOBILE ENGINEERS.

MR. DUGALD CLERK has been elected President, and Dr. H. S. Hele-Shaw and Mr. F. W. Lanchester Vice-presidents of the Institution for 1908.

The following have been elected on the Council:—Messrs. M. O'Gorman, Percy Martin, C. R. Garrard, F. L. Martineau, F. C. A. Coventry, D. Leechman, D. Mackenzie, A. Sharp, E. W. Lewis, E. E. Baguley, A. S. Hill, F. R. Simms, W. W. Beaumont, J. L. Sampson, D. J. Smith. Mr. R. K. Morcom has been co-opted a member of the Council.

A general meeting of the members of the London branch of the graduates' section of the Institution will be held on Tuesday, the 31st inst., at 1, Albemarle Street, Piccadilly, London, W., when a debate on "Live Axle v. Chain Drive" will be opened by Messrs. Percy Bishop and D. M. Power.

AUTO-CYCLE UNION.

THE annual general meeting of the Council will be held to-day (Saturday) at 3 p.m., at the Imperial Restaurant, 60 and 62, Regent Street, London, W., and not at the Criterion Restaurant, as previously arranged.

It has now been definitely arranged that the annual race meeting of the Auto-Cycle Union will take place at the new Stadium at Shepherd's Bush on August 22nd.

AERO CLUB.

ON Thursday afternoon the members of the Aero Club of the United Kingdom held their annual general meeting at 166, Piccadilly, S.W. The business transacted included the election of the committee for 1908-9, and the confirmation of certain additions and alterations to the rules and by-laws. As regards the new committee, no ballot was necessary, as the following eleven members had been nominated for eleven vacancies:—The Hon. Claud Brabazon, Mr. Ernest Bucknall, Col. J. E. Capper, C.B., Vice-Admiral Sir Chas. Campbell, K.C.M.G., Mr. John Dunville, Mr. Martin Dale, Capt. A. H. W. Grubb, D.S.O., R.E., Mr. J. T. C. Moore Brabazon, Viscount Royston, the Hon. C. S. Rolls, and Mr. Roger W. Wallace, K.C.

MR. C. W. BROWN, of Hollyville, North Finchley, N., has been elected hon. sec. of the Junior A.C.

THE Leeds Motor Cycle Club, of which Mr. H. S. Atkinson, 72, Avenue Hill, Leeds, is hon. secretary, is arranging a series of inter-club meets during the season. J.M.E.A. 13288

CASES UNDER THE MOTOR CAR ACT.

EXCEEDING THE SPEED LIMIT IN ROYAL PARKS.

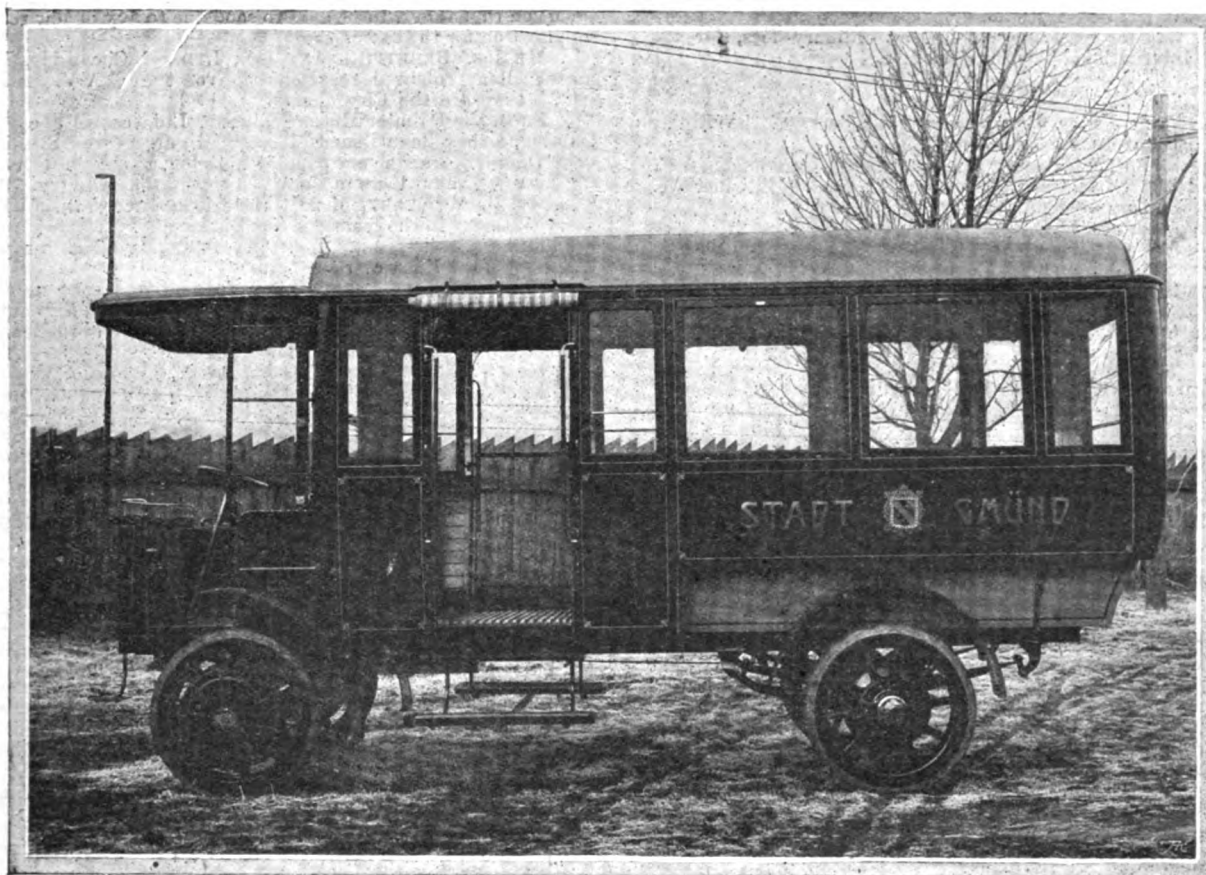
On Friday of last week one Metropolitan magistrate dealt with a batch of seventeen summonses against motor-car drivers for exceeding the speed limit of ten miles an hour in Hyde Park. The facts were proved by Sergeant Filce, of the A division, who, with Constable Pick, timed the defendants over a measured furlong. The speeds ranged from sixteen to twenty-four miles an hour. Four of the cars were taximeter cabs. The fines ranged from five shillings to sixty shillings. This makes a total of seventy similar cases within a month.

DANGEROUS SPEED.

At the Brighton Borough Bench, Luis Martin de Saint Sumera, of Gerrard Street, London, W., was summoned for driving a motor-cycle on the Grand Junction Road, Brighton, at a speed dangerous to the public, having regard to all the circumstances of the case, on February 20th. Defendant made a statement—which was interpreted as a plea of not guilty—to the effect that he thought he was allowed to travel at twenty miles an hour. The Chief Constable (Mr. W. B. Gentile) said he had ascertained that defendant had only been in the country a short

FAILING TO GIVE NAME AND ADDRESS.

Frederick Southgate, living at 1, Werner Road, Putney, was summoned before Mr. Garrett, at West London Police Court, on Tuesday, for driving a motor-car in a dangerous manner in Fulham Road, on February 12th, for failing to give audible warning of his approach, and for failing to give his name and address after an accident. Mr. Barker (Wontner and Sons) supported the summonses on behalf of the Commissioners of the Police, and Mr. Freke Palmer defended. After the accident the defendant stopped, and, though asked by an omnibus conductor to give his name and address, refused point-blank to furnish that information. The defendant said he was driving Miss Deacon, the sister of his employer, Mr. Deacon, J.P., of Grantham House, Putney Heath, and another lady in the car. Miss Deacon stated that the accident was entirely due to the dangerous driving of the motor-bus driver, who "deliberately took their (the motor-car's) road, and but for the clever driving on the part of the defendant, a serious accident must have occurred. The magistrate observed that he had often thought that such cases should with more satisfaction to everyone be tried before a civil tribunal. He had never known a case where there was such a conflict of evidence, each of the witnesses for the prosecution having given a different version of the accident. He did not think that,



One of the two Public Service Vehicles now in use in the town of Gmund, Bohemia.

A feature of the vehicle is that while it runs on the ordinary roads it is electrically propelled by means of current taken from an overhead conductor, the same as electric tramways. *[Allgemeine Automobil Zeitung.]*

time. On the occasion in question he was travelling at about twenty-four or twenty-five miles an hour, and all the policeman who stopped him could get out of him was "Grand Hotel." Defendant was probably ignorant of the regulations, and, under these circumstances, he (the Chief Constable) could be satisfied if the defendant would promise not to drive so fast in the future. Defendant gave his Worship the required promise, and paid the costs (14s.).

A DISMISSAL AT HOVE.

Leonard Cushman, of Franklin Road, Portlade, was summoned at Hove for driving a motor-car without a rear light on the car at Portlade, after dark, on March 5th. Mr. H. E. Tringham appeared for the defendant, who pleaded guilty. In mitigation Mr. Tringham submitted that it was quite an accident. The defendant, he said, was merely taking the car from one road to another, and the light went out. He appealed to the Bench not to record a conviction against the defendant, who was a young driver, as it would mean endorsing his licence. P.C. Rummery, who had given evidence in support of the case, was recalled, and said the defendant was driving the car at the rate of about eight miles an hour. The Bench dismissed the case on payment of costs, and warned defendant to be careful in future.

where a motor-car driver had no reason to believe that he was responsible for an accident, he was bound to give his name and address to a layman, and there was nothing to show that the presence of the motor-car was responsible for this accident. While considering that the defendant would have exercised a wiser discretion in pulling up his car altogether at this very dangerous part of the road, he did not hold that he had acted with criminal negligence. He dismissed the summonses.

MR. CHARLES P. WILSON, the hon. secretary and treasurer of the Yorkshire A.C., has changed his address from Town Hall Chambers, Victoria Square, Leeds, to 24 and 25, Basinghall Buildings, Basinghall Street, Leeds.

FROM the "Empress" Motor Company, Ltd., of Stockport Road, Manchester, comes a copy of the new catalogue of "Empress" cars. The list gives full particulars and illustrations of the various models, 16-20-h.p. and 20-24-h.p. four-cylinder and 24-30-h.p. and 30-36-h.p. six-cylinder, which are making their first appearance in London at the Cordingley Show. The catalogue also gives details of the company's "Perfecta" carburettor, which has already been described in the M.C.J.

FORTHCOMING EVENTS.

MARCH.

- 21st (Saturday)—28th (S.).—Open daily from 10 a.m. to 9 p.m.
CORDINGLEY'S THIRTEENTH INTERNATIONAL MOTOR-CAR EXHIBITION
 will be held at the Royal Agricultural Hall, London.
- 21st (Sat.).—Annual general meeting of the Council of the Auto Cycle Union.
- 24th (Tu.).—The annual general meeting and dinner of the Crystal Palace A.C. at the Restaurant Frascati, Oxford Street, W.
- 25th (W.).—General Conference of Automobilists under the auspices of the Motor Union, to consider the question of motor-car taxation and other Parliamentary proposals affecting motorists.
- 26th (Th.).—Ladies' Automobile Club Day at the Motor Car Exhibition at the Agricultural Hall, London.
- 27th (F.).—Meeting of the Cycle and Allied Trades' Association at the Agricultural Hall, London.
- 28th (S.).—Closing day of the Cordingley Motor Show.
- 29th (Sun.).—Opening Run of the Southend Motor Club to the White Hart Hotel, Witham.
- 31st (Tu.).—Last day for receiving entries, at ordinary fees, for the International Touring Car Race.

APRIL.

- 4th (Sat.).—Auto Cycle Union dinner to road-menders on the Ripley road at the Anchor Hotel, Ripley.
- 11th (Sat.).—Annual open Flexibility Contest of the Crystal Palace A.C. Opening meeting of the Nottinghamshire A.C. at Edwinstowe.
- 16th—20th.—Easter Tour of the Motor Cycling Club.
- 17th (Good Friday).—Lincs. M.C.C. meet at Mablethorpe.
- 18th and 20th.—First meeting of the Brooklands A.R.C. for 1908.
- 25th (Sat.) to May 25th.—Industrial Vehicle competition of A.C.F. Opening meet of the Yorkshire A.C. at the Hotel Majestic, Harrogate.
- 26th (Sun.).—Southend M.C. run to Thatched House Hotel, Epping.

MAY.

- 1st (F.).—The Frome's Hill Climb of the Herefordshire A.C.—provisional.
- 2nd (Sat.).—Impromptu pace judging competition of the Sheffield A.C. at Ollerton.
- 9th (Sat.).—First provincial meet of the R.A.C.—to be held at Nottingham, by invitation of the Nottinghamshire A.C.
- 10th (Sun.).—Targa Florio Race.
- 21st (Th.).—25th.—Reliability Trial of the Irish A.C.
- 23rd (Sat.).—Clipstone race meeting of the Notts A.C.
- 25th.—Industrial Vehicle Competition of the A.C. de France.
- 31st (Sun.).—Southend M.C. run to Saracen's Head Hotel, Dunmow.

JUNE.

- International Aeronautical Federation conference in London.
- 5th—6th.—London-Edinburgh twenty-four hours' run of the Motor Cycling Club.
- 8th (M.).—Cars competing in the International Touring Car Trial will arrive at the depot.
- Start of the International Touring Car Trial of the R.A.C.
- 9th (Tu.).—Touring competition for Prince Henry of Prussia's prize begins.
- 15th—19th.—Scottish Reliability Trial.
- 20th (Sat.).—Meet of the Hull Auto Cycle Club and the Lincolnshire Motor Cycle Club at Brigg.
- 27th (Sat.).—Hill climb of the Midland A.C. at Shelsley Walsh. Saltburn beach races.
- 28th (Sun.).—Southend M.C. run to Grand Hotel, Clacton.

JULY.

- The Land's End to John o' Groat's Trial of the Auto C.C. will be held.
- 6th (M.).—Grand Prix A.C.F. (Voiturette section).
- 7th (Tu.).—Grand Prix A.C.F. on the Dieppe Circuit.
- 16th (Th.).—Club meet of the Notts A.C. at the Hop Pole, Ollerton.
- 25th (Sat.).—Petrol Consumption Tests of the Motor Cycling Club. Annual Open Hill Climb of the Midland A.C.
- 26th (Sun.).—Southend M.C. run to Coach and Horses, Quendon.

AUGUST.

- 29th (Sat.).—Meet of the Lincolnshire Motor Club at Lincoln.
- 30th (Sun.).—Southend M.C. run to Great White Horse Hotel, Ipswich.

SEPTEMBER.

- 27th (Sun.).—Southend M.C. run to White Hart Hotel, Braintree.

LIGHTING-UP TIMES—LONDON.

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|----------------|-----|-----------|-----|-----------|-----|-----------|
| Mar. 21st—7.12 | ... | 23rd—7.16 | ... | 25th—7.19 | ... | 27th—7.23 |
| „ 22nd—7.14 | ... | 24th—7.17 | ... | 26th—7.21 | ... | 28th—7.24 |

Secretaries of automobile clubs are invited to forward their programme of fixtures as soon as arranged.

BUSINESS NEWS.

THE DUKE OF MARLBOROUGH has purchased a Siddeley 45-h.p. six-cylinder car from the Wolseley Company. The Hon. Neil Primrose has also ordered an 18-25-h.p. Siddeley vehicle.

MR. A. E. CREESE is opening a new garage at No. 1A, Barry Road, East Dulwich, S.E., where Brouhot cars can be had on hire. Plant is also being put down to enable repairs of every description to be carried out.

MESSRS. HURST AND MIDDLETON, LTD., at their works at Windsor Road, Holloway, N., are well equipped for the carrying out of motor-car repairs of all kinds. They are also making a speciality of gear-cutting.

MR. FRANK MORRIS, late of King's Lynn, has been appointed manager of the motor department of the London and Paris Exchange, Ltd., 55-59, Shaftesbury Avenue, London, W.C.

THERE is one matter of importance to the purchasers of Argyll cars, viz., that the company's system of agencies is so complete that buyers, when touring the country, are hardly ever at any distance from a point where expert advice or parts for an Argyll car can be secured.

FROM the Swift Motor Co., Ltd., Coventry, comes an extremely neat and useful oxidised copper ash tray. The company ask us to mention that they will be glad to send one to any of our readers making application for the same.

MESSRS. BENETPINK AND CO., LTD., of Cheapside, London, send an excellent coloured representation of the C.A.V. accumulator, for which they are the City agents.

FROM the Daimler Motor Company, Ltd., comes a copy of the new catalogue they have issued of Daimler cars in the Spanish language. The Daimler cars are very popular in Spain, and the new list should tend to increase the business in these vehicles in that country.

MR. J. A. RYLEY, of 23, Martineau Street, Birmingham, has his 1908 catalogue in the printers' hands.

THE SIRDAR RUBBER COMPANY, LTD., have had a repeat order for the King for Sirdar carriage tyres.

HERR OTTO DREUSEN, of Copenhagen, has sent us a copy of his latest catalogue of cycle and motor accessories. Extending to about 150 pages, the list is most complete, and should be of assistance in greatly increasing his business in Denmark.

MR. G. MAXWELL BROWN has joined the firm of Messrs. W. Searle and Co., and all inquiries relating to M. Perez and Co. for A.V. plugs and Fulman accumulators should be sent to Messrs. W. Searle and Co., 23, Glasshouse Street, London, W.

THE Wolseley Tool and Motor-car Company have just issued a new catalogue of the Siddeley industrial vehicles. The cars illustrated and described include char-a-bancs, buses, fire-engines, lorries, vans, wagonettes, private buses, ambulances, and motor-cabs, and, as particulars are given of each, the list is naturally very complete.

THE Star Cycle Company, Ltd., of Wolverhampton, are prepared to undertake the re-treading and repairing of motor tyres, and, having an extensive plant at their command, can give prompt delivery.

WE learn that Mr. E. H. Lancaster severed his connection with the Enfield Autocar Company, Ltd., at the end of last month; he is, however, continuing to give the receiver and committee of the company every possible help towards bringing about a revival of its prospects.

THE Stepney Spare Motor Wheel, Ltd., have sent us a photograph of a new showcard they have recently brought out. The subject is a London motor-cab rank fitted with Stepney wheels. On the back is printed a complete catalogue of Stepney wheels, so that it answers the double purpose of a catalogue and a showcard. Agents can be supplied with copies on application.

TO CORRESPONDENTS.

All communications intended for insertion in this Journal or relating to Editorial matters should be addressed to THE EDITORIAL DEPARTMENT, MOTOR-CAR JOURNAL, 27-33, Charing Cross Road, London, W.C., and must be written on one side of the paper only. Letters must in all cases be accompanied by the name and address of the writer, as no notice will be taken of anonymous communications.

The Editors cannot undertake to return MSS. or drawings, although every effort will be made to do so in the case of rejected communications. Where such are regarded as of value, correspondents are requested to retain copies.

The Editors do not hold themselves responsible for the opinions expressed by their correspondents, or for statements and facts which do not appear in the editorial columns.

To insure insertion communications and contributions must be in the Editors' hands by Tuesday forenoon of the week in which the same are intended to appear. Disappointment may be caused by non-compliance with this rule, and to avoid this earlier receipt, if possible, is necessary.

Photographers, both professional and amateur, are invited to send photographs of current events or of motoring scenes and incidents. The fee, if any, required for reproduction should be stated in each case, otherwise no liability will be accepted.

The Editors and Publishers beg also to state that they will accept no responsibility for unsolicited contributions, even if used, unless payment for same is directly specified in forwarding, and the terms arranged before publication.

THE Motor-Car Journal.

VOL. X.]

LONDON, SATURDAY, MARCH 28, 1908.

[No. 473.

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COMMENTS.



NOT only was the annual dinner of the Automobile Association an enjoyable event, but it brought forth valuable testimony as to the work that is being done in the interests of motorists. Having regard to the official positions he has held in the Government, the letter from the Earl of Onslow was especially significant. He pointed out that at one time numbers of convictions were obtained against motorists who fell into Surrey police traps for having exceeded the speed limit on open spaces of roads. "There are now," he added, "comparatively few. It is true that the result has been a falling off in the revenue derived by the county authorities from fines, but, even as a large ratepayer in the county, I cannot regret this source of relief to our rates, seeing that it is due to more careful driving, owing to the supervision executed by the watchmen of the Association, warning all its members that they must drive with consideration. The amenities of our Surrey roads, both as regards the motorist and the policeman, are much improved." This must be regarded as a sufficient vindication of the methods and the policy of one of the most virile organisations in the automobile world.

The Cordingley Show.

TO-DAY (Saturday) will see the last day of the thirteenth of the series of motor-car exhibitions organised by Messrs. Cordingley and Co. at the Agricultural Hall, London. The fourteenth will be held at the same place from March 20th to 27th, 1909, and plans and prospectuses are already obtainable by those interested in securing good positions in the Hall. This year's display is being fully reported elsewhere in our columns, and we would take this opportunity of informing those readers who have been unable to attend the Exhibition that copies of the catalogue can be obtained from the publishers on postal application to 27-33, Charing Cross Road, accompanied by 9d. in stamps. The published price is 6d., and orders for the same can be given to newsagents from whom the *M.C.J.* is obtained.

Popularising Brooklands.

EXPERIENCE has proved to the promoters of the Brooklands Track the necessity of giving popular interest to the events at their race meetings, and the Easter programme will be full and varied. In addition to the speed contests, some of which should provide excitement in their finishes, two innovations are now announced which should each draw some visitors. The inclusion of a motor-cycle event will appeal to a large number of enthusiasts, and we hope an extended entry for the first Brooklands motor-cycle race will justify further encouragement of that form of sport. This trial event will be for motor-bicycles, of which the engines, of twin-cylinder, do not exceed 80 mm. by 98 mm. for each cylinder. It will be over a distance of about five and a half miles. The second innovation consists of the Tyre Change Plate, for motor-cars propelled by means of internal combustion engines only, of a cylinder dimension 55 to under 65, carrying one complete

spare back tyre. At a specified place during the race the complete tyre of the right-hand back wheel will be replaced by the spare tyre carried, which must be duly fixed and inflated by hand pumping. Detachable rims and wheels are barred from the race, which is over a distance of about three and one-third miles. Entries for both these events will close on the 9th prox.

Educating M.P.'s.

WE understand that members of Parliament representing the Parliamentary divisions of Sheffield and the adjoining part of Yorkshire, have received communications from the Sheffield and Hallamshire Motor Cycle Club with regard to the taxation of automobiles. This is a kind of education which county organisations might well serve out to their Parliamentary representatives, for, while the national associations interested in motoring may be able to influence public opinion to some degree, there is often greater intensity of influence in the communications of the local organisations to their local members. Although nothing is yet known as to the extent of the financial intentions of the Chancellor of the Exchequer, motorists must not slacken their efforts to inform M.P.'s as to the detrimental effect that any greatly increased taxation would have upon the trade of the country.

Taxes for Roads.

MEANWHILE those who look to the increased taxation of motorists as a means of assisting the ratepayer are continuing their activity, and the County Councils Association have been interviewing Mr. Asquith and Mr. John Burns on the subject of upkeep of main roads. In urging that the Imperial Exchequer should make grants for this purpose, the spokesmen of the deputation were not slow to point out that, in their opinion, motor traffic was greatly responsible for the increase in the up-keep of the roads, and at least one of them declared that the motor problem had become well-nigh intolerable. Another speaker urged that in the Birmingham and Coventry area local authorities were subject to a great deal of extra expense owing to the roads being used for trial purposes by motor manufacturers in those districts. In replying to the deputation, Mr. Asquith accepted the declaration as to the increase of the cost of main roads during the past ten years, but he was inclined, while recognising the motorist as a factor in the advance, to also attribute a portion to a higher conception of the standard as required by local authorities compared with what was necessary a decade ago. In his speech, however, there was no indication as to his future proposals, and on this interesting point we are left as much in the dark as before.

The Views of Legislators.

A MEETING of members of both Houses of Parliament has been held to consider the question, at which about twenty-four legislators, belonging to both the great parties in the State, were present. They naturally were against further taxation of an industry which is already sufficiently financially handicapped, but their dolorous view may be inferred from the resolution that was adopted to the effect that in the event of taxation

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of motor-cars being increased, it should be strongly urged upon the Chancellor of the Exchequer that a National Road Department should be established to deal with the upkeep and improvement of such main roads. A committee, composed of the Duke of Sutherland, Lord Onslow, Lord Montagu of Beaulieu, Mr. C. D. Rose, Sir H. Norman, and the Hon. Arthur Stanley, was appointed to communicate the resolution to Mr. Asquith.

Club Organisation.

PROVINCIAL and county club organisations have much to thank their honorary officers for. The work of an honorary secretary in securing invitations for meets, in arranging dates to suit the majority of the committee, and in keeping members informed of arrangements, is no light task and entails considerable labour. We understand that this fact is being recognised by the Lancashire A.C., who are considering the appointment of a paid secretary to assist their present honorary secretary in his arduous work. This question of assistance to officials is one that is becoming a practical matter in many other club organisations, and doubtless many will watch the example of the Lancashire motorists with a view to imitation in some form or other before long.



The Crown Prince of Germany with his F.N. Four-Cylinder Car.

Irish Motorists and Licence Duty.

IN the House of Commons, an evening or two ago, Mr. T. H. Sloan, who represents a Belfast division, asked the Secretary to the Treasury if he could explain why an Irish motorist is obliged to pay licence duty to the Board of Inland Revenue on a motor-car which may only be passing through Great Britain, notwithstanding the fact that he is registered in Ireland as the owner of such motor-car. Could the Secretary say why an Irish motorist, keeping a motor-car in Great Britain, was obliged to pay licence duty for a whole year, and in addition thereto was liable to a fine for failing to take out a licence, although he may have only used the car there for one day. Mr. Runciman, in reply, said that there was no exemption from licence duty in favour of motor-cars used in Great Britain by persons resident elsewhere, and he "saw no reason to alter the law." So that want of uniformity to which we first called attention some months ago, is to continue indefinitely. We trust the motoring M.P.'s, who now form a considerable body in the House of Commons, will make a note of the anomaly with a view to securing equal treatment for all. Is it too much to hope, in the present financial uncertainty with regard to motoring, that the regulation that is good for Ireland may be extended to this side of the Irish Sea?

Conference on 'Bus Traffic.

ON Monday many of the Metropolitan authorities were represented at a conference held at Hammersmith to consider whether action could successfully be taken to lessen the growing noise from motor traffic in London. After much discussion it was resolved "That the abnormal development during recent years of motor and other mechanical passenger and goods traffic in metropolitan thoroughfares, and the resulting nuisance and annoyance to the public therefrom, has necessitated the revision and expansion of the present regulations and conditions." Naturally many strange things were said, and many were in favour of new legislation to deal with what is persistently called a "nuisance." Surely such a term is really a misnomer, and allowance may reasonably be made for the troubles incidental to a new form of traffic which everyone recognises as likely to effect a very considerable revolution in the social affairs of the country.

The Extent of the Traffic.

ON this question of motor-bus traffic in London Mr. Gladstone, as Home Secretary, had several questions addressed to him in the House of Commons on Tuesday, and in reply said that the traffic of motor-omnibuses in London was regulated by the Motor Car Acts of 1896 and 1903, the several Public Carriage Acts, and the orders made under the Motor Car and Public Carriage Acts. The maximum weight and permissible speed of these vehicles was laid down in the Local Government Board Order of December 27th, 1904. Some check to unnecessary smell and noise was afforded by the regulations of the Commissioner of Police as to the conditions to be fulfilled before a license was granted. Moreover, the owners of vehicles which were found to offend in these respects were frequently served with notices forbidding them to use the vehicle again until the defect had been remedied. Earlier in the day Mr. J. H. Moore, the Chairman of the London Road Car Company, had given the shareholders of that concern some information as to the traffic developments of the Metropolitan, and informed them of the coming amalgamation with the Great Eastern London Motor Omnibus Company, which owns about 88 motor-buses. He showed that whereas the railway and bus companies carried 375 millions of passengers in 1899, they—supplemented with tubes and motor-buses—carried 619½ millions of passengers last year.

The Dust Trials.

THE complete report of the judges in last year's Dust Trials has just been presented to the R.A.C. Our readers will probably remember that these were held early in the year. The judges have come to the conclusion that the 130 photographic records, taken at speeds varying from twenty to sixty miles an hour, form a valuable series, indicating the character of the dust wake raised by motor-cars better than any series that have yet been produced. It seems to have been well established that the density of the dust increases with the speed, and the committee is still investigating that aspect of the matter. It is noted that every one of the steam cars tested raised less dust than the petrol vehicles. Experiments are shortly to be carried out to determine whether the rubber-studded tyres fitted on the wheels of the steam car contributed to the excellent results shown by that vehicle. Referring to the devices tested, that of Messrs. Dennis Bros., in which the wheels were cased in, is favourably mentioned, and further tests are to be made with that vehicle. Mention is given of the dust preventing arrangement devised by Messrs. Wayman and Matthews, and which is now on view at the Agricultural Hall. The car is fitted with a double bottom, through which a current of air passes beneath the vehicle, and is deflected upwards at the back at an angle which the inventor has found to give the best results. The effect obtained is due to this air filling a partial vacuum formed behind the back. A small deflecting shoe was fixed behind each wheel. The clearance from the ground was extremely small.

Ordinary tyres were used, and the spokes of the wheels were covered by discs. Further experiments were carried out by one of the members of the Committee on the highway near Staines with this car, and photographic records were obtained, showing that this invention does undoubtedly tend to prevent the rising eddies, and hence allows the dust raised by the wheels to be kept low, and so quickly fall to the ground. The Committee has noticed that cars fitted with dust screens and overhanging hoods at the back, although they may contribute to the comfort of the passengers in the car, certainly do so at the expense of the other users of the road—a view that may excite some controversy.

Motor-Car Materials.

BEFORE the Sheffield Society of Engineers and Metallurgists, on Monday, Mr. A. W. Reeves gave his views on the "Materials of Motor-car Construction." These are referred to elsewhere; here, however, we may give his opinions as to the requirements of the motoring public. These were summarised as a car capable of a given average speed over give-and-take roads, with reliability as a prime factor. Economy of upkeep was a *sine qua non*; there should be lightness of weight consistent with a given horse-power, and, of course, comfort in

the provinces, as well as from nearer London, visitors can come with the assurance that this is a favourable opportunity to purchase as well as to inspect cars.

Public Warnings.

THE railway companies foster a kind of fear in the minds of those passengers and others who seek to obtain free rides, or to damage their property, by posting particulars of convictions in conspicuous places on their premises. This is said to have a deterrent effect; and now a somewhat similar plan is being discussed by the Motor Union. Complaints have been received from motorists at Hull as to the throwing of stones, mud, &c., at their cars. In one case in which the motorist, a local medical man, furnished the name of the offender, the M.U. wrote to the father, who chastised the boy with, we hope, good effect. If these complaints continue the Union should go further and prosecute the delinquents there, as it has already done in other districts. In one of the most recent prosecutions two men were fined 20s. and costs each for throwing stones at a car driven by a Member of Parliament. In some localities this dangerous pastime would appear to be frequent, and motor-car owners, garage proprietors, and others who are willing to display warning placards giving particulars of convictions for assault,



Industrial Motor Vehicles in Russia.

The above illustration depicts the N.A.G. motor lorry belonging to the Serginaki Ufalinaki Mining Company of Ufalet (Perm), Russia. The roads in the district are, as may be judged from the picture, anything but suitable for automobiles, but we learn that, notwithstanding this, the vehicle is giving every satisfaction.

travelling. Mr. Reeves referred to the difficulties experienced by the early British designers in getting materials which in any way approached in resisting powers those obtainable upon the Continent. Now, however, the metallurgist and steelmaker in this country was realising that there should be no necessity for the importation of foreign unfinished parts.

Bargains in Cars.

ONE interesting fact concerning the automobile exhibition now proceeding at the Agricultural Hall is with regard to the opportunity that is provided for securing splendid vehicles at reasonable prices. Those who go with cash in hand will recognise that this event constitutes an unique Motor Mart and Exhibition, bringing motoring well within the financial range of many who have regarded the sport and pastime as wholly beyond their means. Not only is this true as it affects the new vehicles shown in the Great Hall, but in the Gilbey Hall is a selection of cars that have already passed the "road test," and can be depended upon to give their owners a satisfactory introduction to the scenery of their native land. From

obstruction, and stone throwing, are invited to communicate with the organisation with a view to full publicity being given the matter.

The Kentish Highways.

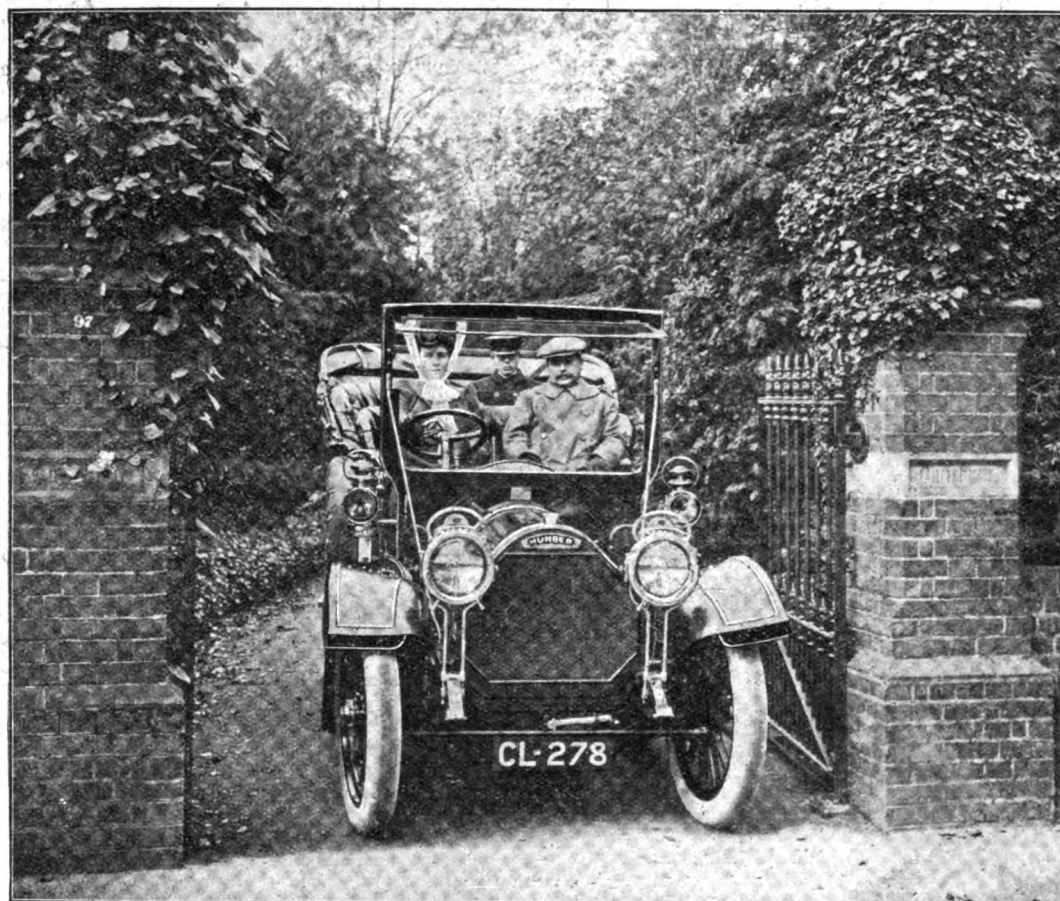
IN view of the near approach of Easter, Mr. H. P. Maybury, the County Surveyor of Kent, is inviting motorists who pass through that county to keep to their near side of the road. He has noticed that there is a tendency for drivers to maintain the bee-line as nearly as possible in the centre of the roadway, and, as he remarks, with high speed and armoured tyres, the damage to the surface is said to be considerable. As a practical point, it is suggested that if the same track was not continually taken, the damage would not be so marked. One of the points that will be urged is that, in consequence of excessive camber, motorists are compelled to keep to the centre. Whilst this was a sound contention a few years ago, it no longer applies to the main roads of Kent, as these have been considerably flattened and strengthened at the sides, thus adding width and conducing to safety.

THE BEST FORMS OF CONTROL FOR LADY DRIVERS.

AN easy form of control is usually one of the first items on the list of things to be remembered by intending purchasers of a car for lady drivers, so while visiting Cordingley's interesting show I turned my attention to the various forms of this important part of an automobile's anatomy. After many hours spent in examining the numerous types shown at Olympia last November, one is glad to find several exhibits not seen there. The 16-20-h.p. Stella, a Swiss-built car, is a new-comer. It is termed the "ideal ladies' car," and though, unfortunately, I have not yet had the opportunity of being at the wheel of one, it appears to merit the title. The control is especially well arranged. There is the usual lever on the steering wheel, but moving this for about a quarter of the full distance (the exact

sion of air from the atmosphere; secondly, admission of heated air; and thirdly, total exclusion of extra air, for starting the motor; it is worked by a small lever on a sector fitted to the dash. Another point in favour of the F.N. chassis is the butterfly throttle, rotating in the inlet pipe, coupled to the clutch pedal, thus acting as a governor when the clutch is withdrawn. Although many ladies would be careful in minor details, there are many more who like to drive with the minimum amount of trouble and thought, for these the above refinement is strongly to be recommended, as it will automatically save wear and expense.

The model that should appeal to drivers who like an extra amount of comfort in the control arrangements is the 20-h.p. six-cylinder Standard that Mess's. Scott Russell and Brée are showing. The ignition and throttle control levers are fitted to the steering wheel, but do not move with it, to my mind an item



Mrs. Wainwright, of Buarbrae, Eaton, Norwich, at the wheel of her 30-h.p. Beeston-Humber, which she has driven 3,000 miles without the slightest trouble.

position being indicated on the sector) only brings into use one jet of the carburettor, and the car can thus be driven in thick traffic on top speed. When the lever is moved beyond the mark a second jet comes into action; but except for use in open country, when one's ankles are apt to get tired from long pressure on a pedal, it is most convenient to use the foot accelerator, which is another means of bringing the second jet into operation, and at the same time allowing the wheel control to be left for the use of one jet. The ignition is low-tension magneto, and has a particularly easy adjustment for the tappets, which would interest anyone wishing to attend to their car themselves.

The 14-16-h.p. F.N. car, hailing from Belgium, is another new exhibit, and an excellent one for lady drivers, as it avoids a lot of muddling levers to be fiddled with while driving, yet provides facilities for hand adjustment of the air to suit variations in the temperature. The device consists of a cylindrical chamber beneath the carburettor, which contains a rotating metal drum that has three apertures allowing of, firstly, admis-

tion of air from the atmosphere; secondly, admission of heated air; and thirdly, total exclusion of extra air, for starting the motor; it is worked by a small lever on a sector fitted to the dash. Another point in favour of the F.N. chassis is the butterfly throttle, rotating in the inlet pipe, coupled to the clutch pedal, thus acting as a governor when the clutch is withdrawn. Although many ladies would be careful in minor details, there are many more who like to drive with the minimum amount of trouble and thought, for these the above refinement is strongly to be recommended, as it will automatically save wear and expense.

Although visiting the Show with the express idea of looking only at the best forms of control, no feminine eye could help being attracted by the elegant "Sedan-chair" body fitted to a 10-14-h.p. Renault, shown by the Metropolitan Garage Association, and I must digress from my subject for a moment to describe it, as it is a car specially suitable for a lady. It is a two-seater, enclosed in the form of a doctor's coupé,

with a very neat patent folding seat at the back, which can be made to disappear into the luggage platform when not required. The whole is painted a very pale green, almost a "duck's egg" shade, and upholstered in grey cloth. It would be difficult to imagine a better constructed body for a lady who wishes to drive herself about town, or to functions, when it is desirable not to arrive looking as if one had been out in a gale. The control of the car is exceedingly simple, being by accelerator pedal only; the ignition is fixed, the high tension magneto running at engine speed. On this model there is an excellent arrangement to show which gear is in use; the speeds are operated by a notched quadrant device; over the quadrant is fixed a brass plate marked with the positions and numbers of speeds, "0" standing for neutral; on the lever itself is a pointer, therefore showing which gear is in use.

A car not seen at Olympia is the Vivinus. Of the three models shown I preferred the 16-20-h.p. chassis; the control is by lever on the steering wheel and foot accelerator, which opens a butterfly valve regulating the gas. The air supply is automatic, unless a Longuemare carburettor is ordered, there being an extra lever on the dash to fit up to this should a purchaser prefer it. The lubrication is by pressure and sight feed, so there is not much to trouble one while driving this car. The ignition is by Nilmelior magneto, and can be worked in all positions from one switch on the dash, but alteration would seldom be required, and, if necessary, it is easily moved by a touch of the foot.

Among the small cars, one of the simplest for control arrangements is the "Turicum" voiturette; there is a pedal for control, and no levers on the steering wheel; the ignition is fixed, being low-tension magneto; the chief point, however, about the exhibit is its transmission by the friction of one wheel or disc, connected to the engine, with another similar disc, in connection with the driving wheels, set at right angles and in frictional contact with the former; by moving the latter's position in relation to the wheel driven by the engine any speed from zero to twenty-five miles per hour is obtained by the simple forward and backward movement of a side lever. Being unable to obtain a very good view or description of the car, owing to a crowd of people intent on the same object, the above is but a rough idea of the general arrangement. It is certainly a model to be considered by those to whom gear changing is a terror and who like an exceedingly simple control.

A comfortable car for driving is the No. 8 Jackson two-seater. The change-speed and side brake levers are in a nice position to the hand; the control of ignition and gas is on the steering wheel—the throttle being of the "snail" type, a very fine adjustment is claimed for it. Below the wheel on the steering column is a small lever working an extra hot-air inlet; these refinements one does not always find on cars priced so low as the Jackson, and I consider, for those who are good enough drivers to be undisturbed by additional hand adjustments, it adds tenfold to the interest of driving not to have the air and ignition automatically controlled. Other small cars that I noticed for simplicity of control were the 8 and 10-12-h.p. Starlings, New Pick, and Reo; the first-mentioned should be an easy single-cylinder car to drive, it is governed by variable inlet valves operated by a lever fitted under the steering wheel. It has a "gate" change and three speeds forward and reverse, an advantage not generally to be procured on small cheap cars; the 10-12-h.p. runs on nearly identical lines, with the addition of an accelerator pedal. The New Pick is an extraordinarily low-priced four-cylinder British built model; the control is by means of a pedal actuating the throttle, and a lever beneath the steering wheel for the advance and retard of the spark. The Reo is a well-known American make; for preference I should choose the 18-22-h.p. chassis for a touring body. Having epicyclic gear, it is simple to drive, for a lever by the driver's seat introduces the first and top speeds, by a pulling back and forcing forward movements, a pedal being used for the reverse; there is also an accelerator pedal connected up to the throttle valve, and by this the speed of the car can almost entirely be governed; a lever on the steering column beneath the wheel controls the

ignition. Having to visit the Show on the opening day, I was unable to see all the exhibits, as several stands were not complete, and in a short article it is most difficult to do adequate justice to the numerous makes, but those that I have endeavoured to describe struck me as particularly suitable for ladies who like easily driven cars.

MECHANISTE.

THE AUTO-SLIP.

AN ingenious arrangement designed to avoid the necessity of a motor pit has recently been introduced by M. E. Huchet, of Quai Ile-Gloriette, Nantes, France, who points out that a pit is not always convenient, as cars may be standing over or around it, whereas the auto-slip, as the new device is

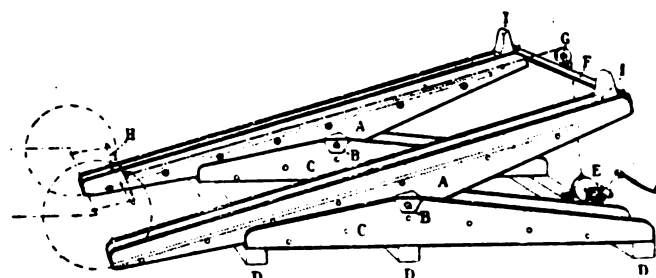


Fig. 1.—Detail View of the Auto-Slip.

known, can be readily placed in any desired position. Moreover, the manifold dangers and dampness of the pit are avoided. From Fig. 1 it will be seen that the auto-slip is formed of two iron-plated wooden side members A, pivoted and rocking about the centres B on the stout frame C, the side members of the latter being carried on three joists, which rest upon the ground. To the rear cross member is attached a small winch, by which the car is hauled on to the slip by the attachments G H shown in dotted lines, stops I being provided to prevent the car running off at the opposite end. When the car has been drawn to a position of balance the wheels are strapped firmly to the rocking bridge members, and the vehicle can then be tilted forward or backward in such wise as to give easy access to the

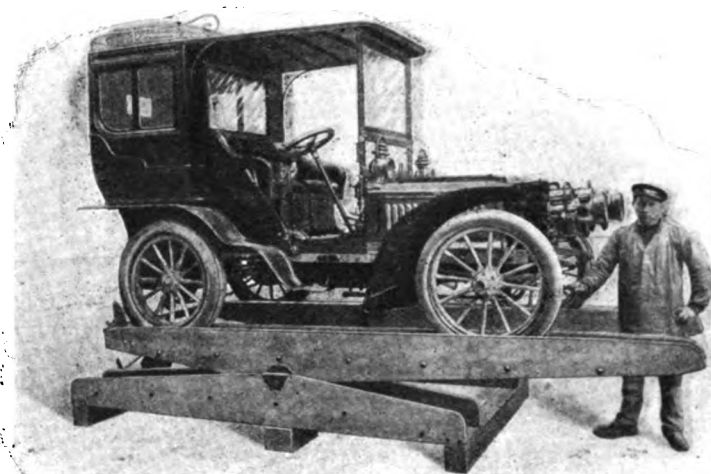


Fig. 2.—The Auto-Slip with Car in Position.

front or rear of the chassis, which are raised a distance of about 4 ft. 6 in. from the ground. The auto-slip, which when not required can be readily packed away so as to only occupy a small space, is designed to take cars of a maximum weight of two tons and wheel base of 9 ft. 10 in.; while as regards the wheel track, provision is made so that with a little adjustment the one apparatus will accommodate vehicles ranging from 4 ft. to 4 ft. 7 in.

GOSSIP FROM PARIS.

It is probable the month of May will see Mr. Henri Farman in England. Last Saturday he beat his own record of 1 kilometre by an officially recorded flight of 2 kilometres 4 metres 80 centimetres. But as he had to veer round poles placed only 500 metres apart, even the officials of the Aero Club estimate his flight at 4 kilometres or 4,374 yards. This feat was achieved in 3 min. 31 sec. His ambition is to fly across the Channel, but for the present he will content himself with having his aeroplane packed away in a railway van, and with taking the train and boat like the commonest of mortals. His intention is to compete for the Graphic £1,000 prize for a mile flown in a straight line, and he will most surely try to perform yet greater feats. The Mayor of Yarmouth has written to him officially offering to place the South Denes racecourse at his disposal for his experiments. According to all accounts it is one of the most suitable spots within easy access of London. No doubt the British Aero Club will accept that place and will send its representatives to officially control the flights. It seems likely that one or more other prizes will be offered by the town of Yarmouth for a flight to a certain distance and back to the starting point without touching ground.

THE aeroplane Mr. Farman will bring to England is the same with which he won the Deutsch-Archdeacon prize. It has, however, been considerably improved in many details. The wings have been stripped of their old canvas, which has been replaced by a specially prepared linen covered with a layer of indiarubber gum, making it impermeable to both air and water. The bearing capacity of the machine has thus been increased and the weight of the apparatus diminished. The motor is always the great trouble. A fortnight ago the new 50-h.p. Renault motor on which Mr. Henri Farman had founded such high hopes was fitted on the aeroplane. But after trial it was found necessary to send it back to the manufactory to be overhauled. The motor will probably be got into good working order before Mr. Farman comes to England and be used by him on his aeroplane, as it is expected to give a larger horse-power than the Antoinette motor. It is in itself heavier than the latter, but, being air-cooled, requires no water tank and piping. This leaves the balance of light weight in its favour.

A GREAT many people have constructed or are building flying machines, but if the brothers Wright, whose performances were not made in public, are excepted, there was till last week only one flying man. Now there are two, and there is, fortunately, every reason to hope and expect their number will go on increasing rapidly. Though it is undoubtedly M. Santos Dumont to whom the honour and glory of demonstrating the possibility of flight belongs, yet his bound of 220 metres can scarcely be said to have made him a flying man. It was Mr. Henri Farman who first flew, and it was M. Delagrangé who followed him last week with a flight of 1,500 metres. The two flying men have been good friends for a long time, and, curiously enough, they are both artists, Delagrangé being a sculptor and Farman a painter, though the latter is also in partnership with his elder brother in an automobile firm. It was Delagrangé who first constructed a machine. In the first instance Henri Farman did little more than copy it. But neither of the aeroplanes would fly. After infinite trouble and study Farman succeeded in improving his machine so materially that though he started last he came in first. And now Delagrangé, in his turn adopting all the ameliorations made by his friend, has come in second. Neither the one nor the other is a man of many words, but they have both, in conversation, described the sensation of gliding through the air. It has fascinated both to such an extent that nothing in the world could induce either of them to abandon the study of the "heavier than air," with which they hope to make long journeys before many years are out.

To encourage them in their enterprise there are plenty of prizes more or less officially offered. The list of them published

here reaches a total of some £60,000, but the biggest are quite beyond the reach of the present aeroplanes, on account of the unreliability of even the best of the existing light motors. For instance, the last project started by M. Georges Dubois, a member of the Aero Club of France, is not tempting. M. Dubois has opened a subscription for a handsome prize to be awarded to the first man who, on a machine heavier than the air, without any gas-bag, shall rise in the air to the height of 25 metres (82 feet)—that is to say, to something like double the height of an ordinary Paris house. With the present motors the flying man shows his skill by keeping comparatively low, because he knows that if the motor should fail when at any considerable height the result would be disastrous. In the case of the motor stopping when at the altitude of 82 feet the flying man could not avoid a catastrophe for himself and his machine, which would fall to the ground and be shattered to atoms. To attempt such an undertaking with the present motors would be foolhardy.

THE publication of the text of M. Barthou's Bill "concerning the penalties to be inflicted for the infringement of the automobile traffic regulations" has but increased the strength of the agitation against the proposed measure. It shows that the summary published last week did not exaggerate its vexatious character, and that if, to imagine the impossible, it were to be adopted by the Chambers as it stands, it would be a very serious blow to the automobile industry in France. The preamble to the Bill has raised a storm of indignation. In it the Minister of Public Works tells the owners and drivers of motor-cars that he does not think the police and gendarmes can any longer suffice to detect their misdeeds. He has, therefore, decided that every functionary having anything to do with the roads, or whose work calls him on them, shall have the power and duty to stop motor-cars and legally note every infringement of the automobile traffic regulations. M. Barthou presses into this spying service "the engineers, their assistants, the highway inspectors, the chiefs of gangs of road labourers, and all the other commissioned employees of the Posts et Chaussées department, the forest guards, the custom house officers, the Government tax-collectors, the collectors of town dues, and the officials occupied with public weighing machines." No one but the postman is excepted. This enumeration shows the spirit which evidently inspired the author of the Bill. All who are acquainted with France will understand that under such conditions the life of a country gentleman owning an automobile would be unbearable. If he failed to keep on good terms with all the people, without exception, instructed by Government to watch him, he would be prosecuted for imaginary infringements of the regulations every time he appeared on the road in his car. The probability is he would promptly sell it.

THE Dieppe circuit, over which the Automobile Grand Prix will be run in July, has already received the visits of most of the French competitors in the great race. Very few of them have the cars they will pilot on the occasion, but they are studying the road, of which, before the date of the contest arrives, they will know every stone. If their English competitors follow their example, I advise them to drive through Criel sur Mer, a little hamlet of about 900 inhabitants, with special care and at a low speed. It is not that the road there is dangerous, but because the gendarmes of the place seem to take pleasure in annoying the automobilists. There is scarcely a man who has tried the Dieppe circuit during the last three weeks who has not been stopped by them to learn he will be prosecuted either for furious driving or for the number of his car being invisible under a layer of dust adhering to it by oil or grease, which those gendarmes always say has been plastered on it on purpose to conceal it. The amiable character of those functionaries of the Republic is illustrated by last year's statistics, which show that of the 300 infringements of the regulations noted on the Dieppe circuit in 1907, no fewer than 250 were detected by the vigilant eyes of the Criel-sur-Mer gendarmes.

MARNEY.

CONTINENTAL NOTES.

Encouraging the Development of the Small Car.

With the view of encouraging motor-car manufacturers to devote greater attention to the production of reliable vehicles at a moderate price, Baron Pierre de Crawhez, the chairman of the Sporting Committee of the Belgian Automobile Club, is offering a cup for a competition of vehicles, the chassis price of which does not exceed £200. The details of the competition will be announced later.

An Austrian Light Car Reliability Trial.

The Austrian Automobile Club is organising a reliability trial of light cars for the 18th, 19th, 20th and 21st June next. The competitors will be divided into four categories, viz.: (1) single-cylinder cars up to 100 mm. bore, (2) ditto up to 130 mm. bore and double-cylinder up to 90 mm. bore, (3) two-cylinder

best time of the day was made by Ragusa on a Darracq, who covered the distance in 35 3-5 sec. A flexibility trial, confined to six-cylinder cars, was afterwards held, this being won by Massie on a Berliet.

German Motor-Car Imports and Exports.

The imports of foreign motor-cars, both of the pleasure and industrial type, into Germany during January last attained a value of only £28,696, as compared with £57,331 in the first month of 1907. On the other hand, the exports of motor vehicles of German manufacture during the same period increased from £37,295 to £37,804.

Miscellaneous Items.

A motor-bus service is being started between Saarburg and Dagsburg, Germany. A start will be made with three Scheibler



Motoring in Montenegro.—A snapshot at Nitrachik.

[Allgemeine Automobil Zeitung.]

cars up to 105 mm. and four-cylinder ditto up to 75 mm. bore, and (4) four-cylinder vehicles up to 85 mm. bore. The total distance to be covered is about 1,000 kilometres, the first day's run being from Vienna to Prague, on June 19 from Prague to Reichenberg, on June 20 Reichenberg to Tabor, and June 21 Tabor to Vienna.

Belgian Motor-Car Imports and Exports.

The imports of motor-cars and parts into Belgium during the two months ending with February last attained a value of £18,996, as compared with only £14,611 in the corresponding two months of last year. During the same period the exports of motor-cars and parts from Belgium advanced from £41,086 to £56,910.

Speed Trials at Nice.

A series of flying kilometre speed trials was held at Nice on Sunday last in connection with the annual automobile meeting at that popular resort. In the single-cylinder car class the best time—47 1-5 sec.—was made by Giuppone on a Peugeot. The

vehicles.—A new fuel for petrol motors known as "Rapidin" is being introduced in Germany.—The Danish Automobile Club is organising a reliability trial of touring cars, to be held on the 29th, 30th and 31st May next.—Prince Heinrich of Bavaria has acquired a 40-h.p. Benz car.—Thirty-nine entries have so far been received for the industrial vehicle trials to be held in France in May next.—It is estimated that there were 34,850 private motor-cars in use in France at the commencement of the present year.—A State motor-car service is shortly to be established between Bad Kissengen and Bruckenaun, Germany.—The entry list for the Prince Henry of Prussia Touring Competition is to remain open until April 15th, a fortnight longer than was at first arranged. The event itself will be held from the 9th to the 17th June next.—Count Scheremetzew, who owns several sugar factories in the neighbourhood of Moscow, has ordered three N.A.G. motor-vehicles, which are to be used for the conveyance of workpeople between the works and their homes.—A company has just been formed to introduce a service of motor-cabs in the town of Nantes.

LAST year 747 motor-cars were registered in the county of Middlesex.

THE Danlop Motor Tyre Sundries List for 1908 has just been issued.

MR. JOHN DUNCAN has been granted permission by the Perth Dean of Guild Court to erect a motor garage at Wellshill Terrace, Perth.

THE Scottish Automobile Company, Ltd., of Edinburgh, have just sold a 30-h.p. live-axle Daimler chassis, fitted with a Newnham carriage body, to Sir Robert Usher.

THE Frome's Hill climb having been frustrated by the action of the Bromyard authorities, will probably be succeeded by a trial on Cockshut Hill, near the picturesque town of Ledbury.

FOR motoring on the road at Dunsappie Loch, in Holyrood Park, Edinburgh, where such is prohibited, a driver has been fined 10s. For the defence, it was shown that he was unaware of the prohibition.

THE Elastes Company, Ltd., of 79-80, York Street, Westminster, have entered for a 3,000 miles Reliability Trial of Elastes-filled tyres and the Elastes movable flange. The tyres and rims will be fitted to an 18-h.p. Siddeley car.

MESSRS. BOULT, TAYLOR AND CO., LTD., of 12, Upper St. Martin's Lane, London, W.C., have changed their name to the St. Martin's Motor Works, Ltd. The business is being carried on as before and under the same management.

WE understand that the Legal Cases Committee of the Motor Union is sending a deputation to the Secretary of the Metropolitan Water Board with reference to the new scale of charges, to which we gave publicity in our issue of the 14th inst.

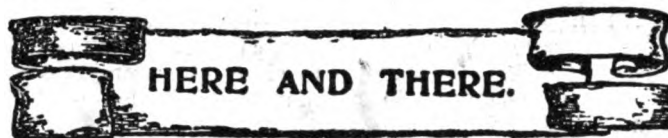
IT has been said that belt-driven cars were as dead as Queen Anne. It is, therefore, of interest to learn that the Brouhot Company, of Vierzon (Cher), France, are introducing a new 9-h.p. two-seated car in which the power from the engine is transmitted by a belt to the gear-box at the rear.

THE case of *Harris v. Du Cros*, in which the expensive luxury of running the ill-fated "Motorist and Traveller" was duly chronicled, resulted in judgment for the defendant—which seems well in accordance with the evidence and the public knowledge of Mr. Du Cros, whose abilities to speak for himself are generally recognised.

MESSRS. HARVEY FROST AND CO., LTD., have prepared for exhibition in the establishments of their agents a neat series of rubber patches illustrative of the various degrees of repair necessary in connection with their vulcanising system. These cases form an effective means of arresting public attention, and are being lent to enterprising firms in the leading towns of the country.

ARIEL MOTORS, LTD., inform us that they have abandoned altogether the manufacture of six-cylinder cars, and that they do not intend to make any more. They add: "Merit or no merit is not the point which we have considered in coming to this decision—it is a question altogether of public requirements. Four-cylinder cars of first-class make are so extremely good now, that the great mass of motor-car users have no wish to go in for the added expense and cost of upkeep of the six-cylinder car, and, therefore, for financial reasons we prefer to make four cylinders only."

THE Coventry Simplex Engines, Ltd., Coventry, recently fitted one of their 10-h.p. two-cylinder engines to a 6½-h.p. Humberette, and invited us the other day to a run on the same over a hilly road. A very neat job had been made of the conversion, it having only been necessary to remove a portion of one of the longitudinal tubular members and substitute an angle steel member, using the original flywheel and clutch. We drove the car over a hilly course, and were delighted with the smooth way in which the car ran. Notwithstanding the increased power, everything seemed to be well balanced. The clutch was not fierce, and the radiator quite satisfactory. The weight of the Simplex two-cylinder engine is about 10 lb. lighter than the old single-cylinder motor it has replaced.



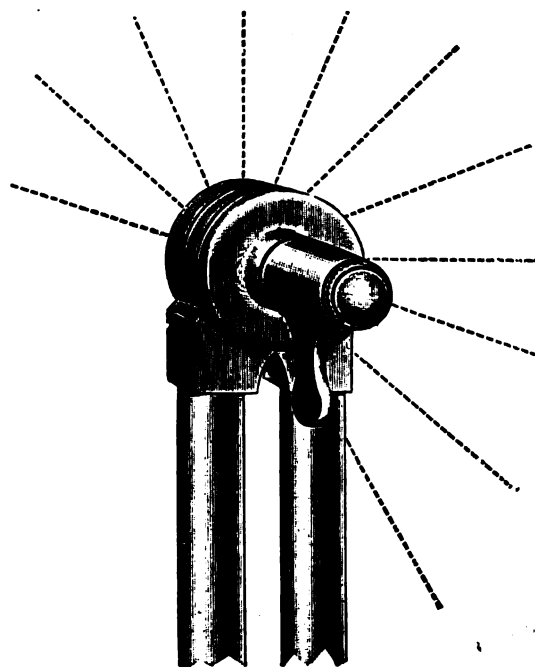
THE motor-bus daily service between Kirkwall and Stromness has been resumed.

THE Percy Cycle Co., Ltd., have a well-equipped garage in Northumberland Street, Newcastle-on-Tyne.

THE Staines Motor Company have a garage in Staines, which has proved very popular during the past season or two. It is now making cars and is doing good local trade in that direction.

ON one of the stands at the Cordingley Show will be seen the "Sceptre" motorists' outfit, brought out by the City Manufacturing Company. This is a comprehensive and excellent addition to the things that should be in the motor house.

ONE of the most ingenious ball bearing joints for wind screens is the "Victor," brought out by Messrs. J. Neale and Sons, Ltd., of Neale Street, Birmingham. This is adjustable to the dozen positions indicated in the accompanying illustration. The locking of this joint is effected by four pins working on ball bearings which pass through the two plates of joint; when the lever is unlocked the pins are automatically thrown out of action during adjustment. Each position is definitely indicated by



"stop," enabling the user to adjust the screw in the dark and allowing the alteration of position to be effected without leaving the car. The rigidity of the joint is absolute, and when it is locked it cannot be made to move under any pressure or vibration. This joint causes no strain on the screen, as it does not separate or come apart during the adjustment. It is flat at the back, having no projections whatever, and should have great popularity in the trade.

AMONG the recent purchasers of Napier 40-h.p. six-cylinder cars are Sir Herbert Marshall and Mr. Henry Ballantyne, of Tweedvale House, Walkerburn.

FOUNTAIN'S Coach and Motor Company, Ltd., at 24A, The Grove, Ealing, W., is under the management of Mr. J. Fountain, assisted by Mr. S. J. Fountain. A special feature is being made of Cape cart hoods, glass wind screens, canopies, &c.

MR. S. F. EDGE is offering prizes to the drivers of Napier cars who show the minimum number of involuntary road stoppages in proportion to mileage covered during the six months ending with September of the present year.

ELECTRIC CARRIAGES will be admitted to Hyde Park during the months of May, June, and July. Licences for the same will be issued by the Commissioner of Works on written application to his office at Storey's Gate, Westminster.

The Cordingley Motor Show.

(Continued from page 70)

CORDINGLEY'S Motor-Car Show, which opened last Saturday, has been continued with much success throughout the whole of the week, the various sections with their automobile novelties attracting attention from press and public alike. Below we continue our report of the many specialities shown, as well of the cars on view.

The "Club" Car.

A finely-finished 24-30-h.p. landaulet is staged by Mr. A. E. CREESE, of East Dulwich. The vehicle, to which the name "Club" has been given, is of French construction, being built by Messrs. Brouhot and Co., of Vierzon. The cylinders of the four-cylinder engine are cast in pairs, and have the valves operated off a single cam shaft. The carburettor, which is provided with a hot-water jacket, is of the automatic type, while the ignition is by low tension magneto. The

lines, being fitted with pressed steel frames, push pedals, framed ribbed-tube radiators, and transmission by cardan shaft and bevel gear on to a live axle. Prominence is given to the No. 8 two-seated model, which since its introduction a few months ago has met with considerable success. The car is built on the lines of a miniature racer, the seats being placed well back, and the steering inclined at a sharp angle. The bonnet is of such a length that it covers not only the engine, but also the clutch and gear-box, rendering these parts extremely accessible. The motive power is supplied by a De Dion 8-9-h.p. single-cylinder engine of the latest type, although, if desired, a 10-12-h.p. two-cylinder Aster or a 10-12-h.p. four-cylinder Amstutz engine can be supplied at an extra cost. The clutch is of the leather-faced-cone type; the change-speed gear is of the Renault pattern, giving three speeds forward, in addition to the reverse, with a direct drive on the top speed. The transmission is by a cardan shaft to a strongly-built live axle. Other models on view include an 8-9-h.p. double phaeton and a four-seated dog-



General View of the Exhibition.

lubrication of the motor is controlled by a pump, which forces the oil from the tank through a sight-feed lubricator on the dashboard. The control is by two levers on the steering wheel, one actuating the ignition and the other the quantity of mixture passing to the cylinders, the latter also varying at the same time the amount of petrol allowed to pass through the jet. Other features of the vehicle include the clutch, which is of the cone type, the male portion being built in halves, so that it can be readily detached. The gear-box is adapted to give four speeds forward and a reverse with direct drive on the top speed to a differential shaft, and thence to the rear road wheels by side chains. Mr. Creese is using as a trial car a 10-h.p. four-cylinder taxicab, also made by Messrs. Brouhot. This car is of the cardan shaft, live-axle variety, and is fitted with a Renault type gear-box giving three speeds and a reverse. The vehicle is of very sound construction, and well adapted for the rough work motor-cabs are called upon to perform.

The Jackson Cars.

One of the exhibits appealing particularly to the motorist of moderate means is that of Messrs. R. REYNOLD JACKSON AND Co., who have a large range of the Jackson cars on view. They are all on modern

cart of the same power, both being fitted with De Dion single-cylinder engines. The dogcart has been considerably improved in several of the details. The wheel base is longer, enabling a more roomy body to be provided; the latter is now provided with a curved back in place of the somewhat stiff lines formerly adopted. The seats are made detachable, so that the car can be made to serve a double purpose—that is to say, it can be used both for pleasure and also for delivery purposes. Throughout the Jackson car is on modern lines, the frame being suspended on five springs, while other up-to-date fittings include long push pedals, throttle control above wheel, and a combined fan-cooled radiator and water tank.

The "Belgica" Cars.

The LONDON AUTOMOBILE SUPPLY COMPANY, who have secured the sole agency for Great Britain and the Colonies for the "Belgica" cars, built in Belgium by the Usines de Saventhem, have an excellent display of these vehicles, which are shown in this country for the first time. The *piece de resistance* of the stand is the polished 58-h.p. six-cylinder chassis, of which we give an illustration in Fig. 12. The frame is of pressed steel, of deep section; it is narrowed at the front to give a wide steering lock, and raised at the rear to give clearance for the

differential casing. The chassis is carried on four long springs, those at the rear being of the three-quarter elliptic type. The engine, which comprises six cylinders, is supported directly on the main frame, the sides of the base chamber being extended to form a mud shield. The cylinders are cast in pairs, with the valves located on opposite sides. The bore and stroke are respectively 125 mm. by 140 mm. The carburettor, which is of the automatic type, has a throttle provided with both hand and foot control. The main ignition is by a low-tension

with direct drive on the top speed. The final transmission is by a cardan shaft and bevel gear to a live axle. The latter, like the gear-box, runs on ball bearings; it is provided with a central torque rod of pressed steel and two side radius rods. The power is transmitted to the road wheels through the axle ends, the wheels themselves being mounted on the axle casing. The brakes are of the internal expanding type, and we note that the usual method of control has been reversed, the hand lever actuating the brake behind the gear-box and the pedal,

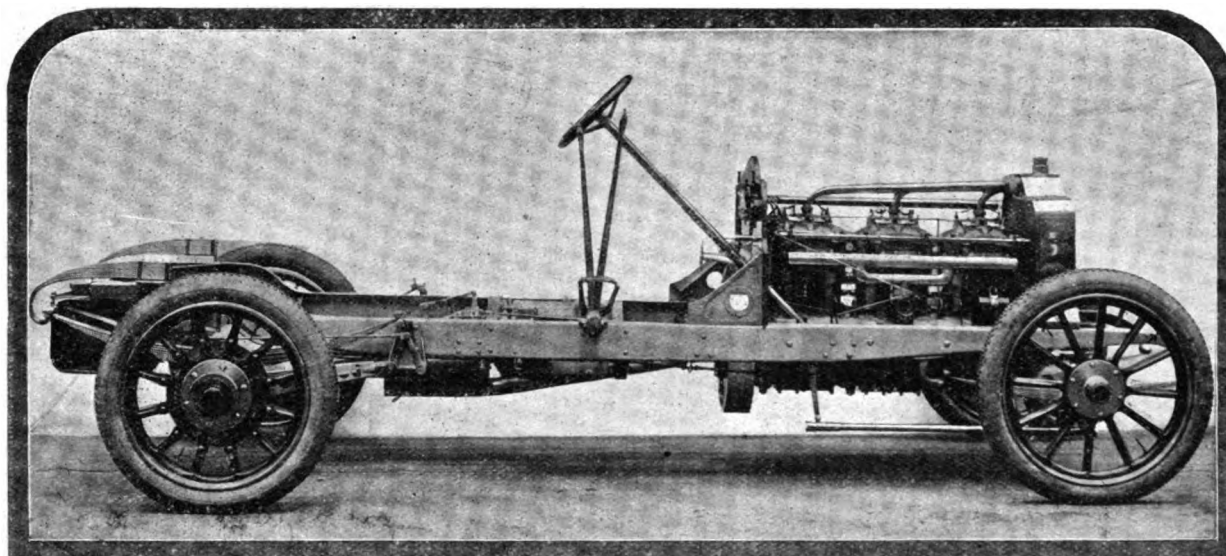


Fig. 12.—Chassis of the Belgica 58-h.p. Six-Cylinder Car.

magneto. The cam-shaft actuating the make-and-break mechanism is located at the upper ends of the cylinders, and is driven by an inclined shaft at the dashboard end of the engine and operated off one of the half-time shafts. The cams on the overhead shaft actuate little spring-loaded bell-cranks, which in turn engage and release the rocking pieces of the plugs. A single naked brass wire conveys the current to all the plugs from the magneto. High-tension accumulator ignition is also

these working in drums on the rear wheels. A complete six-cylinder car, equipped with a double-phaeton body by Van den Plas, with hood and front glass to the rear seats, forms a striking vehicle. A 38-h.p. four-cylinder vehicle, with limousine body, is also on view. With the exception of the number of cylinders, this is identical as regards the chassis with the 58-h.p. car above described. A further "Belgica" model is seen in a 28-h.p. four-cylinder chassis. Generally speaking,

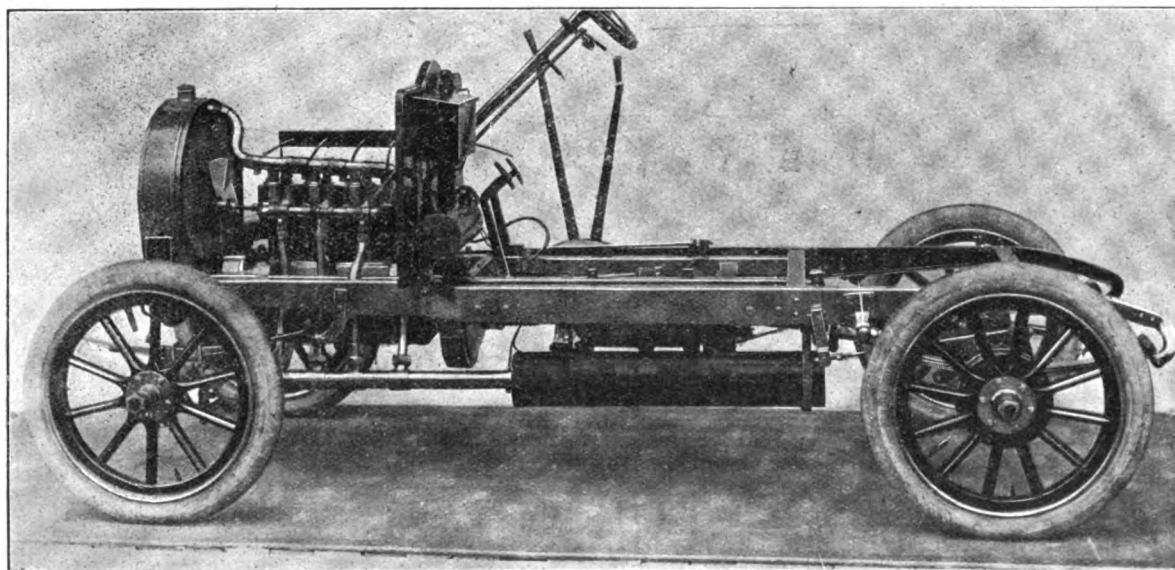


Fig. 13.—Chassis of the New Leader 10-12-h.p. Car. (See page 97.)

fitted as an auxiliary, a distributor being mounted on the upper end of the inclined shaft above referred to. The water circulating pump is gear driven; it works in conjunction with a honeycomb radiator, a current of air being drawn through the same by the flywheel, the arms of which are formed so as to act as a fan. The clutch is of the multiple disc type; an enclosed joint is provided between it and the gear-box to allow for any want of alignment between the two parts. The change-speed gear is "gate" controlled, and is adapted to give four speeds forward

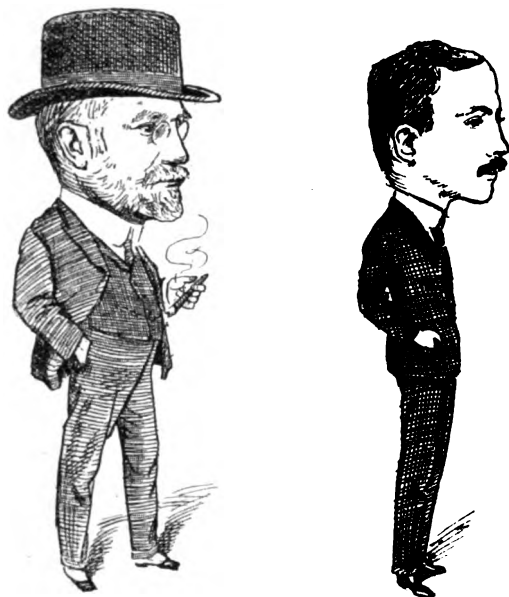
this is on the same lines as the others. The cylinder dimensions are, however, 105 mm. by 130 mm. A high-tension magneto takes the place of the low-tension one on the more powerful cars, while the flywheel fan is replaced by a belt-driven fan immediately behind the radiator. There are many points of interest in the new "Belgica" cars, notably the attention which has been paid to the accessibility of the various parts and to the lubrication and protection from dust and dirt of those components subject to wear.

The New Leader Cars.

The HIGH HOLBORN MOTOR AGENCY are present with several examples of the 10-12-h.p. New Leader two and four seated cars. The motive power is supplied by an engine comprising four separate cylinders, 90 mm. bore by 90 mm. stroke; the valves are operated off a single cam shaft, and the water circulation is on the thermosiphon system. The transmission is through a leather-faced cone clutch, three-speed gear-box, cardan shaft and bevel gear to a live axle. The gear-box is provided with roller bearings and ball thrusts; the dashboard is of a special curved type, forming the petrol and oil tanks, and carrying the coil and sight feed lubricators; this arrangement insures a constant supply of petrol to the carburettor when ascending steep gradients. An 18-22-h.p. two-seated Victoria, with hood and front glass screen, is also on view. This is on similar lines to the vehicle described above, except that the water circulation is by pump. A noticeable feature is the special form of the front mudguards, which extend vertically from the frame at the side of the wheels as well as over the latter. A new model is seen in a 12-16-h.p. two-seated car, in which the valves are situated on opposite sides of the cylinders.

The Reo Cars.

One of the largest stands in the Exhibition is that of REO MOTORS, LTD., Westminster. We first inspected the 10-h.p. vehicle, which can be supplied with either two or four seated bodies, the rear seat being ingeniously made to fold up when not in use. The engine, which is



Messrs. Lambie and Sharp (Reo Motors, Ltd.).

set about the centre of the frame, is of the single-cylinder horizontal type, the bore being $4\frac{1}{2}$ in., the stroke 6 in., and the normal speed 800 revolutions per minute. The ignition is by coil and accumulators, the advance and retard being controlled by a lever on the steering column. The water circulation is by a positive gear-pump and tubular radiator. The change-speed gear, which is of the epicyclic or planetary type, is adapted to give two speeds and a reverse, the latter being actuated by a pedal; the gear is mounted on an extension of the crank shaft, a single chain transmitting the power to the rear live axle. The axles are of tubular construction, and fitted with roller bearings. Double elliptic springs are employed at the rear, and three-quarter at the front. Several examples of the Reo 18-20-h.p. car are on view, these including a handsomely-finished landaulet, a taxicab, and a five-seated touring car. In these larger vehicles the engine is of the horizontal opposed double-cylinder type, the bore and stroke being respectively $4\frac{1}{2}$ in. by 6 in., the transmission being similar to that referred to above. A dashboard of the curved type is fitted to the car (Fig. 14). Prominent among the 18-22-h.p. cars is the "Flying Greyhound," a touring model, designed specially for speed and as a two-seater, and fitted with a box trunk at the rear, which may be converted into an emergency or third seat. The engine is similar to the standard 18-22-h.p. car, but with certain improvements in detail. It has two horizontal opposed cylinders, located somewhat more to the rear than usual, with the object of evenly distributing the weight on all four wheels, thus ensuring comfort and causing the car to ride sweetly over rough roads. A somewhat unique hood is provided; this, while only covering the two front seats,

is made on the same principle as the usual hood, which has an extension piece in front, which causes the front support to be perpendicular, and overcomes the otherwise difficulty of obtaining access to the car. In hot climates the hood can be used as a sun screen, the back portion being then rolled up to allow the air to pass freely, while the further provision of side curtains and a folding transparent screen ensure the protection of the occupants in wet weather. The road wheels are of larger diameter than hitherto—viz., 32 in. instead of 30 in. A new type of silencer is fitted, which includes a "cut-out," so that in the country

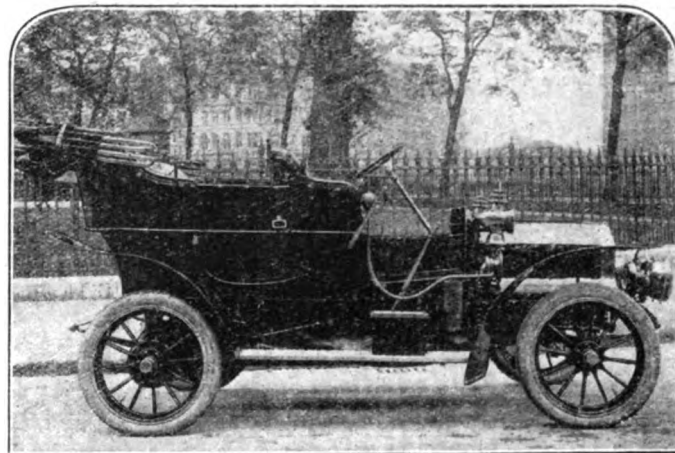


Fig. 14.—The Reo 18-22-h.p. Car.

greater power can be obtained. The tyres fitted to all the cars are of the Goodyear type, which are noticeable for the ease with which they can be detached without the use of tools. The Reo cars have an excellent reputation for their quiet running and hill-climbing qualities, and, in view of their relatively low price, are finding a steadily enlarging clientele in this country. Apart from the cars, the Reo Company are showing a new combined speed indicator and mileage recorder, known as the Hicks. This is a neat and effective device made in two patterns, one showing speeds up to fifty miles and the other up to seventy-five miles per hour. Attention may also be drawn to the range of Hildreth marine motors to be seen at this stand. These engines, which are of American design and manufacture, are of the two-

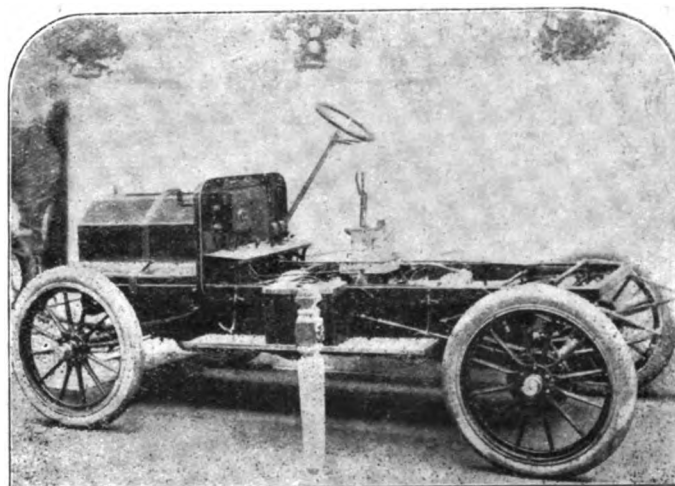


Fig. 15.—Chassis of Reo 18-22-h.p. Car

cycle type; they are made in a number of sizes, including 5-h.p. single-cylinder, 7-h.p. double-cylinder, and 10-h.p. three-cylinder.

Freeland's Non-Skid.

Among the non-skid devices embodying special features is that shown by Mr. G. FREELAND, 63, Quarry Hill, Tonbridge, Kent. In this the treads are replaceable when worn—a means to economy which will doubtless be generally appreciated. The studs are inserted in the leather band, which is isolated from the cover by the usual rubber. The head portion is screwed into the metal piece going through the band, and any of the treads can be taken out and replaced with ease.

The "Turicum" Cars.

One of the novelties of the Show is undoubtedly the "Turicum" friction-driven light car exhibited by the VOITURETTES "TURICUM," of 19, Avenue de la Grande Armée, Paris. Apart from the friction drive, the vehicles comprise a number of novel features. Fig. 18 shows respectively an elevation and plan of the chassis. The motive power is supplied by a 6-8-h.p. single-cylinder engine (Fig. 17), air-cooled in an ingenious way. The cylinder is enclosed in a sort of cowl, in the front part of which is mounted a fan belt driven off the engine. By this means a powerful current of air is drawn through the perforated metal front, which takes the place of the usual radiator, and circulated round the engine. The ignition is effected by a chain-driven low-tension magneto, with simple make-and-break mechanism. The usual clutch and change-speed is replaced by a friction drive by which any speed



Fig. 16.—The Rco 18-22 h.p. "Flying Greyhound." (See page 97.)

between zero and twenty-five miles per hour can be attained. The engine shaft is extended to about the centre of the car, and terminates in a large disc. Mounted on a cross shaft at right angles thereto is a second disc, the periphery of which is leather covered, and by a pedal is brought into contact with the engine disc. The cross shaft is of square section, so that by means of a side lever the position of the friction disc in relation to the engine disc can be varied, the speed increasing as the point of contact is brought away from the centre towards the outer edge, while if the disc is moved along its shaft beyond the centre of the fixed one a reverse motion is obtained. The cross shaft is mounted in a ball bearing at one side, and in a slide at the other, in such a way that by means of a pedal it can be moved slightly to the rear, and the contact between the two discs is broken whenever it is necessary to change speed. A single side chain conveys the power from the cross shaft to the rear live axle. The frame of the vehicle is of ash, with steel fitch plates; the road wheels are of the artillery type, with tubular steel spokes; the four springs above the axles of the car are

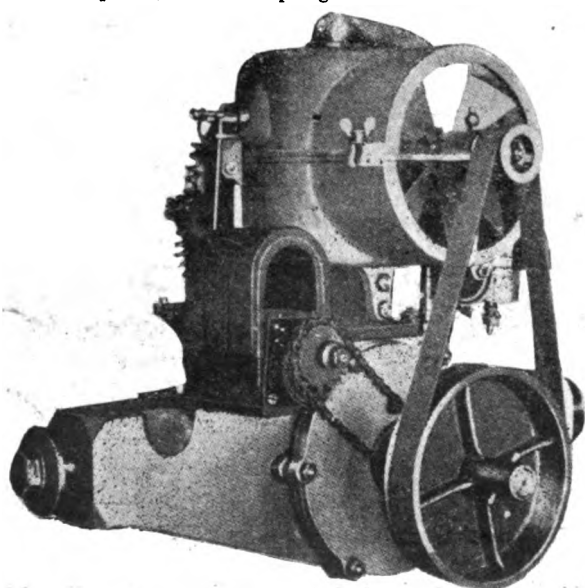


Fig. 17.—The Turicum Air-Cooled Engine.

also extremely novel, in that they are each absolutely circular. They consist simply of a series of thin steel strips placed one above the other, the whole formed into a circle, having an overall diameter of about 12 inches. The exhibits comprise a chassis, the gear of which is shown in motion, a two-seated car, and a light delivery van for loads up to 8 cwt. The cars only weigh about 7 cwt., so that they should be

economical in tyres. The Turicum Company also show a side-entrance double phaeton, fitted with the same system of transmission, but having a 12-h.p. four-cylinder engine, the four cylinders being cast in one block and water-cooled. As in the 6-8-h.p. car, the crank shaft runs on ball bearings, while an ingenious form of automatic throttle is provided on the admission pipe to prevent the engine racing. When m

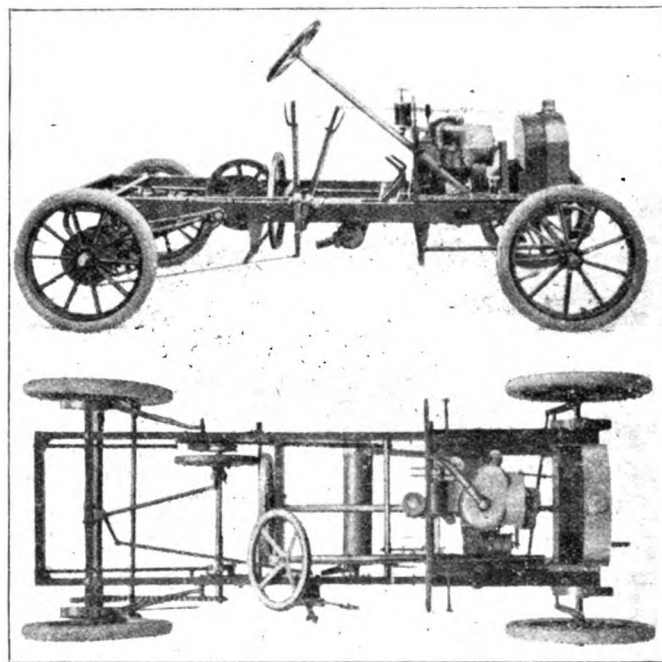


Fig. 18.—Elevation and Plan of Turicum Friction-Driven Voiturette.

Paris in December last we had an opportunity of testing one of the 12-h.p. vehicles, and were struck not only with the speed it attained, but with the general ease of control. We may add that the friction discs are entirely protected, so that the efficiency of the drive is not affected by dust or dirt. The cars are being put on the market at a

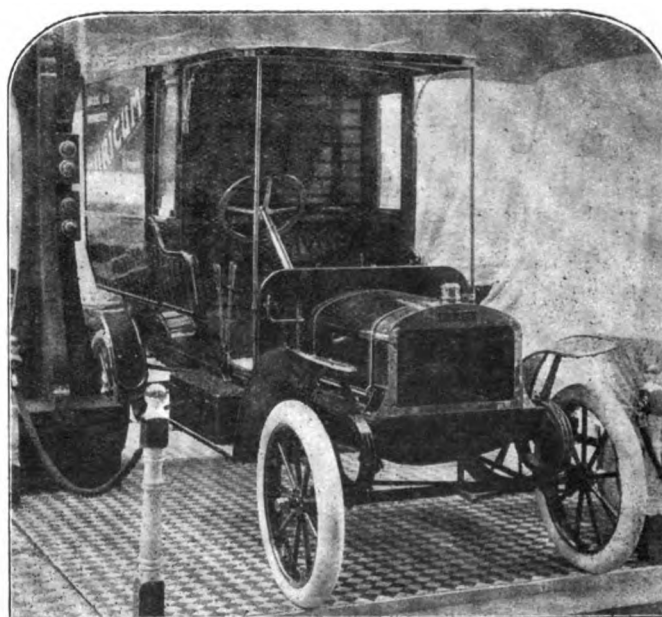


Fig. 19.—The Turicum Light Delivery Van.

relatively low price, and in view of their absence of complication are attracting considerable attention. The company are well aware that the friction drive has been tried before, but claim that they have overcome the difficulties associated with it, and that, having subjected their vehicles to most severe tests, they have every confidence in placing them on the English market.

The New Pick Cars.

As sole concessionaires for the "New Pick" Motor Company, of Stamford, the EARL'S COURT MOTOR AND GARAGE COMPANY, LTD., exhibit for the first time examples of the New Pick two and four seated cars, which are attracting considerable attention. The reason for this is found in the fact that they are probably the cheapest four-cylinder vehicles on the market. At the same time, the makers claim that every care is taken in the construction and in the selection of material. The frame is of pressed steel, suspended on five semi-elliptical springs. The engine is of the four separately-cast cylinder type, $3\frac{1}{4}$ in. bore by

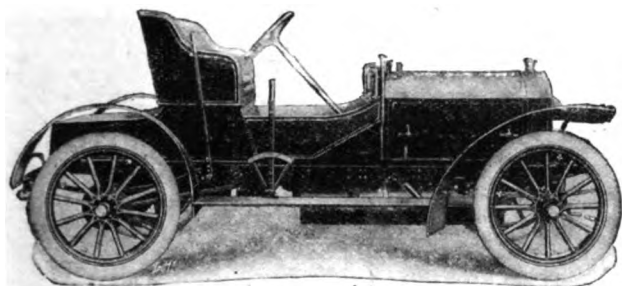


Fig. 20.—The New Pick 14-16-h.p. Two-Seated Car.

4 in. stroke, the valves being actuated off separate cam shafts. A simple form of automatic carburettor furnishes the mixture, while the ignition is by coil and accumulator. A gear-driven pump circulates the water for the cooling of the engine through a framed ribbed tube radiator. The speed of the engine is controlled by a small foot lever. The clutch is of the cone type, fibre being used in place of the usual leather, the material being claimed to give all the advantages of a metal clutch. The transmission is through a three-speed gear-box, cardan shaft to a live axle, provided with ball bearings. The steering is of novel design: a bracket is attached to the front axle and serves to carry the shaft of a pinion, which acts upon a rack connected

and is lubricated from the dashboard, the surplus oil passing to the timing gear. The water circulation is on the thermo-syphon system, no pump being employed. The ignition is by Nilmelior high-tension magneto. Both hand and foot control of the throttle is provided. The lubrication of the engine is effected by pressure, the oil reservoir being fixed on the engine side of the dashboard. The clutch is of the leather-faced cone type, a peculiarity of the design being that the male portion is in two halves, allowing the leather to be easily renewed when necessary and without disturbing the gear-box. The latter is connected with



Fig. 21.—The Vivinus 20-24-h.p. Car.

the engine base chamber by an aluminium casing, which serves as a shield to the clutch, and at the same time secures the alignment of the two parts. The change-speed gear is adapted to give three speeds forward, with a direct drive on top speed. The control is by a single lever working in a "gate" quadrant. The final transmission is by a cardan shaft and bevel gear to a well-supported live axle. The foot brake is not located behind the gear-box as usual, but on the small bevel pinion shaft at the rear of the cardan shaft. The 20-24-h.p. Vivinus car varies in several details from the 16-20-h.p., the motor having four separately-cast cylinders, 98 mm. bore by 116 mm. stroke, with the valves arranged on opposite sides. The lubrication is by a

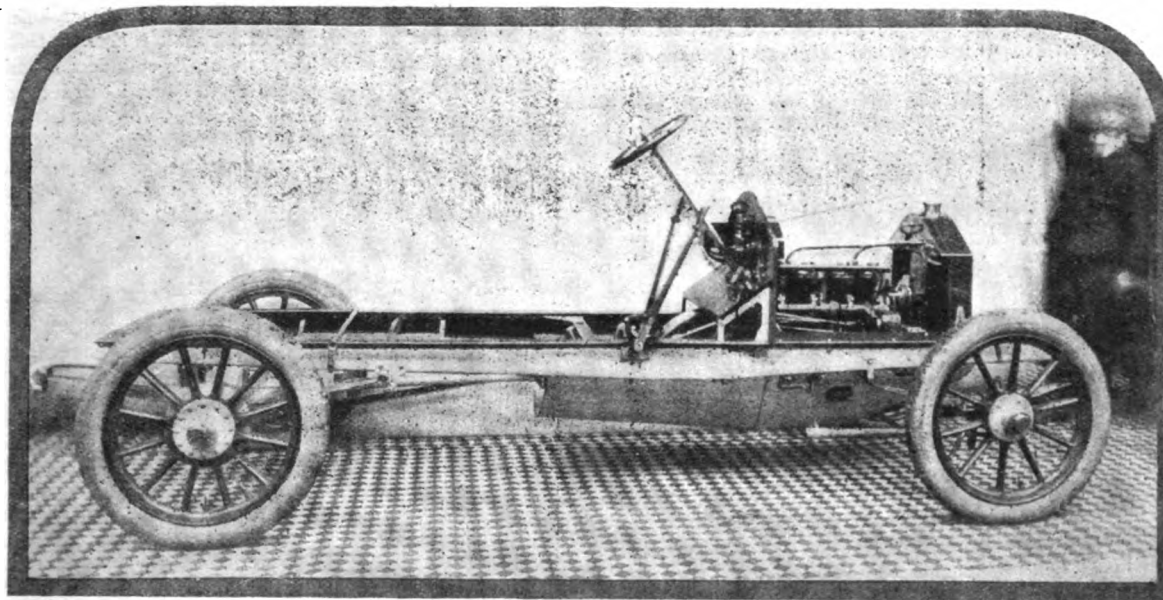


Fig. 22.—Chassis of Vivinus 16-20-h.p. Car.

to the front steering rod. The action from the steering wheel to the pinion shaft is communicated by means of a universally jointed shaft. The car is exceedingly light, as well as economical, the petrol consumption working out at twenty-eight miles to the gallon.

The Vivinus Cars.

A Belgian-built car, which has long had an excellent reputation in this country, is the Vivinus, the agency for which is now in the hands of the VIVINUS AGENCY COMPANY, LTD., of Sydney Street, Chelsea, S.W. Prominent on the stand is a chassis of the latest model, a 16-20-h.p. four-cylinder car (Fig. 22). The cylinders are cast in pairs, with the valves all located on one side. The bore and stroke is respectively 90 mm. by 110 mm. The cam shaft is enclosed in a separate case,

mechanical pump forcing oil to a series of sight feeds on the dashboard, the surplus being returned to the tank by a tap-controlled by-pass. The body-work at this stand is worthy of close attention. The complete cars on view include a 20-24-h.p. side-entrance double phaeton by Snutsel, of Brussels, this being fitted with a Capt-cart hood and patent wind screen; and a 20-22-h.p. car with landaulet body by Million-Guiet.

The Unic and Brasier Cars.

The display of Messrs. MANN AND OVERTONS, LTD., includes examples of the latest types of the well-known Unic and Brasier cars, for which they are British agents. Of the first-named vehicles those on view include a 10-12-h.p. cab, similar to those now running in large numbers in London, a 16-20-h.p. landaulet, and a 24-30-h.p. chassis.

The 10-12-h.p. vehicle has already been described in the *M.C.J.*, so it will suffice to mention that the engine comprises two cylinders, 102 mm. bore by 110 mm. stroke, and that the transmission is through a leather clutch, a ball-bearing gear-box giving three speeds and a reverse, and a direct drive on the top through a cardan shaft and bevel gear to the rear live axle. As regards the 16-20-h.p. vehicle, the four cylinders of the motor are cast in pairs, with the valves on opposite sides; the bore is 87 mm. and the stroke 110 mm. Several alterations have been made in the new model; for example, the low-tension magneto system

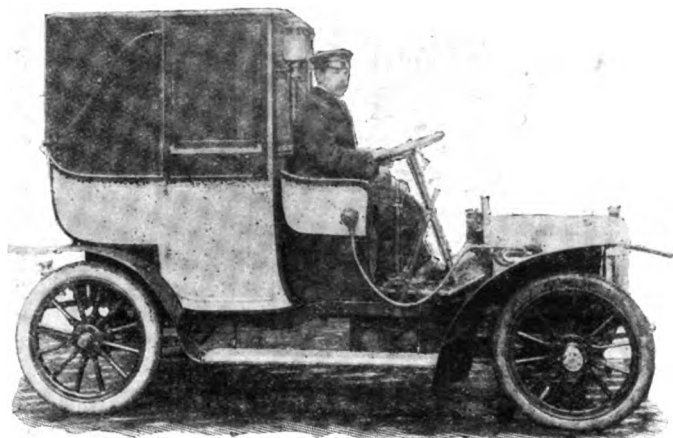


Fig. 23.—The Unic Taxi-Cab.

has been superseded by a high-tension magneto. The carburettor is of a simple automatic type, which has proved very economical as regards fuel consumption. The auxiliary air supply is regulated by the action of the suction of the engine on a mushroom valve, and in order to avoid an irregular movement of the valve, the end of the valve stem is fitted with a piston, which works in a cylinder filled with glycerine. The throttle is of the sliding piston type, and is fitted over the carburettor. The clutch is of the leather-faced-cone pattern, and a joint is introduced in the shaft connecting it with the gear-box. The gears can be arranged to give either three or four forward speeds and a reverse, and the control is by a "gate" lever. The transmission is by a cardan shaft to the back axle, which is of solid construction, and fitted with ball-bearings, besides being protected from road shocks by two stout tension rods. The speed of the engine is regulated by a hand lever on the steering wheel. This lever controls the throttle only, and has no effect on the

oil to travel through it to the big end bearings of the connecting rods. An arrangement is fitted so that the throttle is automatically closed when the clutch is thrown out, thus avoiding any racing of the engine when changing speed. The transmission is on the Unic standard lines, the main alteration in this model being the adoption of a metal-to-metal disc clutch (Fig. 24) running in oil. Turning now to the Brasier cars, those on view include a 16-20-h.p. side-entrance double phaeton, a 30-40-h.p. chassis, and a touring car with Vincent body of the same power. The four cylinders of the 24-30-h.p. engine are cast in pairs,

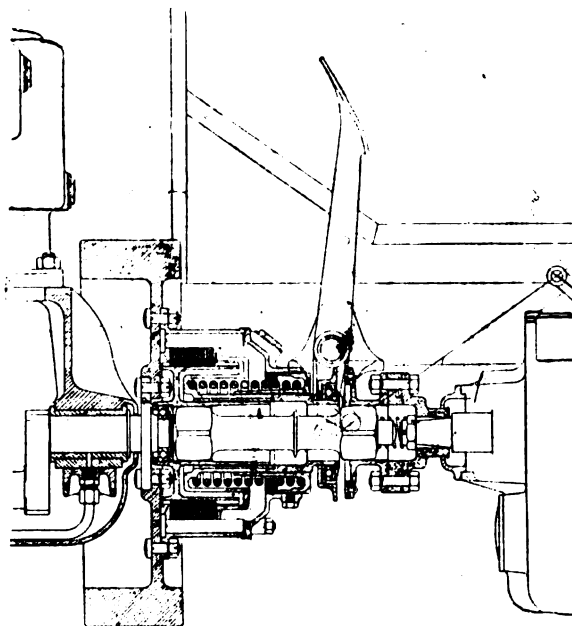


Fig. 24.—Sectional View of Clutch of Unic 24-30 h.p. Car.

with the valves all arranged on one side, the dimensions being 112 mm. bore by 130 mm. stroke. The crank shaft is *desaxé*—that is to say, it is slightly out of line with the centre of the cylinders. Ignition is by low-tension magneto, the operating shaft being located overhead, with the strikers so arranged that each may be taken out independently of the others. The carburettor is of the automatic type, the additional air supply for the mixture being regulated automatically by means of a small conical valve. The leather-faced-cone type of clutch is retained, a double-jointed shaft connecting the clutch with the gear-box. The latter

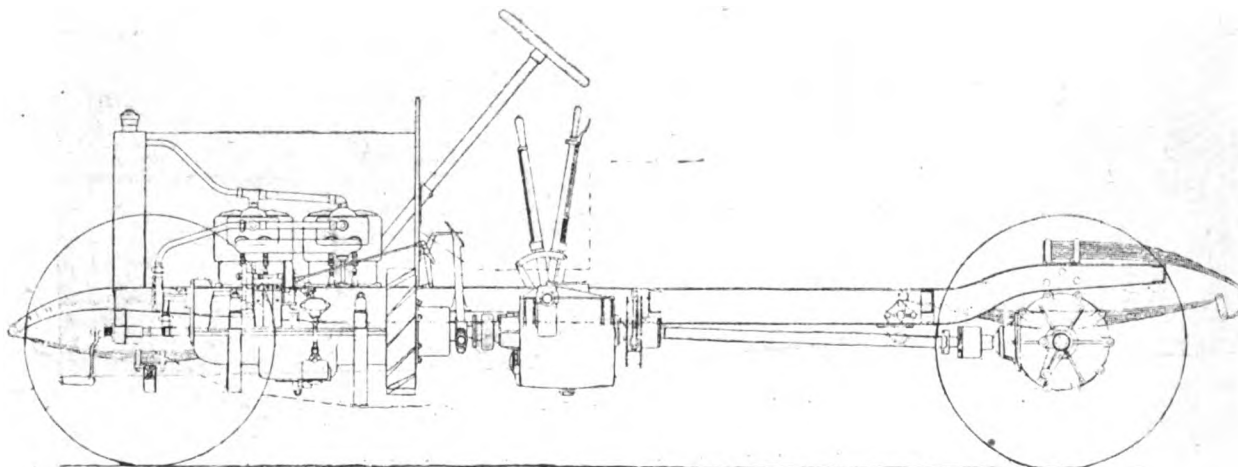


Fig. 25.—Chassis of Unic 24-30-h.p. Car.

ignition. On the other hand, the foot accelerator controls both throttle and spark, an arrangement which is also fitted on the 24-30-h.p. car. The 24-30-h.p. Unic is an entirely new model. The four cylinders (102 mm. bore by 116 mm. stroke) are cast in pairs, while the valves are arranged on opposite sides. The carburettor is of the same design as that on the 16-20-h.p., while the ignition is by a high-tension magneto, this being mounted upside down with a view to economy of space. The lubrication of the crank shaft bearings is effected by means of a pump in the base-chamber; the crank shaft is hollow, allowing the

is adapted to give four speeds forward and a reverse, with single operating lever working in a "gate." On the top speed the drive is direct to the differential shaft, from which the power is conveyed to the rear road wheels by side-chains. Ball bearings are fitted to all parts except the engine.

The Empress Cars.

THE EMPRESS MOTOR COMPANY, LTD., of Manchester, whose cars are already well known in the North, bring their vehicles to the notice, for the first time, of motorists in the South of England. Four

models are being made, viz., 16-20-h.p. and 20-24-h.p. four-cylinder, and 24-30-h.p. and 30-36-h.p. six-cylinder, and, while following, in general design, the usual lines of chainless cars, the details bear evidence of careful thought, while, as regards material and construction, these are, we are assured, of the highest grade. Only two models are on view—a four-cylinder 16-20-h.p. side-entrance double phaeton and a 24-30-h.p. six-cylinder landaulet. As regards the chassis, practically the only difference between the two is the addition to the engine of an additional pair of cylinders, the bore and stroke for both cars

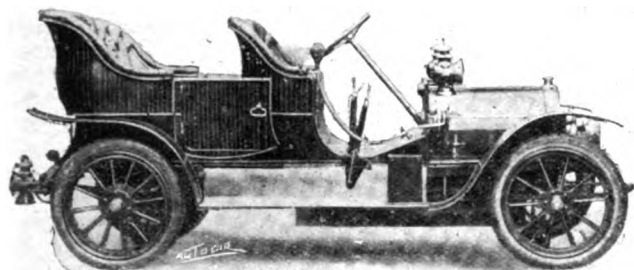


Fig. 26.—The "Empress" 16-20-h.p. Car.

being 90 mm. and 127 mm. respectively. The cylinders are cast in pairs, and have the valves all operated off one cam shaft. As will be seen from Fig 27, large inspection doors are provided in the base chamber, while the bottom half of the latter can be removed, without interfering with the crank shaft bearings. A separate pipe from each cylinder conveys the exhaust gases to a collecting chamber, from which they pass to the silencer proper. The mixture is furnished by the Perfecta carburettor, devised by Mr. Smith, and an illustrated description of which has already been given in the *M.C.J.* Both foot and hand control of the throttle is provided, the arrangement being such that the pedal acts as an accelerator. When the pressure on it is released the speed of the engine falls to that permitted by the position of the hand lever on the steering wheel. Two systems of high-tension ignition are provided—magneto and accumulator. The magneto is

through the bonnet. A noticeable feature of the cars is the "clean" dashboard, the only fitting on it being the switch. The lubrication of the engine is effected by a positively-driven apparatus located below the front floorboard. The clutch is of the internal leather-faced cone type, provided with three large ball thrust bearings. The gear-box, which is adapted to give three speeds forward and a reverse, is provided with large circular shafts, running on ball bearings, and having

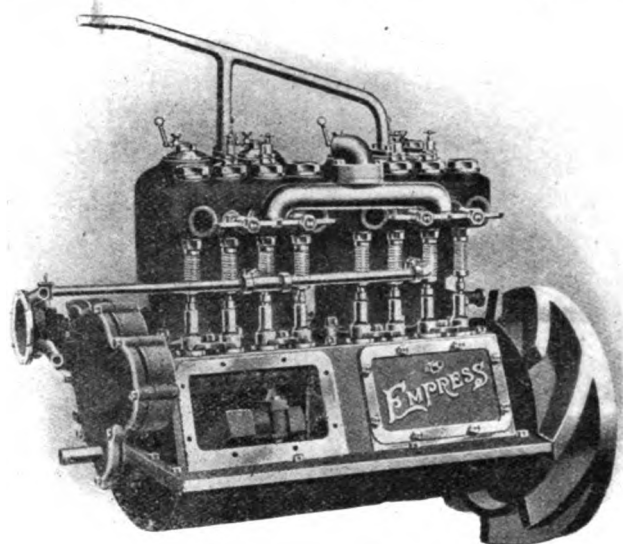


Fig. 27.—The "Empress" 16-20-h.p. Engine.

four projecting keys engaging with keyways of similar size in the pinions. The final transmission is through a propeller shaft and bevel gear to a live axle. The cardan shaft, which has only one joint—at the forward end—is enclosed in a casing, which acts as the torque rod, and which is provided with a ball bearing at each end. The differential gearing is of great strength, and equipped with four pairs of spur pinions instead of two, as is usual. These pinions are made solid

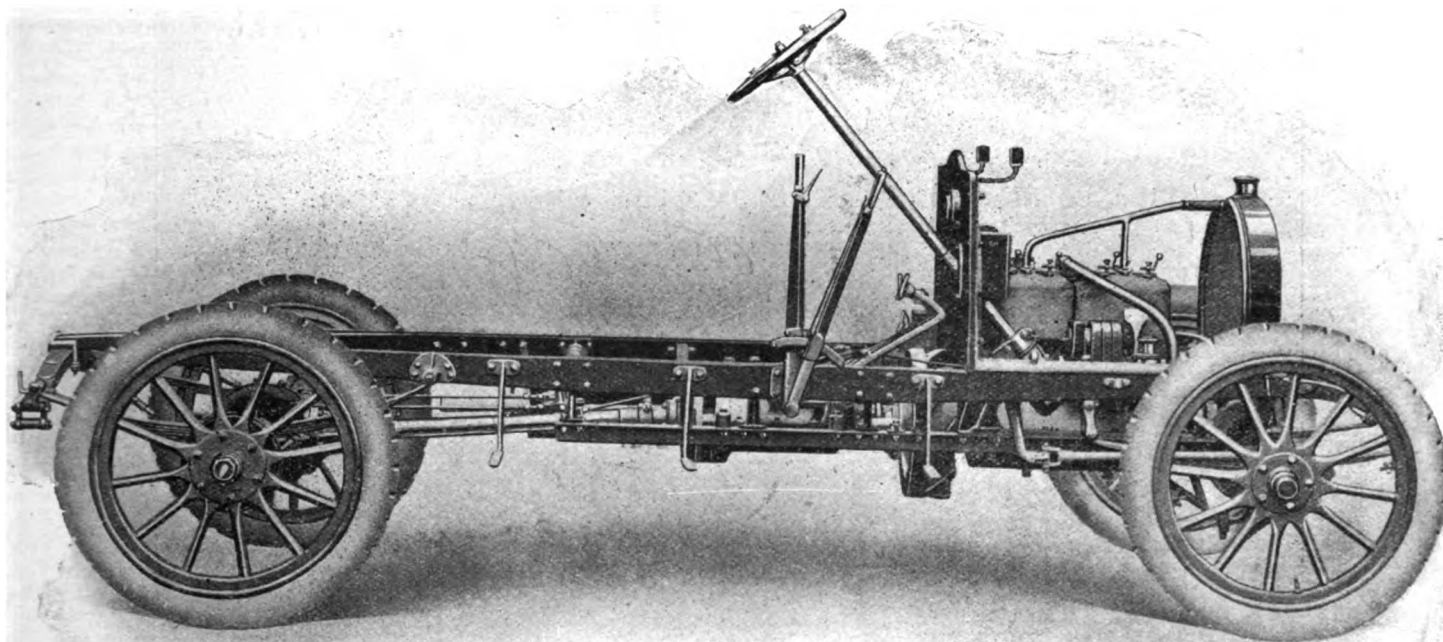


Fig. 28.—Chassis of "Empress" 16-20-h.p. Car.

located on the right side of the motor; the shaft which drives it is extended in the opposite direction to operate the water-circulating pump, which latter can readily be detached when necessary. The radiator is of the honeycomb type, while the flywheel of the engine has vanes cast on its periphery to act as a fan in drawing a current of air

with their pivots, which work in hardened steel bushes in the differential casing. The whole of the differential gear revolves in ball bearings mounted in the axle casing, and these bearings may be adjusted from the outside of the axle, the adjustment not interfering with the two sleeves extending outwards and carrying the road wheels. The axle

shafts run on double row ball bearings, and both these shafts and their ball bearings can be withdrawn without disturbing the differential gear. The road wheel hubs are mounted upon the taper ends of the axle shafts, which latter are provided with four keys formed solid with the shaft, thus obviating the employment of loose keys. The whole axle may be removed from the car by removing four screws, and

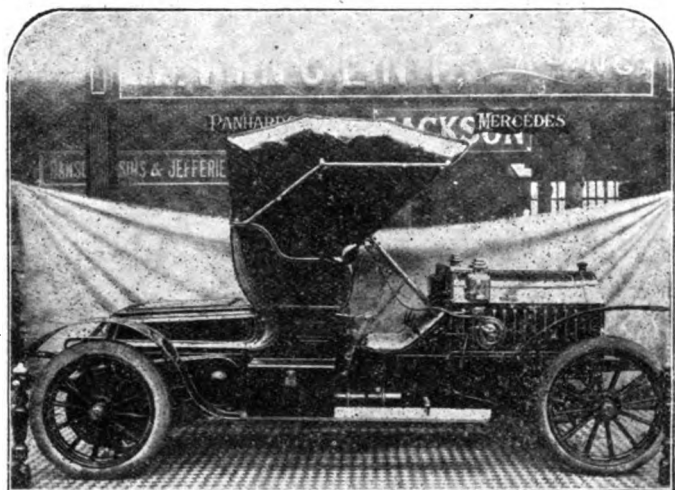


Fig. 29.—The 45-h.p. Mercedes with "Reading" Single Phaeton Body and Victoria Hood, exhibited by Mr. William Vincent, Reading.

without disturbing the springs, spring clips, or cardan-shaft joint. Ball bearings are fitted to all parts except the engine. The foot brake is interchangeable with the hand-operated ones on the rear wheels. The latter are provided with an ingenious compensating arrangement, which equalises the pull. A special feature of the cars is that the road wheels are all detachable from the hubs and interchangeable with each other. Thus the system gives the motorist the option of repairing the tyre

of channel steel is employed to support the engine and gear-box. Mr. Frank Smith, the designer of the "Empress" vehicles, is a firm believer in the subsidiary frame, considering that it ensures absolute alignment of the engine and gear-box, besides making the *chassis* several times stronger without adding weight; this increase of strength is due to the metal of the *chassis* being disposed in two planes, giving the complete frame the form of a beam of considerable depth. The usual set of four longitudinal springs is supplemented by a transverse one at the rear. The 16-20-h.p. car has a wheel base of 9 ft., while that of the 24-30-h.p. is 10 ft. 8 in., enabling any form of closed or open body to be fitted to the *chassis*.

Vincent's Motor Bodies.

An elaborate display of modern motor-body work is made by Mr. Wm. VINCENT, of Reading. Prominent on the stand is the 45-h.p. Mercedes car, shown in Fig. 29. This is undoubtedly one of the most striking vehicles in the show. It is fitted with what is known as a "Reading" single phaeton body, sloping back, Victoria hood, and folding glass screen. The car is painted in two shades of green, and upholstered in sage-green leather, the whole forming a speedy and luxurious touring vehicle. Another handsome vehicle is a 50-h.p. Florentia chain-driven car fitted with a seven-seated limousine. The body is painted in two shades of green stripes, relieved with red lines, the upholstery being in pearl colour French cloth, the *tout ensemble* being extremely pleasing. A third car on view is a 16-h.p. Brasier. This has a five-seated Tulipe double phaeton body, painted in Dutch green and cream lines, with cream under-frame, and upholstery in bright chrome leather. Other exhibits at Mr. Vincent's stand include a single landaulet body, painted carmine, upholstered scarlet, with real ivory fittings; a single landaulet body, painted light green, upholstered leather; a double landaulet body, painted dark green, upholstered in French cloth, and two unfinished bodies, a limousine and a Parisian four-seated phaeton, unfinished, to show the construction. An interesting novelty at Mr. Vincent's stand is the Reading patent wind and storm screen. This is quite a new idea in devices of this type, some of its features being the entire absence of glass and the facility for readily folding it up out of the way when not required. Fitted to the top of the dash is a metal frame, which carries a spring-actuated roller, while below

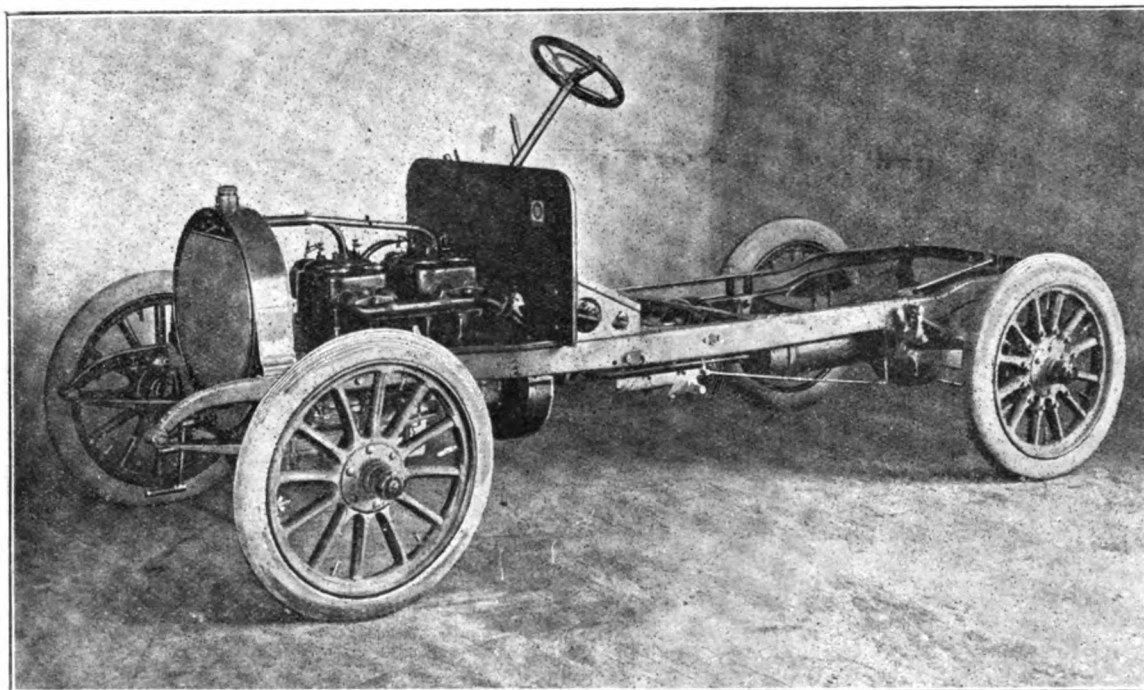


Fig. 30.—Chassis of "S.M.B." 20-h.p. Car (Union Motor-Car Company). (See page 103.)

in position or replacing the wheel by the spare one carried. It is also sometimes desired to transfer worn tyres on the back wheels to the front wheels. With the "Empress" arrangement the complete change can be effected in ten minutes by simply removing the wheels bodily, without recourse to changing the tyres on the rims. The main frame of the vehicle is of pressed steel, while a subsidiary one

it is a collapsible metal frame. The latter can be opened out any desired distance to the maximum of about 18 in. On the roller is mounted a screen of waterproof material extending the full width of the car. When required, the frame is adjusted to the right height and angle—facilities for adjustment being provided—and the screen pulled out and attached to the top of the frame, the arrangement form-

ing a complete protection to the driver. Any rain which collects on the screen finds its way to the bottom, where two small channels convey it to the sides of the dash, whence it falls into the road.

The S.M.B. Car.

An Italian car, new to this country, is the S.M.B., made by the Societa Meccania Bresciana of Milan, and exhibited by the sole concessionaires, the Union Motor Car Co., 21, Denbigh Street, Victoria, London, S.W. Fig 30 gives a view of the 20-h.p. chassis exhibited, from which it will be seen that the design is on thoroughly up-to-date lines, and forms a new addition to the list of high-grade cars turned out in Italy. The engine comprises four cylinders cast in pairs, the bore being 100 mm., the stroke 110 mm., and the normal speed 1,200 revolutions per minute. The valves are located on opposite sides, and operated off separate cam shafts. The ignition is effected by an Eisemann high-tension magneto, and the carburettor, which is gravity fed, is of a special balanced automatic type. The water circulation is maintained by a gear-driven pump and a honeycomb radiator with air-inducing fan, the latter being mounted on a special bracket, provided with a spring which keeps the driving belt at the requisite tension. The speed of the engine is controlled by a pedal, which varies the lift of the inlet valves by altering the position of the cams. The lubrication of the engine, and, in fact, all parts of the mechanism, is effected by a novel design of valveless pump driven by an eccentric off the crank shaft. The main oil reservoir is carried under the floorboard, the only fitting on the dash being a gauge, which indicates whether the oil pump is working or not. The clutch is of the single metal-to-metal disc type, and runs in oil. The change-speed gear, which is controlled by a special design of "gate" lever, gives four speeds forward and a reverse, with direct drive on the top. The final transmission is by a double universally-jointed propeller shaft and bevel gear to a live axle, which, like the gear-box, runs on ball bearings. The brakes are of the metal-to-metal internal expanding type, a point of interest being the compensating device employed in connection with those on the rear wheels; this consists of a miniature differential gear on the cross bar, which renders it impossible for the two brakes to act other than equally. The wheel base of the chassis is 9 ft. 2 in., while the track is 4 ft. 4 in., enabling any type of body to be fitted. An S.M.B. 20-h.p. four-cylinder marine type motor, complete with reversing gear, is also on view. The engine, which has the valves arranged on opposite sides, has cylinders 105 mm. bore by 130 mm. stroke, and runs at a normal speed of 800 revolutions per minute; it is fitted with low-tension magneto ignition, and a carburettor designed to work with either petrol, paraffin, or alcohol. The Union Motor Car Co. are also exhibiting the "Sceptre" motor cleaning outfit, and a new series of acetylene lamps and generators made by Messrs. Troubetzkoy and Co., of Milan. The new generator has been devised with the view of obtaining a production of gas, with even pressure, from the moment of lighting to the complete consumption of carbide. This is obtained by an apparatus in which the water which is to generate the gas and is regulated by hand, by means of a valve, is drawn from a tank, the level of which remains invariable during the entire function. To this end the water tank of the generator is divided into two parts, the first of which furnishes the water to the carbide, and the second supplies with water the first as this drops it on the carbide. Other advantages claimed for the system are:—(1) The production of gas can be interrupted and the generator stopped from working when the light is not required, thus obtaining a considerable economy of carbide. (2) The taking apart of the apparatus and recharging the charge of carbide can be done rapidly and simply, without the aid of any tools. (3) The generators of two and three elements are arranged so as to work either separately or simultaneously. Besides, either of them can be re-charged while the others are working, and without their light being put out. (4) Once the generator is furnished with carbide and with water, it can be set working at any time, even several days after, without the carbide deteriorating in any way.

The Royal and Imperial Starling Cars.

Among the exhibits of popular-priced cars worthy of notice is that of the STAR CYCLE COMPANY, LTD., of Wolverhampton, who have for some years been devoting special attention to the requirements of motorists of moderate means. Attention may first be drawn to the "Royal Starling" cars, of which several are on view, including a four-seated side-entrance car (Fig. 31), a similar car with hood and front glass, a two-seated touring vehicle, and a two-seated car with sample chest attached. The chassis (Fig. 32) of all four are identical, and an examination shows it to comprise all the main features of larger vehicles. The engine, which is rated at 10-h.p., comprises two vertical cylinders, 3½-in. bore by 4½-in. stroke, the valves being all mechanically actuated

off a single cam shaft. The arrangement of the inlet pipe is on somewhat novel lines. The carburettor is located on the right-hand side of the motor, and the gas is conveyed therefrom by an oblong section pipe between the two cylinders, and thence by a short vertical round pipe to the inlet valves. The latter are provided with a variable lift, by means of which the speed of the engine is controlled, this being obtained by a wedge piece which can be slid in and out between the cams and the valve tappets. The ignition is by coil and accumulators, the contact-maker being located in front of the car in an extremely accessible position. The water circulation is maintained by a gear-driven pump, with large radiator and fan. The transmission is through a leather-faced cone clutch to a three-speed and reverse gear-box, the shaft of which runs on Hoffmann ball bearings. The final drive is by a cardan shaft and bevel gear to a well-supported live axle, the latter

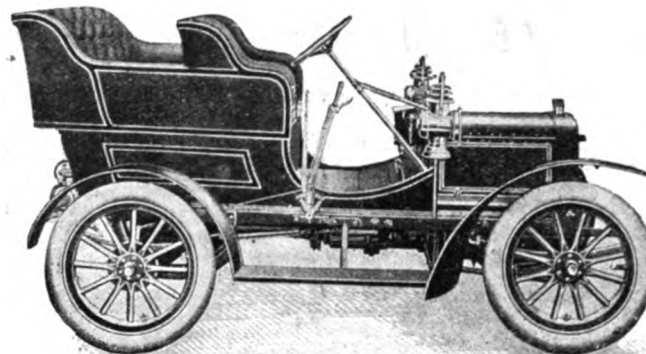


Fig. 31.—The "Royal Starling" 10-h.p. Four-Seated Car.

also running on ball bearings. The wheel base is of such a length as to permit a comfortable body to be fitted, access to the rear being through a swinging front seat. Altogether the Royal Starling is an interesting addition to the list of reliable small cars. The latest production of the Star Company is the "Imperial Starling" two-seated car. This is on similar lines to the 10-h.p., except that the motive power is supplied by an 8-h.p. single-cylinder engine of a bore and stroke of, respectively, 4½ in. and 4½ in. The frame of the chassis is of ash, strengthened with fitch plates. The transmission is through a leather-faced clutch, three speed and reverse gear-box, and bevel gear to a well-designed live axle. With artillery wheels and a neat two-seated

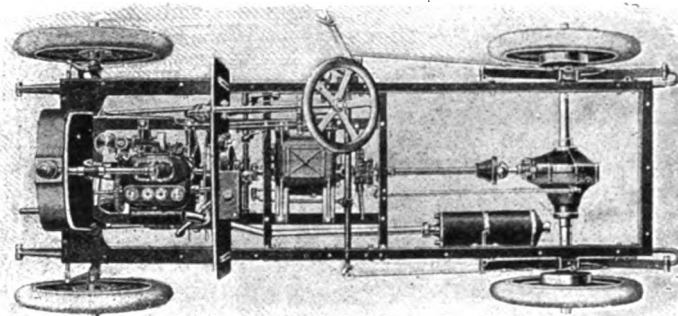


Fig. 32.—Plan of Chassis of "Royal Starling" 10-h.p. Car.

body, and sloping tool-box, it forms a useful production, and one that is steadily gaining in popularity.

Starting Device.

The F. H. SMITH ACCESSORIES, LTD., of Datchet, make a creditable first appearance with their pneumatic starting device, which also serves the purpose of detecting the cause of missing or want of power in an engine while running on the road. The fitment has its place on the dashboard, and consists of brass cap, in which is a push bottom, by means of which increased atmospheric pressure is put upon the petrol in the float-chamber through a flexible tube leading thereto. If the lack of power is from want of petrol the engine will at once show the increased power, because of the extra charge thus given. On the other hand, if the want of power or missing is caused from electrical faults, the engine power will not be improved—in fact an increase of petrol supply will tend to retard the engine if the charge was normal to commence with. The device is finely finished, and is easily fitted to any carburettor.

The Martin and Jellicoe Commercial Vehicles.

Messrs. MARTIN AND JELICOE, LTD., who have established works at Thames Ditton, Surrey, for the construction of industrial motor vehicles and motor components, make their bow to the public with a chassis of a 12-cwt. motor-lorry or van, which is noteworthy on account of its robust proportions. The 12-14-h.p. engine comprises two separately cast cylinders, 4½-in. bore by 5-in. stroke. The valves are operated off a single cam shaft, and the tappets, which are fitted with

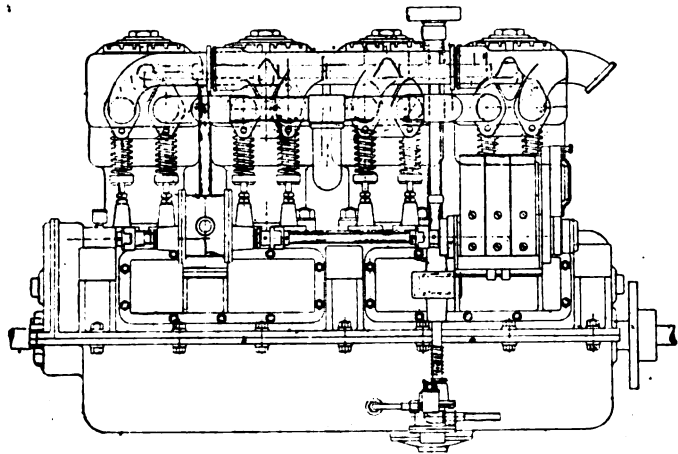


Fig. 33.—The Martin and Jellicoe 24-28-h.p. Engine.

adjustable screw tops, work in phosphor bronze guides. The crank chamber is of aluminium, and fitted with large inspection doors on both sides; the lower half is so arranged that it can be removed without disturbing the main bearings. The crank shaft is forged from Vanadium steel, and runs in three phosphor bronze bearings of extra large proportions, giving excellent wearing surfaces. The cam shaft is so fitted that it can be drawn from the crank case without dismantling the engine, while the timing gear is completely enclosed in an oil-tight case. Ignition is by coil and accumulators, although provision is made for the ready installation of a magneto if desired. The contact-maker is located on the upper end of a vertical spindle driven by skew gearing off the cam shaft; the spindle is carried down to drive the Albany pump, which forces the water through the large jackets and framed ribbed tube radiator, with fan. The mixture is furnished by an automatic triple jet carburettor. The transmission is through a metal-to-metal clutch, four-speed gear-box, cardan shaft, and bevel gear to a live axle. A joint is introduced on the shaft between the clutch and gear-box to allow for any want of alignment between the two parts, and to allow either to be dismantled without disturbing the other. The change-speed gear, which runs on ball bearings, and gives a direct drive on the top speed, is fitted with a patent "gate" quadrant and lever, enabling each gear change to be effected by a full and positive stroke of the lever, the latter working on a fulcrum. The propeller shaft is provided with universal joints at each end, while the rear axle is of strong and substantial design, it being mounted on Hoffmann ball bearings in self-contained cages. The chassis on exhibition is fitted with pneumatic tyres to the front wheels, and solids to the rear; the wheel base is 8 ft. 6 in., enabling any desired form of body to be fitted. The firm are also showing one of their 24-28-h.p. engines (Fig. 33), designed for 2-ton lorries or marine work. Like the 12-14-h.p. type, this has separately cast cylinders, 4½ in. bore by 5 in. stroke, and a single-cam shaft. The object of the designers has been to produce a motor, which shall run for long periods without requiring repairs; to this end special attention has been devoted to the bearings, and to the lubrication. The latter is effected by a pump fixed to the lower half of the crank chamber, and driven by skew gear off the cam shaft, with a vertical shaft and spring drive. The oil is drawn from the bottom of the crank chamber, and distributed through a series of pipes to the cylinder walls, connecting rods, main bearings, and all other working parts of the engine, then returns to a reservoir, forming a complete circuit. The system is entirely automatic, positive in action, and very simple, the only fixing on the dashboard being a small gauge-glass to show that the pump is working. Two systems of high-tension ignition are provided, accumulators and magneto. The latter is mounted on a base plate formed on the crank case, and is so arranged that it can be readily detached at any time. Specimens of the firm's gear-boxes, differentials, and other component parts are also on view, and demonstrate the high class character of the work.

Oil Cans, etc.

Excellence of construction, no less than utility in design, has been a factor in the popularisation of the seamless copper, brass, and steel oil cans of Messrs. JOSEPH KAYE AND SONS, LTD., amongst motorists. The inside parts of the patent locomotive oil can are tinned, so as to prevent verdigris, and made in highly-finished copper it has become a familiar part of the equipment of garages, etc. The firm's petrol squirt can is another speciality. This is recommended for cleansing purposes. It will force petrol or any similar liquid a distance of six feet, and can also be employed for lubricating oil. For ordinary lubricating purposes, however, K.'s seamless serrated copper or brass valve oil cans are an admirable device. The body or can is formed of one piece of metal, and is fitted with a sieve which absolutely prevents the passage of grit or dirt to the working parts of the automobile. All these specialities are on view at the exhibition, as well as an improved oil economiser for lubricating oil. This has a pump, which provides for an easy and rapid flow of oil, which instantly stops when the action of the pump ceases. Clean in use, it also conduces to economy, and should be found in all motor depôts, as well as the motor houses of those who own cars.

Dry Cells.

The Siemens-Obach dry cells for ignition purposes are exhibited by Messrs. SIEMENS BROS. AND CO., LTD. These have a low internal resistance and consequent large output of current. The cells possess great powers of recuperation, and Messrs. Siemens recommend that for ignition with multi-cylinder engines two complete batteries should be carried, one connected to either side of a two-way change-over switch. By this means the two batteries can be used alternately, the combined useful lives of the two batteries being extended beyond the time that they would last if each were worked continuously. Several sizes of single cells are shown for making up into batteries for small cars, as well as batteries of three cells (4½ volts) made up in single boxes, with two special lock-nut terminals. These have about the same output as three of the corresponding single cells, but have the merits of compactness and convenience for handling. Larger batteries are also included in the comprehensive display.

The S. and G. Wind Shield.

A new wind, rain, and dust screen is exhibited by Messrs. GROVER AND SONS, of Abbey Street, Bermondsey, London, S.E. This is the work of a practical firm of motor body builders, is well made, and

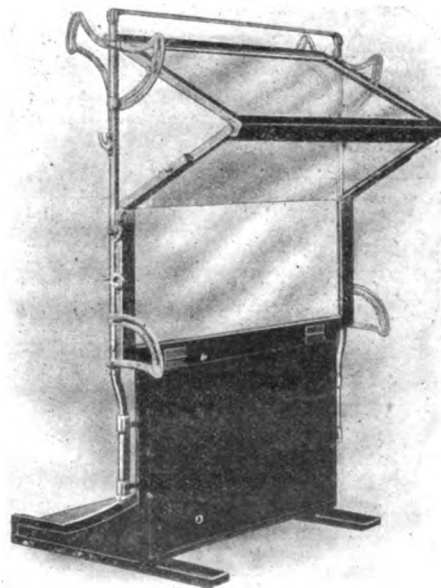


Fig. 34.—The S. and G. Wind screen.

strongly and ingeniously jointed. It can be raised to any position, and can be easily arranged in wet weather to enable the driver of a car to maintain a clear view without having to abandon any part of the screen owing to raindrops falling upon the glass through which he is looking. The "S. and G." screen, which is illustrated in Fig. 34, is constructed to fit any car, and can be folded up and temporarily dispensed with when not required without having to be detached from the car. For comfort, as well as utility, the screen is to be commended.

Coventry Simplex Engines.

At the stand of Mr. J. E. GARRATT, reference to whose Lubrimer is reserved till next week, are two examples of the "Coventry Simplex" engines of four and six cylinders respectively. In the 16-h.p. four-cylinder engine provision is now made for thermo-syphon or pump circulation. An alteration has also been made which shortens the engine considerably. This consists of an enclosed gear drive for the

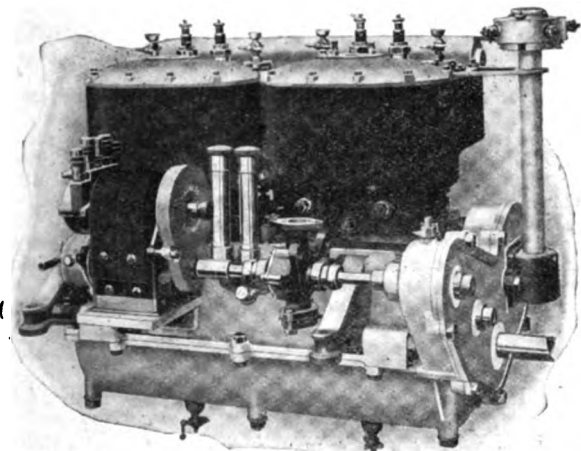


Fig. 35.—The Coventry Simplex Four-cylinder Engine.

magneto which is placed alongside the same shaft also driving the pump. The 4-cyl. engine on view does not contain this latest improvement, but it can be seen in the six-cylinder motor. These engines are of thoroughly sound construction and good principles of design.

Detachable Rims and Non-skids.

Mr. W. S. CORT, of Market Harborough, is again present with his well-known non-skid. He also associates with this invention the Beresford rim, which we favourably noticed in our issue of November 23rd last, and which has undoubted advantages. Its security has been well demonstrated, and its ease of attachment and detachment. The latest form of the Cort non-skid band is that known as No. 2. The band is made up of three layers of chrome leather. The first envelopes the tyre. The second is the foundation for the hardened studs to clench on, which makes them impossible to pull out or come in contact with the tyre. The third acts as the tread, and is fitted with three or four rows of hardened studs, thus obviating a side-slip or puncture. The tread may be removed where worn down and another fitted to the existing device; and this process may be repeated time after time. The fastener of the No. 2 band is new. The cover is held in position by twelve steel clips clipping into the rim on each side of wheel, through which screws pass which are fastened to the chromed leather. These screws being fitted with hexagon nuts, make it possible to adjust the band to fit any make of tyre perfectly tight, and when once adjusted need no attention for thousands of miles, as it is not at all necessary when attaching or detaching to undo these screws, as the clips may be slipped in or out of the rim same as No. 1. All metal parts of Cort's bands are "spheradized" by the patent process, so that rusting is rendered impossible.

Upholstery for Motor-cars.

At the stand of the THAMES BANK WHARF MOTOR WORKS, LTD., a good selection of upholstery made by machinery is displayed. The system of production is such as to secure the most reliable results, and the buttons on the upper surface of cushions, seats, &c., are secured right through the material, and held by fasteners at the reverse side of the cushion. The company have the sole concession in this country for this method of upholstery, and it should give them a great pre-eminence on that account. Motor-car screens and Cape cart hoods complete their display.

Clothing.

Messrs. CHARLES BAKER AND Co., LTD., have a good selection of clothing for motorists, including some specialties, in which are incorporated good design and sound construction, with a view to rendering the raiment thoroughly weatherproof. We notice, too, that regard has been paid to the pockets of motorists, and that reasonable prices prevail in all sections of their clothing department. A heavy tweed breasted overcoat is an excellent speciality, which can be used as an ordinary walking coat as well as when on the car. Liveries are an important

branch of the tailoring department of Messrs. C. Baker and Co., Ltd., whose business with motorists should materially increase as a result of their present enterprise.

Map for Motorists.

Mr. G. WHEATLEY, of Scotgate, Stamford, drove up from that town on his Argyll car, on which he is showing his combined switch and brake lever for independently controlling the car from the tonneau—an idea which should prove of interest in the motor academies throughout the country. He has also brought out an ingenious map for motorists, known as the "Opti-map." In this the whole map of England, or of any particular district, is printed and mounted on a cylinder 6 in. long and 1½ in. diameter. The map revolves within the cylinder, and by means of a powerful lens, which is moved along guides outside the cases, every main road is brought into view. The arrangement is one of the most compact we have seen.

New Vulcaniser.

The principle of vulcanising in connection with the repair of tyres having become almost universally accepted, motorists are naturally interested in the appliances by which it can be efficiently and promptly effected. Several such appliances are on view, that of the FORGROVE MACHINERY COMPANY, LTD., of Admiral Street, Dewsbury Road, Leeds, being conspicuous by reason of its reasonable price and excellent results. As will be seen from Fig. 36, the device has few parts, is of small size, and the metal work being of aluminium, it is extremely light. Through the top of the combustion chamber charcoal is inserted, and after being sprinkled with methylated spirit, is fired by a match applied to the fire-grate below. More charcoal is put in, and in about fifteen minutes the heat will be up to gauge mark. On the top of the apparatus are four wooden plugs, which can be removed to reduce the temperature should it get beyond the desired heat. The heat generated in the combustion chamber is transmitted to the external surfaces used for vulcanising through the surrounding air-chambers, and by a special arrangement of heat-conducting ribs, thus ensuring uniformity of tem-

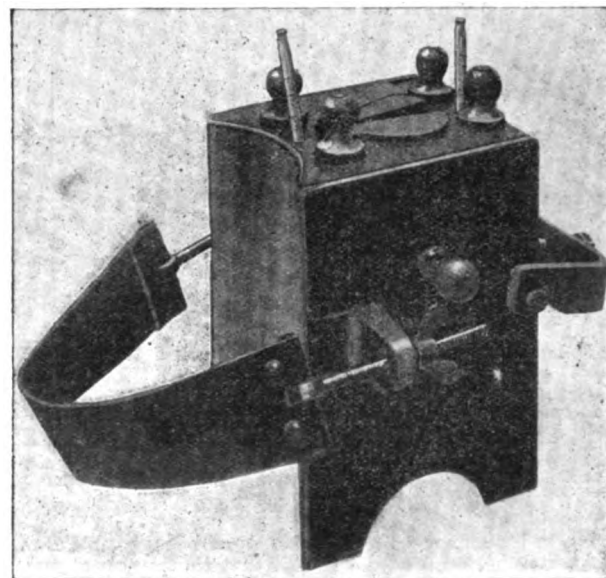


Fig. 36.—The Forgrove Vulcaniser.

perature over the vulcanising surfaces. Should it be preferred, gas can be used instead of charcoal. The Forgrove vulcaniser should be found upon many cars as well as in hundreds of garages during the coming season.

Next week's report will include references to the "Clair" silencer shown by Messrs. J. C. Lyell and Co.; the Vulcan distance recorders; the machine tools and lathes of Messrs. Drummond Brothers, Ltd., and the Colchester Lathe Company; several new detachable rims, the Kempshall tyre, new speedometers; Messrs. Smith and Son's Perfect Speed indicator, the G. L. Carburettor, the Simplex shock absorber, previously described in our columns; the "Belmont" non-skid; the engines, etc., shown by Messrs. Hurst and Middleton, Ltd.; the Prested electrical specialities, and the hundred-and-one other accessories exhibited in the Gallery.

(To be continued.)

Correspondence.

[Letters to the Editor should be addressed to the offices, 27-33, Charing Cross Road, London, W.C.]

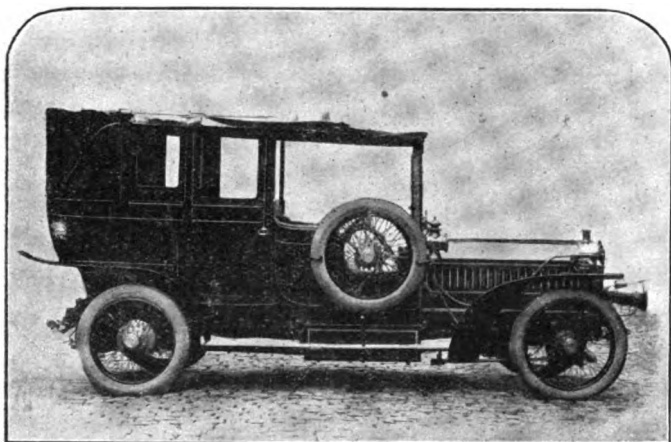
INTERNATIONAL TOURING CAR TRIAL, 1908.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—There are indications that the leading motor-car manufacturers, both British and foreign, intend to enter for the Royal Automobile Club's International Touring Car Trial to be held in June. May I be permitted, on behalf of the Royal Automobile Club, to inform your readers of the principal features of interest in connection with this important event.

Whereas the International Tourist Trophy race, held in the Isle of Man last year and in former years, was confined to cars having engines of practically the same size, this trial is open to standard touring cars having engines of practically any size from 6-h.p. to 60-h.p. In this respect it differs not only from the competition above mentioned, but also from the principal Continental events. Again, whereas many Continental competitions, to which public attention is attracted, are settled by speed alone, this trial will be decided on the points that appeal to the purchaser of the ordinary touring vehicle. The weakness of many former trials has been that the public was given no information as to the condition of the cars at the end of the trial. The race at Brooklands, which is to take place after 2,000 miles of road travel and twenty miles of timed hill-climbs, will demonstrate beyond all question the wear-resisting qualities of the respective cars, as it is clear that a car that has suffered badly during the road test can have no chance on the Brooklands track against a car that is practically in the condition in which it started.

Generally, the effect of the trial must be to enable the public to decide which are the best cars in the various horse-power classes, and its importance cannot, therefore, be over estimated. The results must be of world-wide interest as affecting the user of the motor-car on the



The 60-h.p. Six-Cylinder Napier recently supplied to the Rt. Hon. A. J. Balfour.

Amongst the chief characteristics of the car are the detachable wire wheels, the neat folding arrangement of the hood, and of the canopy over the driver. The car can be converted from an open to a closed carriage, or vice versa, by one person in a few seconds. When the top is lowered the car forms a completely open vehicle. The car is painted in Mr. Balfour's own colours, the bright fittings are in nickel silver, and electric lights and an indicator to the driver are installed.

Continent, in India, in the Colonies, &c., as well as the home user. The system of marking has been so arranged that the first car past the post at Brooklands will be the winner in its class, and the trial results will thus be known immediately, instead of some days or weeks after the event, as has happened in the case of former trials where results depended upon the allotment of marks.—Yours truly,

J. W. ORDE.
(Secretary R.A.C.)

THE SETTING OF VALVES.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—I have followed with interest from week to week the letters on the above subject. I am not surprised at the unreciprocated interest of the manufacturers to one of your correspondents' letters, as they would only be giving away the results of experiments which have cost them much time and money. But, if we have not their arguments in favour of their timing, we, at least, have the results of their arguments i.e., their timing, then, by comparison of the best makers, we may synthetically build up the arguments by which they arrived at their conclusions, and possibly get a basis for further experiments. Of course I am assuming the investigator to have had some training in physics.

Mathematical accuracy is absolutely essential, as the time of overlap of inlet and exhaust valves on some of the best makes is only $\frac{1}{100}$ of a

second; with the engine running at 240 r.p.m. this represents a movement of 2 mm. at the top of the stroke.

None of your correspondents go into detail; one mentions the figures of setting of one engine, but omits to give figures of the alteration—this is useless for comparison. Possibly the results of an engine I tested may be of interest. The motor was a 4-cylinder 90 mm. bore by 110 mm. stroke, large inlet and exhaust passages, giving free ingress and egress, inlet opened 4.5 mm. down, closed 4.5 mm. up; exhaust opened 93 mm. down, closed 6.5 mm. down. This engine ran perfectly on the road, pulling well, fast or slow, but received no electric test, which personally I do not believe in, as an engine rarely runs under steady conditions, but under varying barometric pressures and high and low speeds.

As regards the Larrad Timer, the makers seem to have confidence in this, and it looks as though they are justified, as no one has accepted their challenge, although many have said they can get as good results by other means. Anyone acquainted with the difficulties of timing an engine correctly should welcome an instrument for facilitating the process.—Yours truly,

AJAX.

THE EFFECT OF STUDDED TYRES ON ROADS.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—I am surprised Capt. Windham should make such a dead set against such a useful and reliable invention as the studded tyre. Perhaps it is because it leaves an impression in the dust or mud, the same as the hob nails or tips on a working man's heavy boot would do. If the matter is reasoned out no doubt more road material would be loosened by a plain tread, caused by the suction. This is easily proved by a round piece of wet leather or rubber on a string, the same as a boy's plaything called a sucker, which will lift a stone of some pounds weight when pressed upon it. Now if the sucker had studs underneath it would be impossible to get a lift, on account of the air spaces between the studs, and I submit what applies to the sucker ought to apply to the tyre.—Yours truly,

STUDIOUS.

STEAM CAR EXPERIENCES.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—It is very evident from his letter that your correspondent, S. Aspinall, has not had a very extensive experience of the petrol car. Possibly I have exaggerated or overdrawn my picture of the petrol car in my last letter, but by no means will I withdraw one iota of what I have said of such a car. Of course, I realise that all the "bloomers" mentioned might not occur at once.

I should imagine that the predominating feature of his car is that the hand brake withdraws the clutch. Permit me to point out here that if this was so, with such a car as I had in my mind, as soon as the engine was started, and in all probability raced like fury, before the driver could get round at the levers the brake would slip over the teeth of the quadrant, permitting the clutch to engage, and off would go the car, and the driver need not be the ignoramus your correspondent alludes to. For I know, and many others do, of similar instances to this: a splendid driver mechanic, who had just got out of a new Leon Bollée car, costing over £1,000 to buy, and finally drive away a car for his employer's son. Now here was a really good man, yet he did exactly what I have just described. Besides, you must know that the noise of an old car and the surrounding conditions of traffic is quite enough to agitate even an experienced man into creating such a fiasco as I have described, to the annoyance of your correspondent, in my previous letter.

To go on with the latter portion of his letter, I can assure him that no herculean efforts are required to turn the starting handle even when "in gear" and the brake on. Your correspondent here betrays his knowledge, because I have actually done the thing myself, not knowing that someone in my works had interfered with the speed lever. My partners and others would testify to this, and I can assure you that, had someone been in the car and advanced the ignition at the right moment, she would have gone right out.

Now what I have said now and in support of my previous letter is not intended to prejudice the uninitiated against the petrol car—that would want some doing—but it is simply meant to point out some advantages of the steamer.—Yours truly,

H. J. CHAPMAN.

ELECTRICALLY LIGHTED MOTOR LAMPS.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—Your correspondent can use the ordinary paraffin lamps by fixing adaptors and using 4 volt 3 c.p. Osram bulbs; these bulbs consume 75 amps. The best plan would be to use the single pole adapter with bulb to suit. Take the wire from the negative terminal of the accumulator and earth it to frame of the car, the positive wire to one terminal of switch (there will be one wire from each lamp), join the ends of these together and fix to the other terminal of switch. The 30 a.h. accumu-

lator will do all right, it will give you about twenty hours' light, so that if your correspondent charges his own accumulators or is near a charging station he has nothing to fear. The "single pole" is by far the easiest for wiring, as it saves wire and current and I fancy gives a better light.

The double pole is wired up on the same principle, but instead of the negative wire going to frame it goes to the second pole of the three lamps.

If large headlights are used, there should be a separate switch for the tail lamp and cut out side lamps.—Yours truly,

GEORGE D. DAVIDSON.

A TROUBLESOME ENGINE.

TO THE EDITOR OF *The Motor-Car Journal*

SIR,—I have a 14-16-h.p. car. In four cases out of five my engine stops when trying to start. I am most careful to let in my clutch gradually, but the car still starts with a jerk. I have put some oil on the leather of the cone; the result, however, is not appreciable. Does racing the engine at the start in any way cause this trouble? The car, I might mention, is less than twelve months old. The transmission is by cardan shaft. I should be very grateful for your opinion.—Yours truly,

C. FIRTH.

[It would appear that there may be a defect in the clutch, and that dressing the leather with oil has not got at the root of the evil. Correspondents would assist greatly if they would give fuller details in their queries. Mr. Firth does not tell us if his engine is a two or four cylinder; we presume it is the latter. Also he does not say whether the trouble is one that has recently crept up, or whether his clutch has

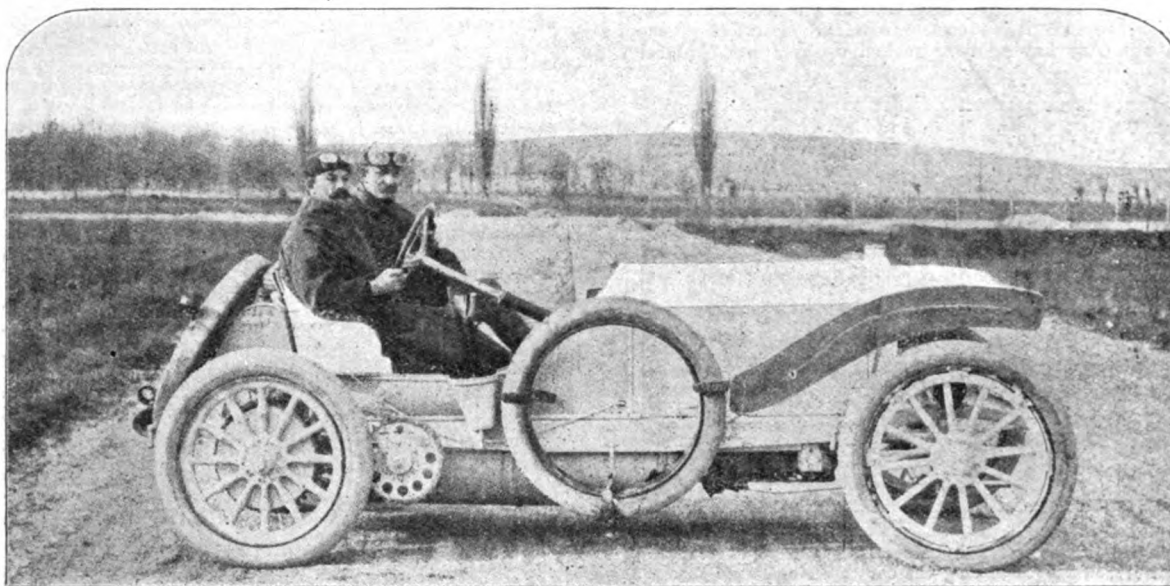
fine spray. I have tried without any outlet, then it is driven out through the bearings. The engine works well so long as there is oil in chamber, but the reverse when it is all gone.—Yours truly,

C. W. C.

[It is very difficult to keep the oil properly in a motor in which the two pistons of a two-cylinder engine move up and down together, on account of the large volume of air they displace. "C. W. C." has tried a good many remedies, and among them one which we think, if properly carried out, should effect, if not a cure, at least a marked improvement. We refer to an outlet valve—that is to say, of course, one which can only open outwards. It is no good, however, fitting a small one; this would be useless. Its capacity should be at least that of the combined area of two of the valves of the motor, and it should project vertically, or nearly so, from the crank chamber at the end of a tube about nine inches high. The tube carrying the valve can be fixed to the side of the crank case, by means of a flanged elbow. The bore of the tube and the hole in the side of the crank case must, of course, be in proportion to the area of the outlet valve at the top of it. The valve itself may be of the flap type, shod with leather; or a light mushroom valve working on a fibre seating may be employed. The object, of course, is to keep the crank case below atmospheric pressure. Fitting stuffing glands on the bearings is another remedy that we have seen applied to some engines given to exuding oil, and this is also more or less successful, but considerably more trouble and expense to fit than the method we describe above.]

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—I note your correspondent's letter signed "Drip." I myself have experienced the same difficulty, which I believe is frequently due



Lautenschlager on the Mercedes Car he will drive in the A.C.F. Grand Prix Race.

been a nuisance right along. Putting oil on a clutch does not make it slip once it has soaked in; in fact, it will often make a clutch hold that slipped before its application. Our correspondent might try roughing the leather with a rasp, and then dressing with French chalk. Cork insets are a great improvement to clutches and make the "take up" very sweet. If the clutch is badly designed—wrong angle for instance, or if the pedal movement is not well proportioned, or the clutch spring unnecessarily strong, then he must seek the aid of a motor engineer. Racing the engine at the start will certainly cause the trouble; it should only be run at sufficient speed to take up the load without pulling up. Also if the ignition and throttle are not set at the best point there is always a probability of not being able to start away nicely.]

LUBRICATION DIFFICULTIES.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—Could you or any reader of the *M.C.J.* kindly help me over a difficulty by either a sketch or instructions for a device to retain the oil in the crank chamber of a two-cylinder 10-12-h.p. Bachet engine? Both pistons are connected to one crank pin, cylinders side by side, both pistons moving up and down together, therefore getting an impulse every revolution. I have tried all means that I could think of to keep the oil from being driven out, by means of tubes of various sizes, some filled with fine wire gauze, valves, outlet and inlet, thinking that the suction stroke in the chamber—that is, the up stroke—would draw back any oil driven out by down stroke. The last thing I tried is fixing an enlarged cylinder on the top of a 1 3/8-in. tube, but all to no effect. There is a powerful blast from the tube when engine is running and the oil is blown out in a

to the effect of temperature changes upon the consistency of the oil, as it more usually occurs in cold weather. I have experimented with a quantity of different oils and am now using "Ilo" light lubricating oil supplied by Easton and Melville, Ltd. This I find gives excellent results and has not shown any tendency to clog in the lubricator, and I believe that if "Drip" were to try this oil his trouble would be overcome.—Yours truly,

40-H.P.

THE TAXATION OF MOTORISTS.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—I am opposed to any tax which tends to check the free communication between the various parts of the kingdom. Free and unfettered communication is essential to commercial prosperity, and in my opinion any such tax is more than lost in the check it gives to trade. If the tax be much heavier for the moderate motorist than it is at present, I shall certainly give up my car. At the same time I would willingly pay a tax for the improvement of roads of the country, to be managed by the State, as is at present done in France.—Yours truly,

A. A. PADLEY.

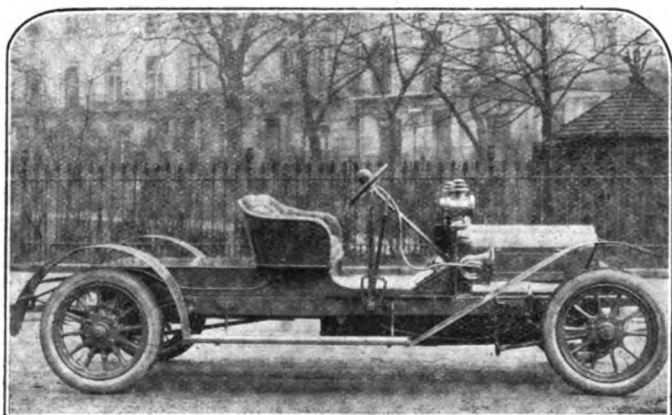
DE DION writes:—"I should like to know if any owners of 6-h.p. cars provided with two speeds only have had successfully fitted a reverse."

THE CARBURETTOR AND ITS FUNCTIONS.*

(Concluded from page 82.)

PRESENT-DAY FAULTS OF THE MIXING VALVE SUMMED UP.

We may get a better understanding of the features necessary in a perfect mixer by considering a typical present-day carburettor. This consists of a float chamber, usually at one side of the air passage and with a long, small nozzle for petrol reaching into the air passage, which at this point is strangled or contracted to increase the velocity of the air past the nozzle. Between the nozzle and the engine an auxiliary opening is provided, closed by a spring valve, which, when the suction is increased sufficiently, opens more or less, admitting a quantity of pure air with which to dilute the over-rich mixture coming from the strangled passage. The action of this device is about as follows: At extremely slow engine speeds, say under 200, the mixture is imperfect because the air passage is not small enough to give proper air velocity for a suitable spray. This is one of the reasons why the gas engine is regarded as inflexible, and why many engines fail to develop power as soon as their speeds are reduced. If this passage is small enough for perfect running at very slow engine speeds, say 50 to 100 r.p.m. with throttle practically closed, it is too small to admit a practical amount of air at higher speeds, so the petrol by itself, or badly mixed with air, is drawn from this passage, while the greater portion of air, with imperfect provision for mixing, enters at the auxiliary valve. Clearly this cannot give a proper mixture or proper proportion. Next, it must be remembered that, while the strangled passage is constantly open, the auxiliary passage is closed except when sucked open. Further, the auxiliary valve flutters, and the result may often be that in the early part of a stroke the mixture is exceedingly rich, because it all comes from the strangled passage, while later, the auxiliary having been sucked open, a large quantity



The 15-h.p. Mors lately supplied by Mors (England) Ltd., to Mr. C. R. Burkill, who is taking the car to Shanghai.

The vehicle is fitted with a very racy, long, two-seated body, a small extra folding seat being provided at the back.

of air enters (larger than necessary), with resultant poor mixture, followed by closing of the valve as the suction decreases near the end of the stroke, with consequent rich mixture at this time. Add to this the fact that with a long, slim nozzle the petrol will continue to flow for some time after the suction stops, because of its momentum, and it will be seen that the beginning and end of each charge are probably overfat, while the centre of the charge is very lean.

WIDE RANGE OF SUCTION.

There is also a wide range of suction, because at the beginning and end of the stroke there is little or no vacuum and the strangled tube offers a free passage, while at the centre of the stroke there must be, and is, enough vacuum to open the auxiliary; so it is quite evident that the engine is not drawing uniformly and is not free from that negative pressure or vacuum necessary to get the largest charges and to avoid needless loss of power. The ideal carburettor will avoid this irregularity by opening a passage proportionate to the amount of mixture required, and it will not only open the air passage, but it will adjust the petrol to suit. If, for example, a piston or diaphragm is provided, operated by the suction of the engine in one direction and by gravity in the other, with a dash pot so that it cannot flutter, it may be made to open the air passage and to adjust the petrol so that with little or no increase of suction the proper amount of air and liquid is admitted. With such arrangement the vacuum need only be sufficient to give the air the necessary velocity required to make a proper spray, and higher speeds will not starve the engine

*Abstract of Paper read by Mr. C. E. Duryea before the American Society of Motor Engineers, Buffalo, N.Y.

because of higher vacuum. The dash pot ensures average openings, so that at the beginning and end of the stroke the velocity will be low, at the middle high, but with an average somewhere higher than the least practical velocity, while good results will be obtained even during the slow portions of the stroke.

THE IDEAL CARBURETTOR.

Many typical carburetors have quite abrupt corners. This decreases the amount of air that can enter, and thus impairs the efficiency. Some provide for complete vaporisation within the carburettor, or very close thereto, with the result that in wet weather the moisture of the atmosphere is condensed, and in cold weather frozen, thus choking the device with ice. It is better practice to carry the spray some distance and thus distribute this refrigerating effect, with less likelihood of ice formation.

In conclusion, the requirements of the perfect mixer may be summed up as follows: It must intimately mix, properly proportion and satisfactorily adjust, and also have the following specifications: Float chamber concentric with inlet and nearly concentric with outlet; float of metal with point adjustable to different heads, different liquids and different weights of float; float point easily ground, and moved by any motion of the float; the float should be free from balance-weights or levers; the mixer should be adjustable by the operator while driving; it should have adjustments for very low speeds and also for normal or high speeds, and should automatically adjust between these speeds; it should have a short petrol passage for quick action, and a large petrol passage to prevent clogging or ramming; it should retain in the air passage unsprayed liquid, but have provision to let out any excess. A gauze strainer at the petrol inlet and also at the air inlet are strongly advised. The petrol should flow in a single direction, either up or down, to the float chamber from the tank. The float chamber must have vent at the top, which should, if possible, open higher than the tank; it should have removable bottom and a means to shut off the petrol. The air passage should be easy and single, rather than multiple, and have a removable gauze to prevent unsprayed liquid reaching the engine. This passage should be adjustable to the engine speed by the amount of suction, and should open freely in a reverse direction to permit back explosion to escape. A dash pot must prevent fluttering with change of opening, so that the suction vacuum is closely constant. Provision for heating is necessary in cold weather or with low gravity liquids. A mixing device which meets these requirements leaves little room for improvement.

ROAD REPORTS.

"POLICE CONTROLS."—The Portsmouth road at Putney has again its measured distance over which the police are timing motorists. The trap at Bromley Common is now in almost daily operation. Police traps have re-appeared in the Maidstone district.

BRIGHTON ROAD.—Timing is taking place every week end at Reigate and Redhill, and the police are frequently engaged in timing cars between the 20th and 21st milestones.

SOUTHAMPTON.—The Southampton Borough Council has asked Mr. Sidney Tebbutt, M.I.Mech.E., of Freemantle Chambers, Southampton, to obtain information as to methods of treating roads for the allaying of dust. He will be pleased to hear from gentlemen having any special knowledge on the subject.

IRISH RELIABILITY TRIAL.

It has been decided to offer gold medals to the successful team of private owners entering in Section II., in addition to the team prizes already announced in Section I. Gold medals will be given on condition that at least three teams enter, and silver medals if two teams enter. These awards will be made to the team which obtains the highest total marks for reliability. In the event of a dead heat for reliability, the hill and speed test marks obtained by the cars in their respective price classes will be taken when making the award. No formula will be used when making out the hill climb and speed test marks in each class, the marks being given in proportion to the actual time taken in each hill climb and speed test.

ONE of the newest aids to motorists for dismounting and remounting covers is the "Talbot" lever shown by Maison-Talbot at Cordingley's Show.

It was reported that Mr. Charles Jarrott had tyre troubles when attempting to lower the world's records on the 13th Inst., and an impression has got abroad that Palmer cord tyres were used, but this was not the case. Another make of canvas-lined tyre which had not been tried previously was used.

MR. W. F. HINTON has joined Mr. F. Webster, Wells Street, Oxford Street, London, W., in the latter's business in second-hand motor-cars. Each partner will devote himself to the commercial and technical side of the business respectively.

As a guarantee of the faith which Vauxhall Motors, Limited, have in their products, they are offering to maintain and keep running their 12-16-h.p. Vauxhall, and take all risks regarding same, and also supply another car if the machine should be laid up for repairs, at an inclusive price per annum.

CLUBS AND ASSOCIATIONS.

MOTOR UNION.

A GENERAL conference of automobilists was held at the Hotel Cecil, London, on Wednesday (prior to the annual general meeting of the Motor Union), to consider the political situation so far as it affects motorists. The resolutions submitted were as follows:—(1) That this representative conference of automobilists is of opinion that additional taxation of motor-cars for the general purposes of revenue would tend to retard the development of improved methods of transit, and should be strongly opposed as contrary to the public interest. (2) That this conference strongly supports the recommendation of the Royal Commission on Local Taxation that financial assistance should be given by the State to local authorities for the purpose of improving the roads, and is of the view that taxation derived from motor and other vehicles should be administered by a central department as a grant-in-aid for highway purposes. (3) That in view of the difficulty of arriving at an equitable basis of taxation for motor vehicles this conference is of opinion that before any change is made in the existing basis there should be a public inquiry by a Departmental Committee.

At the annual general meeting which followed the Motor Union medals won during 1907 were distributed.

AUTOMOBILE ASSOCIATION.

AGAIN has the Automobile Association scored a great success at its annual dinner. This was held on Wednesday of last week, at the Hotel Cecil, London, when Col. W. J. Bosworth was supported by a large company of distinguished motorists, including Lord Montagu, Sir Henry Kimber, M.P., Messrs. L. Schlentheim, Charles Jarrott, Walter Gibbons, S. F. Edge, A. Harris, Herbert Smith, Amery Parkes, Charles Temperley, Captain Bennett-Stanford, J.P., Charles Cordingley, J. W. Orde, Ballin Hinde, Staplee Firth, Rees Jeffreys, and others.

The toast of "The Automobile Association" was proposed by Lord Montagu, in the absence of Mr. C. D. Rose, M.P., owing to the illness of his son. Responding to the toast, Col. Bosworth read letters of regret from the Earl of Onslow, Earl Poulet, Sir Charles B. Locock, Bt., the Earl of Plymouth, and the Earl of Orford, all of which contained expressions of appreciation of the work done by the A.A. Colonel Bosworth said when he first addressed them the A.A. numbered 300, in the following year they numbered 3,000. Now that 3,000 was doubled. The sphere of their operations had also been extended in the same satisfactory manner. Only £292 was spent on patrols during their first year, in the following year £1,964 was spent, and from May last down to date nearly £6,000 had been expended on patrols alone. 1,200 miles of main road were covered, and they had 1,500 road agents, 300 danger warnings had been erected at the expense of the Association, also nearly 1,000 village signs, and during the coming year it was hoped to largely extend this work. For the benefit of A.A. members wishing to tour on the Continent, triptyques were now issued, by virtue of which it was only necessary to make the necessary deposit at the A.A. offices before entering France, Germany, Holland, Belgium, Italy, or Switzerland, when all the usual inconvenience in passing through the custom houses on the frontier would be avoided. Their relations with the police became pleasanter as the A.A. grew older. The police now recognised the wish of the A.A. to help them in every reasonable way in restraining inconsiderate driving, and realised that the greatest assistance could be afforded them by the A.A. As an example: A man was recently knocked down by a motor-car and killed. The police communicated with the A.A., alleging that the driver had driven on without stopping to see what injury he had caused. Within a few hours that driver was being looked out for on 1,200 miles of road. Unostentatiously, the Association was undertaking an extraordinary amount of correspondence work in communicating with owners of cars observed to be driven inconsiderately. County councils had invited and obtained assistance in restraining inconsiderate driving at certain dangerous points in their counties. Such assistance was given willingly, for the A.A. had nothing to do with the hooligan driver and would not raise a finger to shield him from his just punishment.

Mr. S. F. Edge proposed "The Press," on whose behalf Mr. T. McDonald Rendle responded, and the toast of "The Visitors" was given by Mr. C. Jarrott.

Then followed—thanks to Mr. Walter Gibbons—an entertainment of an entirely unique character, which was thoroughly enjoyed by all.

AUTO-CYCLE UNION.

MR. ROBERT TODD presided over a large attendance at the annual meeting of the A.C.U. at the Imperial Restaurant, London, on Saturday. The chairman read the new agreement entered into by the A.C.U., showed that they had complete control over their own affairs, and set forth the advantages of associateship of the R.A.C. The treasurer, Mr. C. A. Smith, presented the balance-sheet, which showed the Union to be in a very good position. They had now £500 in hand.

It was decided to approach the Scottish Cyclists' Union with the view to inducing them to relinquish the control of motor-cycling sport in that country, so that the clubs and motor-cyclists there could effect their desire, and join the A.C.U. A similar course was adopted with respect to Ireland. It was decided to hold the council meetings four times each year, alternately in London and the provinces.

BASINGSTOKE.

MR. T. BAKER read an interesting paper on "Some Early Experiences with Heavy Road Vehicles," before the Basingstoke and District Motor Club, on the 11th inst. Mr. N. Endacott was in the chair, and mentioned that he shared many of Mr. Baker's early experiences.

Mr. Baker then described how he drove the very first steam wagon manufactured by Messrs. John I. Thornycroft in the red flag days. He also described an amusing incident in the Liverpool trials, when he was driving a heavy seven-ton steam wagon, the only fault of which was the difficulty in restarting on a hill, owing to lack of adhesion, and how, when negotiating a very stiff hill, a 6-h.p. Daimler van in front of him missed gear and came careering backwards down the hill. Knowing the extreme difficulty he would experience in restarting if he once stopped, and also the impossibility of steering clear of the runaway vehicle, Mr. Baker kept his wagon going, caught the van in the rear and carried it triumphantly to the top, much to the surprise and satisfaction of its driver.

Many other incidents contributed to a most interesting change from the usual more or less technical papers read before the club, and at the finish the speaker came in for a very hearty vote of thanks. Mr. Baker briefly replied and the meeting terminated.

SHEFFIELD AND HALLAMSHIRE MOTOR CYCLE CLUB.

A LETTER concerning the taxation of motor-cars has been sent on behalf of the members of the Sheffield and Hallamshire Motor Cycle Club to all the local members of Parliament, in which they speak as representing motor-cyclists of Sheffield and district to the number of about 400.



The Siddeley 10-h.p. Motor Cab.

"Motor-cyclists," says the letter, "have from the first been very unfairly treated. This was partly their own fault, because they had little or no organisation to represent them, and their case was looked after by the Motor Car Organisations, but so badly was their case put before the authorities that they were actually taxed higher in proportion than their more wealthy friends the car owners. In proof of this we will say that taking the average value of motor-cars weighing under one ton as being £350, and the average motor-cycle as £15, which is a very fair average, we find that the car owner pays 2½d. in the £ taxation on his car, but the motor-cyclist pays 1s. 8d. in the £, or to take it on percentage, we see that the car owner is taxed about 1 per cent. on value, but the motor-cyclist is taxed 9 per cent. This hardship is all the greater when it is seen that the motor-cyclists of to-day are not wealthy persons. Many machines are sold for £10 and under, and working men can afford to purchase them at this price, and make use of them as a means of getting to and from their work. They are also largely used by small traders for delivering goods, &c."

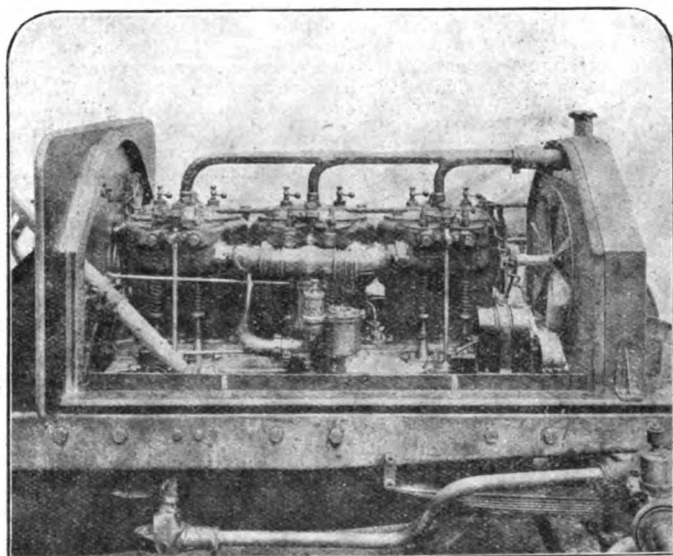
NOTTINGHAM.

ON Friday of last week the Nottinghamshire A.C. held an enjoyable entertainment at the Victoria Station Hotel, Nottingham. At the invitation of Mr. Charles Hardy, the president, an admirable series of bioscope views of motoring subjects was presented, and at the conclusion Mr. J. W. Orde proposed a vote of thanks to Mr. Hardy, which was seconded by Mr. Atkey. In the course of his reply Mr. Hardy made announcements with regard to the summer programme of the club, and referred with pleasure to the provincial meet of the R.A.C. to be held at Nottingham on May 9th. The Duke of Portland had accorded consent

for a drive to Welbeck, and, in addition, had permitted the club to use the Clipstone track for the trials on May 2nd.

JUNIOR.

THE opening run of the Junior A.C. takes place on Saturday, the 4th prox. The destination selected is Bognor, where hotel accommodation, with supper, bed, breakfast, and lunch the following day, has been arranged for members and their friends at a special rate.



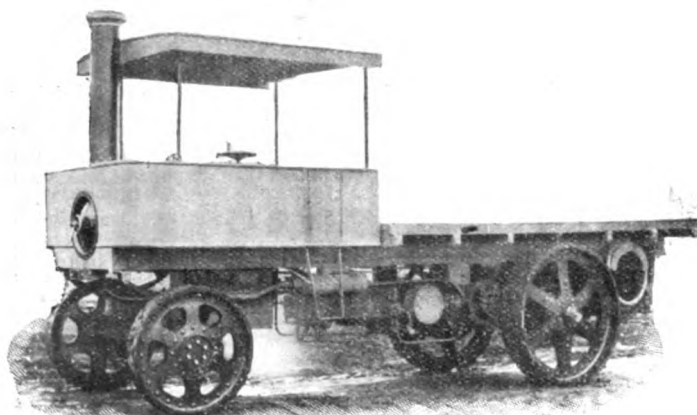
The Engine of the Weigel Six-Cylinder Car.

The cylinders have a bore of 130 mm. and a stroke of 140 mm., while the ignition is by low-tension magneto. The first car of this type was recently delivered to the Earl of Wilton.

The return to town will be on Sunday afternoon, with a halt at Horsham for tea.

HERTFORDSHIRE COUNTY.

THE Hertfordshire County A.C. has issued a delightful souvenir of the successful season enjoyed in 1907. This is illustrated with photographs of the various social and motoring events organised by the club. The results of the hill climb, &c., are also given, and the publication is an innovation in club literature upon which the hon. press secretary, Mr. A. J. Salmon, is to be congratulated.



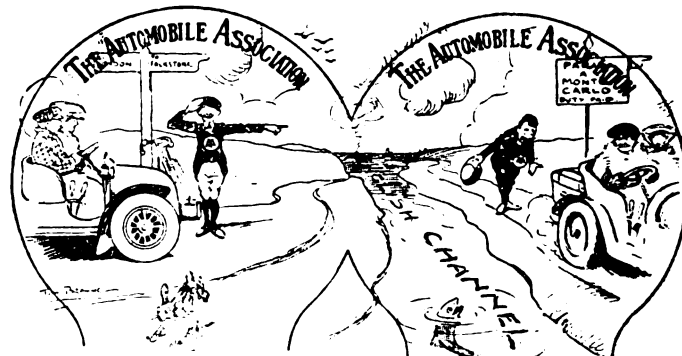
The Standard 5-ton Colonial Steam Wagon. (See last issue).

BROOKLANDS.

SUPPLEMENTING the programme of the Easter meet of the B.A.R.C. published in our last issue the following further races will be run:—The Sizaire et Naudin Cup over a three-mile course; the Spring Stakes of 5 sovs. each; the April Stakes of 50 sovs.; the Paddock Stakes of 5 sovs. each; the Tyre Change Plate of 30 sovs. and the first Brooklands motor-cycle race of 25 sovs.

MATERIALS OF MOTOR-CAR CONSTRUCTION.

IN the course of his paper before the Sheffield Society of Engineers and Metallurgists on Monday, Mr. A. W. Reeves, of the Sheffield Simplex Motor Works, dealt with the need for uniform powers of resistance relative to stresses imposed, and its bearing upon efficiency and economy of operation. It was the object of the designer to so distribute the material composing the detail parts that throughout the machine the ratio of maximum stress to the point at which rupture occurs was constant. In other words, the "factor of safety" should be constant for every part of the car. That expression, as a rule, referred to the ratio existing between the maximum load to the ultimate strength. Other factors, however, entered into the subject, which made that ratio absurd. The foregoing, he added, was necessarily an ideal only, which to approach as commercially possible was the aim of the designer, for, if it were possible, they would have a machine the useful life of every part of which would fail at approximately the same moment, hence when the machine came to the scrap heap it did so with every part at its minimum value. The stresses imposed on the mechanism of a motor-car were in many cases incalculable. In such parts as gear wheels, for instance, the stresses on teeth must often approach a maximum of 60,000 lbs. per square inch. He instanced a car striking a rut in the road—one wheel striking the rut sooner than the other, due to its diagonal direction—when travelling at, say, thirty-five miles per hour, and said that the impact on the steering gear was tremendous. The blow might not reach the point of rupture of the material, but they must remember that that sort of thing was taking place scores of times during the day's run, and it was the repeated stresses which told. So long as a car was running swiftly and smoothly the stresses acting upon the shafts, gear, &c., were very nearly constant, and energy was being furnished by the motor at practically a uniform rate. When, however, the engine was hardly pressed to meet the demands for the requisite energy under a given condition, the stresses acting upon all parts of the car's mechanism were



Mr. Tom Browne's Impression of the A.A.'s Latest Development in the way of Continental Touring Facilities.

justly in an extreme degree, and the loads thrown upon the parts varied widely from severe driving stresses during the height of the explosion stroke, to slight driving efforts, or even, perhaps, negative efforts, at the end of compression stroke. Of course they knew the multi-cylindere engine did much to alleviate that, but it was a factor to be considered all the same. A part which demanded their closest attention, he said, as regarded the stresses in play and the physical properties of the material to be employed was the crank shaft. It was questionable whether medium grade carbon steel did not give as good results as chrome nickel steel. In any case, the factory costs were reduced by using the medium grade. As to the making of cylinders, the point was whether the reverberatory furnace did not give better results than the old cupola method of casting. Too much care could not be taken in the quality of metal used if success was to be obtained in the making of cylinders. With regard to gears, what they wanted was a steel which need not be case hardened, whilst retaining its properties to resist wear, thus getting away from the deformation due to treatment. He laid stress on the strength of some of the special aluminium alloys, which were very much in excess of those thought obtainable, an alloy having a tensile strength of 30,000 lbs., with an elastic limit of 16,000 lbs., 2 per cent. elongation, being easily obtainable. With regard to steel castings, it was thought that much more might be done in this connection for motor-car manufacturers.

ONE of the features of this year's season at Biarritz is the great number of Daimler cars in the town. There were eight at the same time at the golf links the other day, and at the races last week, out of forty-two cars in the motor enclosure, six were Daimlers.

THE MOTOR ACCESSORIES COMPANY, of 55, Great Marlborough Street, London, W., have been appointed sole concessionaires for the British Isles of the well-known exhaust whistle, which they have been selling for some time past under the title of the M.A.C., and which will also in future be known by that name.

CASES UNDER THE MOTOR CAR ACT

THE VALUE OF A SPEEDOMETER.

WALTER MIDWINTER, a chauffeur in the employ of the Daimler Company, has been summoned at Woolwich for having driven a motor-car at an excessive speed at Charlton Road, Westcombe Park. Defendant said that the speedometer did not register a higher speed than twenty miles, and this was corroborated by Mr. Colin Wilkinson, an engineer in the employ of the company, who was in the car. This witness stated that he knew there was a police-trap in Charlton Road; that was if he could believe the word of a policeman, for a policeman told him of it. Mr. Knight (prosecuting for the Commissioner) asked the witness for the name and number of the officer. After a protest, the witness said he could not give the name and number, but he believed he could identify the constable. On the day of the alleged offence he had been to Woolwich Police-court, and before leaving asked a constable near the door if he could avoid the tram-lines on the lower road. The constable advised him to go over Blackheath, and witness observed to the chauffeur that there was probably a "trap." With a laugh, the constable said, "As a matter of fact, there is—in Charlton Road." The summons was dismissed.

ALLEGED NEGLIGENT DRIVING.

Oswald Belt, of Hartham Road, Isleworth, was summoned at Brentford for negligently driving a motor-car at the Powder Mill Bridge, Staines Road, near Bedfont, on January 28th last. Mr. Staplee Firth

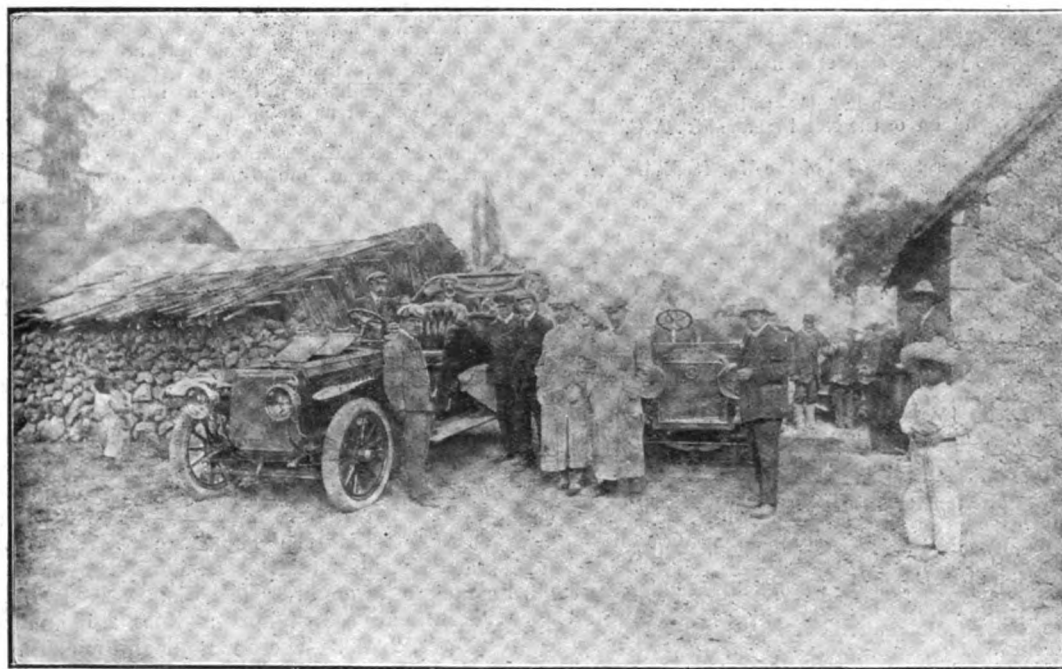
INTERNATIONAL TOURING CAR TRIAL.

THE Anglo-American Motor-Car Company, Ltd., have entered a 10-h.p. Cadillac car in class 2B; Messrs. Brown Bros., Ltd., have entered a 25-30-h.p. Brown car in Class 5; the Daimler Motor Co. (1904) Ltd., two 35-h.p. Daimlers in Class 7; the Hillman-Coatsen Motor Car Co., Ltd., a 54-h.p. Hillman-Coatsen car in Class 7, and one of 12-15 h.p. in Class 4.

AUTOMOBILE ACCIDENTS.

A MOTOR CAB, in which Lord Marcus Beresford was riding, was entering the centre of Enfield recently, when it was suddenly confronted by a van at right angles. To avoid a smash the driver turned sharply, and the car skidded, with the result that one of the off wheels fell to pieces, while the vehicle was only prevented from falling across the pavement by coming in contact with a tree.

A SERIOUS motor-car accident occurred at Andover the other morning. A horse and trap, driven by a man named Hounslow, coachman to Messrs. Tasker, of Waterloo Iron Works, was passing over the cross roads, and before getting clear a motor-car driven by Mr. Moore, jun., of Andover, collided with the trap, with the result that Hounslow was thrown out, and sustained injuries to the head. He was removed to hospital.



Motoring in Mexico.—A Halt at San Mateo (Xalpa).

[El Automovil en Mexico.]

defended and the prosecution was conducted by the police. The defence was a denial that the man was injured by the motor. A friend of the defendant, who was in the car, said that defendant took the only possible course under the circumstances, and had the driver of the wagon who was injured had control of his horses the accident would not have occurred; the man was not struck by the motor, he was thrown against it by the wagon. Mr. Sharpe said the defendant had committed an act of negligence. As the case was not serious, however, they would only impose a fine of 1s., but the defendant must pay £5 as compensation to the injured man Whitmore, and it would be understood that the latter should take no further proceedings. A further £1 was ordered to be paid to the witnesses.

LEAVING MOTOR-CAR UNATTENDED.

For obstructing the free passage of the highway at Christchurch Street East, Frome, by leaving a motor-car thereon for 45 min. (from 12 noon), Archibald Hobbs has been fined 10s. and costs at the Frome Petty Sessions.

EXCEEDING LEGAL LIMIT.

At the South-West London Court, on Monday, Viscount Curzon personally attended to a summons, before Mr. de Grey, charging him with driving his motor-car at an excessive rate of speed. P.C. Walton and another officer timed his lordship over a measured distance on the Portsmouth road, Putney, on the 7th inst., and his rate of speed was 29 miles an hour. Viscount Curzon denied that he exceeded the limit, and justified his conclusion by the fact that he was able to pull up in the car's length. The magistrate imposed a penalty of 30s., with costs.

THE UNITED MOTOR INDUSTRIES, LTD., have heard from a Salisbury motorist who has had Castle accumulators in use for four years without having any trouble.

THE London branch of the graduates' section of the I.A.E. has arranged a full programme as far ahead as May, 1909. This includes visits to various motor-car works, a tour of motor factories in the Midlands, to start on July 10th, and various papers for the winter session, which will open in October next.

THE Sheffield-Simplex agency for Northumberland, Durham and Cumberland has been recently taken up by the well-known firm of Sir Wm. Angus, Sanderson and Co., of 65, Westgate Road, Newcastle-on-Tyne.

MR. H. C. WILLSON, who has been works manager and buyer for the past seven years to the Wolseley Tool and Motor Car Company, Ltd., has now taken on the representation of several Birmingham and Coventry houses in motor components and machine tools, &c.

TEXALEINE is being exhibited at the Cordingley Show by the Texaleine Company, Ltd., 33, Chancery Lane, E.C. This is admirably adapted for cleansing the paint and metal work of automobiles.

THE repair works which Messrs. Stuart Morrison and Co. have established in London are able to cope with every demand that may be made upon them, although they are at the present moment fully engaged retreading "Durandal" bands. This band was first manufactured as far back as 1899. It has altered very little since it was first manufactured. A new price list has just been issued from 199, Piccadilly, London, W., from which we notice that prices have been reduced.

FORTHCOMING EVENTS.

MARCH.

- 27th (F.) and 28th (S.).—Closing hour 9 p.m.
CORDINGLEY'S THIRTEENTH INTERNATIONAL MOTOR-CAR EXHIBITION
 at the Royal Agricultural Hall, London.
 29th (Sun.).—Opening Run of the Southend Motor Club to the White Hart Hotel, Witham.
 31st (Tu.).—Last day for receiving entries, at ordinary fees, for the International Touring Car Race.
 Entries at ordinary fees for the Scottish Reliability Trials close at noon.

APRIL.

- 4th (Sat.).—Auto Cycle Union dinner to road-menders on the Ripley road at the Anchor Hotel, Ripley.
 11th (Sat.).—Annual open Flexibility Contest of the Crystal Palace A.C.
 Opening meeting of the Nottinghamshire A.C. at Edwinstowe.
 16th—20th.—Easter Tour of the Motor Cycling Club.
 17th (Good Friday).—Linca. M.C.C. meet at Mablethorpe.
 18th and 20th.—First meeting of the Brooklands A.R.C. for 1908.
 25th (Sat.).—Open Motor-Cycle Hill Climb of the Hertfordshire C.A.C.
 Opening meet of the Yorkshire A.C. at the Hotel Majestic, Harrogate.
 25th (Sat.) to May 25th.—Industrial Vehicle competition of A.C.F.
 26th (Sun.).—Southend M.C. run to Thatched House Hotel, Epping.

MAY.

- 1st (F.).—The Frome's Hill Climb of the Herefordshire A.C.—provisional.
 2nd (Sat.).—Impromptu pace judging competition of the Sheffield A.C. at Ollerton.
 9th (Sat.).—First provincial meet of the R.A.C.—to be held at Nottingham, by invitation of the Nottinghamshire A.C.
 10th (Sun.).—Targa Florio Race.
 16th (Sat.).—Fifty miles Consumption Trial of the Hertfordshire C.A.C.
 21st (Th.).—Reliability Trial of the Irish A.C.
 23rd (Sat.).—Clipstone race meeting of the Notts A.C.
 Meeting of the Yorkshire A.C. at Helmsley.
 25th (M.).—Industrial Vehicle Competition of the A.C. de France.
 28th (Th.).—Visit of the Aero Club to Aldershot.
 30th (Sat.).—Meet of the Herts C.A.C. at Hatfield Park.
 31st (Sun.).—Southend M.C. run to Saracen's Head Hotel, Dunmow.

JUNE.

- International Aeronautical Federation conference in London.
 5th—6th.—London-Edinburgh twenty-four hours' run of the Motor Cycling Club.
 8th (M.).—Cars competing in the International Touring Car Trial will arrive at the depot.
 Start of the International Touring Car Trial of the R.A.C.
 9th (Tu.).—Touring competition for Prince Henry of Prussia's prize begins.
 13th (Sat.).—Hill climb of the Notts A.C. at Oakamoor.
 16th—19th.—Scottish Reliability Trial.
 20th (Sat.).—Meet of the Hull Auto Cycle Club and the Lincolnshire Motor Cycle Club at Brigg.
 27th (Sat.).—Hill climb of the Midland A.C. at Shelsley Walsh.
 Saltburn beach races.
 28th (Sun.).—Southend M.C. run to Grand Hotel, Clacton.

JULY.

- The Land's End to John o' Groat's Trial of the Auto C.C. will be held.
 6th (M.).—Grand Prix A.C.F. (Voiturette section).
 7th (Tu.).—Grand Prix A.C.F. on the Dieppe Circuit.
 16th (Th.).—Club meet of the Notts A.C. at the Hop Pole, Ollerton.
 18th (Sat.).—Annual Gymkhana of the Herts C.A.C. at The Grove, Watford, by permission of the president, the Earl of Clarendon.
 25th (Sat.).—Petrol Consumption Tests of the Motor Cycling Club.
 Annual Open Hill Climb of the Midland A.C.
 26th (Sun.).—Southend M.C. run to Coach and Horses, Quendon.

AUGUST.

- 29th (Sat.).—Meet of the Lincolnshire Motor Club at Lincoln.
 30th (Sun.).—Southend M.C. run to Great White Horse Hotel, Ipswich.

SEPTEMBER.

- 5th (Sat.).—Aston Hill climb of the Herts C.A.A.
 27th (Sun.).—Southend M.C. run to White Hart Hotel, Braintree.

LIGHTING-UP TIMES—LONDON.

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|----------------|-----|-----------|----------------|-----|----------|
| Mar. 28th—7.24 | ... | 30th—7.26 | April 1st—7.28 | ... | 3rd—7.30 |
| ,, 29th—7.25 | ... | 31st—7.27 | ,, 2nd—7.29 | ... | 4th—7.31 |

Secretaries of automobile clubs are invited to forward their programme of fixtures as soon as arranged.

BUSINESS NEWS.

BEFORE the Ipswich Engineering Society, last week, Mr. C. C. Morris read a paper on petrol engines and motor-buses.

PRATT's motor spirit was used during the 500 miles run of the three Cadillac cars on the Brooklands track in connection with the recent standardisation trial.

MR. B. C. JOY and Mr. Duncan Watson are hon. consulting engineer and hon. consulting electrical engineer to Messrs. Trevor, Ltd., the specialists in motor tuition, of 162, Great Portland Street, London, W.

THE Midland Rubber Company, of Ryland Street, Birmingham, have issued a new price list of their "Midland" motor tyres, "British" non-skids and motor rubber accessories. Several reductions are notified.

THE Motor-Car Equipment Company, of 55, Warren Street, New York, have just issued their 1908 catalogue of automobile supplies. Over 2,000 items are illustrated, described and priced, so that the list should be in the hands of every motor dealer and motorist.

WITH reference to the order for De Fornier tyre protectors for the self-propelled vehicles of the London Fire Brigade, reported in our last issue, Mr. W. J. Mayer, Chapel Place, Brompton Road, London, S.W., who introduced these protectors to this country, informs us that the contract was for five new sets for 4 in. tyres.

A COMBINATION which should be productive of a firm of all-round ability and absolute integrity is that of Lieut. R. G. L. Markham, M.I.Mech.E., M.I.A.E., late R.N., and Mr. H. Waymouth Prance, A.I.E.E., A.M.I.A.E., who have entered into partnership as consulting motor engineers (land and marine) at 143, Strand, W.C. Lieut. Markham is well known as a marine motor engineer, and has in addition had an experience in commercial motor vehicles dating back many years. Mr. H. Waymouth Prance has for some time past practised as a consulting automobile engineer, and his services have been made use of by many of our readers in the matter of expert examinations of second-hand cars. Messrs. Markham and Prance will, in addition to carrying out expert examinations, supervise maintenance, select second-hand cars, commercial vehicles and motor-boats, including superintending shipping for colonial clients, give technical and driving instruction, supply new cars, commercial vehicles, motor-boats, &c., of any make, and act as advisory engineers for the protection of clients' interests in land, marine, and air motor matters of every kind.

TO-DAY (Saturday) the Motor House will conduct auction sales in the Gilbey Hall of the Agricultural Hall, London—a new feature in connection with the Cordingley Motor Show, which should attract a considerable number.

WRITING of the Cordingley Motor Show, which has been open all the week and which closes at 9 p.m. to-day (Saturday), the "Motor Trader" says that "it seems clear that greater results have been attained by privately organised effort than the less elastic methods of the concrete trade associations concerned."

AS regards the New York-Paris run the latest news is to the effect that the Thomas car arrived at San Francisco on Tuesday, March 24th. The Thomas car has now placed 3,832 miles to its credit. The distances covered by the other competitors are as follows:—Zust, 2,636 miles; De Dion, 2,390; Protos, 2,226. There is no definite news as to the whereabouts and progress of the Motobloc.

TO CORRESPONDENTS.

All communications intended for insertion in this Journal or relating to Editorial matters should be addressed to THE EDITORIAL DEPARTMENT, MOTOR-CAR JOURNAL, 27-33, Charing Cross Road, London, W.C., and must be written on one side of the paper only. Letters must in all cases be accompanied by the name and address of the writer, as no notice will be taken of anonymous communications.

The Editors cannot undertake to return MSS. or drawings, although every effort will be made to do so in the case of rejected communications. Where such are regarded as of value, correspondents are requested to retain copies.

The Editors do not hold themselves responsible for the opinions expressed by their correspondents, or for statements and facts which do not appear in the editorial columns.

To insure insertion communications and contributions must be in the Editors' hands by Tuesday forenoon of the week in which the same are intended to appear. Disappointment may be caused by non-compliance with this rule, and to avoid this earlier receipt, if possible, is necessary.

Photographers, both professional and amateur, are invited to send photographs of current events or of motoring scenes and incidents. The fee, if any, required for reproduction should be stated in each case, otherwise no liability will be accepted.

The Editors and Publishers beg also to state that they will accept no responsibility for unsolicited contributions, even if used, unless payment for same is directly specified in forwarding, and the terms arranged before publication.

THE Motor-Car Journal.

VOL. X.]

LONDON, SATURDAY, APRIL 4, 1908.

[No. 474]

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COMMENTS.



A CASE which has its interest for motorists generally has occurred at Pontefract, where a farmer was summoned on the information of a motorist for having created a highway obstruction by leaving hedge clippings on the road. The chauffeur to Mr. Rosslyn Halliday, of Featherstone Hall, said that he was journeying along the highway and the motor-car he was driving met with a puncture in consequence of the thorns on the highway. Going along the same place a week later he saw the thorns were still there, and reported the matter to the police. At the hearing of the case the magistrate's clerk said he failed to see how the thorns could be an obstruction. True, he observed, they were very objectionable, but hardly constituted an "obstruction" in the legal sense. Fortunately, the Bench, although they did not consider the particular case in question a serious one, were sufficiently awake to the possibility of its danger to inflict a small fine on the delinquent. The practice of leaving hedge-clippings on the highway, to be blown often for miles and cause untold injury to tyres, is so frequent that we are always glad to learn that motorists recognise the general benefit they can confer on the movement by taking action against people responsible for such ill-considered actions.

Lights on Motor-cars.

CONSIDERABLE activity seems to have followed the operation of the Lights on Vehicles Act, 1907, and although it is not concerned with motor vehicles, which are regulated, so far as lamps are concerned, by their own Act, the police appear to have made it an occasion for increased vigilance with regard to motorists. At Handsworth, near Birmingham, a driver of a car was fined for leaving his vehicle outside his house without providing it with proper lamps; and at Oxford a similar case has been brought before the courts. The matter is perhaps only a small one, but we would again emphasise to motorists the necessity of giving heed to this question, as neglect may not only mean enforced attendance at the police courts, but endorsement of the licence without magisterial option.

Motor-Cars in Municipal Service.

Now that several departments in connection with leading municipalities of the country are utilising the motor-car for their officers when engaged on visits of inspection and the like, the organisation of the service with a view to the allocation of expenses to the proper quarter is matter requiring some consideration on the part of the authorities. At Glasgow the Corporation recently appointed a special committee to frame regulations with a view of drawing up a scheme by which the total cost of each car should be charged proportionately to the department of the Corporation according to the number of miles which it has run in that particular service. They have now completed their labours, and in future the words "Corporation of Glasgow" are to be printed in letters of the same size and distinct-

ness as the existing identification mark. All cars attached to various departments are, in future, to be kept at the depots of the Tramways Department and put at the call of any of the Corporation officers, irrespective of their particular work in the past. To each vehicle a speedometer and milometer is to be affixed, so that at the end of the year the total mileage can be ascertained. The total cost of the running will be taken and the proportion of expenses charged to each department on the basis already mentioned. These regulations seem well framed to secure their end, and should also prevent, what has been heard of on this side of the Border, viz., the use of municipal motor vehicles for private enjoyment.

A Yorkshire Incident.

ONE of the incidents that bring ridicule upon the present position of automobile legislation occurred at Darlington a day or two ago, when the driver of a motor-car was summoned for exceeding the legal limit near that town. He was fined three guineas, although the evidence of the two constables who worked the trap in which he was caught prove that he was only driving at the rate of 20 miles 800 yards per hour. Granted that the apparatus was accurate, and the evidence of the police equally correct, the defendant was so little beyond what is allowed by the law that the result seems almost to savour of southern vindictiveness. So rarely have we had occasion to call attention to this phase of the matter in Yorkshire that we would suggest that the county automobile club might well take notice of any future occurrences of the kind, especially if they show any tendency to become general.

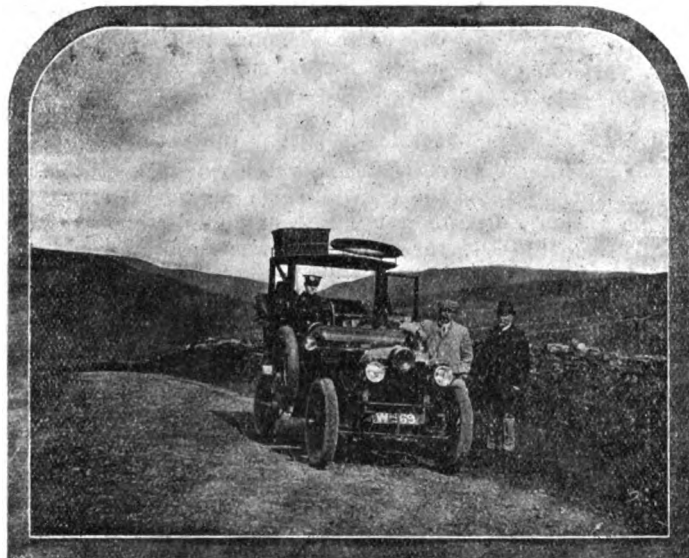
The Progress of Automobiles.

FULL of interest was the lecture which was given on "Recent Developments in Power Traction on Roads," by Sir J. H. A. Macdonald, K.C.B., to the members of the Royal Scottish Society of Arts a few evenings ago. He pointed out the advance as shown by the number of motor vehicles on the road and the multiplicity of journals concerned with the progress of the industry. It was a fact, which he had ascertained by his own observations in Edinburgh, at the hour of the morning when people were using their vehicles to go to business that the number of private motor-cars was greater than the number of private carriages. Taking twelve consecutive days, excluding Sundays, he saw on his mile walk in the morning fifty-two private motor-cars to twenty-three private horse carriages. Sir John had seen an even more marked advance during a week in the metropolis. He had observed that the numbers on the embankment from about twenty minutes to 10 a.m. to about half-past 10 o'clock were 1,011 motor-cars to 478 carriages. The idea that the motor vehicle was a luxury of the rich, and not a useful aid to the community, had been completely exploded, reference being made to the announcement given in a recent issue of the *M.C.J.* to the fact that the managers of the new Bangor Asylum had by a majority of twenty-four to four passed a resolution for the purchase of a motor vehicle as "necessary for the proper working of the institution." He noticed, too, almost daily the ambulance in front of the chambers of the Medical Officer of Health, and the Lord Provost had informed him that the paupers who were going to the House at Craiglockhart had a motor-car

provided to take them there; thus from the King downward the community were being driven in mechanically propelled vehicles.

The Influence of Brooklands.

ON the 25th ult. Mr. S. F. Edge read a paper before the Midland Automobile Club at Birmingham on some lessons which he has learned from the Brooklands track. First among these is the fact that with regard to tyres a certain degree of inflation is the most important point as against the previous instructions which were summed up in the words "pump hard." 100 miles of Brooklands track is, according to this authority, equivalent to something like 1,000 miles of ordinary running on the road, where tyres are concerned. So far as the improvement of engine cooling is concerned Brooklands should have a good effect. Smaller radiators can be used there than on the ordinary road owing to the high speeds attained forcing an enormous volume of air through the radiator. Mr. Edge then went on to refer to the various experiments he has carried out, and which have been previously chronicled in the *M.C.J.*, with regard to wind resistance, &c., concluding with an expression of opinion that the maintenance of Brooklands as a racing centre will constitute an important factor in the supremacy of the British automobile industry.



The 28-h.p. Daimler Car belonging to Dr. Sinclair White, of Sheffield, at the summit of the Buttertub Pass, between Swale Dale and Wensley Dale, in Yorkshire, 1,760 ft. above sea level. The owner is accompanied by Dr. Norman Walker, of Edinburgh, and Sir James Barr, M.D., of Liverpool.

Taxation and Prosperity.

NOT often do the gentlemen who perform formal opening ceremonies in connection with exhibitions show such a practical acquaintance with the object in view as did Sir John Bell, the Lord Mayor of London, in opening the Exhibition at Olympia on Friday of last week. Doubtless the very appropriate speech he made was inspired by the fact that he is a motorist, the happy possessor of a couple of good cars. He believed the motor-bus would, despite its rattle and its rumble, out-stay the tramcar. Touching on the taxation question, he trusted that neither this nor any other Government would penalise the rising automobile industry, for assuredly it would be undesirable for legislation to check its progress in any way. He would like to see the motor business take a very prominent part in the manufactures of this country. It had been proven already that, given the opportunities, we should be able to achieve that end. It was gratifying to hear Mr. E. Manville, as president of the Society of Motor Manufacturers and Traders, declare it to be the

opinion of that organisation that it was against all traditions of public policy to tax methods of locomotion, particularly when one class was singled out from the others. The effect which increased taxation might have was likely to be serious and far reaching, for it should be borne in mind that the industry employed several thousands of skilled workers in these islands, who would be the first to feel any check in the development of the movement.

A View to Urge.

THIS point as to the effect on industry any further taxation is one that should be kept well to the front. As Sir J. H. A. Macdonald pointed out the other day, the British motor movement was greatly handicapped by legislation a few years ago, and now that it has attained a position of prosperity scarcely seems an opportune time to give it a set-back. This is a point of view that should be appreciated by every section of the House of Commons, and the Parliamentary Motor party should take steps to bring it before all M.P.'s—whether Conservative, Liberal, or Labour.

Military Aeronautics.

THE retirement of Col. J. Templer from the Royal Engineers' balloon establishment at Aldershot on Monday is an event of national importance, for he has always taken an enthusiastic view of his duties. It was as long ago as 1877 that he put forward his plans for military aeronautics to the British authorities, and ever since he has been experimenting with aeroplanes, dirigible balloons and the like. Under his supervision "Dirigible No. 1" was built, this, it will be remembered, being the airship in which Col. Capper and Mr. S. F. Cody came from Aldershot to London last year. Throughout his official career Col. Templer constructed about a thousand balloons for the Army, and it is gratifying to learn that he intends to continue his study of aerial navigation. That his interest has in no way abated was shown last week, when he, with several other officers, made careful investigation of the exhibits at the Agricultural Hall, and spent some time on an examination of the eight-cylinder engine described on another page.

Lowestoft's Measured Mile.

MEASURED distances on the highway, as set forth by official order, are so generally suggestive of motorphobia that we heard with some perturbation that the Lowestoft Corporation was considering similar provision of a measured mile within its boundary. On inquiry, however, we are glad to discover that the matter is entirely a friendly one, and that the relations of the authorities of that town with motorists, are, to say the least, satisfactory. It appears that the Corporation has put down an accurate and plainly indicated nautical mile immediately north of the Ness Point, for the purpose of determining the speeds of motor-boats and power craft generally. This is an innovation that will be appreciated by motor-boatists, seeing that there is no sinister intent.

Taxation.

As we were going to press last week the Motor Union was holding a conference with regard to the subject of taxation, and the resolutions published on page 109 of our issue of the 28th ult. were unanimously approved. Lord Montagu announced that they might take it as a fact that the Chancellor of the Exchequer intended to impose extra taxation, however much they protested. This is a view to which we ourselves have given expression; and hence the point so freely urged that the first thing for motorists to insist upon is that such a step may have a disastrous effect in retarding the progress of the industry. We are not alone in this opinion, for at a largely-attended meeting of the general committee of the Scottish Automobile Club it has been resolved "that increase

of the present taxation of motor vehicles is unjustified." The committee followed this resolution with another to the effect:—"That, meantime, action on the part of the Club is inexpedient and uncalled for, but that the matter be remitted to the executive to take such steps, if and when, such additional taxation is proposed, as may seem to them proper to submit the views of the Club to the House of Commons, and to bring the influence of the members to bear individually upon their representatives in Parliament."

Irish Reliability Trial.

WHEN arranging the route for Irish Reliability Trial, the committee were anxious to include a suitable strand for a speed contest, in addition to hill climbs. It was also thought that the pleasure would be increased by including Killarney in the route, without in any way minimising the severity of the trial. With the former object in view it was at first thought advisable to run direct to Portrush, for a speed test on Magilligan Strand, returning to Dublin next day, and proceeding to Killarney on the following day. It has been realised, however, that three long daily runs following one another would impose unnecessary hardship on the drivers, and the Committee have been actively engaged in prospecting for a course suitable for the speed test which would obviate the three long daily runs of over 170 miles which the Portrush route would entail. Having ascertained that the strand at Rossbeigh, in Dingle Bay, co. Kerry, is quite as suitable as Magilligan Strand for a speed test, the Committee have decided in favour of the former. In order to reach the strand at low tide in the afternoon and to give a Sunday in Killarney, it will be necessary to proceed southward to Cork on Friday, May 22nd, reaching Rossbeigh Strand on the following afternoon, after which an hour's run will bring the cars to Killarney. This alteration in arrangements involves a change in the date of the commencement of the trial, which will not now commence until Friday, May 22nd (instead of on the previous day, as originally intended). This alteration will also permit of Belfast being included in the itinerary.

The Accident at Albourne.

AN unfortunate accident which occurred on the Brighton road on Sunday, causing serious injury to the passengers of a motor-car, is, as we write, the subject of police investigation. The accident took place at Albourne, and an examination of the wheel marks shows that the damaged motor-car was about a foot off the road, on the roadside turf, for some yards before the accident happened. To avoid collision with a hedgerow at a lane corner it was necessary for the chauffeur to get upon the road again, and at this point the overtaking car passed. The wheel marks then show a semicircle across the road to the ditch into which the damaged car was thrown. The driver of the latter vehicle has stated that he was travelling at a speed of about twenty miles an hour, and the deviation of his car off the road on to the turf was in anticipation of the passing of the faster car. The contact between the two was but "a touch"—possibly unfelt by the fast-travelling car, but sufficient to affect the steering of the car which came to grief. It is for a light-coloured vehicle that the police are now searching.

The International Touring Car Trial.

Now that some idea of the entries for the International Touring Car Trial is available, interest in that event should gradually quicken. The paper by Mr. Claude Johnson which has been read to the members of the R.A.C. will contribute to that end, and those who will participate in the test in any capacity, whether as competitors, drivers, observers, or passengers, will doubtless study it exhaustively. The general motoring public will be satisfied with a less thorough investigation of his review of the conditions of the Trial. The initial references in connection with the event were as to the definition of a car of a certain horse-power carrying a minimum number of passengers,

weighing not more than a certain weight, measuring a certain distance from the dashboard to the centre of the back axle, and presenting to wind resistance a minimum area in respect of body and wings. Subsequent discussion having settled the details of those four points, a process of elimination of various proposals brought the Trial to one of 2,000 miles of road travel, including twenty miles on hills and 200 miles on the Brooklands track, and the incorporation of the Scottish A.C., which latter, however, can also be entered as a separate event. Mr. Johnson gives the view of the motoring authorities that the Trial will correspond as nearly as possible with a race, subject to conformity with the law, and declares that it will (1) demonstrate which cars can run regularly, and (2) which cars of their class can ascend hills fastest; further, it will prove to what extent an owner must expect delay in his travels by reason of the necessity of replenishing the fuel tank, and, fourthly, it will demonstrate durability and resistance to wear and tear and to road shocks. With reference to the alleged severity of the Trial for small cars, Mr. Johnson showed that some of the manufacturers are of a different opinion, and concluded with regarding the forthcoming Trial as "the most practical, most enlightening, most comprehensive, and most important motor competition in the world."



Touring in Holland.—The Montalbanstoren, Amsterdam.

ON Tuesday, Mr. John Miles conducted an auction sale of carriages and motor vehicles at the Baker Street Bazaar, Portland Square, London, W.

ON Saturday the crew of the Newhaven motor-lifeboat were summoned for their quarterly practice. The boat was at sea about two hours, behaving splendidly.

THE motor course of the Brooklands A.R.C. will be re-opened to-day (Saturday) at 10 a.m. At 4 p.m. a private handicap sweepstakes will be run off over a distance of twenty-two miles.

MESSRS. MANN AND OVERTONS, LTD., the British agents for the Unic vehicles, have now arranged to supply their 12-h.p. motor-cabs to cabdrivers on the extended payment system, an arrangement which will enable individual drivers to run their own vehicles.

LAST week a strange adventure befell the 40-h.p. Napier car belonging to Mr. Marshall Roberts, of Easton Hall, Grantham. It was being driven home from Dereham, in Norfolk, and when at PODE Hole, about two miles from Spalding, had to cross several bridges over the watercourses that intersect the Fens. Crossing one of these bridges the car struck the masonry, carrying away about seven feet of it, and causing the car to overhang the parapet. In that perilous position it remained several hours, until, hoisted by ropes and pulleys, it was again placed on *terra firma* in a much damaged condition. Fortunately no one was hurt.

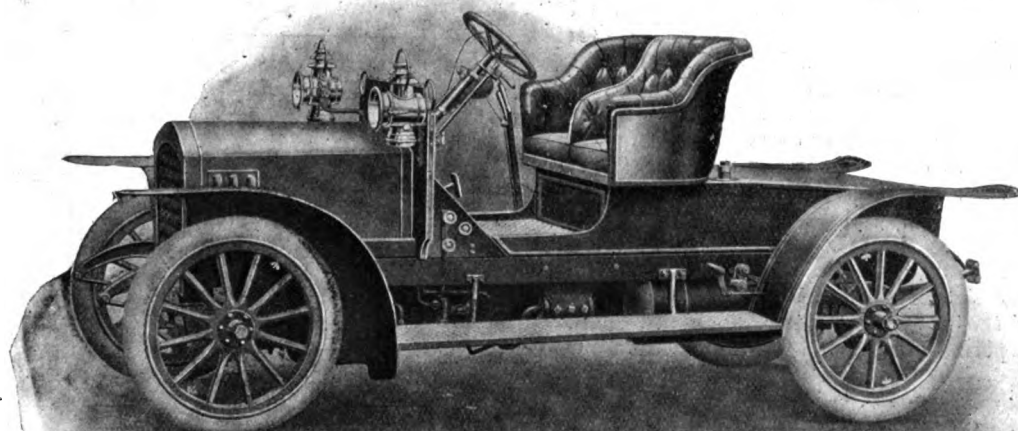
THE TAXATION QUESTION.

To tax, or not to tax; that is the question;
Whether 't is wiser on the car to suffer
The present ills in quiet subjection;
Or to anticipate a sea of troubles,
And showing fight, stop them? To speak; then silence,
No more: and, by a speech, to think we end
The matter, and all the incidental shocks
The road brings to us, 't is a consummation
Devoutly to be wished. To speak—then silence
The end! perchance our ruin: aye, there's the rub;
For in those silent hours what schemes may rise.

IN like manner Hamlet, had he been a motorist, might have soliloquised over the present aspect of the motoring body politic. There is no advantage in disguising the fact that the subject of further imposts on motorists has been mooted; that the Chancellor of the Exchequer has his eye on the motorist and—figuratively, of course—intends putting his hand into his pocket; that the motorist, by suggesting a use to which further taxes should be put, has given colour to the justice of increased licence fees—and that, altogether, the present unsatisfactory outlook is largely of his own making.

the Treasury is being strengthened in its desire to plunder the speediest portion of the community.

Of course it is alleged that the negative position is absurd and that the proper method of agitation is (1) to say we do not want more taxation, and (2) that if we are taxed we ought to have the disposal of the revenue. This is almost on a par with the victim of some Macedonian brigand suggesting (a) that he does not want to be robbed, but (b) if he is to be divested of his possessions he would like them handed over to a hospital or some other good cause. Surely the matter should be brought into the plane of justice and equity, and the whole subject dispassionately reviewed with a view of doing nothing to hinder a rising industry. If it can be shown that increased taxation is likely to lessen the demand for British productions, to check the advance of an important trade, and to prevent a development that recent progress has led us to expect, then no Chancellor of the Exchequer is justified in knowingly suggesting such an imposition. These points have been brought out in the *M.C.J.* from the commencement of the agitation; they will be considered in further detail next week in view of the near approach of the Budget.



The Turner-Miesse 10-h.p. Two-Seated Steam Car.

The anxiety of the various motoring organisations, and each goes one better than the others, has resulted in the current uncertainty; and many believe that the correct attitude has been expressed by the Scottish Automobile Club, which, having declared against further taxation, declines to modify its view by suggesting how further sums could be utilised. The impression is about that the motorist wants better roads, and is willing, nay anxious to contribute to their cost, and that the Chancellor will meet their wishes by taxing them pretty stiffly. In fact, there are some folks who believe that the motoring world will be disappointed if further taxation is not levied. That is the position; and how the motorist is to extricate himself from the *impasse* is now the problem. The conference last week presented no solution; in fact, it revealed an apathy and weakness that is not encouraging.

Apparently it was thought that the desire to tax motorists could be suppressed by a speech, or a few utterances and letters. But the subject once set afoot, "What schemes may rise?" Therein lies the damage, for all kinds of proposals are being made for the allocation of the new funds to be obtained from motorists. County Councils want some for road improvements, district councils are anxious that a proportion should be allocated for rounding corners at dangerous places, and rural councils would like the present voluntary erection of warning signs to become obligatory on the part of those who motor. Thus the claimants for the revenue from further taxation are increasing, and

THE TURNER-MIESSE STEAM CAR.

LOVERS of steam cars—and there are many—will be interested in the illustration we are able to give this week of the new 10-h.p. two-seated vehicle which has been put on the market by Turner's Motor Manufacturing Company, Ltd., of Wolverhampton. The generator, which is located under the bonnet in the fore part of the frame, is of the tubular flash type, similar in design to that which has hitherto been manufactured by the same firm. The condenser, which fills up the front opening of the bonnet, is of the tubular type, a belt-driven fan being provided behind it for cooling purposes. The burner which furnishes the necessary heat for the generator is of a new type, which has been found to give good results in the experiments that have been made with it; it is designed to use paraffin as fuel. From the generator the superheated steam is admitted through a foot-controlled throttle to the inlet valves of a horizontal three-cylinder engine located transversely at about the centre of the frame in such a way that the crank shaft is directly connected up through a universal joint to the propeller shaft, which drives the rear live axle through bevel gearing. At the forward end of the crankshaft is fitted a chain sprocket and also a crank; the former drives at a reduced speed a counter-shaft, on which is mounted an eccentric, which serves to operate the mechanical water pump. A hand-actuated water pump is also provided for starting purposes. The wheel base of the vehicle is 9 ft., and the track 4 ft. 1 in

GOSSIP FROM PARIS.

LAST week it was war to the knife between the French automobile world and the Ministry. In addition to the hundreds of thousands of petitions against the Bill for the policing of the roads sent out for signature by the Automobile Club to every village in France, and the threatening articles published in the daily sporting and even political journals of Paris, many leading automobilists talked of nothing less than upsetting the Cabinet or of at least hustling M. Barthou, the man responsible for the obnoxious proposals, out of his seat at the Ministry of Public Works. The motorists and journalists in conversation and in flaming leading articles failed to find epithets strong enough to express their indignation at M. Barthou's deliberate attack on the automobile industry. I heard some people even pretend that the Minister had by the Bill sought to assuage his anger at having been the victim of an automobile accident, but, on inquiry, I discovered such an accident never occurred.

All ill-will has, however, now vanished, the transformation scene is complete, the wolf is lying beside the lamb. I do not know whether M. Barthou was really alarmed for his seat in the Cabinet by the formidable agitation against him, but he took prompt and, as the event proves, effectual measures to preserve it. The first thing he did was to confer with the Committee of the Chamber to which the Bill had been referred. Of course, he could not absolutely repudiate it, but he explained that after all it was only a project, and could be modified. The object he had had in framing it was, he affirmed, the protection of the general public, and also reasonable automobilists, against the excesses of the madmen who by their furious driving brought discredit on a means of locomotion which had already rendered such signal services, and which would certainly continue to add to the riches of the land. There is not a single clause in the Bill which M. Barthou did not profess himself willing and anxious to alter, or even to suppress, if it could be shown that it was advisable. After that declaration the Minister signed and sealed peace with the automobile world by attending the annual banquet of the "Association of Sporting Journalists." In his speech at dessert he assured his hosts that his most ardent wish was to foster the automobile industry. If only those who are experts on the matter would give him advice, the Bill would be modified in such a manner as to make the projected new law a boon to the community at large, and the automobilists in particular. The measure must, he said, respect the interests of all Frenchmen. And now journalists, motor-car manufacturers and owners of self-propelled vehicles are united in singing the praises of the Minister at whom only a week ago they were hurling anathemas. In a word, they are shouting in unison, "Barthou is the man for us! Vive Barthou!"

The Steerable Balloon Company which has just been founded by the celebrated balloon constructor, M. Maurice Mallet, under the title of the Société Française des Ballons Dirigeables, is a venture to which everyone wishes success. The share capital of the company is only £20,000, which will most surely have to be considerably increased if the programme expounded by the directors is to be executed. The names of the directors, such as MM. Léon Desmarais, André Schelcher, Jules Armangaud, and Maurice Mallet, and the appointment of Comte Henri de la Vaulx as technical adviser, are valuable guarantees of the safety of the public, who will surely be tempted to make excursions in the car of the big omnibus steerable balloons it is proposed to construct, and the smallest of which is to have a capacity of about 5,000 cubic metres. M. Cailletet, the President of the Aero Club of France, told me the other day he considered steerable balloons could with advantage be made considerably larger than the "Patrie." It would not, he believed, be found difficult to keep the gasbag tightly inflated by means of yet more perfect compensating balloons, and thus made sufficiently rigid to resist the action of the wind when driven at a high speed. That opinion is encouraging for the new steerable

balloon company, which will perhaps before long create a regular daily service of omnibus balloons to carry British excursionists to St. Germain, Versailles, and then off to Fontainebleau and back to Paris in the same day, with stoppages at each of the towns to visit the chateaux. It would certainly be an improvement on the railway or the slow lumbering vans which ply between Paris and Versailles, and even on the four-in-hand coach. But that is not all the Steerable Balloon Company proposes to do. It will build military steerable balloons if it can get orders from the French military department or from foreign Governments, and will, at any rate, make little airships to carry one or two persons only.

The general requirements of the United States Government for military flying machines, as accepted by the Brothers Wright, Mr. Herring, and Mr. Scott, are regarded here as very hard. There are many aeronauts who wish to bet that no single flying machine will be constructed within the next twelve months capable of fulfilling them. They do not for a moment doubt of the progress being ultimately effected, but not so quickly. The Brothers Wright will, however, now at least have the opportunity of proving to the sceptical that they really accomplished the flights they boast of. But to remain an hour in the air without touching ground on a flying machine built to carry two persons and fuel for a flight of 125 miles is a feat which would mark the immediate and definitive conquest of the air by man. The timid flights achieved till now would fall into insignificance, especially if the flying machine fulfilled the other requirements of the United States Government, including the stipulation that "the flying machine should be designed so that it may be quickly and easily assembled and taken apart and packed for transportation in an army wagon. It should be capable of being assembled and put in operating condition in about an hour." The flying machine must also be able to descend without injury to any of its essential parts at any unprepared spot, such as a field, and then to take its flight from that unprepared ground unaided. Also, it must be provided "with some device to permit of a safe descent in case of accident to the propelling machinery." By tendering for the construction of such a machine the Brothers Wright have undertaken to deliver it within 200 days from February 1st, that is to say, at latest on August 18th next. It is to be hoped they will succeed, but, as I have said, great scepticism prevails in the aeronautic world here, and it has been rather increased than diminished by the announcement that the Brothers Wright have had seven motors of 30-h.p. each built by a foreign firm. These motors are said to have been already shipped to America.

Mr. Henry Farman's accident was fortunately not very serious. His aeroplane was smashed, but he escaped with a severe scratch on the nose and a blow on the upper lip. He was out the day after the mishap examining the wrecked machine and arranging with the Brothers Voisin for the prompt completion of a new aeroplane of the same type as his old one. He will recommence his trial flights without delay to prepare for his attempt to gain the "Graphic" prize.

MARNEY.

THE Greenan Laundry Company, Ayr, has placed an order with the Ayr County Motor Company for an Albion motor-van.

THE "Turnover Generator" has been placed on the English market by the Motor Accessories Company, to meet the demand for an apparatus to produce acetylene gas with economy, purity, and ease. Once charged the apparatus can be left for months without the slightest deterioration to the carbide or evaporation of the water, and when the time arrives for use, the only action required is the unfastening of one clamp and the turning over of the generator, which is supported on trunnions. Gas is instantaneously produced and the lamps can be lit immediately. When no longer required the generator is turned back to its normal position, and the production of gas immediately ceases. There is no after generation.

B

A RUN INTO HAMPSHIRE.

Not spring or summer's beauty hath such grace
As I have seen in one autumnal face.

SO says Donne; and now that cars are covered in, and, thanks to steel-armoured tyre covers, skids need not be feared, the owner of a car may proceed

Through autumn's fading realms to stray,
To see the heath-flower wither'd on the hill,
To listen to the wood's expiring lay,
To note the red leaf shivering on the spray,
To mark the last bright tints the mountain stain,
O'er the waste fields to trace the gleaner's way.

It is true as our faithful car carried us along by Knightsbridge the road was not inviting, and I quite confess we contemplated lingering and even staying under that sea coal canopy which so oft covers London and its wondrous tempting shops; but luckily the ladies mastered their desire to wander into the happy bargain-hunting grounds of Kensington High Street, and at Hammersmith we turned sharp to the left through Barnes, Roehampton, Richmond Park, with its ten-mile limit, on to police-trap Kingston. Luck or fog favoured us, however, and we soon passed through Bushey Park to that speed-inviting road to Staines without even one blue-coated gentleman holding up his hand. Egham, Holloway's College, Virginia Water, Sunningdale, and then along the dreary expanse of Bagshot sands to Blackwater, and so into Hampshire. Pretty lanes to the right lead to Yateley, with its restored Transition Norman church and traces of an anchorite's cell. A little further, and Charles Kingsley is brought to mind, for the author of "Westward Ho" was rector of Eversley, and his grave can be seen in the churchyard there. Keeping to the left, and leaving the common on the right, Bramshill is reached. Here there is a famous old Jacobean house, once built for a Prince of Wales. It is worthy of a halt, if only to see the fine firs in the surrounding park. Probably they will call to mind Kingsley's "My Winter Garden." Here, among the heather and densely packed small firs and gnarled giant trees, he loved to wander. At the eastern end of the house is the famous troco terrace, where once the old game was played. If possible, the fleur de luce bedroom should be seen, where the oak chest, the hiding-place and coffin in the "Mistletoe Bough," once stood. It was in this house that, in repairing part of an interior wall, an original letter of Oliver Cromwell's was found behind the wainscot.

The road should now be taken by Heckfield Place; a little beyond is the Wellington Monument, a bronze statue of the Duke by Marochetti, which was erected in 1866 at a cost of £3,000. Turning to the left, Strathfieldsaye is soon reached; the house and park were purchased from the Rivers family and presented by the nation to the Great Duke in 1815. Of the approach on the north side, which is by a mile long avenue of elms, Rogers says:—

These are the groves a grateful people gave
For noblest services, and from age to age
May they to such as come with listening ear
Relate the story.

The general effect is indeed fine, and scattered about are some grand old oaks and thorns, and amid it all the slowly flowing Loddon wanders, in places expanding into sheets of ornamental water in which the reflection of the brown and gold on the bright autumn day when we were there alone repaid the journey. The house is of the Queen Anne period and contains an interesting portrait by Barker, in which the Duke is depicted

descending the Pyrenees together with Marlborough and Washington. Part of the hall floor is made of mosaic pavements obtained from Silchester. Here is the flag by the annual delivery of which on June 18th at Windsor the estate is held. The Duke of Marlborough pays, I believe, a similar rent for Blenheim. In the library over the fireplace there is an excellent portrait by Sir Thomas Lawrence. In the grounds, near some splendid tulip trees, is buried Copenhagen, the charger which carried the Duke at Waterloo. The Duchess, it is said, always wore a bracelet made of his hair. The north road over the Loddon should next be taken, passing the grass-grown old Roman London-Silchester road. Four miles, and the now silent and desolate British town of Caer Segeint, or, as the Romans called it, Silchester, is reached. In the farmhouse close to the church are the famous fifteenth century old walls surrounded by a dry moat. A temple as well as the Forum have been unearthed. From articles found, the site of ancient shops have been more or less correctly made out; money-lenders, as well as butchers and fishmongers, must, it is thought, have carried on their trades in the insulae or blocks of the old city. Like Pompeii, many details remain showing that sudden destruction must have overtaken the town; but, as no Lytton has weaved a romance about it, the British public seem to prefer to wander abroad and to there explore Roman remains, though they have as interesting ones close at hand in their own country. Truly does Wolcot

say:—

Rare are the buttons of a Roman's breeches,
In antiquarian's eyes surpassing riches;
Rare is each cracked, black, rotten, earthen dish
That held of ancient Rome the flesh and fish.

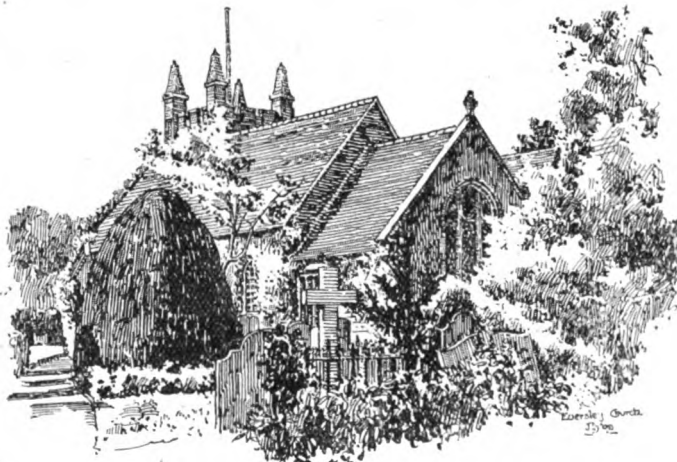
Anyway, those who are interested can see in the museum some certainly rare coins and specimens of pottery and mill stones. The parish church is built of some of the old Roman stones, and contains a carved oak Perpendicular screen, and a sixteenth century altar table. In the churchyard there is a fine spreading yew tree, with surrounding elms, that recalls those lines of the poet Gray:—

Beneath those rugged elms, that yew tree's shade,
The rude forefathers of the hamlet sleep.

(To be concluded.)

MR. A. WHALEY has added to the equipment of his motor-car garage and repair works at Forres, and, in addition to keeping a stock of accessories and motor spirit, he has also a vulcanising plant for dealing with tyres. Mr. Whaley has latterly been busily at work in converting several large rowing boats into motor-boats, for Scottish sportsmen.

THE Flash Antiseptic Cleanser, as its name indicates, is a preparation for removing grease, dirt, &c.; from the hands of motorists. Flash is not a soap in the ordinary sense of the word, as it only contains glycerine, with a neutral oil, a small amount of chemically pure soap stock, and a little finely-ground pumice. This new hand-cleaner is thoroughly antiseptic, and combines the action of a good detergent with the emollient properties of cuticle soap. Although the pumice makes a feeling of grittiness the skin is not abraded nor rendered rough as when soda is a constituent. If the hands are covered with heavy black grease, ink, acid, or chemical stains, they should be rubbed with a little Flash, and in less than a minute they will be absolutely clean. It may be used with hard, soft, cold, hot, and salt water, and, in extreme cases, without any water at all. Messrs. Brown Bros., Ltd., have taken up its sale to the motor trade.



Eversley Church.

THE Transvaal A.C. has become affiliated with the R.A.C.

MR. MONTAGUE LUSH, K.C., has acquired a 30-h.p. six-cylinder Coventry-Humber landaulet.

IN reply to several correspondents, we have to announce that the dates of the 1909 Cordingley Show are March 20th to 27th next.

THE address of Messrs. James Neale and Sons, Limited, makers of the wind screen joint illustrated in our last issue, is Graham Street, Birmingham.

QUESTIONS concerning motor-buses in London continue to be addressed to the Home Secretary, but no information beyond that reported last week has been given.

SHOULD the Sunday Closing (Shops) Bill leave the House of Lords in the form in which it has been introduced, those who sell petrol, &c., on Sundays will find themselves prohibited from further transactions on that day.

IT has been settled definitely that Messrs. Warwick Wright, D. Resta, and Moore-Brabazon will drive the Austin cars in the forthcoming Grand Prix race.

LORD BRASSEY, G.C.B., has ordered a 25-30-h.p. Vulcan car from the London and Parisian Motor Company, Ltd., who are also supplying a 16-20-h.p. Hotchkiss car to Lord Alastair Kerr.

ON the 13th inst. Local Government Board Orders for the restriction of the speed of motor-cars to ten miles per hour will come into force in certain thoroughfares in Rickmansworth, Barnes, East Molesey, and West Molesey.

OUR contemporary "Truth," which, by the way, had very complimentary reference to the Show at the Agricultural Hall last week, asks, "When is a Master of the Motors to be added to the other functionaries of the British Royal House?"

IN fining a chauffeur summoned at Woolwich on Tuesday for exceeding the legal limit in Charlton, Mr. Baggallay, the magistrate, refused to allow time for payment—a policy that is apparently becoming general with Metropolitan magistrates.

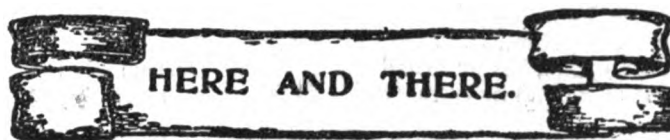
TWO gentlemen and a mechanic were severely burned about the hands in extinguishing a fire which broke out in a motor-car near Manchester the other morning. The car was not much damaged by the outbreak, which was attributed to an escape of petrol.

IN our Correspondence columns are some interesting letters with regard to the dust question, a matter again brought to the front by the lately issued report of the R.A.C. Dust Trials Committee. The subject is one upon which our readers are invited to give their views.

THE judges in the New Zealand Reliability Trials organised by the Canterbury (N.Z.) Automobile Association awarded the first prize for "cars under 12 h.p.," the prize for "the most meritorious performance in the whole trials," and a special prize for "the best performance of any car selling in England for less than £350," to a Dunlop-tyred 10-h.p. Cadillac.

THE sympathy of motorists generally will be felt with Mr. C. D. Rose, M.P., in the loss of his son. It will be remembered that the serious illness of young Mr. Rose was the cause of the absence of the chairman of the R.A.C. from the annual dinner of the A.A. We regret, in common with all who knew him, the sudden death of a promising officer in the Royal Horse Guards.

UNDER the title of "Everything for Motorists," a new price list, extending to 120 pages, has been issued by Messrs. A. W. Gamage, Ltd., of Holborn, E.C. The alphabetical index extends to twelve closely printed columns, and hundreds of illustrations are scattered throughout the work, which is one of the most complete we have seen. The section devoted to lamps and the numerous sundries connected therewith is most comprehensive, and an interesting page is that on which the many types of non-skid tyres and devices are illustrated, so that the motorist can have a review of the whole field before making a final selection. Tools and accessories are also exhaustively treated, and the electrical section deals with everything that the motorist is likely to require.



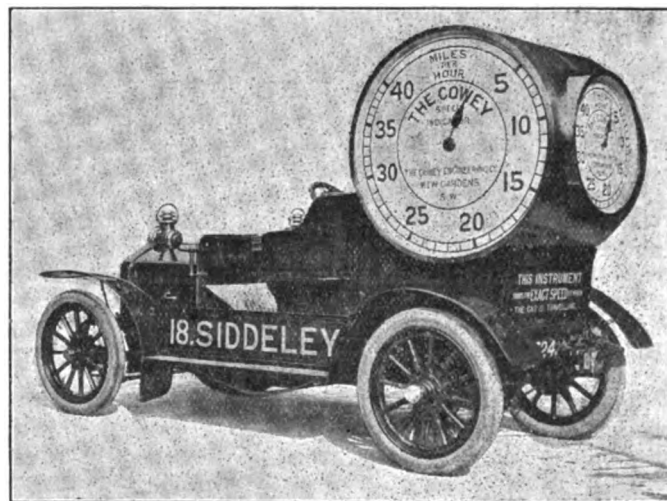
THE Post Office night mail between London and Dover is to be carried by motor-vans, which will leave each terminus every night.

REPLYING to a question in the House of Commons, Mr.

Burns has announced that he cannot promise to introduce legislation on motor-cars during the present session of Parliament.

THE Mabout Club has been formed in Los Angeles, Cal., U.S.A., with the object of endeavouring to put a stop to the reckless driving and scorching that is bringing bad repute to automobilists throughout southern California.

EVERY motorist is aware that the general public have very hazy ideas of the speed of motor-cars, but some of these mistaken ideas should be removed by the appearance of the instrument illustrated in the accompanying photograph, which shows the actual speed attained by a vehicle in a vivid and convincing manner. This huge instrument has been constructed by the Cowey Engineering Company, Ltd., the makers of the well-known Cowey Speed Indicators, with the object of giving to motorists and the public generally an accurate idea of the speeds of various vehicles travelling along the public roads, and with a view to demonstrating the accuracy and reliability of the speed



indicator in question. The indicator itself consists of four dials. The two side ones are 4 ft. in diameter, the back one 2 ft. 6 in., and the small index dial in front 9 in. The pointers of all four dials are operated by bevel gears off a central shaft, and it is surprising to know that this shaft, which operates all the pointers, is actually driven by one of the firm's ordinary speed indicators made about half as big again as the normal size, i.e., 6 in. in diameter. The whole apparatus is driven, as are all Cowey indicators, by means of bevel gearing and a special chain drive from the road-wheel, in this case the left. On the off-side of the car is operated one of the firm's standard indicators, the readings of this and the giant indicator having proved identical from the first time they were attached to the car. The huge instrument is mounted on an 18-h.p. Siddeley car, which we learn is doing its work without trouble of any kind. The Cowey Engineering Company will at all times be willing to give their services with this novel instrument for the purpose of demonstrating the absurdity of some of the proposed speed limits, in cases where such are being opposed.

FROM Messrs. T. J. Harman and Co., of 26, Regent Street, London, S.W., comes a copy of the new catalogue of Vinot cars; this gives full particulars of the various models—viz., 12-16-h.p., 16-24-h.p., and 30-45-h.p. four-cylinder, and 40-65-h.p. six-cylinder. The illustrations comprise pictures not only of the different chassis, but also a number of outline drawings, giving an idea of the various types of bodies that can be fitted to the vehicles.

AN up-to-date parcel delivery service by means of motor carrier cycles has been started in Albuquerque, N.M., U.S.A.

THE Torking Tyres (Patent Syndicate), Ltd., has intimated its intention of entering for a 5,000 miles trial of these tyres, to begin during the present month.

WE illustrate herewith the new adjustable spanner lately introduced by the Birmingham Small Arms Company, Ltd. Like their other productions, these spanners are made of the highest quality, the simplicity of action being a most noticeable



feature, besides which the neatness of design and effectiveness of the tools under all conditions must bring them into public favour. The spanners are made in two sizes. The small one, measuring $5\frac{1}{4}$ in., is particularly suitable for cyclists and small mechanical work, while the larger size, measuring 11 in. over all, is intended for the use of motorists and engineers generally.

MR. FREDERIC COLEMAN has taken over, on behalf of the White Steam Car Company, a newly-erected repair works just off the main street at Camden Town, by Mornington Crescent Station. The building has a superficial floor area of a million feet.

A PATENT has been taken out by two Liverpool motorists for a method of deodorising the exhaust from petrol motors by passing it through a cage or retainer containing a quantity of carcarilla bark, with or without additional substances, such as tonquin bean or soda-lime crystals, to impart a pleasant perfume to the gases.

THE new motor showroom of Messrs. Benetfink and Co., 107 and 108, Cheapside, London, E.C., is now complete. This has recently been extended and removed to a much more prominent position on the ground floor of the establishment, where there is a full stock of all motor specialities such as has made the Holborn house of Messrs. Gamage, Ltd., so popular.

WE had an opportunity the other day of making a short trial run on a car fitted with what is known as the lever spring suspension, which has been brought out by the Lever Spring Suspension and Engineering Syndicate, of 13, Grape Street, New Oxford Street, London, W. The arrangement is not a shock absorber in the accepted sense of the word, but rather an additional springing device arranged to meet the high frequency vibrations ordinarily set up under bad road conditions. The common design of motor-car spring is admittedly slow in recovering from displacement, and although much of this vibration is absorbed by the tyres, yet a comparatively large amount is transmitted to the chassis. It is claimed for the new suspension that, by the employment of a swinging lever, acting against a coiled spring, a method of springing is obtained which, while giving the necessary amount of movement to absorb all the smaller shocks, possesses the quick recovery which is absent with ordinary springs. The invention consists briefly in a bell crank lever, to the short arm of which the rear end of the ordinary spring is shackled, instead of to the usual bracket or hanger. The longer arm of this bell crank works against a flat coiled spring, the centre of this being attached to the fixed centre pin, about which the bell crank rocks. This centre pin is clamped by a bolt to the bracket or hanger, bolted to the frame, and, therefore, takes the place of the usual direct shackled connection. Stops are arranged on the bell crank to limit the movement, the object being to prevent over-stressing of the coiled springs when a large obstacle is met. In this way the greater part of the shock is, it is claimed, thrown on the main plate springs, which are better adapted to receive impacts of this nature. In the course of the trial run we made some bumpy roads were encountered, over which the car ran with little or no discomfort to the passengers. The device, which is being exhibited this week at Olympia, is well worthy of inspection.

THE Daimler Company have received an order from Prince von Saxe-Weimer for a 45-h.p. phaeton.

THE Durham and District Omnibus Company has apparently failed in its endeavour to secure a motor-omnibus service for the city of Durham.

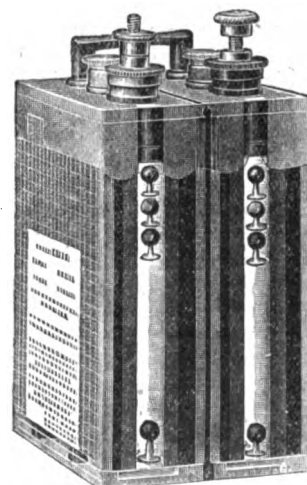
ON Sunday the Queen and the Empress Marie of Russia motored to Brighton, returning to town in the early evening, thus joining the ranks of those who regularly enjoy a motor run from London to its seaside prototype.

THE municipal authorities of Berlin have recently purchased a N.A.G. 18-20-h.p. motor-lorry capable of carrying five tons, to be used for transporting tools used in street cleaning. The chassis is so arranged that it can also be fitted with a large water tank for sprinkling purposes, if desired.

WE learn that Messrs. J. Keele & Co., of New Bond Street, W., have been appointed official repairers for Belsize cars in London. They have on view at their depot one of the new 1908 Belsize 14-16-h.p. four-cylinder cars, and also one on which they are prepared to give trial runs to intending purchasers.

ACCORDING to the Fire Committee of the Municipal Council of Springfield, Mass., U.S.A., the four automobile fire service wagons in the department there, locally known as the "flying squadron," save the city over £40 per year, as compared with the cost of horse equipment. The Commissioner therefore recommends the purchase of three combination chemical and hose automobiles to replace horse-drawn apparatus.

WE illustrate herewith a new ignition accumulator known as the "G. B.," which has lately been put on the market by the County Chemical Company, Ltd., Excelsior Works, Birmingham. The positive plates are of an improved Planté type, i.e., the active material is electrolytically formed out of the lead; no paste is used, so that internal short circuits are obviated. The negative plates consist of a special form of spongy lead contained in a robust type of undercut grid. All terminals are covered with an alloy to render them acid-resisting. To prevent creeping and corrosion of the thread, the lugs of the celluloid cells pass through grease cups. The positive terminal is coloured red, and the negative black. The special feature of the accumulator is its patent discharge indicator. This useful adjunct consists of a tube visible from the front of the cell containing four coloured glass beads. According to the number of beads floating, the state of the cell in respect of discharge is



automatically indicated, and can be ascertained at a glance. The following are the indications given:—

- | | | | |
|----|------------------------------|-----|---|
| 4. | Red, blue, dark blue, purple | ... | Specific gravity has risen above 1.220. |
| 3. | Red, blue, dark blue | ... | Charged. |
| 2. | Red, blue | ... | About a quarter discharged. |
| 1. | Red | ... | two-thirds " |
| | None | ... | Discharged. |

The accumulators are made up in celluloid boxes in 4-volt sizes, from 16 to 80 ampere-hour capacity, and in teak lead-lined boxes, from 72 to 126 ampere-hour 4 volts, and from 90 to 126 a.h. 6 volts.

CONTINENTAL NOTES.

The A.C.F. Grand Prix Race.

The first of the new cars which the Brasier Company are building for this year's A.C.F. Grand Prix race is now on the road. The vehicle is fitted with a four-cylinder engine, 155 mm. bore by 160 mm. stroke. Three speeds and a reverse are available, a direct drive being obtained on the top speed to the differential shaft, from which the transmission to the rear road wheels is by side chains.

Hill Climbing in Bohemia.

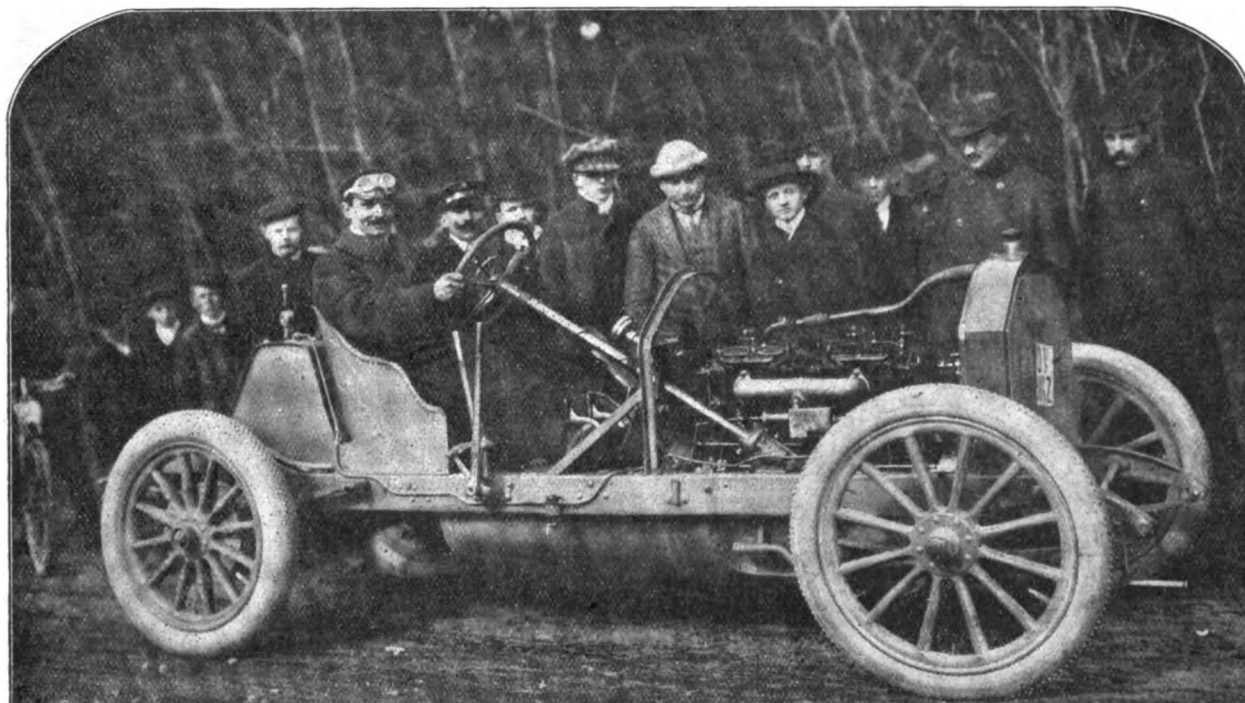
The Automobile Club of Bohemia held a hill-climbing competition last week over a five-kilometre course on the Zbraslav-Jilovischt road, near Prague. The event was well patronised both as regards the number of competitors and also the spectators, among the latter being the Archduke Karl Franz Josef. The best time of the day was made by Joerns on one of the cars which the Opel Company, of Russelsheim, Germany,

Motor-Car Racing in Spain.

The "Mundo Deportivo," of Barcelona, is organising a light car race for May 28th, to be held over a 250 kilometre circuit in the neighbourhood of that city. The competing vehicles will be divided into three classes, viz., (1) single-cylinder cars up to 100 mm. bore and weighing not more than 500 kilog.; (2) two-cylinder cars of a maximum cylinder bore and weight of 80 mm. and 600 kilog.; and (3) four-cylinder cars 65 mm. bore and 650 kilog. Three Peugeots and three Gregoires have already been entered for the event.

Accidents in France.

The Automobile Club du Rhone has issued a return of the accidents which have occurred in the Departments of Rhone and Ain between January 1st and March 20th last. Railway accidents were 36 in number, causing the death of 9 persons and injury to 19 others; 69 tramway accidents resulted in 4 deaths and 48 injured; horse-drawn vehicle mishaps brought about the death of 8 persons and injury to 110 others.



Joerns at the Wheel of the Opel Grand Prix Racer on which he won the Hill-Climbing Competition recently held near Prague, Bohemia.

have built for this year's A.C.F. Grand Prix race. His time for the five kilometres was 3 min. 55 sec.

Speed Trials in Algeria.

The Automobile Club of Algeria is organising a series of flying kilometre speed trials for the 12th inst. It will be held on the road between Algiers and Boufarik, the usual categories being provided for. A special cup is being offered to the competitor who makes the best time of the day.

New Brasier Vehicles.

It is reported that the Brasier Company are taking up the construction of light cars—a single-cylinder two-seated vehicle and a light two-cylinder car. Both machines will have cardan shaft transmission.

Motoring Regulations in Belgium.

Some new regulations with regard to motor traffic are about to come into operation in Belgium. A speed of 45 kilometres (28 miles) per hour will be allowed in the country, but this must be reduced to 18 kilometres (11½ miles) when passing through villages. The use of headlights in towns, as also sirens and whistles, is prohibited.

Finally, the number of automobile accidents, in which 13 persons were injured, was 24; no deaths, however, occurred.

Miscellaneous Items.

The second general meeting of the International Motor Yacht Association was held in Amsterdam last week, when certain modifications were made in the rules which will allow every nation to be fully represented on the body.—The Verein zur Förderung des Gewerbelebens of Berlin is offering a prize of £150 and a silver medal for the best method of utilising the fuel in internal combustion engines with the least possible amount of smoke and smell.—Prince Bibesco, one of the leading motorists of Roumania, has lately acquired a 75-h.p. six-cylinder Mercedes.—It has been definitely decided that Cagno, Fabry and Henry Fournier will drive the Itala cars in the A.C.F. Grand Prix race.—Two new motor papers are about to see the light in Paris; one, known as "La Voiturette," is to deal with light cars; the other, the "Courier des Mecanos," will appeal more especially to motor-car drivers and mechanics.—The annual Small Inventors' Show was opened in Paris on Sunday last. Several new devices for the starting of the engines of cars from the driver's seat are on view, as also several two-cycle engines.

The Cordingley Motor Show.

(Continued from page 105.)

BELOW we continue our report of the various stands at the Cordingley Motor Show at the Agricultural Hall, London, which closed on Saturday last.

The Peugeot Cars.

In addition to the new Pick cars described in our last issue, the EARL'S COURT MOTOR AND GARAGE COMPANY, LTD., had on view several examples of the latest types of Peugeot cars. Prominent on the stand was an 18-24-h.p. car, with specially finished body, by Million-Guiet. The engine comprises four cylinders, cast in pairs, with the valves arranged on opposite sides. The mixture is furnished by the Peugeot Company's special automatic carburettor, while the ignition is by low-tension magneto. The four-speed change-speed gear is "gate" controlled, and the final drive is by side chains. All the details have been carefully thought out, and, needless to add, ball bearings are fitted to all parts except the engine. An 18-24-h.p. car fitted with a roomy side-entrance body by SALMON was also shown. Of the Peugeot 8-11 h.p. single-cylinder vehicles, several were on view, including a

can be fitted. The clutch is of the multiple disc pattern, the shaft connecting it with the gear-box being jointed. The change-speed gear is "gate" controlled, and the final drive is by short side chains. Special attention has been paid to the brakes, the usual pair on the hubs of the rear road wheels being supplemented by two brakes, both operated by one pedal, on the differential shaft. Other cars on view included a 50-65-h.p. chassis and a 16-22-h.p. car with limousine body. These are on similar lines to the 40-45-h.p., the main alteration being in the arrangement of the foot brakes, there being one on the differential shaft and one on the forward end of the gear box side shaft. The Isotta-Fraschini cars are among the high-grade productions of Italy, and have already earned an excellent reputation in this country.

The Pope Tribune Car.

The SERVICE COMPANY, LTD., of Featherstone Buildings, High Holborn, W.C., were present with an example of the Pope Tribune 14-h.p. car, which is being offered at a relatively low price. The engine is of the two-cylinder type provided with coil and accumulator



A View in the Aeronautical Section in the Gallery.

handsome two-seated victoria, a two-seater with racing-type body, and a double phaeton. Another exhibit of interest at this stand was the A. W. Hemmings wind screen, which allows, through a simple appliance, the device to remain raised in rainy weather without obstructing the line of sight, at the same protecting the occupants from the inconvenience of the bad weather. This is made possible by forming on the glass screen in the line of sight an aperture made to any desired dimension, so that the driver can see through in rainy weather or by night. This aperture can be swung out of the line of sight and closed by a small shutter made of glass or celluloid, so that the line of sight is always quite clear.

The Isotta Fraschini Cars.

Three examples of the well-known Isotta-Fraschini cars were displayed by Messrs. HALL, CAPRIS AND CO., LTD., a prominent position being given to a polished chassis of the 40-45-h.p. model. The engine comprises four cylinders, 130 mm. bore by 150 mm. stroke, cast in pairs, with the valves arranged on opposite sides. The water circulation is maintained by a pump driven off the exhaust-cam shaft. The ignition is by Eisemann high-tension magneto, while the carburettor is of a special automatic type. To facilitate the starting of the engine, a half-compression device is provided, while, if desired, a self-starter

ignition. The transmission is through a leather-faced cone clutch, cardan shaft and bevel gear to a live axle. The lubrication is effected by a Hill precision oiler with five leads, one of which feeds each cylinder, one the front and one the rear bearing of the engine, and one the crank case. A partition is formed in the base chamber which provides each crank with its own oil well. The frame of the vehicle is built of angle steel, and is supported on long, semi-elliptic springs; the body is of the side-entrance double-phaeton type. The SERVICE COMPANY also had a display of the well-known "Service" and "Service Billet" detachable non-skid and tyre protectors. The covers, which are made of the finest quality leather, treated by a special process, consist of two parts, the casing and the tread. The casing is shaped to the tyre and practically encloses it, but it is constructed in such a way as to allow ample cooling. On either side loops are formed to contain the metal segments and adjusting screws which hold the cover in place, and permit of its being attached or detached in a few minutes. The segments permit of adjustment to take up any slack in the leather, thus allowing the cover to be always kept tightly in place, at the same time giving free play to the tyres. To the casing a special form of tread is fixed in such a way that there is no possibility of the rivet ends chafing the tyre, while at the same time permitting of its being easily removed and an entirely new tread fitted when occasion requires.

The "Maja" Cars.

Considerable interest was shown in the "Maja" cars exhibited in London for the first time by the MAJA COMPANY, LTD., of Conduit Street, London, W. The vehicles, which are built by the Austrian Daimler Company, comprise a number of special features. Two cars and a chassis were staged, all of 28-35-h.p. The engines comprise four cylinders, cast in pairs, the bore being 110 mm. and the stroke 130 mm. The mixture is provided by an automatic carburettor of special design, the throttle being controlled both by hand and foot levers. Ample brake power is provided, the usual hand-operated brakes on the rear wheels being supplemented by two separate brakes on the differential shaft, operated by different pedals. The ignition is by low-tension magneto, simplification being introduced by working the make-and-

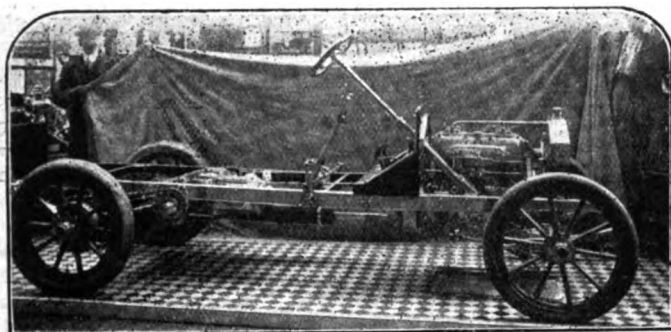


Fig. 37.—Chassis of Maja 28-35-h.p. Car.

breaks from a single vertical shaft, having a cam at the top controlling two horizontal spindles in either direction. In this way a single cam, which runs in grease, effects the ignition in all four cylinders. Another new feature is the lubricator, in which all springs are avoided, the pump being worked through a small cardan shaft from the half-time shaft. The clutch is of the metal-to-metal type, and the change-speed gear is "gate" controlled, and gives a direct drive on the top fourth speed. The final transmission on the cars on view was by side chains, but a chainless model is also made. The complete cars on view included a special 28-35-h.p. limousine, having accommodation for six persons, the body-work being by Messrs. Cockshoot and Co., of Manchester, and

their rear ends attached to a cross-bar. The motive power is supplied by one of the Coventry Simplex 10-h.p. two-cylinder engines, the bore and stroke being respectively 3½ in. by 3½ in. Large water-jackets are provided, while the water circulation is on the thermo-syphon system. The radiator is somewhat on Renault lines—that is to say, it is located in front of the dashboard and at the rear of the bonnet. To allow, however, a good draught of air between the ribbed tubular pipes, the sloping footboard is brought almost to the top of the dashboard. The

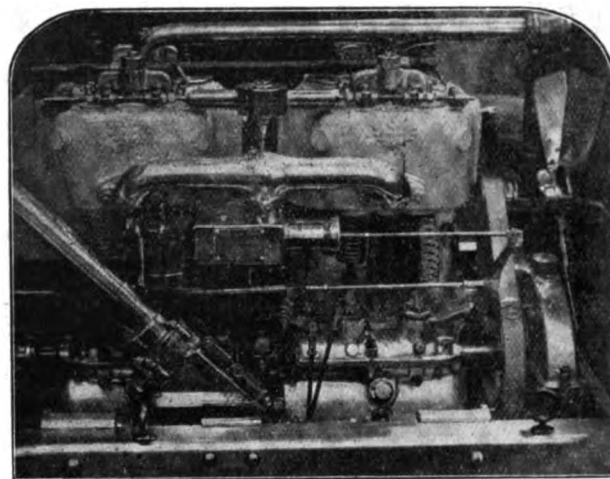


Fig. 38.—The Motor of the Maja 28-35-h.p. Four-Cylinder Car.

mixture is furnished by a special form of automatic carburettor, the extra air-inlet valve being provided with a dashpot. The ignition is by coil and accumulators, provision being, however, made for the fitting of a magneto where desired. Special attention has been devoted to the question of rendering the various parts accessible and readily detachable. The carburettor can be taken down and put back by anyone who can use a spanner in ten minutes, while the jet, throttle, and air-valve are all independently removable without disturbing anything but the part needing attention. The transmission is through a leather-faced cone clutch and a three-speed and reverse gear-box. The shafts of the latter run on ball bearings; the box itself is a single aluminium

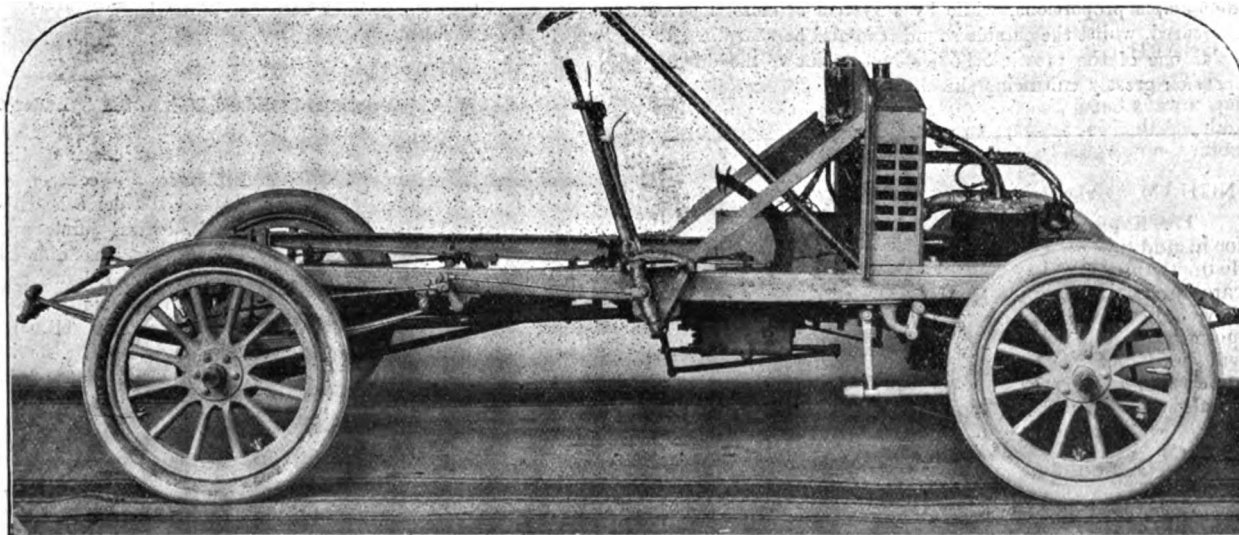


Fig. 39.—Chassis of Staines-Simplex 10-h.p. Car.

a three-quarter landaulet to seat seven, the body-work of which is by the Daimler Motoren Gesellschaft, of Unterturkheim.

The Staines Simplex Cars.

The principal exhibit of interest at the stand of Mr. DOUGLAS S. Cox, West Norwood, was the chassis of the new 10-h.p. Staines Simplex Car (Fig. 39), built by the Staines Motor Company, Ltd., of the London Road Works, Staines. The car, which can be fitted with a two or four seated body, has a pressed steel frame. Semi-elliptic springs are employed at the front and three-quarter-elliptics at the back. The latter are, however, not connected together, but have

casting, provided with a large and readily-detachable lid. The final drive is by a cardan shaft, with joints at each end, and bevel gear, to a well-designed ball-bearing live axle, the weight of the car being carried on the axle casing. The universal joints are of a special design, the pins being adjustable to allow any wear to be taken up. Altogether, the new car will well repay inspection. Mr. Cox also had on view a Peugeot 18-24-h.p. side-entrance car, with side entrance double phaeton body, a Peugeot 8-11-h.p. two-seated car, an Adler 4-h.p. twin-cylinder motor-bicycle, and a Douglas 2½-h.p. motor bicycle with horizontal engine.

The Renault Cars.

Among the French cars at present on the market, none are enjoying a greater popularity in England than the Renault vehicles, several examples of which were shown by the Metropolitan Garage Association, of Palace Street, Victoria, London, S.W. The exhibit comprised a 20-30-h.p. chassis, a 20-30-h.p. limousine, a 14-20-h.p. landaulet, and a 10-14-h.p. two-seater. As regards the mechanical details of the chassis, the 1908 models do not vary from those of last year, except in small

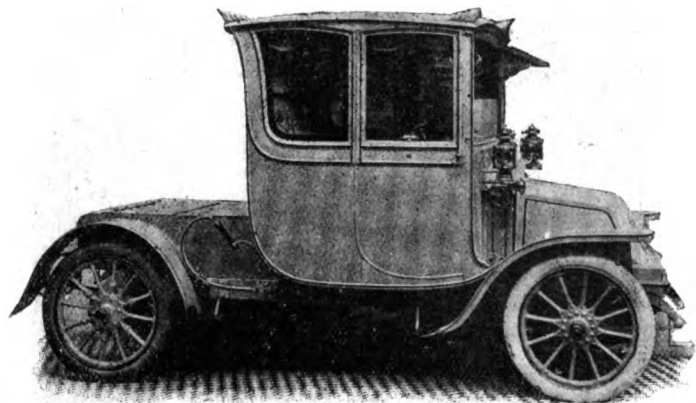


Fig. 40.—The Renault "Sedan Chair"

details, the familiar dashboard radiator and sloping bonnet being still retained. The engines drive through a special form of leather face cone clutch, the Renault gear-box, cardan shaft and bevel gear to a live axle (Fig. 41). The body-work of the cars exhibited was both of smart design and high-grade construction. Special reference may be made to the 14-20-h.p. landaulet, with body by Messrs. Thrupp and Maberly, seating four inside and two out. A special feature of the design is a light folding hood over the driver, instead of the usual extension, thereby keeping down the weight, and allowing for luggage carrying capacity on the grid at the back of the chassis. The great novelty of the stand, however, was the 10-14-h.p. car (Fig. 40), fitted with a body on the lines of an old "sedan chair," painted a pale green, and upholstered to suit. As will be seen, the vehicle is arranged to be driven from the inside, a folding seat being provided at the rear to accommodate an attendant. The windows are of ample proportions, while by a system of small louvres ventilation is secured, whilst the outside sounds can also be heard. Altogether, this was one of the prettiest bodies in the Show, the dummy C-spring suspension greatly enhancing the effect.

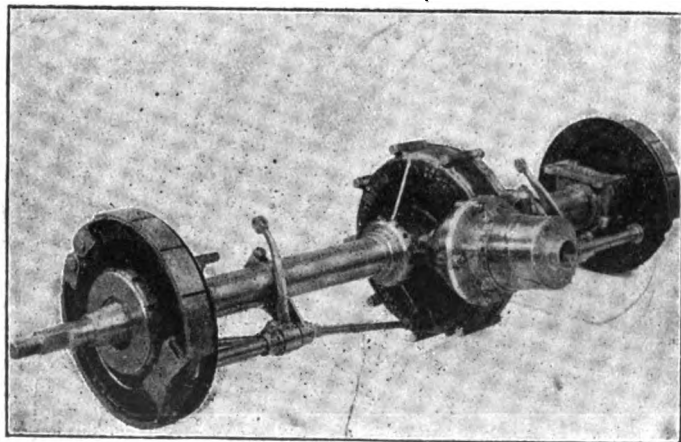


Fig. 41.—The Renault Back Axle.

Motor Tools.

In the Gallery, Messrs. AVERY AND ROBERTS had a large show of general motor accessories and tools of really considerable ingenuity in their design. One useful appliance is a double-ended box spanner with a tommy handle, which fits most standard sizes of plugs. The Auto Nut Pliers are a combination nut plier, wire cutter, nipper, and ordinary plier. By its means nuts can be reached in various awkward places where it is impossible to work with ordinary spanners and ratchets. Motor Cone Pliers of various sizes were also shown, as well as the Auto

Adjustable Box Spanner, which does the work of the largest set of box spanners, and is a really indispensable tool. We illustrated on the 21st ult. the Auto Ratchet Spanner, which is supplied with adapters in leather case. Each of the four adapters separately fit in the $\frac{1}{2}$ -in. ratchet spanner. This tool takes five sizes of nuts, from $\frac{1}{4}$ -in. to $\frac{1}{2}$ -in., and is light and portable to carry. The adapters are also made in French sizes, and Messrs. Avery and Roberts, Ltd., whose headquarters are at 64, Stanley Street, Liverpool, completed a very representative display of tools with a selection of their well-known tool kits containing all the tools usually required by the motorist in difficulties on the road.

The Standard and Sizaire Cars.

The exhibit of Messrs. SCOTT RUSSELL AND BRÉE, of High Street, Lewisham, S.E., consisted of a Sizaire 9-11-h.p. two-seated car and a Standard 20-h.p. six-cylinder side-entrance double phaeton. The Sizaire is an interesting single-cylinder vehicle of French construction, the design comprising a number of novel features, which have already been dealt with in these pages. Among these may be mentioned the special system of frame construction and suspension, the clutch, and the transmission gear. The Standard car, of the chassis of which we give a view in Fig. 42, is built by the Standard Motor Company, Ltd., Coventry. The cylinders are cast in pairs, with the valves arranged all on one side; the dimensions are $3\frac{1}{2}$ in. bore by $3\frac{1}{2}$ in. stroke. The bottom half of the base chamber can be detached without disturbing the crank shaft bearings. The ignition is by high-tension magneto, gear driven off the same shaft as the water pump. A feature of the automatic carburettor is the ease with which the various parts can be detached for inspection. The lubrication of the motor is effected by gravity through a sight-feed rack on the dashboard. The clutch is of the metal-to-metal type, consisting of a single plate held between the flywheel and a floating ring.

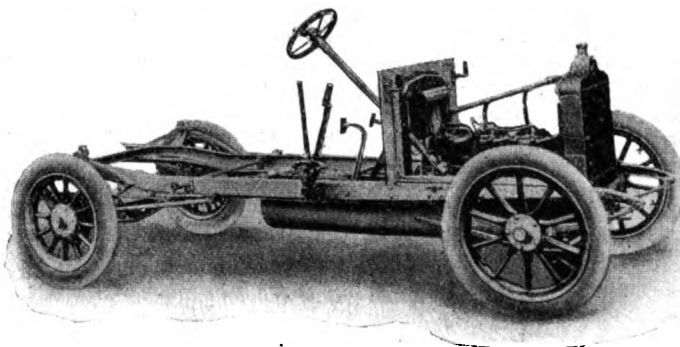


Fig. 42.—Chassis of Standard 20-h.p. Six Cylinder Car.

The gear-box is very compact, reducing the length of the shafts to a minimum. The three speeds and reverse are controlled by a lever working in a "gate." On the top speed the drive is direct through a cardan shaft to the live axle. The universal joints are of a special design. They are exceedingly simple, but somewhat difficult to describe, in the absence of illustrations. It may be stated, however, that no pins or nuts are used in the construction. By loosening one bolt, the cardan shaft can be readily removed from the chassis, the bevel pinion being detachable with equal facility. The differential gear is of the spur pinion type; the casing surrounding it is fitted with a large detachable cover at the rear, to enable the gear to be examined. Ball bearings are used throughout the gear-box and axles.

Tyre Patches.

To motorists generally the novelties shown by Messrs. WOODGATE BROS., of Tiverton, appealed as of practical interest. They consisted of the "Patchquick" Duplex Motor Patches for the repair of inner tubes, and can be fixed in five minutes. The method of securing them to the tyre ensures a thorough amalgamation, so that they will not creep or come off when the tyres get hot. All that is necessary to fix them is to clean the inner tube in the immediate locality of the puncture or burst with either naphtha or sandpaper; a coating of "Patchquick Fix" is then well rubbed into the tube and also to the patch. The specially prepared surface of the latter dissolves, and upon being applied to the inner tube becomes amalgamated with the rubber, thus effecting a permanent repair. The patches are made in oval, oblong, rectangular, and square patterns of various sizes, and appear to be meeting with great popularity among motorists generally. The firm also showed their "Patchquick Fix" used in conjunction with these patches.

The Donisthorpe Petrol Meter.

Newcomers to the Exhibition were the DONISTHORPE PATENTS COMPANY, of 5, Southampton Street, Strand, London, W.C., who showed the micro-motor map and the petrol meter which bears their name. The map is concerned with Great Britain, which is divided into fourteen sections, each about the size of an ordinary lantern slide. By means of a magnifying-glass these are enlarged to a scale sufficiently extensive to show the roads and turnings of the country. The chief novelty here, however, was the Donisthorpe petrol meter, which provides a check upon the consumption of petrol in a similar way to that in which the speedometer registers the speed of the car. The value of such a meter is obvious, and not only should it indicate the state of the tank, but by registering the consumption should enable the owners of a car to become acquainted with its unauthorised use. That is precisely what is done by the device shown. Within the tank is placed an ordinary pawl and ratchet movement, connected by a rod with the float, which secures an indication on the gauge of the state of the tank. A second dial is provided upon which any quantity up to 100 or 1,000 gallons can be registered.

The Rapid Cars.

Another Italian car of high grade construction was the "Rapid," exhibited by the ITALIAN "RAPID" MOTOR COMPANY, LTD., who had on view examples of the 18-h.p. and 30-h.p. models. Fig. 43 gives a view of the 30-h.p. landaulet, with body by Messrs. Locatti and Toretta, of Turin, a facsimile of one supplied to Queen Margherita of Italy. As regards the details of the chassis, it may be mentioned that the four cylinders of the engine are separately cast, and have the valves located on opposite sides. The bore and stroke of the 18-h.p. motor is 90 mm. bore by 120 mm. stroke, while the dimensions of the 30-h.p. are 110 mm. by 120 mm. The ignition is by a high-tension magneto gear driven off the half-time shaft, and so fitted that it can be readily detached. The pump is also gear driven, while a current of air is drawn through the honeycomb radiator by the flywheel, the arms of which are formed to act as a fan. The carburettor is provided with an automatic valve, working in accordance with the speed and suction of the motor, allowing an instantaneous and automatic adjustment of the quantity and quality of the gas. In connection with the lubrication, provision is made in the base-chamber for readily drawing off the oil, and also for ascertaining that it is at the proper level. The clutch is of the multiple disc type, and the four-speed gear-box is controlled by a "gate" lever. On the top speed the drive is direct, all the gear wheels being out of mesh. The final drive is by cardan shaft and bevel gear to a live axle, the design of which has been very carefully thought out. It is pro-

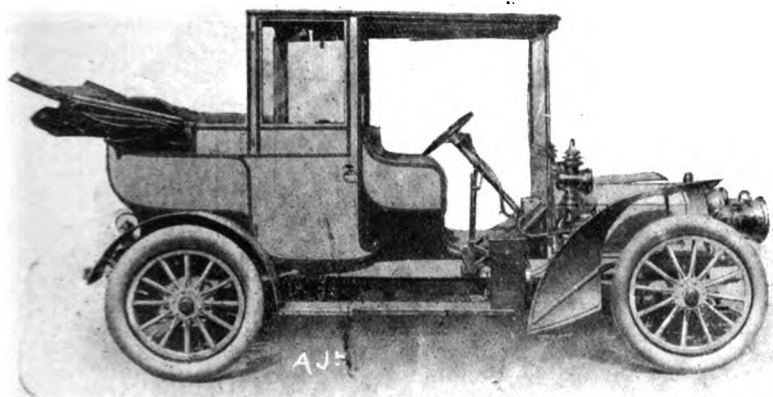


Fig. 43.—The "Rapid" 30-30-h.p. Landaulet.

vided with a large differential gear and ball bearings; it has only the driving effort to withstand, the weight of the car being carried on the axle casing. The propeller shaft has universal joints of special design at each end. At this stand was also to be seen the "Rapid" 50-70-h.p. car which competed in the Coppa Florio race in Italy last year, and also won the flying kilometre contest at Padua.

"Smok-ett" Clothing.

"Smok-ett" has become identified with Messrs. HOARE AND SONS, whose attention to the requirements of motorists in the way of raiment is known to all Exhibition visitors. They showed their new rain coat, which is absolutely weatherproof although without rubber. The "Rex" and "Pioneer" all-wool motor coats were on view, and there was an extensive range of liveries for chauffeurs. The motor coats are all made with detachable leather lining.

The Bowen Cars.

A new firm in the automobile world, but one which has long been established as engineers and metal founders, is Messrs. BOWEN AND CO., of 6, Mount Pleasant, Gray's Inn Road, London, W.C.

In taking up the construction of motor-cars, which, we may mention, are entirely built at their works, the chief aim has been to produce a reliable vehicle, and, with that object in view, they have given every attention to simplicity in design and accessibility of the working parts, and, at the same time, the best material and highest class workmanship have been incorporated in the manufacture.

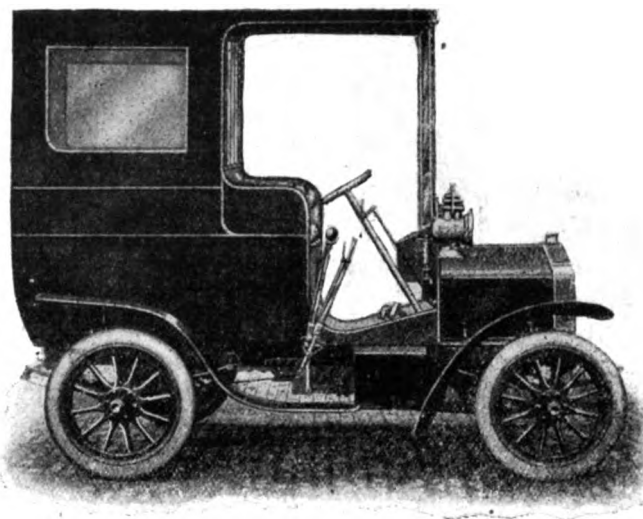


Fig. 44.—The Bowen 8-10-h.p. Commercial Travellers' Brougham.

For the present the firm are confining their attention to one size of chassis—8-10-h.p. 2-cylinder—which can be provided with either a two or four-seated body, or fitted up as a commercial traveller's brougham, or as a light delivery van.

The main frame is of ash, a subsidiary one of channel steel carrying the engine and gear-box. The engine, which is rated at 8-10-h.p., has two separately cast cylinders, 85 mm. bore by 115 mm. stroke, with the valves operated off a single cam shaft. The valve tappets are provided with a neat and simple form of adjustment, and to render them silent in operation the tappet heads are fitted with fibre washers. Ignition is by accumulator and coil, although provision is made so that a magneto can easily be fitted if desired. The water circulation is on the thermosyphon system, large-diameter pipes being used in conjunction with a framed ribbed tube radiator. The transmission is through a leather-faced cone clutch, three-speed gear-box, cardan shaft, and bevel gear to a live axle. The gear-box, the shafts of which run on ball bearings, gives a direct drive on the top speed, and is provided with three-point suspension. The back axle is of strong design, and is provided with ball bearings; the road wheels are mounted on the axle casing, so that the live axle has only the driving effort to withstand. The differential gear is of the plain pinion type. We give an illustration in Fig. 44 of the Bowen commercial traveller's vehicle, which should meet the requirements of a large number of firms as affording a means of covering a large area at a minimum of cost. The car is capable of attaining a speed of thirty miles per hour, and the petrol consumption is very low. The same chassis fitted with a delivery van body for loads of from 10 cwt. to 15 cwt. will also be found a serviceable vehicle.

The "Gordon" Hood.

The GORDON CARRIAGE WORKS, of 47, Harders Road, Peckham, London, S.E., showed their specialities in hoods, wind-screens, luggage-carriers, &c. These have been previously illustrated and described in our columns, and it will now suffice to say that the folding wind-screen has considerable merits. The upper portion turns upon a disc, allowing it to be adjusted to various angles. Full protection is afforded in a simple and secure manner. The Gordon Cape cart hood is a very rigid contrivance, in which a steel rod fixed to the frame of the car plays an important part. This can be easily detached to allow the hood to be folded back. These specialities of the Gordon Carriage Works are characterised by good workmanship and finish, as well as by the ingenuity shown in their design. A selection of rugs, foot-warmers, and other desirable accessories for the car in our uncertain climate was also on view.

The Simplex Shock Absorber.

In Fig. 45 we illustrate a sectional view of the Simplex shock absorber, exhibited by the SIMPLEX SHOCK ABSORBER SYNDICATE, LTD., of Eldon Street House, Eldon Street, London, E.C. This is a pneumatic spring cushion placed between the spring and the axle of the car, and enables solid tyres to be run, giving the same ease and comfort as a pneumatic tyre. The device consists of a metal case formed in two parts, the bottom portion, which is attached to the axle, sliding freely in the upper part, which is affixed to the spring. A pneumatic cushion between the two parts has a pressure of 10—15 lbs., according to the weight of the car. Resting on four springs, the body of the car is said

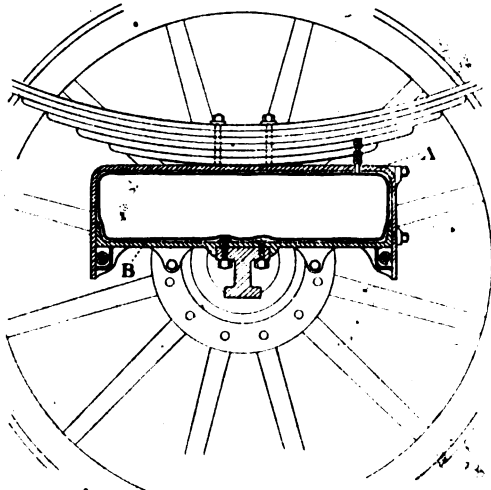


Fig. 45.—Sectional View of Simplex Shock Absorber.

to be literally "floating on air," and the impact with projections, &c., on the road is absorbed before reaching the springs. A year ago we illustrated the Simplex shock absorber in position, and regarded the invention as one worthy of attention—a view that experience has justified.

The Adams Eight-cylinder Engine.

One of the great attractions of the Show from an engineering point of view was the eight-cylinder petrol engine exhibited by Mr. W. L. ADAMS, of the Redbridge Motor Works, near Southampton. The motor, which has been designed and constructed by Mr. Adams, contains a number of interesting features. It will be seen from Fig. 46, that the cylinders are located at an angle of 45 deg. to the vertical. The cylinders, which are made of a special close-grained cast iron, are cast without the main water jacket, and are provided with seamless copper tube water jackets, 6 in. inside diameter, with three spun expansion ribs. These tubes are forced on over the flanges top and bottom, and held in position by steel rings shrunk on. The water inlet and outlet are of phosphor bronze of large area, with ball corners to reduce friction; the water enters the top of each cylinder, follows a course right down one half, round the scavenger or auxiliary exhaust chamber, and up the other half. The inlet and exhaust valves are located directly in the cylinder heads, means being provided to prevent any of the valves, should they happen to break, from falling in the cylinder. The combustion chamber is machined all over, enabling a very high compression to be used, with consequent higher efficiency, without fear of premature ignition through red-hot angles and corners. The admission and main exhaust pipes are built up in sections to facilitate the removal of any of the cylinders. The crank shaft, which is of the four throw type, is of 5 per cent. nickel steel. On each end is mounted a ball bearing 5½ in. in diameter, with ¾ in. balls. The intermediate bearings are of phosphor bronze, held by bolts running right through the crank case, with steel caps. The cam shaft, which is centrally located at the top of the crank-case, runs in six-ball bearings in an oil-tight case. Only eight cams are employed, these being double-acting, mechanically working both the inlet and exhaust valves, their exceptional large diameter, 2½ in., giving easy working with but slight wear. The cams, which are hardened and securely and firmly fixed to the shaft by keys and taper pins, run in separate oil baths. The crank case is made of aluminium alloy in the form of a triangle, the lower half being so arranged that it can be removed without disturbing the crank shaft bearings. The water pump is of the gear wheel type, delivering 600 gallons per hour at normal speed; by taking out two bolts it can be removed, a

special detachable joint drive being employed. It is driven by a ball-bearing cross shaft at one end of the motor, operated by bevel gear off the cam shaft. Mounted on the opposite end of the cross shaft are two high tension distributors, two coils being used for the ignition of the eight cylinders, one for each set of four. Two small pumps are driven by an eccentric off the cam shaft at the timing gear end of the engine. One of the pumps is employed for supplying pressure on petrol tank, while the other is for the lubrication of the engine. The oil is drawn from a special receptacle in the bottom of the base chamber, pumped into a glass-domed oil distributor, from which it is forced along six feeds down the hollow holding down bolts, and then sprayed through small holes on to the cylinder walls, piston, connecting rods, and all bearings. When the oil accumulates to a predetermined height in the lower half of the base chamber it overflows and returns through three 1 in. pipes, covered with gauze, for filtering purposes to the well. One of the principal features of the engine is the auxiliary exhaust with which it is provided, and which is claimed to increase the efficiency and power of the motor. The purpose of this extra outlet for the burnt gases is twofold; first, it does away with the power absorbed in lifting an exhaust valve of large area against a high pressure in the cylinder; and, secondly, it prevents any overheating of the combustion end of the motor. When the piston in each cylinder has completed all but ⅛ in. of its stroke, after the mixture is fired, three groups of small holes drilled through the inner wall of the cylinder are uncovered. The exhaust gases rush through these holes into an annular water-jacketed passage, where their pressure is greatly reduced. During the usual exhaust stroke the small remaining residue of the products of combustion pass out through the exhaust valve in the usual way. Another point about the motor is that it can run in either direction; by means of a special arrangement the exhaust portion of the cam can be retarded 90 deg. and the inlet portion rendered inoperative, the inlet valves when the engine is reversed operating automatically instead of mechanically. For marine work, for which the Adams engine is specially designed, the use of a reversing gear will be rendered unnecessary. The cylinders are 4 in. bore by 4½ in. stroke, and as the engine works both at a high speed and degree of compression, Mr. Adams expects it will develop 100-h.p. There are many other points of interest, reference to which is prevented by the pressure on our space, but sufficient has been said to show that the new engine will well repay careful study. Another interesting exhibit at this stand was the Adams multiple jet carburettor. This is a very ingenious and apparently effective device,

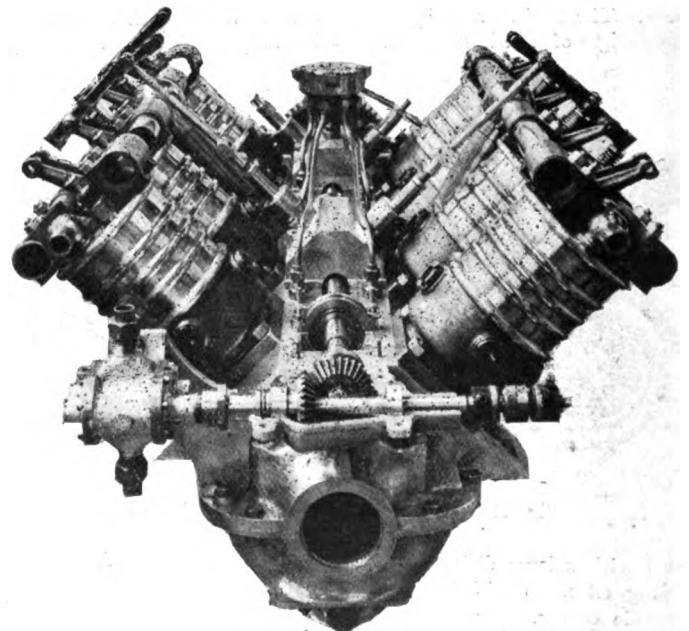


Fig. 46.—General View of the Adams Eight-Cylinder Engine.

but one which cannot be clearly described without the aid of drawings. It may be mentioned, however, that the jet in the spraying chamber is provided with eight different-sized holes. Above them is a cap, provided with a single hole, and formed on one with a barrel valve, which regulates both the quantity of mixture allowed to pass to the engine and the air inlet. In accordance with the position of the gas throttle the jet cap uncovers one or other of the eight minute petrol outlets,

simultaneously regulating the air supply to the desired quantity. When running downhill the petrol feed can be entirely shut off, the engine then drawing in pure air, which, in addition to acting as a brake, also assists in the cooling of the engine.

The Ruthardt High-tension Magneto.

Messrs. RUTHARDT AND Co., of Stuttgart, exhibited for the first time their special design of high-tension ignition magneto. This is a very compact machine, the design differing considerably from the usual pattern, while at the same time the weight is greatly reduced.

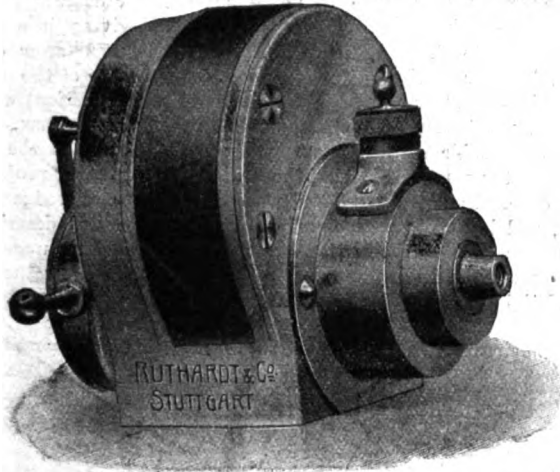


Fig. 47.—General View of the Ruthardt High-Tension Magneto.

The magnet (Fig. 49) consists of a number of separate circular discs without pole pieces; they are provided with two eccentric recesses, in one of which the armature rotates, the other forming the poles. The form of the same makes it possible to grind the surfaces of the poles surrounding the armature, and thus to reduce to a minimum the air-gap between the armature and the magnet. This and the avoidance of pole pieces enable, it is claimed, such a good utilisation of the magnetic field to be secured that its dimensions can be made much smaller than hitherto, while, owing to the reduced gap between the armature and the magnet, the circuit of the magnetic field is nearly closed, and a practically lasting permanence of the magnet consequently obtained. The armature, which rotates on ball bearings, is a Siemens shuttle type, and has two windings, a primary and a secondary one, wound on the core with great care and well insulated. The contact-breaker (Fig. 50), which is mounted on one end of the magneto, is so designed that pinion bearings of any kind are avoided. Consequently no lubrication is necessary, and it is impossible for the platinum con-

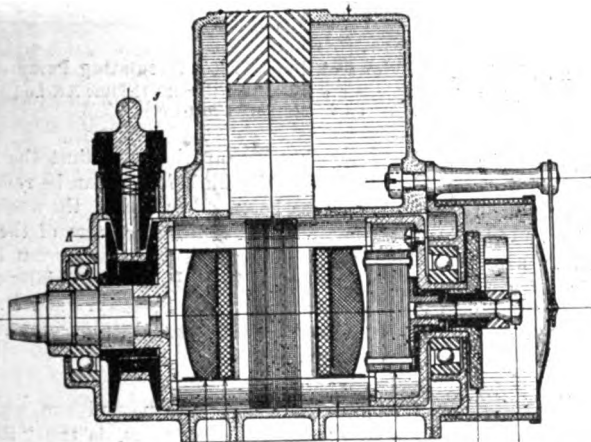


Fig. 48.—Sectional View of Ruthardt Magneto.

tacts to become oily. The contacts are opened against the action of a spring A by means of a fibre roller, which revolves upwards on an inclined plane. (The magneto, for motor-bicycle use weighs only 4½ lbs., and that for a single or double cylinder car engine 7 lbs. The various parts are, it may be added, made on the interchangeable system.)

Nonex.

The "NONEX" SAFETY TANK SYNDICATE, LTD., of 46, Dover Street, Piccadilly, London, W., showed a simple and effective device for use

with vessels containing inflammable liquids. By the adoption of the "Nonex" explosions in cans, tanks, or other vessels to which it is fitted are rendered impossible, while should by any mischance the escaping vapour become ignited the flames are under complete control, and can be readily extinguished. The device is simple and ingenious. It consists of a gauze cylinder on the principle of the Davy lamp, combined with outlet and inlet valves. The action of the latter is to release the vapour from the petrol before any pressure can cause the vessels containing liquids to wrench, leak, or explode. They also allow for a free entrance of air taking the place of the petrol when the tanks are being emptied. This can be fitted to the ordinary tanks of motor-cars and to the usual forms of petrol cans, securing the safety of the same to a remarkable degree. At the same stand was also to be seen a patent pedal guard, which is adjustable to any car. It obstructs nothing, and affords



Fig. 49.—One of the Magnet Discs of the Ruthardt Magneto.

protection for the feet from cold, wet, and dust, providing a capital fitting for use in bad weather. At the same time aprons and rugs can be used with safety and comfort, with no fear of fouling the pedals.

Number Plates.

Often the numbers for motor-cars have to be obtained at short notice, and difficulty is experienced in getting the regulation size and description. A solution of the problem is provided in the system shown by Messrs. HOWELL BROS., of 411, St. John Street, Clerkenwell, E.C., whose enamelled iron plates can be easily put together to form any combination of letters and figures. Light and strong frames are provided, slotted so as to receive the identification marks. These are attached by screws, and give an excellent appearance. They can be easily cleaned, and the way in which the good looks of the number are retained is a merit that should appeal to those who wish their marks to be as slightly as other necessary additions to their automobiles.

The Hodgkinson Change-speed Gear.

Mr. E. A. HODGKINSON, of 8, Lancaster Gate, Hyde Park, W., exhibited a model of his change-speed gear, giving practically a direct

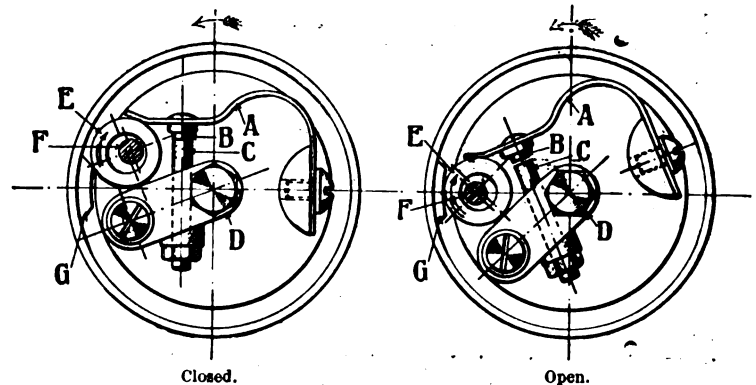


Fig. 50.—The Ruthardt Distributor.

drive on all four speeds, and reverse, by means of a single chain. The accompanying illustration (Fig. 51) depicts the arrangement as designed for a motor-car with cardan shaft transmission. A separate driving chain wheel E is provided for each speed, but only one driven sprocket is required. The four driving wheels, which are, of course, of different sizes, are placed side by side; they are free to move or slide laterally along the driving shaft for the purpose of bringing any particular chain wheel into correct alignment with the driven chain wheel. When chang-

ing gear the clutch is disconnected in the usual way, and at the same time a dog clutch M on the driven shaft is disengaged. By lifting up a suitable trigger, incorporated with the change-speed lever, a rocking sector I engages with the chain, and lifts the chain clear of the particular chain wheel with which it is engaging. A movement of the change-speed lever itself slides the four chain wheels along laterally, suitable notches cut in a quadrant controlling the limit of movement.

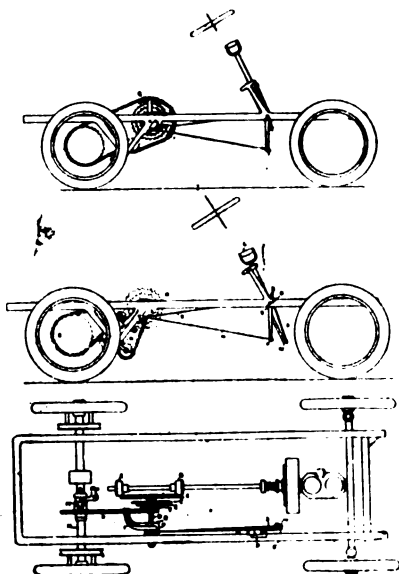


Fig. 51.—The Hodgkinson Change Speed Gear.

The trigger of the change-speed lever is then depressed, and the chain falls on to the new driving sprocket brought immediately below it. The clutch can then be engaged in the ordinary way. Change of speed can be effected instantly from any one speed to any of the others, and, moreover, the gear can be changed when the car is stationary. Two jockey wheels, J, K are fitted to automatically keep the bottom of the chain taut.

Renewable Studs.

Many efforts have been made from time to time to obviate the disadvantage of the studs in non-skidding bands being unrenovable. Of these, one of the most successful we have seen was that shown in the Gallery by Mr. C. PAYNE, C.E., of Cranbrook, Kent, who claims for

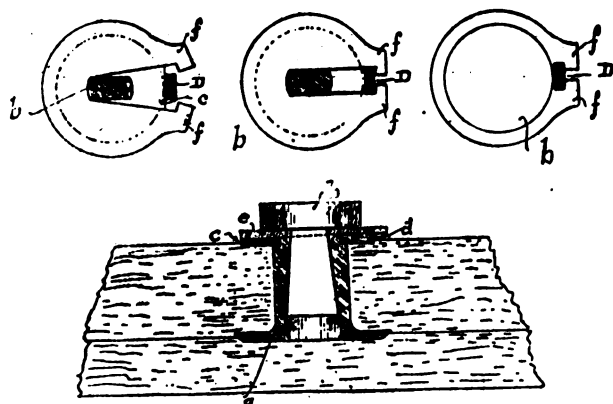


Fig. 52.—Details of Payne's Compound Eyelet and Renewable Studs for Non-skid Tyres.

The lower illustration gives a section through the eyelet, washer and stud in position. The upper drawing at the left shows the washer in position ready for being clipped round the projection D as indicated at the right.

his invention that hardened studs can be used, that in the event of a stud being lost it can be renewed in a few seconds without deflating the tyre, and that the whole of a steel-studded tread can be renewed, when the studs are worn down, in less than an hour and at the cost of a few shillings only. How he secures these points of merit is apparent from the accompanying sketch in Fig. 52. Mr. Payne forms the stud in two parts, viz., the stud proper and a socket or eyelet, which

is inserted in the band, and into which the stud is fitted, two locking washers preventing it from being twisted or moved from position. The lower sectional view represents the socket inserted in the band, the surface of the fixing washer (c) rising just level with the outer surface of the tyre. The bore of the socket is slightly conical, the smallest diameter being uppermost. The stem of the stud (b) is turned to correspond, but the opening, as will be seen by the drawing in plan, is oblong, with rounded ends, and the stud is flattened on the sides. The interior of the socket, however, is only of this shape at the orifice, the remaining portion being cylindrical. By merely putting the stud in the socket, turning it half round, and giving it a slight pull, it becomes fixed. The method of locking the stud from either twisting or becoming loose is equally simple. On the top of the socket there is a slight rebate, and on this the wedge-shape (in section) washer (c) fits by a "D" shape countersunk opening. This performs, when expanded, the double office of securing the socket firmly in the band and providing the means of locking the stud by the upturned projection (d) on its edge. The locking slotted washer (e) is also of wedge shape in section, and is formed with two lugs (f.f.). From this description it will be seen that as the slotted washer (e) is forced up under the head of the stud, the folding wedged washers (c) and (e) draw the stem of the stud tightly against the taper of eyelet and the two lugs (f.f.) on the slotted washer (e) pass by the protection (d) on the washer (c), these lugs will then close together with a pair of pliers. It is then impossible for

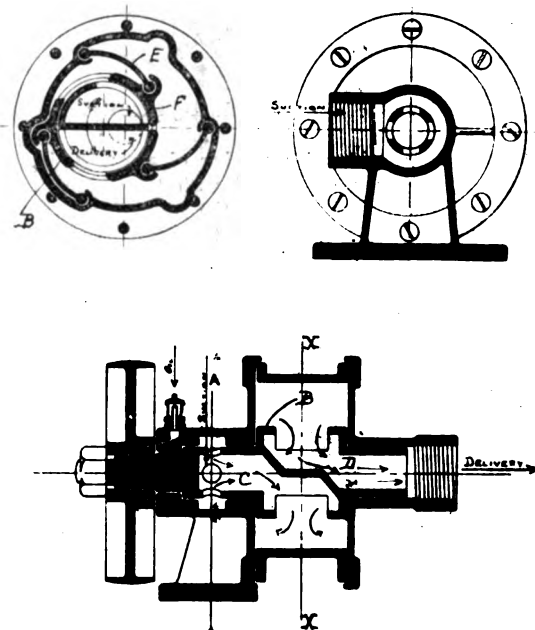


Fig. 53.—Sectional Views of Eland Water Circulating Pump. The upper left-hand drawing is a cross section through the line XX and the one on the right a section through AA.

the stud (b) to become loose by vibration or friction against the road, as the locking washer (e) must be forced open before it can be removed. When the head of the stud, however, becomes worn away, the washer (e) can easily be opened and withdrawn, and the broken stem of the stud removed by a pair of pliers, when a new stud and washer can be inserted in a few seconds. The washer (e) being made of specially tough brass or soft steel, can be used several times if necessary. Mr. Payne's invention has many points of advantage that should prove of considerable utility.

The Eland Rotary Water Circulating Pump.

A water circulating pump of ingenious design, and one which is well worthy of the attention of motor-car designers, is the "Eland," made by Messrs. J. J. LANE, LTD., of the Phoenix Engine Works, Old Ford Road, London, E. The feature of the pump consists mainly in the fact that the water is drawn and discharged through the hollow axes of a revolving eccentric, B (Fig. 53); this latter is divided into two chambers (C and D), connected respectively with the suction and delivery. Around the eccentric, and held in position with light wings, are three slides F; at the centre of each of these slides is hinged a wing E, loosely attached to the wall of the pump cylinder, dividing the pump into three sealed chambers; consequently the revolving of the eccentric expands and contracts these three chambers, drawing and discharging

the water from and to the respective chambers. The light rings are only required to hold the slides in position until the pump is flooded, when the water pressure maintains them in place. Apart from the fact that the pump has neither valves nor glands and minor advantages, the great improvement is the very low peripheric speed of the revolving eccentric piston. Hitherto the comparative high friction speed of the rotary pump, compared with that of the reciprocating pump, has been the condemning feature; this at last is entirely avoided, as with the "Eland" the friction speed is even less than most reciprocating pumps. The pump is made in all sizes from a capacity of 60 to 4,500 gallons per hour, the larger types being, of course, intended for industrial purposes. The 200-gallon size weighs only 5 lbs., and is adapted to run at a speed of 200 revolutions per minute. Another interesting exhibit at Messrs. Laue's stand was a portable petrol-driven fire pump, designed for use

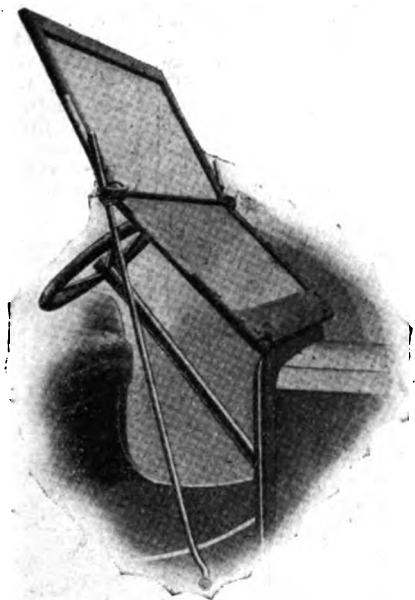


Fig. 54.—The Summers Wind Shield.

on country estates. The plant, which is mounted on two readily-removed wheels, consists of a 6-h.p. two-cylinder petrol engine, coupled through a reducing gear to an Eland pump of the type above described, and having a capacity of 6,000 gallons per hour. The plant can be quickly run to the scene of a fire, and, by removing the wheels, set on its own firm foundation near a water supply; it weighs only 5 cwt., and can project a powerful stream of water 100 ft. high.

Summers' Wind Shield.

Last November we published a full description of the details of the safety wind shield illustrated in Fig. 54, and eulogised it as one of the simplest and most effective devices brought to our notice. That opinion was confirmed by further inspection at the Show. As will be seen from Fig. 54, both the top and bottom halves are freely adjustable at any angle. They are fixed by simply turning one fly nut. The top part can be adjusted to avoid all reflections, and when in use the goggles are rendered unnecessary. At the same stand Mr. H. R. SUMMERS showed the Salisbury speedometer mileage recorder, for which he is the agent. This is an English instrument which has successfully withstood several severe tests as to its accuracy and strength. It is simply constructed on the principle of being gear-driven by patent flexible ball chain enclosed in electric-brass steel flexible casing. The balls form practically a universal joint at each link. The drive is fixed to the speedometer with a bayonet catch, and the connection can be made in a second. All sharp bends are obviated by means of bevelled wheels. The "Salisbury" speedometer indicates the rate of speed, the maximum speed attained on any trip, and records the total mileage up to 10,000. It can be driven from either the off or near front wheel, and, although the indicating hand is perfectly steady at all speeds, it is so sensitive that the slightest change of speed is instantly shown. Mr. H. R. SUMMERS' premises are at 28, Cheapside, London, E.C.

The "Electary" Accessories.

The newcomers to the Show who made a distinctly good impression upon expert motorists included Messrs. W. AND R. JACOBS, of 39c, King William Street, London, E.C., whose "Electary" motor appliances were characterised by neatness of design and, so far as it was

possible to judge, superior workmanship. Their specialities are distinguished from others by the use of the word "Electary," and include ignition accumulators in all sizes, dry batteries, head, side and tail lamps, charging boards, voltmeters, amperemeters, sparking plugs, switches, patent terminals, &c. The firm's dry battery is made in two forms, and of stout *papier mache* cases, bound together at the sides. In their "stand-by" dry battery Messrs. W. and R. Jacobs avoid chemical action by making up the cell entirely without moisture, the necessary chemical for producing the current being placed in the cell in powder, in which condition it will remain for years without giving any current. When the cell is needed for service it is only necessary to pour a small quantity of water through the opening at the top, and any losses that take place through evaporation can be replenished in the same way. A singularly good coil shown was the "Voltoo," working on two volts, and taking only one-fifth of an ampere to produce a spark equal to a 4-volt. coil—a means to economy. The "Electary" terminal is another speciality with merits. This can be left attached to accumulators for recharging, disconnecting the wire from the terminal instead of the terminal from the battery. A neat form of garage lamp for use with accumulators was on view, and half-a-dozen good forms of switches for cars and cycles. Mention may also be made of an instrument for indicating the state of the accumulator. When the latter is fully charged the pointer indicates the fact on the dial, and gradually falls as the battery becomes exhausted. A steering pillar lamp, with universal joint, was another minor exhibit of some interest, and this reference to a really creditable display of electrical accessories may conclude with a word of praise to the firm's charging boards, designed to meet the demand for a cheap as well as an efficient board.

Turner's Detachable Rim.

Among the detachable rims considerable notice was taken of that shown by Messrs. TURNER'S AUTOMOBILE WORKS, LTD., of Heald Grove, Rusholme, Manchester. The formation of this will be seen from the illustration (Fig. 55). In this the detachable flanged rim consists of a fixed part A, a loose flange B, and a locking ring C; D represents the wood felloe. In order to fix the tyre in position the cover is first placed on the fixed rim. Then the loose flange is put into position, the springing of the split locking ring into place being all that is necessary to secure it. The pressure of the air consequent on the inflation of the tyre assists the cover to be doubly secured in position. Any existing wheel can be easily converted to the purpose of Turner's detachable flanged rim simply by removing the old rims. There is no need to cut

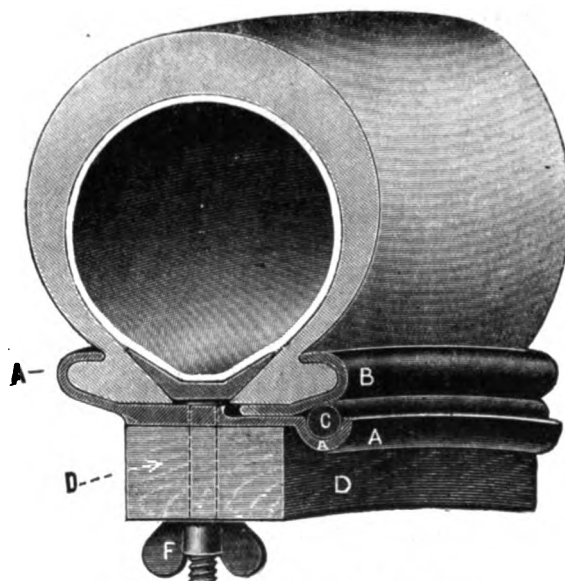


Fig. 55.—The Turner Detachable Rim.

down the existing wood felloe. Another advantage is that all parts are interchangeable. The tyre can be detached and attached without the aid of tools, and all risk of damaging the inner tube is obviated by seeing it in position before fixing the flange. The same makers have also a No. 2 rim, by the use of which a spare rim and tyre can be carried fully inflated and ready for fixing on any wheel of the car. This can be fitted in a minute. Yet another device of the Turner Automobile Works was a combination of these specialities in No. 3 Combination Rim. (To be concluded.)

THE OLYMPIA INDUSTRIAL MOTOR VEHICLE EXHIBITION.

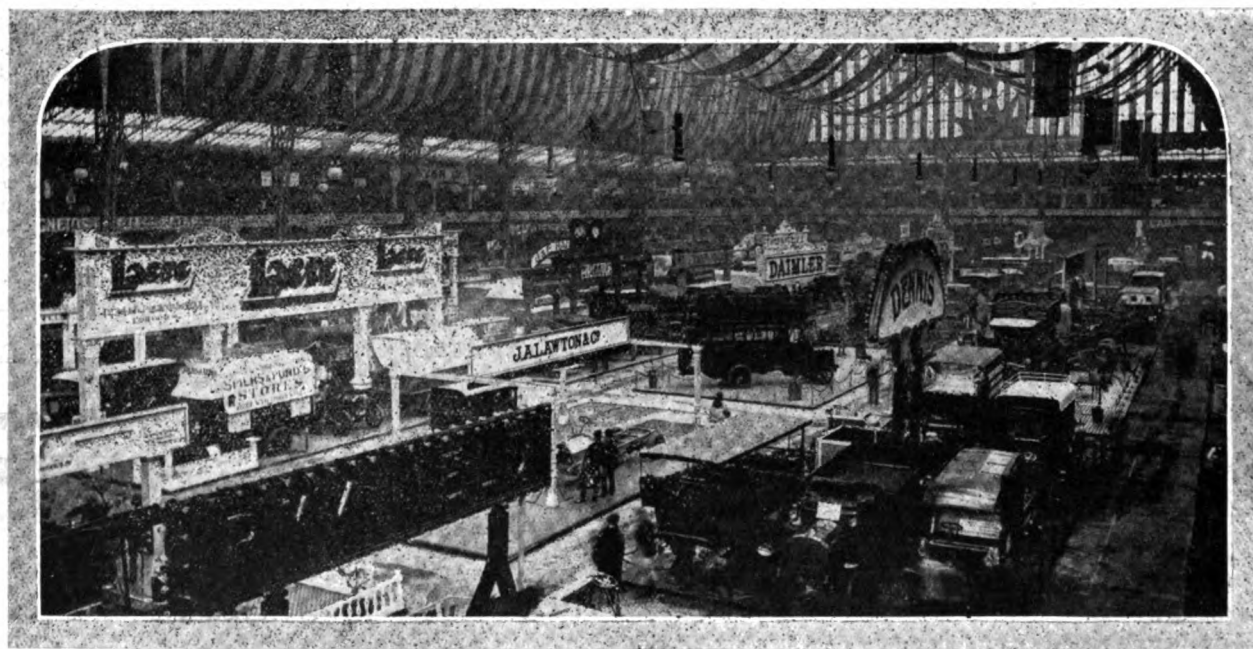
The second annual exhibition of industrial motor vehicles and motor-boats held at Olympia, W., was opened on the 27th ult. and closes to-day (Saturday). While the principal firms in the trade are represented there is no striking novelty, the outstanding feature of the show being the large number of makers who are now turning out motor-cabs.

The exhibit of the Wolseley Tool and Motor Car Company, Ltd., is a varied one, including as it does an 18-h.p. single-deck 'bus, a 30-cwt. van chassis, a 10-cwt. van and a 10-h.p. cab; an illustration of the latter was given in our last issue. The engine is of the two-cylinder type, with a bore of 3½ in. and a stroke of 4½ in. Ignition is by high-tension magneto and the water circulation is arranged on the thermosiphon system. Three speeds with a direct drive on the top are provided by the gear-box. The wheel base is 8 ft. 2 in. and the lock is such that the vehicle can turn in a 20 ft. roadway. A new motor-cab is also shown by the Austin Motor Company, Ltd.; in this the motive power is supplied by a 15-h.p. four-cylinder engine, located under the driver's seat and built up with the gear-box as a single unit; the final drive is by cardan shaft and bevel gear to a live axle. Other motor-cabs on view include the 10-12-h.p. Unic, shown by Messrs. Mann and Overtons, Ltd., the 10-h.p. two-cylinder and 12-16-h.p. Stars, by the Star Engineering Company, Wolverhampton, the two and four-cylinder vehicles of Messrs. A. Darracq and Co., Ltd.; the 14-16-h.p. four-cylinder Berna, by Berna Motors, Ltd.; the 12-15-h.p.

Sturmeys Motors, Ltd.; the Alldays, by Messrs. Alldays and Onions, Ltd.; the Beeston and Coventry Humbers, by Humber, Ltd.; the 10-14-h.p. Renault, by Messrs. Renault Freres, Ltd.

Clifte Engineering, Ltd., of Portlade, show a Fric 12-16-h.p. 20 cwt. lorry, the novelty of which lies in the double friction drive, which gives any speed between zero and the maximum and does away with the use of the ordinary gear-box. A new-comer in the motor lorry section is the Darwen Automobile Agency, who show a Frazer-Miller 24-h.p. 2-2½ ton vehicle. This is an American built machine, comprising a number of novel features, principal among which is the air-cooled engine. The four cylinders are provided externally with a large number of projections and covered by light metal cowls, through which a powerful blast of air is forced by a large fan driven off the engine. Messrs. T. C. Aveling and Co., Ltd., Birmingham, show a Broom and Wade 3-4-ton lorry, fitted with a 25.6-h.p. single-cylinder engine using paraffin as fuel. Prominent on the stand of Messrs. Durham, Churchill and Co., Sheffield, is a 24-30-h.p. twenty-six-seated char-a-banc; examples of the firm's 2 and 3-ton lorries are also on view. A noteworthy exhibit of Commercial Cars, Ltd., Luton, is a 30-36-h.p. 3-4-ton brewery lorry fitted at the rear with a small jib crane operated by the engine, by means of which casks can be readily loaded and unloaded from the vehicle.

Halley's Industrial Motors, Ltd., of Yoker, Glasgow, exhibit a 2-ton van, a 20-cwt. chassis, and a 20-h.p. fire tender built for the Corporation of Clydebank. The Ryknield Motors, Ltd., have on view a polished chassis of their latest 40-50-h.p. 5-ton vehicle, as also a 22-seated single-deck 'bus and a 3-ton furniture van. A big display is made by Messrs. Dennis Bros., Ltd., Guildford, whose exhibits include



General View of the Olympia Industrial Vehicle Exhibition.

Thames, with worm drive, by the Thames Engineering Company, Ltd.; Greenwich; the 12-14-h.p. Straker-Squire, by Messrs. Straker Squire, Ltd.; the 10-h.p. De Dion, by Messrs. De Dion-Bouton, Ltd.; the 12-18-h.p. Lotus, by Sturmeys Motors, Ltd.; the Coventry and Beeston Humbers, by Humber, Ltd.; 10-14-h.p. Fiat, by Fiat Motors, Ltd.; the 12-14-h.p. West-Aster, by Messrs. West, Ltd.; the 8-9-h.p. Renault, by Messrs. Renault Freres, Ltd. Among the cars specially designed for the use of commercial travellers are the 12-h.p. Bentall, exhibited by Messrs. E. H. Bentall and Co., the Darracq, by Messrs. A. Darracq and Co., Ltd., and the 10-h.p. Austin, by the Austin Motor Company, Ltd.

The Victoria Street Garage and Showrooms Company, of 94, Victoria Street, Westminster, exhibit several of the novel 6-h.p. delivery vans illustrated on page 131 and for which they have acquired the British agency. The vehicles, which are of French construction, are known as the "Roval." The motor power is supplied by a De Dion 6-h.p. single-cylinder directly connected with the three speed and reverse gear-box mounted below the driver's seat in front of the back axle, the final drive to the rear road wheels being by side chains. The vehicles are designed to carry loads of from 10 to 12 cwt., and can attain a speed of close upon twenty miles per hour. Other light petrol motor delivery vans for loads from 7 to 20 cwt. on view include the Vulcan, shown by the London and Parisian Motor Company, Ltd., the Bentall 11-h.p. vehicle, by Messrs. E. H. Bentall and Co., Heybridge, Essex; the Unic, by Messrs. Mann and Overtons, Ltd.; the Royal Windsor by the Industrial Motor Company, Windsor; the Horley, by the Horley Motor and Engineering Company, Ltd.; the Belsize, by Belsize Motors, Ltd., Manchester; the Darracq, by Messrs. A. Darracq and Co., Ltd.; the Thames, by the Thames Engineering Company Ltd.; the Lotus, by

a 15-cwt. post office van, 2, 3, and 4-ton chassis, a 30 cwt. van for Harrod's Stores, Ltd., and a 28-h.p. 20-seated char-a-banc. All the vehicles are fitted with the Dennis worm drive, and the fact that the bulk of the machines on view are repeat orders speaks well for the satisfaction they are giving in practice. The Lacre Motor Car Company, Ltd., stage a number of the largely-used Lacre 16-h.p. vans for loads of from 24 cwt. to 2 tons, the exhibit including the first one delivered to Messrs. Shoobred and Co., which has run upwards of 40,000 miles without a stop due to mechanical causes.

Berna Motors, Limited, have a large display, including a 5-ton 35-h.p. chassis, an 18-h.p. 2½-ton lorry, and a 2½-ton laundry van. The Maudslays Motor Company, Ltd., have on view the actual 3-ton lorry which gained a gold medal in the recent trials, also a 2-ton chassis and a 30-h.p. single deck 'bus for the Midland Railway Company service between Desborough and Rothwell. A new 3-4-ton 30-40-h.p. lorry is shown by Messrs. A. R. Atkey and Company, Ltd. The transmission is on novel lines, the power being conveyed from the cross-shaft at the rear of the gear-box by a compound roller chain to an intermediary shaft above the axle, the final drive being by pinions gearing with internally-toothed rings bolted to the rear road wheels. Messrs. J. I. Thornycroft and Company, Ltd., show a 30-h.p. twenty-nine passenger char-a-banc, a 30-h.p. single-deck 'bus for the L. and S. W. Railway Company, for service between Exeter and Chagford, a 30 cwt. van and a 3½-ton van, the latter being designed to use paraffin as fuel.

The exhibits of Argylls Motors, Ltd., and Argylls London, Ltd., include a 12-h.p. four-seated cab, 15 cwt., 20 cwt., and 40 cwt. vans and lorries, and a 20-h.p. fourteen-seated single-deck 'bus with worm drive. A new-comer in the heavy petrol motor lorry section is the Societa

Cantieri Gallinari, of Leghorn, Italy, who show a 40-h.p. 5-6-ton chassis. The vehicle is of strong construction, a feature being the transmission; the drive from the gear-box is by a cardan shaft which operates by bevel gear, a short differential shaft in front of the rear one-piece axle, the connection between the two being by means of two pairs of spur wheels. Leyland Motors, Ltd., as the old Lancashire Steam Motor Company is now known, exhibit a 35-h.p. double-deck 'bus and a 2 and 3 ton lorry chassis. Milnes-Daimler, Ltd., stage a 28-h.p. 'bus for the G.W. Railway Company, a 2-ton van, a tip wagon and a 35-h.p. 5-ton chassis, the latter comprising a number of new features. Heavy petrol lorries for loads of from 2 to 3 tons are also staged by Messrs. J. and E. Hall, Ltd., Dartford Messrs. J. E. Hutton, Ltd. (Berliet); the Thames by the Thames Engineering Works, Ltd.; the 3-ton Bussing by Messrs. Straker and Squire, Ltd.; the Armstrong-Whitworth by Sir W. G. Armstrong, Whitworth and Co., Ltd.; the Arrol-Johnston by the New Arrol-Johnston Car Company, Ltd.; the 4-ton Fiat vehicles by Fiat Motors, Ltd.; and the 5-6-ton 36-45-h.p. lorry by the Gaggenau Motor Vehicles Company. Mero, Ltd., Sheffield, have on view a Straker-Squire 'bus fitted with their patent "Mero" change-speed gear, which has already been described in these pages. Messrs. Barford and Perkins, Peterborough, are present with two examples of their water-ballast motor rollers, the engines of which can be adapted to use petrol or paraffin.

Petrol-electric motor-buses are shown by the Daimler Motor Company Ltd.—their vehicle being on the Automixte system—Messrs. Greenwood and Batley, Ltd., Leeds, and Messrs. J. and E. Hall, Ltd., Dartford. The feature of the Greenwood and Batley vehicle is that two electric motors are used, each of these driving one-half of the rear live axle through worm gear. A similar drive is adopted in the Hallford chassis of Messrs. Hall; in this case, however, the two motors are located outside the frame. The Electrical Vehicle Company, Ltd., have on view an Electrobuss similar to those seen running in London, as also a number of vans and lorries, reference to which will be made in our next issue.

In addition to a 40-h.p. petrol motor twenty-two-seated char-a-banc, the Critchley-Norris Motor Company, Bamber Bridge, show for the first time a 30-40-h.p. 2-3-ton steam motor vehicle on the Kitchen system; the engine and boiler are located in the fore part of the frame, the transmission being by a cardan shaft to the differential shaft and thence by side chains. The exhibitors of steam lorries include Messrs. Wallis and Stevens, Ltd., of Basingstoke, the St. Pancras Ironwork Company, Ltd., London, N.W.; Mann's Patent Steam Cart and Wagon Company, Leeds, Messrs. D. Stewart and Company, Ltd., Glasgow, Messrs. Straker and Squire, Ltd., Messrs. Alley and MacLellan, Ltd., Glasgow, Leyland Motors, Ltd., Leyland, and Fodens, Ltd., Sandbach. The last-named firm exhibit for the first time in London their new 3-ton wagon designed to run on solid rubber tyres. Steam tractors are shown by Messrs. Chas. Burrell and Sons, Ltd., Thetford, Messrs. Clayton and Shuttlesworth, Ltd., Lincoln; Messrs. Wm. Foster and Co., Ltd., Lincoln; Messrs. Wallis and Stevens, Ltd., Basingstoke; Messrs. R. Garrett and Sons, Ltd., Leiston; Messrs. W. Tasker and Sons, Andover; and Messrs. John Fowler and Co., Ltd., Leeds.

Among the interesting exhibits in the motor-boat section is the "Clift" four-cylinder paraffin engine, which has a patent compression release device to enable the valves, sparking plugs, carburettor, &c., to be removed whilst running; also for inspecting the ignition spark in

ing compressed-air chambers hermetically sealed, producing an unpuncturable inner tube, or providing an admirable cushioning material for upholstering cars.

At the stand of the Polack Tyre Company is a selection of their solid rubber tyres, and also a new idea to withstand skidding, introduced by Mr. W. Coleman. His invention, which is being marketed by the Polack Company, consists in the combination of hard and soft rubber, the latter being rather deeper than the former, so that an even surface is maintained on the road. Yet when a skidding tendency

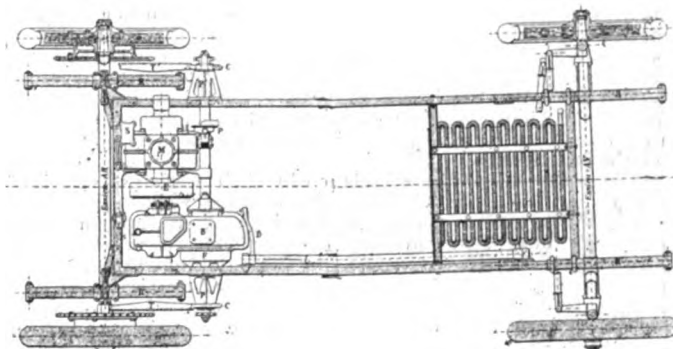


Fig. 2.—Plan of Chassis of Royal Delivery Van.

develops it is thwarted by the opposing natures of the two rubbers. For heavy lorries a triple tyre is being brought out, in which the soft rubber forms the central tyre, the two outer ones being of hard rubber, the three forming a useful combination. For motor-buses a dual series of hard and soft rubber blocks form the surface on the road, these being opposite to grooves, so that slipping is prevented. The same idea of the utilisation of hard and soft rubber is being developed in connection with pneumatic tyres for cars, studs of hard and soft rubber alternating on the outside tread in the same way as the ordinary metal studs. The rubber studs are inserted half-way through the tread, and securely fixed beyond possibility of loosening.

A new flexible hub, forming a resilient wheel, and designed for use in conjunction with all kinds of tyres, is exhibited by Messrs. Smith's Flexible Hub, Ltd., of 20, Copthall Avenue, London, E.C. When used as an auxiliary to the solid tyre, it should minimise the wear and tear of the machinery by the resiliency it affords in carrying weight and in the drive. The main feature is that a flexible drive is transmitted through the agency of rubber-covered spindles or distance pieces, which are located in chambers formed in the rigid body of the wheel, and connecting together side plates which cover the ends of the hub. The object is to provide a hub of comparatively simple construction wherein the shocks due to the vehicles passing over inequalities of the road are more readily absorbed by the flexible cushions, so that the "give and return" of the cushions is unaccompanied by any jar, and a positive, although at the same time flexible, drive is obtained. The invention is not brought to the Exhibition in an untried state, for these hubs have been tried on the public service cars of the Sutherland Motor Traffic Company, Ltd., with success, on some motor hansom cabs in London, and also in private use. The "Hindley" disc wheel, and other wheels for commercial vehicles, are demonstrated by Messrs. G. Scammell and Nephew. As usual, Messrs. Smith, Parfrey and Co., Ltd., have a very attractive exhibit of their forgings for motor vehicles. Artillery motor omnibus wheels and a differential back axle for a 30-cwt. delivery van are also to be seen under their auspices.

In the tyre section the "De Nevers" grooved solid tyres are shown by Messrs. J. Liversidge and Son, Ltd., who are also introducing the "Scott" non-skid treads; while a complete range of the Sirdar, Dunlop, "Peter Union," Gaulois, Bergougnan, and the K.T. are on view. The Shrewsbury and Challiner Tyre Company, Ltd., exhibit the "Giant" wheels and Challiner's detachable rim. The "Ajax" detachable rim is on the stand of the Midland Rubber Company, Ltd., who also exhibit samples of tyres repaired at their works in Ryland Street, Birmingham. A good selection of solid tyres and artillery wheels is presented by Messrs. J. W. and T. Connolly, Ltd.

Well-known lubricants are shown by the Stern-Sonneborn Oil Company, Ltd., whose lubricators suitable for motor-cars are also on view. A representative collection of lubricating oils and greases for use with commercial motor-vehicles is made by Messrs. Engelbert and Co. The Vacuum Oil Company, Ltd., take advantage of the occasion to obtain attention to their fluid and semi-solid lubricants for motor-cars and boats. Another prominent exhibitor is Price's Patent Candle Company, Ltd., whose "Motorine," "Oleogene," "Cirogene," "Manular," &c., are generally known to our readers. Several good grades of oil are also to be seen in the space devoted to the specialties of Messrs. W. H. Willcox and Co., Ltd., many of whose oils have been specially refined for use in motor-buses, wagons, tractors, &c. They also have a range of engineering tools and appliances, including the Penberthy injectors, lamps for lorries, and the usual motor engineers' requisites.

(To be concluded.)



Fig. 1.—The Royal Delivery Van.

the cylinder. A patent pump gear is fitted to enable either of the two water pumps to be removed whilst the engine is running on the other pump. Williamson's Patents Company, of Gorleston, also exhibit a novel internal combustion engine with oscillating cylinder.

In connection with tyres, mention may be made of the "Elastes" filling, which has become well known among motorists, and also the "Elastes" moveable-flange rim, shown in operation at the stand of the Elastes Company, Ltd. A new form of resilient inner tube is on the stand of the Pneumatic Syndicate, Ltd. The essential feature of this system is a spongy material impregnated with mutually-support-

Correspondence.

[Letters to the Editor should be addressed to the offices, 27-33, Charing Cross Road, London, W.C.]

THE SETTING OF VALVES.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—The Larrad Syndicate are in error. I have not at last admitted that there is something in synchronisation. I never disputed that it was not desirable to have all the valves synchronised. What I disputed and still dispute is that one particular setting is correct for all engines. I would draw the Larrad Syndicate's attention to the remarks by that eminently practical motor engineer, Mr. T. Blackwood Murray, whose experience is worth going by. They now doubt the accuracy of a protractor as compared with their device. I am afraid I must once more differ; a protractor, like many other delicate instruments, can be used rightly and wrongly, but I do contend that a flywheel can be accurately marked out with a protractor by anyone acquainted with the use of the instrument.

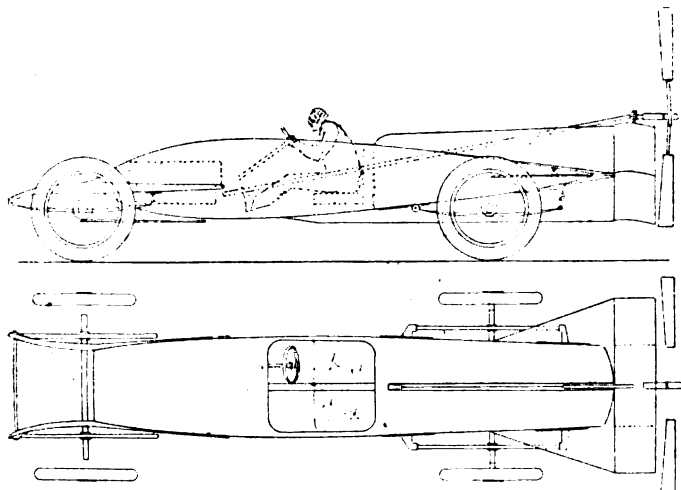
Will the Larrad Syndicate explain why their setting is superior in the case of automatic valves? I keep on wondering what happens to the exhaust gases that must remain in, due to (1) back pressure on the exhaust, (2) the downward movement of the piston before the exhaust is shut. I do not wish the Larrad Syndicate to misunderstand me. I am most interested in the matter, and I consider they are most enterprising people in introducing the "one setting" theory. I hope that this discussion with their views and those of other people will continue, as I am positive the last word has not been said about valve position.—Yours truly,

INTERESTED ENQUIRER.

THE 2,000 MILES RELIABILITY TRIALS.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—In view of the large amount of interest which has been shown, and the discussion which has taken place respecting the treatment of light cars in the proposed 2,000 mile trials organised by the R.A.C.,



The Novel Racing Car designed by M. Henri Farman.

M. Farman considers that the vehicle, which is an outcome of his aeroplane experiments, would only weigh about 8 cwt., and fitted with a 50-h.p. engine could attain a speed of over 90 miles per hour. As will be seen, the design provides for the propulsion of the car by means of a large fan at the rear driven by the engine through the medium of a long propeller shaft.

[La Vie au Grand Air.]

we beg to give you some particulars which we think will interest the manufacturers of light cars. For various reasons, of which financial consideration was one, we have decided not to enter any Ford cars in the 2,000 mile trials. We have not yet come to a decision with reference to the Scottish trials, but we intend to place a team of four cars in the Irish trials.

The consideration of finance is a very considerable one, and was dealt with very completely by Mr. Sturmev in his recent criticisms of the R.A.C. trials. It has been urged against the Irish trials that there is considerable inconvenience, loss of time, and expense entailed upon British manufacturers in taking cars to Ireland. This is undoubtedly so, but there are many compensations in favour of the Irish trials. For example, the entrance fee for the 2,000 mile trials for our 15-h.p. Ford car is £55, the entrance fee in the Irish trials is 6 gs.; in addition to the entrance fees in the 2,000 mile trials competitors have to provide observers; that is to say, they must hire an observer, pay him for his time, and they must pay his expenses and buy an "official" watch.

The following figures give a comparison of what the cost is for a team of four cars in the Irish and in the 2,000 miles trials respectively. No account has been taken of wages, nor has any debit been made against the R.A.C. trials in respect of their longer duration and the con-

sequent increased cost for wages and increased cost for car depreciation, wear and tear, petrol and lubricating oil consumption, tyre renewals, &c. The figures are merely out-of-pockets, and whereas we have allowed nine days for getting cars to Ireland and bringing them back to London, and have charged up expenses accordingly, we have assumed that inasmuch as the 2,000 mile trials commence from and finish in London, there will be not more than two days lost in taking cars to the starting place and bringing them home after the expiration of the trials.

| | Irish. £ s. d. | R.A.C. £ s. d. |
|---|-------------------|-------------------|
| Entrance fees. Four cars ... | 25 4 0 | 220 0 0 |
| Men's expenses, five men at £1 per day— | | |
| R.A.C. trials, twenty-six days ... | | 130 0 0 |
| Irish trials, fifteen days ... | 75 0 0 | |
| Return freight, Holyhead to Dublin ... | 14 0 0 | |
| Men's fares on boat (ditto) ... | 4 0 0 | |
| Fees and expenses of observers— | | |
| Twenty days at 30s. per day ... | | 30 0 0 |
| Six days at 15s. per day ... | | 4 10 0 |
| Watches for observers... .. | | 8 0 0 |
| | 118 4 0 | 392 10 0 |

It will therefore be seen that exclusive of all the additional cost for wages, petrol, &c., as above pointed out, it would cost us more than two-and-a-half times as much to put a team of four Ford cars through the 2,000 mile trials, as it will to put the same team through the Irish trials. The serious question which a manufacturer or concessionaire has to consider is, whether the 2,000 mile trials are going to be worth the proportionate additional cost. There is no doubt that the R.A.C. trials are being held at a more inconvenient time of the year, and will take up a considerable amount more time. The Irish trials will cover a course of 800 and some odd miles, including speed tests and hill climbs. We submit that the car which goes through the Irish trials will have proved itself to be a good car, to the satisfaction of the average purchaser, just as much as a car which goes through the R.A.C. trials.

At the time of writing there seems to be no doubt that there will be even a bigger competition, that is to say, more entrants in the Irish trials than there will be in the 2,000 mile trials; there will be a very great deal of interest shown in these trials, but it is, perhaps, hardly to be expected that they will secure so much publicity as the R.A.C. trials. There is, however, very little doubt that unsuccessful competitors in reliability trials do not want publicity, whereas the successful competitors make nine-tenths of their own publicity.

In our opinion the Irish trials are, from a small car manufacturer's point of view, infinitely preferable, being for an adequate distance, occupying a reasonable time, and, being conducted under rules and regulations proper to such reliability trials, they are not experimental, and, what manufacturers will appreciate, are not an alleged philanthropic effort, notwithstanding that entrance fees are less than one-eighth of the amount of the entrance fees of the R.A.C. trials; furthermore, one experiences in Ireland what only competitors who have gone through several trials and been subjected to various methods of treatment properly appreciate, viz., a fair-minded, always courteous, and absolutely gentlemanly and sportsmanlike treatment from all the officials of the Irish Automobile Club.—Yours truly,

PERRY, THORNTON AND SCHREIBER, LTD.

COURTESY ON THE ROAD.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—One often hears of the apparent inhumanity of cyclists (and others) who pass people in difficulties on the road without offering to help them in any way. Can one altogether wonder at this after the following incident.

On Saturday night last I was cycling on London road just under a mile out of Basingstoke town, when another cyclist (A.) passed me. I noticed another cyclist (B.) coming in the opposite direction at a very fast pace, and before A. got anywhere near him, B. fell from his machine, knocking himself about considerably. A., after riding past him, dismounted, walked back to B. and helped him on his feet again, when B., with a lot of "bluff," asked for our names and addresses and accused A. of colliding with his cycle which caused him to fall, and he made himself so objectionable that we had to send for the police. I might state *en passant* that I know nothing whatever about A., never having, to my knowledge, seen him before. It would be very interesting to know the position of a cyclist (or motorist) placed in the same circumstances as A.

if there had been no witness present, and B. sued A. for any damage done to either himself or his machine.

Thanking you in anticipation for the insertion of this in your paper, and enclosing my name and address.—Yours truly,

CYCLIST.

THE DUST QUESTION.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR.—Our experience, based on numerous experiments in this direction, is, that the larger the area of resistance of a fast moving car, the greater the air displacement, or partial vacuum which seems to be created behind the car, and so it follows, more dust is raised. And in so far as a large folded buggy hood goes to increase this resistance, it must increase the dust raised. It all depends on whether the hood when folded back adds to the area of the car's resistance as seen from the front, or not.

Whether it overhangs the road behind or not does not affect it one way or the other, in our opinion. Our own screen, which does this, but does not materially add to the area of the car, does not cause the car to raise any more dust than it does without it. We think this can easily be proved by a simple experiment. Take a sheet of cardboard, and holding it parallel with, and face downwards to a dusty floor or road, move it rapidly backwards and forwards, and no dust would be raised, although perhaps only a few inches away.—Yours truly,

W. E. WRIGHT.

(The Motor Dust Screen Company.)

TO THE EDITOR OF *The Motor-Car Journal*.

SIR.—With reference to your remarks on the report of the R.A.C. dust trials we have ourselves noticed that the dust is increased with the use of some Cape hoods.

Our experience in this matter is, that it depends chiefly upon the way the hood is set on the car; if, as in some cases, the hood is only slightly raised at the back, we find the dust is carried some distance and then shot off at either side of the car.

When the hood is raised high at the back it has the effect of throwing the dust away from the car, thereby causing it to settle more quickly.—Yours truly,

A. WESTON.

(T. R. Bye and Co.)

WILL THE BELT DRIVE BE REVIVED?

TO THE EDITOR OF *The Motor-Car Journal*.

SIR.—As a motorist of moderate days dating from the time of the early 3½-h.p. Benz cars, I was interested in the announcement in the *M.C.J.* last week that the Brouhot Company of France was bringing out a new belt-driven car. For small-powered vehicles the belt drive enables a simple type of automobile to be produced and one that does not need an engineer to keep in order. French makers have so long pinned their faith to the gear drive that the new departure of the concern above mentioned seems to suggest that we are about to see a revival of interest in belt-driven vehicles, which, from the point of view of simplicity, are certainly worthy of attention.—Yours truly,

DORSETONIAN.

ROAD SIGNS.

TO THE EDITOR OF *The Motor-Car Journal*.

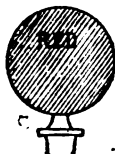
SIR.—It would be an advantage to many readers if you could give illustrations with explanations of the meanings of the various road signals now in use. I was driving with a friend some time ago when we passed several of which neither of us understood the meaning, so I think the information would be welcome to many of your readers besides—Yours truly,

NOVICE.

[The road signals recognised by the Local Government Board are as follows:—



For 10 mile or lower limit of speed.



For Prohibition of Motor Cars.



For Caution at dangerous places, etc.



All other notices to be on diamond shaped boards.

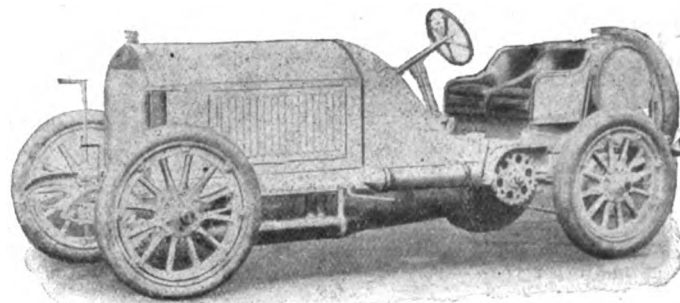
THE ENDORSEMENT OF LICENSES.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR.—Your correspondent "A. D. K." has my entire sympathy. I also have experienced some of the troubles which he alludes to, and although in all probability the endorsement is strictly within the letter of the law, I, too, cannot imagine that it is in accordance with common sense. It is a remarkable thing to me that any body of men can sit together for a considerable time and eventually fine another man the paltry sum of one shilling for an offence which really amounts to nothing, and is purely technical. As for the costs of such an affair, it is, in my opinion, highway robbery by Act of Parliament. There seems to be a great deal too much prejudice against any unfortunate individual who happens to be driving a motor-car. My own license is endorsed in three places, and these by the merest accidents.

In all three cases it has happened that I have been working in my shirt-sleeves on a car, and, probably enthusiastic about my work, I have jumped on the car and driven it to see the result.

A local constable naturally and quickly concludes that that man has not got his license in his pocket, because as a matter of fact he has not even got the pocket on him. He took it off to keep it clean while he did the work, but it cost him considerably more than a new coat would have done. I think that so far as accidents go the license, after all, is of very little avail, and what I do emphatically say is this: If a man has an accident, ask for his license. If he has not got it on him, what the police should do is to find out whether he has a license at all. If he has not, then let them act; but why fine a poor man and bias the opinions of those who are for the time being against him, simply because he did not happen to have the license on his person?



One of the Benz Cars for the A.C.F. Grand Prix Race.

I think to some extent the same theory applies to the speed limit. Why not let a man drive at his own discretion, then when he has an accident or a collision pile it on to him, not on to the poor man who is anxious to keep his place, and is probably driving half a mile an hour faster than he should have been? One thing more—why is the license always spelt with two c's when it should not be?—Yours truly,

HERBERT J. CHAPMAN.

THE SECOND-HAND CAR PROBLEM.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR.—One of the most serious problems at present facing those interested in the motor industry in this country is the disposal of high-powered second-hand cars. At nearly every depot that one visits a number of such cars are on hand, purchasers for which appear to be coming scarcer every day. The rich car-owner, when he desires a change of automobiles, looks disdainfully on second-hand machines, and orders a new one from the factory. The only probable purchasers of the second-handers are would-be motorists of moderate means, who find, some from bitter experience, that it is not the first cost of these vehicles that is the trouble, but the upkeep of the same, the tyre bill in particular working out very heavy. Nor is the outlook for the disposal of powerful second-hand cars improved by the taxation proposals at present in the air, be they based on weight or horse power. Altogether the problem is a difficult one, and he who can find a satisfactory solution will deserve well of the trade.—Yours truly,

A PROVINCIAL TRADER.

RACES AT BROOKLANDS.—Mr. S. F. Edge writes:—"No doubt you have studied the list of races published by the Brooklands Racing Committee for their race meeting on Easter Saturday and Monday. In the autumn of last year it was decided that at every meeting they would have standard class races, to wit, 26-h.p., 40-h.p., 60-h.p. and 90-h.p. These sizes were decided upon at a meeting called to discuss this very question, and which was attended both by prominent men in motor racing circles as well as by representatives of the leading motor firms, and I certainly understood that it was the intention of the latter to build cars to race in these classes. Acting on this assumption, the six-cylinder Napier cars for the 1908 season were made in accordance with dimensions specified at this meeting, and I now see with great surprise that the bulk of the races set out in the Brooklands schedule admit of all kinds of odd sizes of cars, a state of affairs which practically bars the six-cylinder Napiers, as, of course, it is impossible at such short notice to make cars conforming to these new sizes. This being so, it must be clearly understood that there will be a great number of races at Brooklands in which the Napier will be unable to take part. For standard sizes, of course, there will always be a Napier competing."

MESSRS. LEO RIPAULT AND CO., of 64A, Poland Street, London W., have issued a new catalogue of the Oleo specialities, for which they are sole British agents. These include plugs, voltmeters, amperemeters, terminals and a hundred other accessories.

CLUBS AND ASSOCIATIONS.

ROYAL A.C.

MR. C. D. ROSE, M.P., has been re-elected chairman for the ensuing year. On the motion of the Hon. Arthur Stanley, C.V.O., M.P., it was resolved "that the best thanks of the Committee and of the Club are due to Mr. C. D. Rose, M.P., for his strenuous work in upholding the best traditions of the club during his year of office." Mr. W. Worby Beaumont, Professor C. V. Boys, F.R.S., and Mr. Chas. Hardy have been elected vice-chairmen. Mr. Paris E. Singer is re-elected honorary treasurer and Mr. W. Worby Beaumont honorary consulting engineer. The Hon. Arthur Stanley, C.V.O., M.P., and Colonel H. C. L. Holden, R.A., F.R.S., have also been re-elected honorary members of all committees.

MOTOR UNION.

UNDER the auspices of the Motor Union a national conference of automobilists to consider the questions of Parliamentary policy was held at the Hotel Cecil, London, on the 25th ult.

Mr. W. Joynson-Hicks, chairman of the Union, presided, and said that after last month's deputation to the Chancellor of the Exchequer the Motor Union decided to communicate with the local authorities asking their views as to the possibilities of increased taxation and to prepare a petition to Parliament, from all users of motor-cars. That conference was called in order to assure themselves that they had the support and confidence of motorists generally. It was perfectly clear that if they antagonised the local authorities they would be in for serious trouble with the Legislature, and he was glad to say that upwards of 300 local authorities had responded to their request to pass a resolution approving the principle that the money raised from the taxation of motors and other vehicles should be paid out in grants towards ex-

and other vehicles should be paid over to and administered by a Central Department as a grant in aid for highway purposes."

This was seconded by Mr. P. Armitage and agreed to.

The Chairman proposed: "That, in view of the difficulty of arriving at an equitable basis of taxation for motor vehicles, this conference is of opinion that before any change is made in the existing basis the matter should be referred to a Departmental Committee for consideration and report." The object, he said, was to settle once for all whether taxation should be by weight or by horse-power.

This was seconded by Mr. J. D. Siddeley and carried.

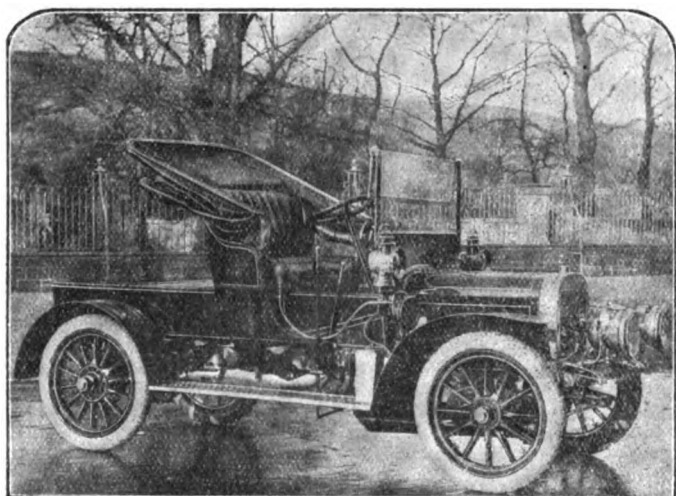
Mr. Joynson-Hicks subsequently presided over the annual meeting of the Motor Union. The report showed that at the end of 1907 there were 101 clubs in membership, the individual numbers being 4,748 as compared with 3,295 in the previous year. There were 149 life members. The total income amounted to £8,282.

Mr. W. Joynson-Hicks moved the adoption of the report.

This was seconded by Mr. C. H. Dodd, who said the Union would continue to work for the provincial motorist and for the owner of the car of moderate horse-power. Great developments were anticipated from the newly-formed Touring Department.

The report having been adopted, Mr. W. Ballin Hinde moved the acceptance of the accounts. The financial position had never been a cause of anxiety. The Union was in a sound state and had a considerable reserve fund. Mr. C. McWhirter seconded, and mentioned that the reserve for an emergency was practically £9,950. The accounts were then accepted unanimously.

Some alterations in the rules made necessary by the altered state of affairs were then sanctioned. Messrs. W. Joynson-Hicks, W. Ballin Hinde, and W. Bourke were elected trustees, and the meeting concluded with the adoption of the resolutions arrived at by the conference held earlier in the day.



The Argyll 14-16-h.p. Two-Seated Car recently supplied to Mrs. Hunter, of Thurston, North Berwick.

penditure on the roads. The petition to the Government on the subject had already been signed by over 20,000 people, and that number would doubtlessly be increased. He moved: "That in the opinion of this conference no sufficient reasons can be shown on general principles for any additional taxation of motor vehicles."

Earl Russell, in seconding the resolution, declared that there was no justification for an increased tax on motor vehicles. If the basis of taxation was that of luxury, that applied to other things besides motor-cars. The resolution was carried.

Lord Montagu of Beaulieu moved: "That this representative conference of automobilists is of opinion that additional taxation of motor vehicles, if sanctioned and allocated to the general purposes of revenue instead of to the purpose of road improvement, would tend to retard the development of improved methods of transit, and should be strongly opposed as contrary to the public interest." They might take it as a fact, he remarked, that Mr. Asquith intended to increase the taxes on motors. A tax on locomotion was *per se* a bad thing, but there was no doubt whatever that the expense of maintaining main roads had gone up very greatly owing not only to motor-cars, but to the general increase of traffic all over the country. Motorists had the support of County Councils and local authorities in demanding that the extra money should be devoted towards road mending. The motion was seconded and carried.

Mr. C. H. Dodd, vice-chairman of the Motor Union, proposed: "That this conference strongly supports the recommendation of the Royal Commission on Local Taxation that financial assistance should be given by the State to local authorities for the purpose of improving the roads, and is of opinion that the revenue derived from taxation of motor

SOCIETY OF AUTOMOBILE MECHANIC DRIVERS.

THE third annual dinner of this society was held at the Criterion Restaurant, on the 28th ult., Lord Montagu of Beaulieu occupying the chair. Among the 200 persons present were Sir Nevill Gunter, president of the society, Sir John H. A. Macdonald, Colonel W. J. Bosworth, Messrs. W. Rees Jeffreys, Stenson Cooke, A. C. Hills, and G. T. Clarke.

After the loyal toasts, Lord Montagu proposed "The Society," observing that the gathering was a practical demonstration of the sympathy that the leading automobile bodies had with the aims of the society, which should become beneficial to the public at large. On the road everything depended on the skilful and considerate handling of the car, hence his hearers had nearly the whole of the legislative future of the movement in their hands. Let them show the public that the drivers of motor-cars considered themselves as one class of road user only, and were considerate accordingly. As being collectively practically the controllers of motor traffic it was well that they should band themselves together. The objects for which they were established were such that no sensible person could take exception to them. They were setting up their own benefits, thereby being more than self-supporting, and they were studious that no one likely to disgrace their body should be admitted to their ranks. He hoped that presently it would become the recognised thing for employers to ask applicants for situations whether or not they were members of the society. At the moment they were a new kind of employee in a new movement, and he would remind them that Mr. H. G. Wells had prophesied that the intelligent man of the future would be the one skilled in mechanics, that being the writer's test of increasing intelligence. He felt sure they were rapidly enlisting the sympathies of all the great motoring associations, and the R.A.C. was sure to support them.

In acknowledging the toast Mr. George T. Clarke briefly recapitulated the history of the society. Three years ago when people got on a car they usually said, "Oh, I do hope we'll start." Nowadays, however, the only trouble seemed to be changing tyres. The society was establishing examining branches for candidates in all the chief cities; and it hoped that employers would speedily realise that the driver was the man who really looked after their property. The society hoped to gather to its membership the genuine article only, and so keep up a fair standard of wages for the motorman.

MARINE MOTOR ASSOCIATION.

AT the annual general meeting of the Marine Motor Association, Lord Montagu of Beaulieu was re-elected president. Captain R. T. Dixon, R.E., and Mr. W. Miall Green were elected vice-presidents, and Mr. O. B. Colls was appointed hon. treasurer. Messrs. F. C. Blake, H. W. Hutchinson, R. S. L. Markham, S. E. Saunders, and J. A. Rennie were elected to the council, and the result of the ballot for vacancies was the election of Messrs. P. Bonthron, Charles Burgoine, L. Miles, J. Day, H. G. Vereker, J. Wood, and M. M. Robins.

The annual report, which was adopted, stated that the association continued to receive the support of every important club in the United Kingdom, and practically the whole of the motor-boat racing in this country was carried on under its racing or rating rules, or both.

MOTOR CLUB.

THE Motor Club held a successful house dinner on Wednesday. After dinner there was a concert in the theatre. This was the last held in the theatre, as great alterations and improvements are shortly to take place. The theatre is to be turned into a billiard-room, and above it will be a large smoking-room, the billiard-room being so constructed that it will still be available for concerts.

The club motor runs, arrangements for which are also in hand, will be announced at a later date. The continued increase of members is phenomenal, over 600 having been enrolled since the new year.

CRYSTAL PALACE.

TWO somewhat important variations have been made to the published conditions of the Crystal Palace Club's open flexibility competition, fixed for April 11th next. Owing to the action of the Royal A.C. in dividing the second of the "Touring Car Standards" into A. and B. sections, the first class in the flexibility competition has been extended to include cars up to 9.4 engine rating, the second class taking cars over 9.4 up to 16.0 engine rating.

The other point is, that it having been found that several of the bodies fitted to cars not giving a sufficient total wind resistance area to comply with the requirements of the touring car standards, the R.A.C. have given permission for the area to be increased by the addition of a screen or board, provided it is not of an objectionable nature.

BASINGSTOKE.

A PAPER on "Carburettors and Carburation" was read by Mr. W. Webber before the above club on the 25th ult. Mr. Webber commenced by explaining the duties of a carburettor, and with the aid of drawings and models described early types, as well as some of the latest. De Dion surface, Lanchester wick, and Longuemare spray were chosen as examples of three different principles applied to carburation, whilst a sectional model of the T. and M. multiple jet carburettor, lent by Messrs. Trier and Martin, proved of great interest to all present. The discussion which followed became at times somewhat heated, and the chairman, Mr. H. Williams, had on one occasion to call for order. One member strongly advocated the wick type carburettor, another variable jets, whilst considerable argument prevailed as to whether or no a weak mixture at high speed was desirable. It was decided, at the suggestion of the chairman, to adjourn further discussion until a special general meeting could be convened for the purpose. Votes of thanks to lecturer and chairman were carried unanimously.

Application for affiliation to the A.C.U. has been made, which body has agreed to affiliate motoring members only, considering the peculiar position of the club, which divides its membership between motoring and non-motoring members.

On the 4th inst. Mr. F. Baron will read a paper entitled "Some Sights in a London Motor Omnibus Garage," and on the 11th inst. a special general meeting to discuss the summer programme will be convened.

LINCOLNSHIRE.

A WELL-ATTENDED committee meeting of this club has been held at Stamford. Major J. A. Cole, J.P., was re-elected chairman of the committee, and Mr. A. A. Padley vice-chairman. Mr. E. R. Simpson was elected hon. treasurer. Mr. J. H. Bainton was elected to the vacant place on the committee. The following were elected representatives of the club on the General Committee of the Motor Union:—Sir Hickman Bacon, Bart., Major J. A. Cole, Capt. C. J. E. Parker, Dr. Gilpin, Mr. A. A. Padley, and Mr. Godfrey Lowe.

The position as regards the threatened increase of motor taxation was considered, and the Chairman pointed out that neither he nor any member of the Motor Union had ever advocated increased taxation, but that the policy adopted had been rather to point out that there was no justification for increased taxation. Should, however, such a thing occur the money raised from the taxation of motors should be pooled, and devoted to assisting local authorities to improve the roads.

The special general meeting for the discussion as to future affiliation was fixed for Friday, May 8th, at Lincoln. The membership of the club is now 242.

KENT.

THE annual meeting of the Kent A.C. was held at the Royal Star Hotel, Maidstone, on the 21st ult., Mr. C. J. Morgan being in the chair. Correspondence was read from Mr. W. B. Prosser, the clerk to the Kent County Council, with reference to the thoughtlessness of some drivers of motor-cars when meeting horse-drawn traffic, and urging that motorists should keep to the near side of the road. Mr. H. P. Maybury, the surveyor to the County Council, also wrote in the spirit indicated in our Comment on page 89 of the issue of last week. The Chairman said that he was thoroughly in accord with the opinions expressed in those letters, and doubtless all members of the club will bear the suggestions in mind. Mr. W. W. Willis was elected chairman of the club for the ensuing year, with the following gentlemen as members of the committee:—Messrs. A. H. Reed, Dr. Tamplin, W. W. Willis, H. J. Fraser, H. P. Maybury, Col. Edward Latter, Dr. Styan, C. E. Wright, and Dr. R. T. Bowden.

Dr. Charles Firth, Capt. Page, and Mr. Granville M. Kenyon were elected as representatives of the general committee of the R.A.C.

MANCHESTER.

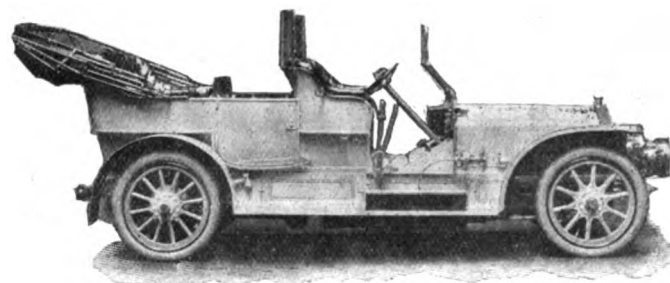
FINE weather favoured the opening run of the Manchester A.C. on Saturday to the Brine Baths Hotel, Nantwich, and about fifty cars joined in it. A speed-judging competition was arranged between Middleswich and Nantwich, where the competing cars had to travel at a specified speed, those cars which most nearly approximated to the correct speed and not exceeding it being adjudged the winners. The first prize went to Mr. A. W. White, who was within 1½ sec. a mile of the prescribed time, and the second prize to Mr. G. J. Crawford, with an error of only 2½ sec. a mile. Among those with an error of under 10 sec. were Messrs. R. Williamson, D. W. W. Parry, J. L. Tattersall, A. C. Tattersall, W. Jackson, G. B. Schwabe, E. Allen, J. A. Morris, R. Crossley, T. Hooydonk, F. J. Kerr, W. J. Stonier, A. G. Holmes, S. Lawton, and J. W. Taylor. As speedometers were covered up the competition afforded an interesting proof of the ability of the driver to judge the exact speed at which he was travelling.

COVENTRY.

SIXTY-THREE members and friends of the Coventry Motor Club recently journeyed to Stratford-on-Avon, fourteen motor-cars and the same number of motor-cycles participating in the event. The membership of the club now runs into three figures, and an attractive programme for the 1908 season has been arranged.

LADIES'.

ON March 26th, Mr. and Mrs. Cordingley invited the members of the Ladies' A.C. to visit the thirteenth Motor-Car Exhibition at the Royal Agricultural Hall, Islington. After inspecting the various exhibits, the members and their friends were received by Mrs. Cordingley in the club-room, just over the Exhibition offices. Here a ladies' orchestra played several selections of well-known favourites, while the members partook of tea and discussed the many novelties that had attracted their attention.



The "Thames" 50-h.p. Six-Cylinder Car recently supplied to Mr. Dunkerley, of Wargrave, by Messrs. W. T. Clifford Earp, Ltd.

The car is a seven-seater and is fitted with Cape cart hood and a double glass screen. An exceptional feature is the manner in which the frame is covered in with a painted screen extending from body to platforms.

SOUTHERN.

THE sixth annual meeting of the Southern Motor Club was held at headquarters on the 26th ult. It was reported that the receipts for the year showed an increase of £114 over those of 1906, while the assets now amount to £66, giving a surplus of £14 after carrying £30 to reserve. It was resolved to call a general meeting in sufficient time to give the requisite six months' notice to cancel the agreement either with the R.A.C. or the M.U. Hearty votes of thanks to the retiring officers concluded the proceedings.

SCOTTISH.

THE magistrates of the Committee of the City of Glasgow have agreed to accept the certificate of the Scottish Automobile Club as sufficient evidence of the competency and efficiency of drivers of motor-cabs in the city. It will consequently be necessary for each driver, before applying for his licence, to submit himself for examination by the Scottish Automobile Club.

At the last committee meeting of the club a report and data—the results of special observation—with regard to the driving of motor vehicles through villages and populous places was submitted, and the committee agreed to urge on members of the club and motor owners generally the necessity of observing moderate speeds in driving through towns, villages, and populous places, and they are solicitous that this moderation should be as apparent where no limit notices are exhibited as where restrictions have been imposed, as this in such cases is but a courteous acknowledgment of the attitude of those authorities who have refrained from seeking restrictive regulations. It is hoped that motor-car owners will take every means of ensuring an observance of this recommendation on the part of their drivers.

THE annual meeting of the Dundee and District Motor Cycle Club was held on the 25th ult., when an attractive programme for the season was drawn up.

CASES UNDER THE MOTOR CAR ACT.

EXCEEDING LEGAL LIMIT.

Robert Yule, of Upper Norwood, was summoned, at Croydon, for driving a motor-car at a speed exceeding twenty miles an hour on the Brighton road, on February 23rd. Mr. Muskett, who appeared for the Commissioner of Police, asked the Bench to suspend defendant's licence. This gentleman, he said, was a notorious offender with regard to the Motor Car Act. He was convicted for exceeding the speed limit in October, 1906, at the Marylebone Police Court, and fined £5, and at the South-Western Police Court in October, 1907, for a similar offence, he was fined 20s. and costs. On September 28th, 1907, defendant was fined £7, and 6s. 6d. costs, by the Croydon County Bench for exceeding the speed limit, and in September, 1908, £10 for driving in a dangerous manner at Leytonstone. He had also been convicted at Marlborough Street Police Court for exceeding the limit in the park, when he was fined £2, and another conviction against him was for failing to produce his licence. The Mayor said the Bench were not unanimous as to the suspension of the licence. They did not, therefore, propose to take that course. As this offence had been so many times repeated, defendant would be fined £20, and £3 6s. 5d. costs.

Five motorists, including Miss Dorothy Levitt, have been fined at the Guildford County Bench for exceeding the 20 m.p.h. limit.

At the Bromley Petty Sessions fines of £5 and costs have been inflicted on four motorists who exceeded the legal limit on Bromley Common.

ROAD REPORTS.

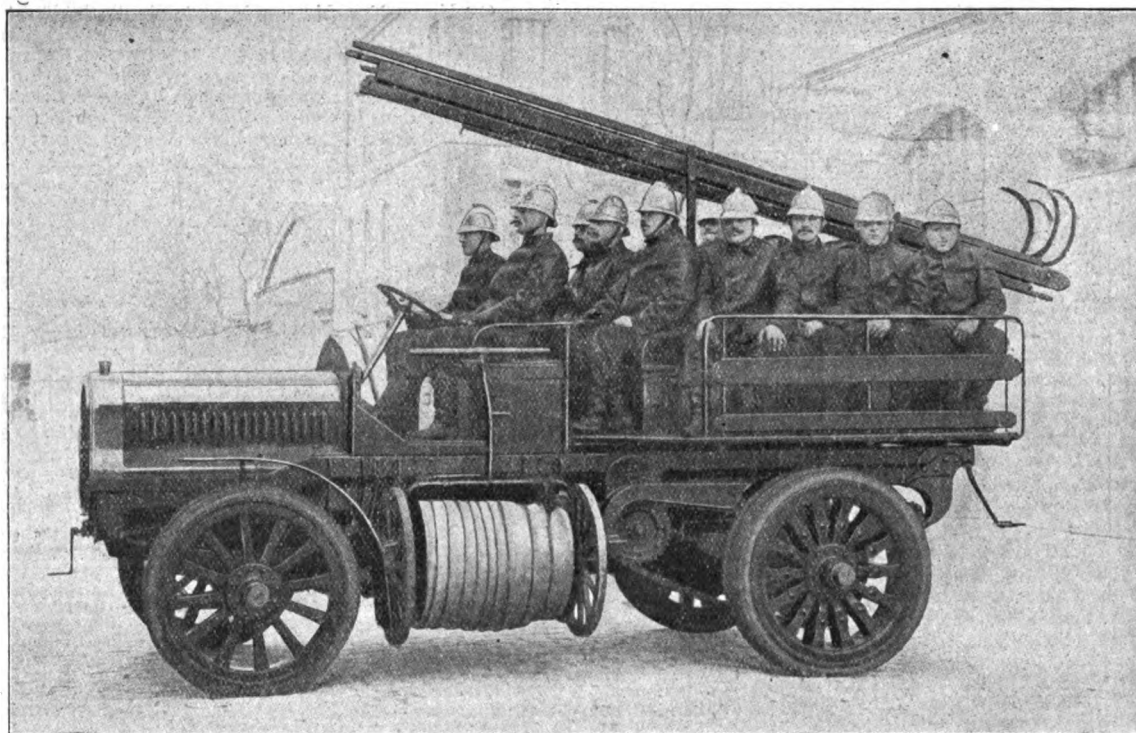
LONDON.—We understand that the police have a nightly "control" on Constitution Hill, the measured distance being from Hyde Park Corner to Buckingham Gate.

BATTERSEA.—The police are daily watching motorists in the Latchmere Road, Battersea, a road that is largely used by those going from the West of London to Balham and Streatham.

YORKSHIRE.—Just outside Wetherby, at the junction where the Leeds and Wetherby road turns towards Boston Spa, is a corner which has been the scene of many motor-car accidents during the last few years. A collision between two mechanically-propelled vehicles last week end suggests that the local authorities might well consider whether something could not be done to round the corners, as is the case on many of the southern roads.

WADHURST.—At the Wadhurst (Sussex) Parish Council it has been reported that automobilists have furnished four danger signal boards to be voluntarily erected in the vicinity of the schools at Wadhurst and Consley Wood. The managers of the schools have promised to maintain them.

CHERTSEY.—At the meeting of the Chertsey Rural District Council a letter was read from the Surrey County Council Surveyor, asking the Council to state specifically the lengths of roads which in their opinion were dangerous for motor-cars to traverse at the ordinary legal pace. The member for Thorpe, a village lying between Chertsey and Egham, said cars were continually going through that village at a tremendous



The Delahaye Petrol Motor Fire Engine recently supplied to the Paris Fire Brigade.

[De Auto.]

For exceeding the legal limit ten motorists were fined £5 each at Kingston on the 28th ult.

On Monday two motorists were fined £3 each at Feltham for exceeding the ten-mile limit in Bushey Park.

At the Epsom Petty Sessions, on Monday, Percy Patley, chauffeur to the Earl of Rosebery, was summoned for driving a motor-car at a speed exceeding twenty miles an hour at Cheam on March 7th. Defendant said they were using the road two or three times a week, and never took less than an hour to go from Hyde Park Corner to the Town Hall, Epsom. He had been strongly cautioned by his employer against exceeding the twenty-mile limit. The chairman said that defendant would be fined £5, and 9s. 6d. costs.

LORD ALINGTON has been re-elected president of the Dorset A.C.

LORD RONALDSHAYE has become a patron of the North Middlesex Automobile Club.

MR. EDWIN CROSS, of Blackburn, has been elected assistant secretary of the Lancashire A.C. at a salary of £25 per annum.

By one post recently the Stepney Spare Motor Wheel, Limited, received from Australia orders for no less than fifty-one wheels from four different firms in various parts of the Colony. The company have now completed arrangements by which the Daimler Company are carrying a complete stock of Stepney wheels both at their showrooms at, Plaza de Colonque 3, Madrid, and also at their garage at San Sebastian, Spain.

speed. He urged that something should be done to stop such great rates of speed, as there were winding roads entering and leaving the village. It was decided that the surveyor of the council should make a report at an early date.

TARROADS.—A number of engineers and surveyors were invited by the Taroads Syndicate to a practical demonstration of tar-spraying and grit-spraying machines in Vincent Square, Westminster, S.W., on Monday. After the tar-spraying machine had covered one side of the road the grit-spraying machine, drawn by a single horse, followed, and covered the newly-tarred surface with finely-ground granite. This permitted the road to be walked on without the objectionable nuisance of the tar affixing itself on the boots of the traverser. Both machines clearly demonstrated labour saving, as the whole operation over some 200 yards of the road was effected in a few minutes. The grit-spraying machine was fashioned after the style of those water-carts that have a revolving wheel at their back, on which the water falls, and is instantly flung off in a spray. Instead of a water-tank a hopper containing the gritting material is carried by this machine, and the distributing wheel is worked by a chain from the wheels of the vehicle.

THE COVENTRY CHAIN COMPANY, LTD., have now taken up the manufacture of nuts and bolts for the motor trade, a special point being made in turning them accurate to size within one and a half thousandths of an inch.

BUSINESS AT THE CORDINGLEY SHOW.

QUITE recently I had occasion to explore the immense pile of old literature I am burdened with (there must be nearly three tons of it), in search of certain early cycle history. Amongst other relics of the past, I turned up the original prospectus of the first Cordingley Show at the Agricultural Hall in 1896. There were very few motors there then, but the number steadily rose, and for long it was practically the only show, and received the official support of the Automobile Club. Then the Motor Traders and Manufacturers' Association rose into power, and made Olympia the official show ground. Despite this ban, the "Original" show has done well, and there is a very interesting exhibition collection of cars present—including very many which are not supposed to be seen outside Olympia—in London at least. In fact, some of the self-same cars, unless my eyes deceive me, are at Islington which figured in Hammer-smith, Mercedes, Daimlers, Panhards, Crossley, Napier, Rochet-Schneider, Brasier, Junior, Renault, Berliet, Unic, Darracq, &c., are either there or are due—so there are not many missed.

Anyhow, I spent over eight hours in the Hall on Saturday, going through the exhibition, which is full of interest, and includes several recent types of motor-bicycles and cars which have not before been seen in public. Coming just at the opening of spring, the best buying period, business ought to be brisk. While I was waiting to interview an exhibitor, I heard a visitor place an order for a new Renault.—"Athletic World."

AUTOMOBILE ACCIDENTS.

AN inquest was held at Loughborough, on the body of Joseph Pratt, aged 67, who was fatally injured in a motor-car accident on the previous day. In the course of the inquiry it was shown that the deceased, after hesitating as to which way to go, turned back and was struck by the car. A verdict of "Accidental death" was returned, the jury adding that no blame attached to the driver of the automobile.

THE Hertfordshire police are searching for a motorist who is alleged to have knocked down a woman of sixty named Florence Crocker, near St. Albans. The injuries received were so severe that the woman died in St. Albans Union on Tuesday. She had evidently been struck in the back, and no help arrived for about two hours. When found Mrs. Crocker said she had been knocked down by a motor-car, but was unable to give any further information. The injuries indicated that she must have been struck by a car going towards St. Albans, in which direction she was walking.

DAMAGES AGAINST A MOTOR-BUS COMPANY.

THE case of Parker v. the London General Omnibus Company and the London Road Car Company came up in the Westminster County Court, on Monday, as an action by a cab proprietor for damages to a horse and cab. Mr. E. F. Lever, who appeared for the plaintiff, said the claim arose out of a collision in a stretch of roadway in the Strand, which, he was told, was used as a motor vehicle racecourse, the highway in front of the Savoy and Cecil Hotels. The cab was being driven westward when the defendant's motor-omnibuses collided with the cab. The plaintiff claimed against the Road Car Company, and the reply was that the London General Omnibus Company was to blame, and when a claim was made against the London General Omnibus Company they said the Road Car Company was to blame, so both were sued. The case lasted the whole day, twenty-six witnesses being called, and Judge Woodfall said he never heard so many witnesses supplying different versions of what occurred. He found for the plaintiff against the London General Omnibus Company for £49 18s. 6d., with costs, and the London General Omnibus Company must also pay the London Road Car Company's costs.

COMPANY NEWS.

THE AUTOMOBILE CO-OPERATIVE ASSOCIATION, LTD.—Presiding over the second annual meeting of the shareholders of this Association at the registered offices, 1, Albemarle Street, Piccadilly, W., Mr. Jules de Meray, the chairman, referred to the extensive and profitable nature of the past year's trading. He reported a considerable increase of membership. A dividend of 17½ per cent. was declared. It was recommended in connection with the option given to members of increasing their holdings to the extent of £210,000, that further capital should not be called up except by resolution of a special meeting of the members.

WE learn that Weigel Motors (1907), Ltd., have removed their works to Olaf Street, Latimer Road, London, W.

OF the tyres fitted to cars exhibited in the Cordingley Motor Show, 222 were Dunlops, this number exceeding the number of representatives of any other of fourteen makes of tyres fitted.

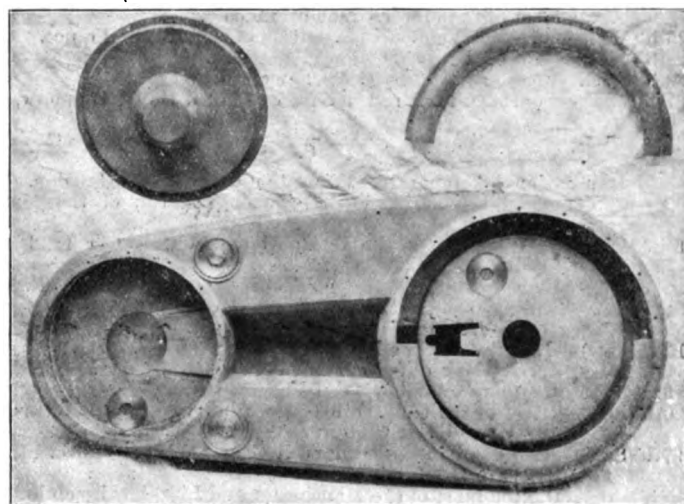
THE motor reliability trial recently promoted by the Canterbury (N.Z.) Automobile Association proves to have been the largest and most successful ever contested in New Zealand. The awards were recently made public, the judges awarding the first prize for cars under 12-h.p. to the 10-h.p. Cadillac driven by Mr. W. Felton. The same car was also awarded the Dunlop Rubber Company's special prize "for the most meritorious performance in the whole trial," and another special prize for "the best performance of any car selling in England for less than £350."

PETROL MOTOR-BUSES.

THE last paper discussed at the general meeting of the Ipswich Engineering Society was read by Mr. C. C. B. Morris, G.I. Mech. E., of London, and entitled "Petrol Engines and Motor Omnibuses." Mr. Wilfrid Stokes (President) was in the chair, and Mr. Morris said that his main object was to bring forward for discussion some of the principal points in connection with the design of petrol motor-omnibuses. There were three factors which tended to excessive noise—(1) bad roads, (2) excessive weight of chassis, as at present used, (3) bad driving and speed-changing. The first two factors were mainly dependent on each other. Given a good road surface, the heavy chassis would run as silently as the light type; the lighter the chassis, of course, the less the wear and consequent noise caused by bad roads. The heavy type of chassis now being used on country routes would probably be superseded by a light type constructed to carry about eighteen passengers, and of about 14-h.p. A bus should be designed to carry as its maximum load a number of passengers corresponding to about 25 per cent. more than the probable number of passengers that would be carried per mile over the route on which the bus was to run. With the present type, the average load per mile was more than 100 per cent. less than the total carrying capacity, the result being that the engine had to drag about with it a chassis far heavier than was necessary, with correspondingly heavy petrol and repairs bill.

THE NAVIGATION OF THE AIR.

PROFESSOR HELE SHAW, in delivering the Howard address at the Royal Society of Arts on "The Navigation of the Air," said that the most important matter in aerial navigation was not to secure safe support in the air so much as to be able to move in the air in any direction. In



The New Mercedes Chain Case.

The above illustration shows the construction of the chain cases now fitted to over a hundred Mercedes cars supplied by Daimler Mercedes, Ltd. The ingenuity of design, small number of parts and cleanliness of workmanship are obvious from the pictures, and it need only be added that these chain covers have been found in use, to deaden sound, economise lubricant, lessen dust and enormously increase the length of life of the driving chains.

reviewing the different types of navigable balloons, he remarked that the invention of Zeppelin, which had been purchased by the German Government, had attained the greatest speed of thirty-five miles an hour. It was sixteen-sided, and the cover was made of aluminium. He also entered into particulars of the various airships constructed by Santos Dumont, and concluded by remarking that the question of perfecting an aeroplane which would travel at sixty miles an hour was now only a matter of time.

THE 1908 list of Continental motor tyres includes a useful list of accessories, including canvas covers, lamp covers, indiarubber water cans, bulbs for horns, waterproof bags, &c.

MESSES. SAMUEL BROS., LTD., of 65 and 67, Ludgate Hill, London, E.C., are opening a new department exclusively devoted to the clothing requirements of motorists.

FROM Gavarnie, 1,360 metres above sea-level, Capt. G. Gaunt, R.N., writes:—"The 10-12-h.p. Coventry Humber, after 2,000 miles in France, came up here through the snow beautifully. This car has now travelled between 14,000 and 15,000 miles."

MESSES. JOHN HADDON AND CO. have removed to their new premises in Salisbury Square, Fleet Street, London, E.C., adjoining those which they have occupied for so many years.

MESSES. BROWN BROTHERS, LTD., have taken up the representation of "Autoclips" motor lamps from G. W. Houk, Ltd., and all orders for this class of lamp should in future be addressed to the first-named company.

FORTHCOMING EVENTS.

APRIL.

- 4th (Sat.).—Auto Cycle Union dinner to road-menders on the Ripley road at the Anchor Hotel, Ripley.
Last day of Commercial Vehicle Exhibition at Olympia, London.
- 11th (Sat.).—Annual open Flexibility Contest of the Crystal Palace A.C. Opening meeting of the Nottinghamshire A.C. at Edwinstowe.
- 16th–20th.—Easter Tour of the Motor Cycling Club.
- 17th (Good Friday).—Lincs. M.C.C. meet at Mablethorpe.
- 18th and 20th.—First meeting of the Brooklands A.R.C. for 1908.
- 25th (Sat.).—Open Motor-Cycle Hill Climb of the Hertfordshire C.A.C. Opening meet of the Yorkshire A.C. at the Hotel Majestic, Harrogate.
- 25th (Sat.) to May 25th.—Industrial Vehicle competition of A.C.F.
- 26th (Sun.).—Southend M.C. run to Thatched House Hotel, Epping.

MAY.

- 2nd (Sat.).—Impromptu pace judging competition of the Sheffield A.C. at Ollerton.
- 9th (Sat.).—First provincial meet of the R.A.C.—to be held at Nottingham, by invitation of the Nottinghamshire A.C.
- 10th (Sun.).—Targa Florio Race.
- 16th (Sat.).—Fifty miles Consumption Trial of the Hertfordshire C.A.C.
- 21st (Th.)–25th.—Reliability Trial of the Irish A.C.
- 23rd (Sat.).—Clipstone race meeting of the Notts A.C.
Meeting of the Yorkshire A.C. at Helmsley.
Meet of the Motor Union at Lincoln.
- 25th (M.).—Industrial Vehicle Competition of the A.C. de France.
- 28th (Th.).—Visit of the Aero Club to Aldershot.
- 30th (Sat.).—Meet of the Herts C.A.C. at Hatfield Park.
- 31st (Sun.).—Southend M.C. run to Saracen's Head Hotel, Dunmow.

JUNE.

- International Aeronautical Federation conference in London.
- 6th–8th.—London-Edinburgh twenty-four hours' run of the Motor Cycling Club.
- 8th (M.).—Cars competing in the International Touring Car Trial will arrive at the depot.
Start of the International Touring Car Trial of the R.A.C.
- 9th (Tu.).—Touring competition for Prince Henry of Prussia's prize begins.
- 13th (Sat.).—Hill climb of the Notts A.C. at Oakmoor.
Speed Trials of the Lincs. A.C. at Grimsthorpe.
- 15th–19th.—Scottish Reliability Trial.
- 20th (Sat.).—Meet of the Hull Auto Cycle Club and the Lincolnshire Motor Cycle Club at Brigg.
- 27th (Sat.).—Hill climb of the Midland A.C. at Shelsley Walsh.
Saltburn beach races.
Buxton meet of the Manchester and Lincolnshire clubs.
Members of the Cheshire A.C. will participate in the Gymkhana of the Manchester A.C.
- 28th (Sun.).—Southend M.C. run to Grand Hotel, Clacton.

JULY.

- The Land's End to John o' Groat's Trial of the Auto C.C. will be held.
- 6th (M.).—Grand Prix A.C.F. (Voiturette section).
- 7th (Tu.).—Grand Prix A.C.F. on the Dieppe Circuit.
- 16th (Th.).—Club meet of the Notts A.C. at the Hop Pole, Ollerton.
- 18th (Sat.).—Annual Gymkhana of the Herts C.A.C. at The Grove, Watford, by permission of the president, the Earl of Clarendon.
Meet of the Liverpool and Cheshire A.C.'s at Delamere.
- 25th (Sat.).—Petrol Consumption Tests of the Motor Cycling Club.
Annual Open Hill Climb of the Midland A.C.
- 26th (Sun.).—Southend M.C. run to Coach and Horses, Quendon.

AUGUST.

- 29th (Sat.).—Meet of the Lincolnshire Motor Club at Lincoln.
- 30th (Sun.).—Southend M.C. run to Great White Horse Hotel, Ipswich.

SEPTEMBER.

- 5th (Sat.).—Aston Hill climb of the Herts C.A.A.
- 27th (Sun.).—Southend M.C. run to White Hart Hotel, Braintree.

LIGHTING-UP TIME—LONDON.

| | | | | | | |
|----------------|-----|----------|-----|----------|-----|-----------|
| April 4th—7.31 | ... | 6th—7.33 | ... | 8th—7.35 | ... | 10th—7.37 |
| " 5th—7.32 | ... | 7th—7.34 | ... | 9th—7.36 | ... | 11th—7.38 |

Secretaries of automobile clubs are invited to forward their programme of fixtures as soon as arranged.

INTERNATIONAL TOURING CAR TRIAL, 1908.

ENTRIES for this event at single fees closed on Tuesday. The following firms have entered:—De Dion Bouton, Ltd. (2), Anglo-American Motor Car Company, Ltd., Humber, Ltd. (4), Vauxhall Motors, Ltd., Hillman-Coastalen Motor Car Company (2), Brown Bros., Daimler Motor Company (2), Rolls-Royce, Ltd. (2), White Company, Ltd. (2), Deasy Motor Manufacturing Company (2), Clement-Talbot, Ltd. (2), Panhard and Levassor (3), Benz et Cie., Milnes-Daimler (Mercedes), S. F. Edge, Ltd. (2), Sir W. G. Armstrong Whitworth and Co. Seventy cars have entered for the Scottish Trial.

The following have expressed their intention of entering:—Ariel Motors, Ltd., Singer Motor Company, Charles Jarrott and Letts (De Dietrich), Star Motor Company, Sheffield Simplex Motor Company.

BUSINESS NEWS.

As an instance of the great strides made by the Daimler Company in their export business, it is interesting to note that a 42-h.p. limousine has just been shipped to the Auto Agencia, Bolhao, Portugal.

IN these days much convenience is experienced by the motoring public when motor goods bear a distinctive name. It greatly simplifies the task of selection, and is a business aid as well as a public convenience. Messrs. G. T. Ritchies and Co., the well-known accessory firm of 19, Store Street, London, W.C., have just registered the name "Orno," worked in a special design as a trade-mark, and in future all the firm's special lines will be known by the name of "Orno," such as "Orno" tyre pumps, "Orno" oil, &c.

MESSRS. JARROTT AND LETTS have lately received orders for the latest 12-h.p. Sizaire cars from Lord Somers, of the 1st Life Guards; Mr. G. F. Ferrand, of Liss; Mr. G. B. Hynes, of the Royal Artillery, Shoeburyness.

FROM Messrs. Woodnutt, of St. Helens, Isle of Wight, comes a copy of the catalogue of their patent self-contained heavy oil vaporizer and carburettor. The details of this apparatus are not only fully described, but very completely illustrated; the carburettor has recently been considerably improved, and is now being largely used for marine motor purposes.

THE LEABORNE MANUFACTURING COMPANY, of Harrow, have given an exhaustive test to Coventry chains, and have expressed satisfaction as to the way in which they withstand stretching.

MESSRS. BROWN BROTHERS, LTD., have taken over the representation of "Autoclipse" Motor Lamps, and all orders for these should now be addressed to 22–30, Great Eastern Street, London, E.C.

OWING to the increasing demand for Ford cars Messrs. Perry, Thornton and Schreiber, Ltd., have found it necessary to secure premises and undertake their own coach work and body alterations. In future all such work will therefore be carried out under their direct superintendence.

MESSRS. J. LIVERSIDGE AND SON, LTD., of 561, Old Kent Road, London, S.E., have received a letter from a private motorist, saying that he has travelled 4,000 miles with Scott non-skid treads on his tyres and that they are little the worse for wear.

AT the automobile show and motor gymkhana held at Bombay early last month Siddeley cars were highly successful. In the gymkhana no fewer than six first and two second prizes were awarded to owners of these vehicles. They had several more wins to their credit, but were precluded from receiving prizes by the rules limiting individual competitors to three prizes only.

TO CORRESPONDENTS.

All communications intended for insertion in this Journal or relating to Editorial matters should be addressed to THE EDITORIAL DEPARTMENT, MOTOR-CAR JOURNAL, 27–33, Charing Cross Road, London, W.C., and must be written on one side of the paper only. Letters must in all cases be accompanied by the name and address of the writer, as no notice will be taken of anonymous communications.

The Editors cannot undertake to return MSS. or drawings, although every effort will be made to do so in the case of rejected communications. Where such are regarded as of value, correspondents are requested to retain copies.

The Editors do not hold themselves responsible for the opinions expressed by their correspondents, or for statements and facts which do not appear in the editorial columns.

To insure insertion communications and contributions must be in the Editors' hands by Tuesday forenoon of the week in which the same are intended to appear. Disappointment may be caused by non-compliance with this rule, and to avoid this earlier receipt, if possible, is necessary.

Photographers, both professional and amateur, are invited to send photographs of current events or of motoring scenes and incidents. The fee, if any, required for reproduction should be stated in each case, otherwise no liability will be accepted.

The Editors and Publishers beg also to state that they will accept no responsibility for unsolicited contributions, even if used, unless payment for same is directly specified in forwarding, and the terms arranged before publication.

THE Motor-Car Journal.

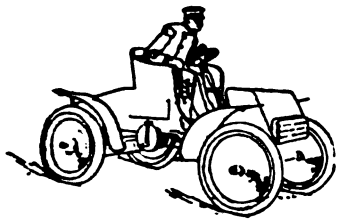
VOL. X.]

LONDON, SATURDAY, APRIL 11, 1908.

[No. 475.

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COMMENTS.



AT the Surrey Quarter Sessions at Kingston, on Tuesday, the justices made an order confirming the diversion of a footpath in the parishes of Byfleet and Chertsey, which crosses the motor track at Brooklands, Weybridge, and sanctioning the substitution of a new footpath in its place. The footpath, which has thus been done away with, was probably the most dangerous in the county.

When the motor racing track at Brooklands was laid out there was an informality in the proceedings for the diversion of the footpath, with the result that it remained open to the public at every race meeting last year, and as it crossed the track in two places, it was used at considerable risk by hundreds of people. In addition to this, the path crossed the main line of the London and South-Western Railway, close to the Brooklands track, and the danger to persons using it was so great that a staff of railway officials were always on duty there during the busy days to prevent accidents. The justices, who had inspected the old and new paths, expressed the opinion that the diversion of the old one would be the means of preventing serious accidents.

Police Traps Again.

THE return of spring-like weather has brought the southern police from their hiding places, and police traps are again in operation on all the roads where they have been familiar during the past few seasons. It is significant, too, that those stationed at the Slaugham Crossways, at the foot of Handcross Hill, have altered their tactics, and instead of charging their victims with exceeding the speed limit have summoned them for driving to the common danger. One witness in a case heard at Haywards Heath, on Monday, said he had counted 303 and 337 motor-cars through Handcross village on two successive Sundays. The police are, therefore, depending more than previously on allegations of dangerous speed, and the magistrates apparently intend to encourage such a course.

Organised Foreign Tours.

IN the latter years of the last century organised excursions of French motorists to the southern coast of England were a regular feature of the year's programme, but the growth of the movement seemed to destroy the social spirit that was pronounced among motorists in the early days. Latterly, however, the charms of foreign travel have tempted a good many motorists in all countries to leave their own shores, and this tendency has been as marked on the part of British owners of cars as of those on the Continent. Recognising this, the Motor Union is contemplating the organisation of tours which should prove popular among its members. The excellent roads, good hotel accommodation and fewer restrictions on speed, that add to the pleasure of travel in France, have suggested that an experiment should be instituted by the Union for a ten days' or fortnight's visit to the valley of the Loire and the famous chateaux of that district. Arrangements will be made for the passing through of the cars at Havre, and

hotel accommodation will be arranged in advance. The nightly stopping places will be about sixty to seventy miles apart, and alternative routes will be drawn up so that the fastest cars can, if their owners desire, run longer distances than the smaller vehicles. This is necessary, as, besides the good roads that will be traversed, the spectacle of a number of cars travelling together when the days are fine is not without its dusty recollections to those who will participate in the forthcoming event. Should this new venture of the Motor Union be successful at Whitsun, other tours in Normandy at the beginning of July in connection with the Grand Prix will be organised. In any case the experiment should be interesting.

Facilitating Individual Travel.

IN connection with foreign motor travel, reference may also be made to the way in which the Automobile Association is catering for the requirements of individual motorists going abroad, and the interesting article by Mr. Stenson Cook on another page will convince motorists who wish to spend a few days on the Continent that they can do so without encountering many difficulties when entering France. Thanks to the various motoring organisations, there is no doubt that the present year will see a great migration of motorists from this country to the Continent, and we trust that at the same time we shall have many visitors from Europe using our roads, taking care, of course, not to increase the expenses of the trip by visiting the various courts which are established not only for the punishment of malefactors but also the fining of those who are lucky or unfortunate enough to own a speedy means of locomotion.

On the Towpath.

AT the last meeting of the Thames Conservancy Board a letter was read from the East and West Molesey Urban District Council stating that annoyance was caused to pedestrians by motor-cars using the towpath above Molesey Lock, and asking the conservators to prohibit such vehicles on that stretch of roadway. It was pointed out that there were notice boards on the towpath already prohibiting its use by automobiles, and the Board have sanctioned a recommendation instructing their officers to take the names of persons driving motor vehicles on the path, with a view to summonses being issued against them. Probably the Conservancy Board regards itself as outside the ordinary range of local authorities, and quite superior to the ordinary form of elected public body; but it is questionable whether the Local Government Board will allow it to prohibit vehicles in this way without some inquiry by the central authority and a report to that effect from the L.G.B. inspector.

The Herefordshire Hill Trials.

THE Herefordshire Automobile Club are to be congratulated upon the success with which they have surmounted the difficulties raised by the Bromyard Rural District Council in respect to the hill-climbing trials for the Hereford trophy. They attacked the difficulty in the true hill-climbing spirit, and the result is a most satisfactory one. The Cockshut Hill, Putley, which has been selected, although not possessing so consistent a

gradient as Frome's Hill, has many other qualifications which should commend it. It is a little over three-quarters of a mile long, and has a total rise of 300 feet and an average of 1 in 13.54, while in its steepest part it reaches the gradient of Frome's Hill—1 in 6.3—for a distance of 700 feet. At the top is an excellent open space for spectators to watch the competitions, and there are two other roads by which the cars can return to the bottom of the hill. From the scenic point of view the hill is most charmingly situated, rising sheer from the valley formed by the Malverns and the Woolhope Hills. In our Club news this week will be found the discussion of the Herefordshire A.C. which decided the event.

Watling Street.

THE news that the R.A.C. intends to press forward the work of sign-posting Watling Street is of general interest. We understand that the preliminary survey has been completed, and very little time will now elapse before the whole work has been accomplished. The object of sign-posting Watling Street is to bring into use one of the ancient main thoroughfares of this country. The road is in excellent condition, and there is very little traffic, but all the principal centres of England can be reached from it. Apart from the Great North road, Watling Street is, perhaps, the most important thoroughfare of the country.



The Motor Club Party on their Launch starting out for the Boat Race on Saturday last.

Photo by)

(Campbell-Gray.

Another Corner Gone.

JUST as travel is said to knock the rough edges from men, so motoring is responsible for clearing many obstructive corners from the highways. These have long been a source of danger to users of the road, but until a few motor-car collisions had occurred it never dawned upon anyone that the removal of high hedges and sharp corners would add to the safety of the highway. Now the truth is clear. Those who journey along the delightful roads and lanes that skirt the banks of the Thames are familiar with scores of such places, and will be glad to hear that many are doomed. One such is at the junction of the London and riverside roads at Hampton. Mention of the Red Lion will recall the location to many motorists, who will be interested to know that the work of demolition has begun, and that the corner is to be widened. This inn has been a landmark for ages. It was standing before Hampton Court, and was the headquarters of the artificers whom Cardinal Wolsey employed on the building. Then in Stuart days it knew magnificence; literary men haunted its benches in the days of Queen Anne, and roystering scenes were enacted in coaching days, when it was the posting place at which horses

were changed by those bound for Windsor from London when the Court was in residence. These days are but memories now and motorists will rejoice at widened corners.

A Candidate on Cars.

AWAY in the Highlands is the constituency of East Perthshire, which is being wooed by political candidates of opposing sides. One of them—we will not refer to which colour he adorns—was informed at a public meeting in the Public Hall at Burrelton that “he was a strong opponent of a certain evil invention called the motor-car. As he said not very long ago, he had never even touched one with a pair of tongs, and certainly he had never been in one. His friends ought to know what his remedy for motor-cars was. He would put the whole blooming lot in the sea as soon as he could.” Such a declaration sounds as scarcely utterable in these years of the Twentieth Century. Certainly it does not indicate that intelligent appreciation of modern movement that we expect at Westminster, and it is probably fortunate for both the speaker and the motoring movement that he has not yet reached the House of Commons.

Accessories for Cars.

Now that Easter is within measurable distance motorists are naturally looking at their cars and will doubtless find many points of improvement requiring their attention. “New lamps for old” will be a much-heard plaint; accumulators will require overhauling; electrical accessories generally will need attention; tool bags and kits will probably demand replenishment; the tyre outfit will warrant a few additions, and everything that is needed by either the car or the driver demands a little thought and, in all likelihood, some expense. Hence the interest that attaches to the series of novelties that are now being described in “Here and There” and other columns of the *Journal*. We welcome suggestions from practical motorists as to the particular accessories which they have found of value and containing special merits beyond the ordinary range of such goods.

Motor-cars v. Cruelty.

AN aspect of the motor movement that should prove a strong argument in its favour with all who love animals was emphasised at a meeting at Limerick the other day. It is not new to most of our readers, but is sufficiently true to warrant reiteration. Sir Thomas Cleve, of that Irish city, is head of a firm employing ten steam motor vehicles, which he finds a great saving as compared with the old horse lorries formerly employed. He was advocating the extension of motor traction in Ireland, and went on to say that they had an association in the county of Limerick which concerned itself with the protection of animals. In that respect he thought the long distances in summer, and carrying very heavy loads, constituted acts of cruelty. If the motor vehicle had done nothing else but obviated that, he thought it had done much. As far as his firm was concerned they would be very sorry to go back to animals, both from the point of view of economy and of saving burdens to horses.

The Sunday Sale of Petrol.

LAST week we mentioned that should the Sunday Closing (Shops) Bill leave the House of Lords in the form in which it has been introduced by Lord Avebury, motor agents and garage proprietors will find themselves prohibited from supplying travellers with petrol, &c., even though they should have motored beyond the new six mile limit advocated by Mr. Asquith in another connection. The matter has been raised at the meeting of the general committee of the Royal A.C., where it was fully discussed. Mr. C. D. Rose, M.P., has consented to act in concert with Lord Montagu and other members of the Legislature in connection with the matter, and Lord Avebury has

adopted an amendment of his measure, so that it may not prove irksome to motorists who avail themselves of their Sundays for travelling. Lord Avebury's published works on the scenery of Great Britain, and the many times he has urged people to explore their native land, lead to the hope that he will not do anything which may lead to thwarting such a desire on the part of many of his countrymen—a result that would assuredly follow the stringent regulation he originally proposed. An addition to the measure, protecting the sellers of petrol and motor-car accessories from the penalties which would otherwise have been enforced against them for opening their shops on a Sunday, has now been inserted by the Standing Committee of the House of Lords.

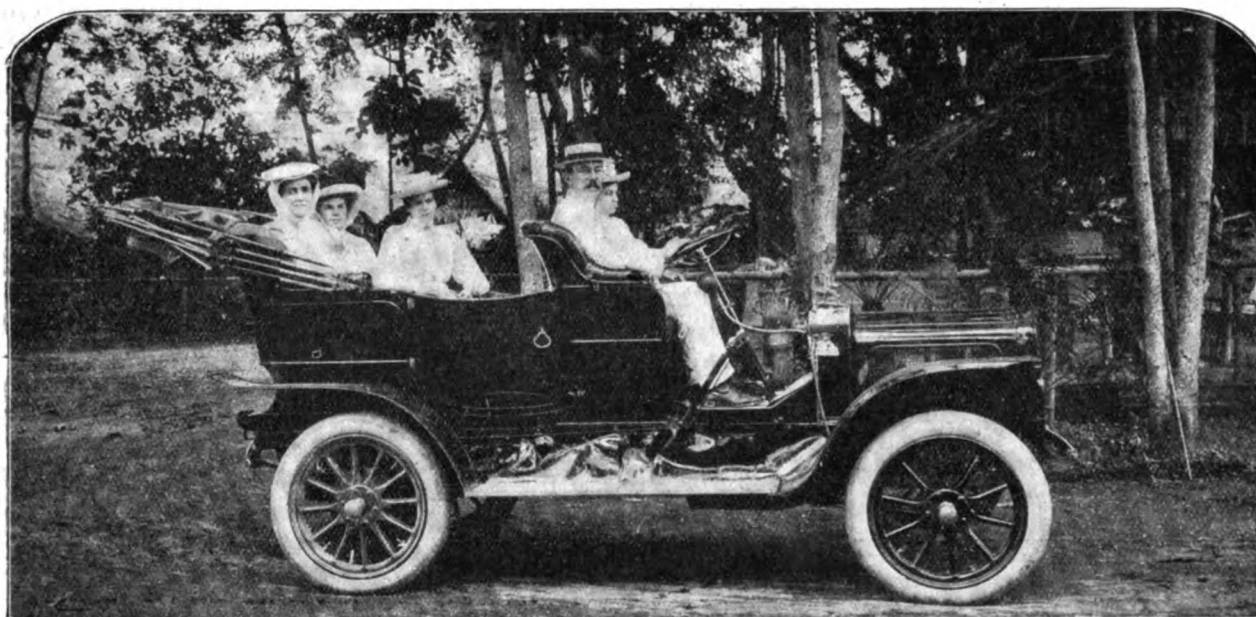
Motoring in Java.

MANY of the tea planters in the Dutch Indies are becoming enthusiastic motorists, and ere long may realise the commercial as well as the pleasure purposes of the motor-car. Among the leading men is Mr. Van Erp, who owns one of several 20-h.p. White cars which have been put on the road in Java since the beginning of the present year. He is

region of Wharfedale. So far as the prevention of cattle straying on the road is concerned, Mr. L. J. Pankhurst, who is one of the largest flockmasters in Kent, speaking at a sheep farmers' dinner at Haywards Heath last week, said flockmasters had good reason to detest motor-cars, for the manner in which many motorists rode rendered it perilous to walk sheep from town to town. He recognised motor traffic was certain to increase, and suggested that would necessitate flockmasters making more use of the railways.

Central v. Local Control.

MR. CATHCART WASON, M.P., pursues motorists with a persistency worthy of the Surrey police, and from his place in the House of Commons frequently hurls a tongue of defiance at those who travel speedily through his beloved Scotland. Now he apparently desires that the parochial authorities should exercise the powers of control with regard to speed limitations that are at present reserved to the central governments of England and Scotland, for we learn he has given notice of his intention of asking the Secretary to the Local Government Board, whether, in view of the number of accidents caused by motor-cars being driven at a rapid pace through towns



Mr. Van Erp on his 20-h.p. White Steam Car at Batavia.

shown with his family, the photograph having been taken not far from Batavia. Steadily the automobile is winning its way throughout the world, and we welcome similarly interesting evidences of its development from readers in all parts of the globe.

Motors-cars and the Grass.

AN interesting sidelight as to the influence of motor-cars in country districts has just been afforded in Yorkshire. In accordance with time-honoured custom, the Wharfedale Rural District Council have just offered for sale at public auction the "eatage," i.e., the grass along the roadsides in the townships of Timble, Fewstone and Norwood. At one time there was considerable rivalry amongst the farmers for this, but the value of the grass is alleged to have deteriorated owing to the continued coatings of dust, as well as to the fact that the cattle require much more tending now owing to the presence of automobiles on the roads. This year only one third of the usual amount has been realised. The proceeds of the sale go towards the relief of the rates in the particular townships, so that we need not be surprised should resolutions of a violent character against motor-cars be adopted in the near future in the pleasant

and villages, "favourable consideration will be given in future to applications from local authorities for a reduction of speed limit within their jurisdiction." On this point motorists should immediately agree. There is no division of opinion. If exceptions to the uniform rate of speed are to be allowed, they should not be at the whim of any little local council—but power should be reserved to the central authorities, which should be capable of taking a wider outlook than the Rural Council of Slowcoach-on-the-Sloth.

WE learn that the Standard Motor Company, Ltd., of Coventry, are bringing out a new 25-h.p. six-cylinder car, of which, however, only a limited number will be made.

MR. LAWSON WOOD is having a private view of his drawings of "prehistoric motoring humorsities" at the Brook Street Gallery, 14, Brook Street, New Bond Street, London, W.

AT 85A, Blackheath Hill, Greenwich, S.E., Mr. J. D. Wilson has just opened the Hill Motor Car Works, where plant has been installed for carrying out motor-car repairs of all kinds. Mr. Wilson has been appointed the district tyre repairing agent on the Harvey Frost system, and is also laid out to charge accumulators and to supply petrol lubricating oil and other motor supplies.

THE TAXATION QUESTION.

THE change in the leadership of the Government and the possible translation of another member of the Cabinet to the Chancellorship of the Exchequer does not affect the problem of motor-car taxation. Promises of such a fruitful nature as that made by Mr. Asquith when unfolding his 1907 Budget are not likely to be forgotten by any probable successor in 1908. So that the discussion can go on as continuously as though no break had occurred in the order of things.

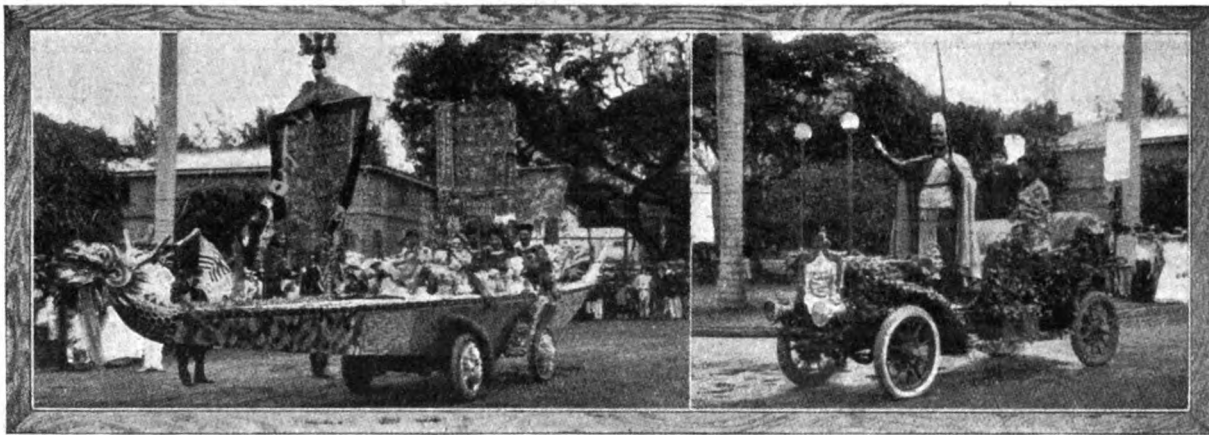
Rich men pioneered the motor-car in this country. Only those who had personally seen automobiles in France had the enterprise and the wherewithal to run defiance at the legal exactions of their own country. Each year they bought the fashionable car of the season; and thus the idea was spread abroad that the motor-car was the plaything of the wealthy. But that is no longer true; men who never owned a horse now possess a car, and those who felt the maintenance of a carriage stud an expense appreciate the economy and the "handiness" of a car. Consequently, it must always be borne in mind that the motor-car is gradually finding its way into the less wealthy classes, and the tradesman can now run his motor-car as fast as the peer drives his motor-carriage. This tendency, too, is causing the automobile to be ranked less of a luxury and more of a necessity than was the case less than a decade ago. Dwellers in the country, and those who live in towns, use the car as a plea-

any substantial increase in that first year's cost or further addition to the annual charges means a dampened enthusiasm, and, probably, a delay in the purchase of a vehicle. The effect of such depression in the present condition of things is obvious, especially on those great firms that have extended their facilities for production in view of the natural growth of the industry. Basing their development upon the existing condition of things, and surmising that taxation would not be increased, they have sunk their capital; and now come the restraining rumours associated with the Budget.

How greatly the motor movement has progressed under the present system of taxation was shown by Lord Montagu of Beaulieu, in a paper read before the Royal Institution on Friday of last week, in which he gave the following estimates:—

| | |
|--|---------------|
| Capital invested in the motor industry | £12,000,000. |
| Number of persons employed | 300,000 |
| Number of miles run per annum | 3,150,000,000 |
| Number of motor-cars and cycles in Great Britain | 125,320 |
| Value of motor-cars and motor-cycles in use | £29,320,000 |

These figures are those which directly bear on the industry. They take no account of the many subsidiary trades that have been benefited by the coming of the car—industries such as carriage building, steel making, and the hundred and one avenues of employment that have found a measure of prosperity in catering for the new demands of motorists. The estimates represent the work of a decade. During that time prejudice has had to be overcome, interests in the horse and the rail con-



Two of the Vehicles in the Procession of Decorated Cars recently held in Honolulu.

[Allgemeine Automobil Zeitung, Berlin.]

sant means of saving railway fares and the like. It is not altogether an addition to their standing expenses, for there are credit allowances to be made which are of no small moment. The view of the type of man we have in view is admirably dealt with by the Rev. Walter Crick, of Oving, near Chichester, in our Correspondence columns this week. There are hundreds of people now using motor-cars in order to facilitate their work; they do not indulge in speed to any extent, their tyres are free from road-disintegrating projections, and their cars are not weighty. In fact, they are used almost for "pottering about" in their own districts, and for nothing more. To increase their taxes would be manifestly unfair, as well as unwise in the general interest of the country.

Nowadays the new adherents of motoring are anxious to know something of the cost of upkeep. They are keenly concerned as to the maintenance of the car, the expense of tyres, the details of insurance, and the scores of monetary matters that enter into the calculations of the man who owns a car. Naturally the questions of licence and registration fees first occur, and the prospective motorist is faced with an initial outlay of twenty shillings for the registration of the vehicle; then follow the annual driver's licence, five shillings, and Inland Revenue licence of two guineas should it weigh less than 20 cwt. So that, with the cost of number plates, &c., a five-pound note is nearly disposed of straightaway, and an annual charge of £2 7s. incurred so long as the car is used. To the man of moderate means

ciliated, and a general educational policy carried through. It may safely be anticipated that the advance in the near future will be accelerated, and that, now the industrial vehicle is extending an interest in the automobile to another large class of the community, progress will be rapid indeed.

But, at the moment, the trade is undoubtedly suffering adversely from the uncertainty of the situation, and the tension is fairly universal throughout the country. If the Chancellor can be persuaded to keep his demands from the motorist to reasonable limits all will be well; but should he actually propose such additions as some seem to suggest are within his thoughts, a serious set-back will have been inflicted on an industry which is having a powerful effect for good on many aspects of our English life.

MESSRS. DUBAUX, FRERES AND Co., of Geneva, Switzerland, have lately completed a novel twenty-cylinder petrol engine; it has been designed for aeronautical purposes, and, while it is claimed to be able to develop 120 h.p., its weight is only 187 lbs.

THAT well-known motorist, Sir A. J. Macdonald, has recently patented a new device to prevent the side-slip of motor-omnibuses. Two arms or sprags connected together by tie-rods are pivoted to the vehicle frame behind the back axle, and are brought into contact with the ground by longitudinal rods operated by the driver, springs allowing for irregularities in the road surface. The device is normally held inoperative by springs.

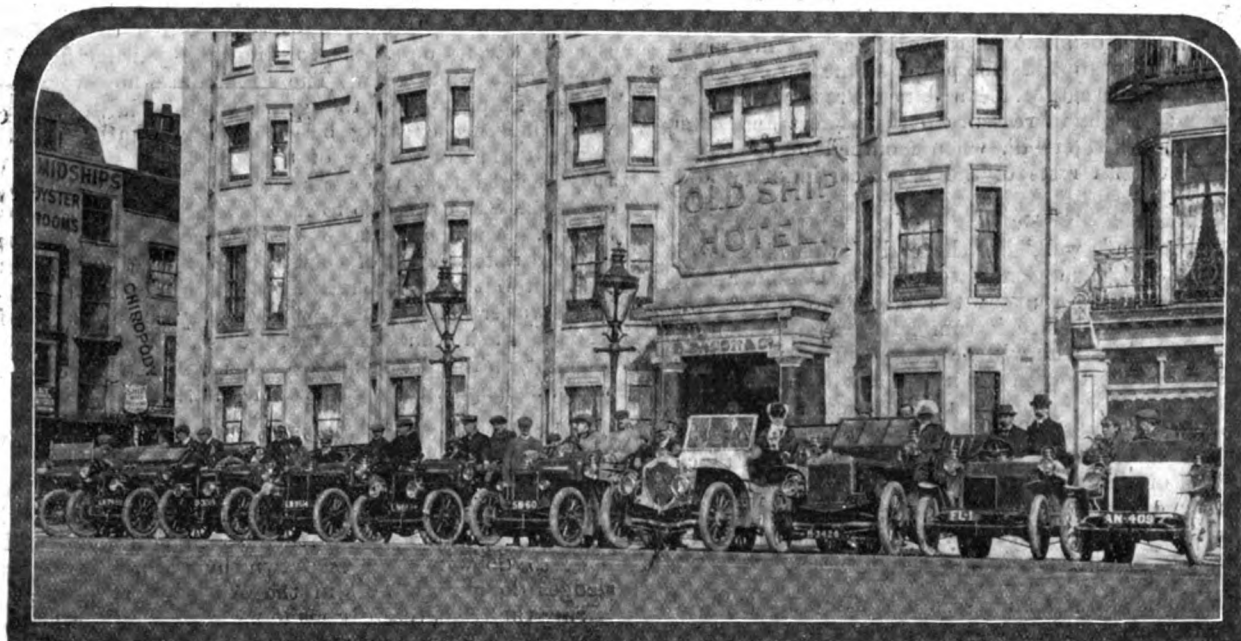
SOME MOTORING TROUBLES AND HOW TO CURE THEM.

AMONG the useful odds and ends that should be included in the kit of an ordinary car should be some rubber insulating tape and a tube of tyre-stopping material, such as Pneu Cure or the Vulcan stopping. Recently I found my engine heating some six miles from anywhere, and on inspection discovered a hole in one of the water-circulating rubber connections. I had no spare rubber hose-pipe, but, the pipe having emptied itself of water, which it did before the defect was discovered, I was able to fill the hole up with the Vulcan stopping I had with me; and then, by painting rubber solution on the tube, the insulating tape was fixed for an inch above and below as well as over the stopped-up hole, and when the tank was filled up the water was retained. As a matter of fact, this temporarily repaired tube did service for over two weeks, and I do not think that I need have then replaced it.

There is no doubt that a tyre lasts much longer if cuts are

square with a small file, and then replaced and adjusted so that a good "buzz" is obtained with as light a contact as possible; heavy contact wastes electricity and causes burning. When adjusting it is important that the high-tension wire be connected to the sparking plug, otherwise the coil may be damaged by burning of the insulation. Short circuits are another source of worry. An easy method to detect these torts is to run the engine in the dark; a dull blue flicker soon shows where the leakage is, and then a little rubber tape will soon effect a cure.

In cleaning sparking plugs it is as well to recollect that it is not only the points that need attention, the insulating surface between the central electrode and the shell of the plug is, as a matter of fact, the common seat of offence; a layer of carbon in that position allows of short circuiting. A little petrol squirted up, and a wee bit of rag on a bonnet pin, should easily put matters right. Even though a plug sparks correctly at the points when earthed on the outside of the engine, it does not prove that it will do so when in the cylinder under compression, as then the added resistance may cause the current to pass through small defects in the insulation, which, when the path at the



A Group of Rover Cars on the occasion of the opening run of the Motor Cycling Club. The run was to the Old Ship at Brighton, and no fewer than fourteen privately owned Rovers took part in the event. The photograph was taken by Mr. R. H. Head, Chairman of the Motor Cycling Club.

stopped up as soon as discovered. Complaints are made that stopping does not always stay in. It will if the hole or cut is first cleaned out thoroughly, and fine emery paper is used. A little rubber solution should next be painted in the hole and allowed to dry, before the stopping is put in, a little at a time. I have some cuts that were filled in this way three months ago, and the stopping is still in and looks as if it would outlive the rest of the cover.

An ordinary cycle oil can with a long spout is of great use. It can be kept full of petrol and used to squirt petrol into the cylinders through the compression taps, when the engine is slow in starting, as is the case occasionally in cold weather. A few drops of petrol, too, on the platinum points of a magneto are of use for cleaning purposes. I picked this tip up from the driver of a motor-bus. Seemingly they all dose their magnetos with petrol when they "play up." It certainly cleans the contacts and is much less trouble than to dismantle the magneto, so as to get at the points and clean with a small file or emery paper. The same can be used for the points on the trembler of a high-tension coil. The burning of the platins on the trembler of an engine fired by high-tension coil ignition is probably the commonest of all causes of loss of power or stoppage. The screw and trembler blade can be removed, dressed perfectly

gap was easy, it would miss. The usual gap at the points should be about one-twentieth to one-sixteenth of an inch, and in the event of the accumulators being run down and others not procurable, it is possible to get the engine to run by approximating the points a little more.

Those having trouble with the leather ring of their pump-friction wheels will, I believe, find $\frac{3}{8}$ in. sheet fibre a good substitute. The fibre can be roughly cut round, fixed on the wheel, and then the wheel can be put on a mandrel, and the fibre periphery trued in the lathe.

Pre-ignition, a common source of overheating and loss of power, is frequently the result of too rich a mixture, and can, therefore, be avoided by seeing that the carburettor air inlet is sufficiently large and that the carburettor does not flood. Flooding of this member does not always mean that the needle valve wants grinding in; it is generally due to wear on some or all of the float bearings; a little wear on each of these will account for the petrol level being too high and so too rich a mixture. The cure is to tap the needle valve rod a shade lower, so that the valve shuts off a little sooner.

C. T. W. H.

CONTESTS between roller skates and motor-cycles are a new attraction at the Corn Exchange, Brighton.

GOSSIP FROM PARIS.

IN France there is no better soporific for an agitation of public opinion than the nomination of a Parliamentary or extra Parliamentary Commission of Inquiry. It is the means which every Cabinet, whether reactionary, republican, radical, or socialist, has had recourse to with success since the establishment of the third republic. M. Barthou, after conciliating the journalists by his speech at their banquet last week, has not failed to profit by the opportunity to complete the calming of the storm raised by his bill on motor-car traffic. An extra Parliamentary Commission of inquiry on the subject had been nominated some two years ago, but its very existence had been forgotten. The Minister had but to resuscitate it. That has been done by the addition to its members of numerous senators, deputies, members of the Automobile Club, motor-car makers, &c., and by the summoning of the Commission to resume its sittings. It has met again, but, as now it comprises over seventy members, the progress of the discussion will most surely be slow. At the same time the Parliamentary Committee to which M. Barthou's bill was referred for study has had several sittings. Deputations from the automobile manufacturers and from the workmen in their employ have been summoned to enlighten its members as to their real sentiments towards the proposed measure. They were so clearly expressed that M. Léon Janet, President of the Committee, thought it right to reassure both masters and men by declaring that the Barthou bill, when modified by the Committee, will further the interests of the motor-car industry and aid its development.

"ALL's well that ends well," but the end of this affair will be a long time coming. The Committee of the Chamber will surely want to know the result of the inquiry of the extra-parliamentary Commission before it completes the remodelling of M. Barthou's bill. And who will be rash enough to predict the date at which the report of that Commission will be presented to Government? In the meantime the petition against the outrageous stipulations contained in the draft bill sent by the Automobile Club to every town, village and hamlet in France is being signed not only by all connected with the automobile industry but by the owners of self-propelled vehicles, and by all those who profit directly or indirectly by the new means of locomotion—and their name is legion.

THE International Road Congress, which is to be held in Paris this autumn, will open its doors on October 11th. It is the historical Salle du Jeu de Paume, on the terrace of the Tuileries garden, which has been chosen for its sittings. Placed under the patronage of the President of the Republic and of the Ministers of the Interior, Public Works, and Foreign Affairs, it is expected that few countries will abstain from sending delegates to it, as the road question is becoming more and more important every day. The general regulations sent out with the invitations show that the main point which will occupy the attention of the Congress will be the effects of automobile traffic on the roads, and the most effectual means to render the highways capable to withstand the wear and tear to which they are subjected by the new means of locomotion. The dust question will also receive the attention of the Congress.

WITH the object of having reliable information to lay before the assembly, the Minister of Public Works has authorised the expenditure of some £40,000 in the examination of the national roads. The Ponts et Chaussées engineers are to cut trenches half way across all the main roads at comparatively short distances to ascertain exactly the condition of the materials employed. The reports they will send in to the Minister will also contain particulars concerning the traffic on those thoroughfares, &c. In this connection it is interesting to note that a proposal has been sent to the Organising Committee suggesting that the deliberations of the Congress should not be confined to the effects of the motor-car traffic on the highways, but should also comprise the effects of the different kinds of roads on automobiles, and especially on the tyres. The utility of the Congress will certainly be

enhanced by the International exhibition of drawings, models, materials, machinery, &c., used in the making and repairing of roads.

HAS the "Matin" made April fools of its readers? One might be almost inclined to think so by the telegram it published dated April 1st. It states that the 60-h.p. Thomas automobile driven by Mr. Brinker in the race round the world from New York to Paris had been shipped at Seattle for Alaska. Other telegrams received previously and subsequently, and one of which was published in the very serious "Journal des Debats," state that Mr. Brinker, having at Seattle ascertained that the condition of Alaska was such as to preclude the possibility of a motor-car crossing the country, had taken the very sensible resolution to ship his automobile to Vladivostok. This is all the more probably true because it was not necessary to go to Seattle to know the insurmountable obstacles which must be encountered by an automobile in the country in question. At any rate there are very few people who are at all acquainted with the geographical and climatic conditions of Alaska and the north of Siberia who imagined that the competitors in the race round the world could possibly drive their motor-cars from the southern point of Alaska to its northern extremity, and then, after crossing Behring Straits on a boat, continue the journey by skirting the Arctic coast of Siberia. The French are, however, proverbially 'bad geographers, and the general public fail to appreciate the vast difference existing between their country and the Arctic regions. The organisers of the race knew this very well when they decreed that the competitors must only ship their motor-cars from San Francisco to Alaska via Seattle and across Behring Straits. The great masses of the people in France took it for granted that the feat of completing the rest of the journey on land without using the railway would be achieved. And though Mr. Brinker's competitors will, if they are prudent, follow his example in shipping their motor-cars to Vladivostok, this little incident, and probably many others, will be ignored or forgotten when, at length, the victor reaches Paris.

IN the month of July Doctor Jean Charcot will leave France for a second voyage of exploration in the Antarctic regions. His journey will have a special interest for motorists, as he proposes to use petroleum motor sledges. He believes they will enable him to penetrate much farther south than he could possibly hope to do with sledges drawn by dogs. If only the auto-sledges do half so well in the Antarctic regions as they did during the trials recently made with them on the Lautaret Pass, there is good reason to expect success. At any rate, the experience of Captain Scott, who in 1901-1904 reached a point situated as far south as 82 deg. 17 min. south latitude, would seem to prove that it is dangerous to rely solely on dogs, for of the twenty-two he took out with him on the Discovery only three or four returned. Dr. Charcot's auto-sledge, which has a total weight of only 462 lb., comprises three distinct parts—the frame, the motor, and the propeller. The frame is made of ash, and is built on the Norwegian model. The 2½-h.p. motor, which is placed behind, is well protected from the snow. There are two speeds, the first two and a half miles an hour, and the second five miles an hour. The propeller is composed of one broad wheel with two rims, each of which is furnished with teeth destined to bite into the snow and ice. This propelling wheel is articulated in such a manner as to follow the sinuosities of the ground. With the aid of some Alpine soldiers and his mechanician, M. Pelissier, Dr. Charcot ascended and descended several steep hills at the rate of five miles an hour. The stability of the sledge was remarkable, and the result of the trials was in every way encouraging.

MARNEY.

THE partnership hitherto subsisting between Messrs. J. Walter Sully, Roland J. Sully, and Mr. E. Hopkins has been dissolved by mutual consent so far as regards the latter gentleman, who retires from the firm. The motor business will be continued at 43A, Penarth Road, Cardiff, by Messrs. J. W. and R. J. Sully, whose garage is well known to motoring visitors to the Welsh town.

A RUN INTO HAMPSHIRE.

(Concluded from page 118.)

THE direct south road to Basingstoke should be taken; it is typical of what the Americans like to describe England as, namely, a well-tilled garden, small fields, with hedges and little streams trickling through pasture fields. A turning near to Sherborne St. John leads to that beautiful old place called "The Vine." Originally built in the early part of the sixteenth century by Lord Sandys, it was greatly improved by Inigo Jones. It is a long-fronted



The Castle Gateway, Old Basing.

brick building, with what Walpole styled "The most heavenly chapel in the world." In the ante-chapel is a "Last Supper," by Ferretti. The stalls are richly carved, and the stained glass windows were brought from Bologna in 1544. The old alms box is worthy of note. The church of Sherborne St. John has a plain Norman doorway, over which are effigies of the builders. In the aisle is a bookstand, with some chained books. Instead of keeping on the main Basingstoke road, a turning to the left can be taken to Old Basing, on the Lodden. It is a quaint old red brick village, made picturesque by the grey feathery headed reeds in the stream and the old mill. The ruins of the castle should be seen; the gatehouse covered with ivy still remains, and over the gateway, cut in stone, are the arms of the Powletts, three swords in pale, points in base. With a little imagination one can go back to 1643; then a stately mansion stood where but a ruin now exists, a palace which once received and entertained Queen Elizabeth; not that there is much in that, as, seemingly, few old houses exist which did not receive that gay queen. Here the Royalists gathered, surrounded by a brick rampart lined with earth and a deep trench, and guarded by the lofty Gate House with its four turrets looking northwards. Here Colonel Norton and Colonel Harvey are beaten off, and forced to retreat to Farnham. The Parliamentarians return with grenades and culverins, but still the Marquess loftily refuses to surrender. On drags the siege, until at last great Cromwell comes with regiments of horse and foot, and, having battered down portions of the wall over-night, rushes in, and like a fire-flood takes the place by storm, even killing the brave daughter of Dr. Griffith, who upbraided the Roundheads for their rough treatment of her father. What stirring scenes took place in those desperate days at Old Basing—work for tears in many an English mother, whose sons were scattered on that bleeding ground, coldly embracing the discoloured earth. Even recently, when the Basingstoke canal was cut, swords, cannon balls, and skeletons and such fragments of this great siege were found. Near is an ancient Danish entrenchment—the Winklebury Circle—and as this overlooked the town it was used by Cromwell as a surveying station prior to the attack.

Basingstoke itself is an unattractive-looking town, once famous for its silk and woollen trade. As we had to halt for that usual worry of a motorist—a flat tyre—we wandered to the

ruins of the Holy Ghost Chapel. Only a hexagonal tower and a few walls remain. The head-master of the Grammar School bears the title of Chaplain of the Chapel of the Holy Ghost. Gilbert White, while a boy at this school, admits having undermined and investigated much of the ruins; whether with the approval of the chaplain or not is not mentioned. The main road, which, however, we found very stony, leads by Kempshot House, Popham, East Stratton Park, Itchen Wood, and Kingsworthy, to Winchester. Hackwood Park, which is to the left of the main road, is worthy of a visit. In front of the house is an equestrian statue of George I., and the Hall contains some fine carvings by Gibbons. Spring Wood suggests a tropical forest; the ivy has grown unchecked, and hangs from the beech trees in long festoons, so that it is easy to imagine oneself in the bush of some Fiji island, miles from civilisation; all that is wanted to complete the illusion is a few palms with more or less naked natives climbing them. Near, bounded by a wall of elms, and with a stage of turf, is a grand amphitheatre. Here Lavinia Fenton, the original Polly Peachum of the Beggars' Opera, performed. She it was who married the third Duke of Bolton. The park is very picturesque, and contains some ancient white-thorns. Instead of returning to the direct route the road to Alton can be followed by Winslade and the well-timbered park of Herriard to Lasbam; here a pretty turning to the right wanders by Medsted and Bighton to New Alresford. At Medsted there is a fine Norman church containing an alabaster monument of William Wallop, in armour. The authoress of "Our Village," Miss Mitford, was born at New Alresford; the village, of course, is Grazeley, not far from Mortimer and Eversley. If a visit is paid to the church at New Alresford the curious old crucifix in the west tower should be looked for.

The direct south road leads to Tichborne, which, as a result of the historic trial that took place in 1872, is well known to the public. One can quite understand anyone claiming this beautiful place. Orton, who was ultimately convicted of perjury, gave out that he was the eleventh baronet, Roger Tichborne, said to have been lost at sea. The claim let the estate in for some £80,000 law costs. Having wandered off the main track, we continued 1½ miles south to Cheriton, famous for the battle in which the Royalists under Lord Hopton were routed by Waller's Parliamentary soldiers; now this village is chiefly famous for its truffles. If time permits, the Early English church should be



The Deanery, Winchester.

seen, especially the ancient tiles on the altar platform. From here the road on the right should be followed and the second turning also on the right taken, and so Winchester can be entered without descending the precipitous hill on the more direct route. We were not sorry to reach that comfortable inn "The George," and, after our prolonged run, did excellent justice to the good fare there provided; the car, too, received her food in the shape of petrol and oil—in fact, we found the town so interesting that we stayed the night.

This old capital of Wessex contains much to warrant a close inspection. Here, where King Alfred's statue has been erected,

did he with his friend of weather fame, St. Swithin, hold his Court; here Guy Earl of Warwick, and Colbrand, the Danish champion, did in single combat settle the issue; here William the Conqueror, Stephen, and Richard I. were crowned; to this town, up to Henry, the many-wived king, flocked merchants from all over Europe to buy the cloth that then was made there; and now it is famous for its cathedral and school. At the bottom of the hill, close to the bank of the Itchen, is the old cathedral, probably the longest in England. Entering by the west door the general appearance is most impressive. On either side are statues of James I. and Charles I., and though the balcony which serves for a triforium is very light it adds to the general effect. The tribune, as the square stone gallery at the end of the north aisle is called, should be seen; once it harboured minstrels, now the episcopal registers. Other interesting features are the chantry of William of Wykeham, the memorial slab to Jane Austen, the novelist, and the alleged tomb of William Rufus. This is in the centre of the choir, a plain sarcophagus, and it is claimed that it is the original place of interment. As this was questioned, some forty years ago it was opened and a body, or portions of one, was found with bits of a gold thread embroidered



King Alfred's Statue, Winchester.

red cloak, and fragments of wood and iron that together made an implement a yard long, and is said to be the fatal arrow. The screen was renovated in 1891, and is a marvellous piece of work; the spandrels of the doors representing the Annunciation and the Visitation are of interest. The wall paintings, illustrative of the Passion and the martyrdom of Thomas of Canterbury, in the chapel of the Holy Sepulchre, deserve notice. In the South Chapel Queen Mary married Philip of Spain in 1554, and there is still preserved the faldstool used by her on that occasion. Leaving by the south door the Deanery is approached; here it was that Charles II. lodged while watching the progress of his own palace on the hill, but the then prebendary, Ken by name, refused to admit Nell Gwynne to his house. Seemingly the King bore him no ill-will, as he afterwards made him Bishop of Bath and Wells. Leaving the Deanery and passing St. Swithin's Church College Street is entered; on a house on the right may be noted a tablet in memory of Jane Austen. The college is famous, and among its pupils may be mentioned Wordsworth, Anthony Trollope, Dr. Arnold, Lord Northbrook, as well as many others. In old days the boys had their meat off wooden trenchers, but now plates are provided. In the hall there still exists the "tub" in which the broken meat is placed after dinner. In the good old times the scholars' beds consisted of

but a bundle of straw with a coverlet, and even in these more hygienic days clean sheets are called "clean straw." The play ground is known as the "Meads," and the marks on the old gate are stated to be due to the shot of Oliver Cromwell.

Winchester gives one such a feeling of serene peace, dropping down, as it seems to, from the barracks and County Hall on the steep to the old grey cathedral surrounded by its beautiful red brick deanery buildings on the flat, with little bits of green lawn scattered about and then the Stoke bridge, where St. Swithin built his bridge over a thousand years ago, and as one leans over it is so easy to dream of when motors were not, and of that period of which Kingsley wrote in "Hereward the Wake," when the last of the English came with his forty knights to see King William at Venta Belgarum, "It's the same river Itchen that roared then as it does now." CHARLES T. W. HIRSCH.

SOME USEFUL NOTES.

BEFORE attempting to remove any part of the mechanism of a car the exact construction and object of the same should be thoroughly understood. Furthermore, before any part is removed be sure that you can replace it correctly, even after a considerable lapse of time.

EVERY shaft or other part of a motor-car which revolves in bearings should be found to move with perfect freedom after the bearings are adjusted; it is far better to leave bearings slightly too loose than too tight.

THE cars of eight or nine years ago were somewhat prone to develop an immense amount of rattle through the loosening upon their studs, pins, or pivots of such parts as radius rods, steering connections, and brake operating rods. It is now the general custom to use hardened pins and bushes very largely in such parts, to provide grease-cup lubrication or some equivalent dust-excluding means, and to furnish means of adjustment when looseness finally develops. The result is that the modern car may be kept free from annoying rattle for years at slight trouble and expense.

ON almost all old cars and on some of the newer ones there are to be found parts which are intended to be lubricated by oil squirted from a can into an open, counter-sunk oil hole. Everyone knows that usually rather more grit than oil gets into these holes in practice. It is a good plan to fit such parts with small lubricators as used on bicycles, and so remove the possibility of the entrance of dirt into the oil holes, and at the same time afford good lubrication.

IT is an easy matter, in an ordinary private motor stable, when taking down any portion of the mechanism, to lose some of the small parts, such as nuts and screws, unless precautions are taken, and it is advisable to have on hand a number of small boxes into which the small pieces from each part of the machine may be sorted. It is specially worth while to do this where some time may elapse before the mechanism is again to be put together. Some motorists provide a number of tin cans partly filled with paraffin, into which such parts may be sorted when removed. These parts, which are generally dirty or gummed with oil, are thus cleaned by the time they are required.

IF a repaired motor tyre is to prove satisfactory, the work it is required to do should be proportionate to the services it is capable of rendering. Consequently such tyres should be placed on front wheels. Having less strain to bear, the cover will last longer; it will be less exposed to punctures and, consequently, will be less liable to burst. Being placed in front, it can also be watched more easily. Repaired inner tubes can be used in the same way; those that have been repaired should be kept for the front wheels, where the strain is not so great, and, consequently, the heat is less, and they will be able to resist some time longer, whereas they might be unfit for use after the first mile if they are placed on the rear wheels.

AN auction sale of motor-cars was conducted at Dundee on Friday of last week.

THE new concern, Benz Motors, who have just opened a depot at Portland Court, Great Portland Street, London, W., are keeping a stock of spare parts for all types of Benz cars.

ON the premises of Messrs. R. Woodhead, of Southport, on Monday, the R.A.C. held an examination in driving and mechanical proficiency.

A FEW catalogues of the Cordingley Show remain from the Exhibition, and will be sent to any address on receipt of the published price, 6d., plus 3d. for postage.

IN the Carshalton Road, Sutton, Mr. R. G. Jeffries is opening an establishment for the storage and repair of cars. He will undertake contracts to keep automobiles in running order, and will also carry a large stock of accessories, oils, &c.

THE Right Hon. the Earl of Leven and Melville has placed a further order with the Daimler Company for a 42-h.p. "Hazelwood" car. An order has also been received from Sir Samuel Scott, Bart., M.P., for a 42-h.p. Daimler with "Frome" limousine body.

DURING the present week Messrs. G. H. Cox and Co. have held an interesting motor show in the Empress Hall, Southsea, the exhibition comprising a full display of Argyll and Fiat cars, as well as a range of Dunlop, Continental and Palmer Cord tyres and other accessories.

AT the last meeting of the Metropolitan Asylums Board, Mr. J. T. Helby said that in one day the motor ambulance with two men and one nurse had done work which, under the old conditions, would have required five horsed vehicles, nine horses, six men, and five nurses.

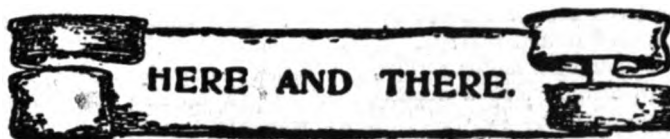
BY request of the Dublin County Council the Local Government Board is to be requested to prohibit motoring on the road from Malahide to Portmarnock via the Velvet Strand. Should this be accepted it will put an end to the interesting motor competitions that have taken place there.

A MOTOR-CAR containing three occupants was proceeding along the High Road, Woodford, on Saturday, when it caught alight. The passengers were so severely burnt that they had to be removed to the hospital. A fire engine arrived on the scene promptly, but the car had by that time been almost entirely destroyed.

ACCORDING to the "Motor News" the Kempshall Tyre Company report that they are quite satisfied at the amount of business done at the Agricultural Hall Exhibition. So brisk were their orders that they had to remove half the tyres off the stand during the progress of the Show for despatch to clamouring customers.

A NOVEL puncture-proof band for motor tyres was shown on the stand of the Gaggenau Motor Vehicles Company, of 95, Regent Street, W., at Olympia last week. The band, which is known as the "J. D.," consists of a series of short pieces of cane, semi-circular in section, held in pockets attached to a thin strip of leather; the band is solutioned to the inside of the outer cover, and is stated to have proved extremely efficacious in preventing punctures.

THE National Motor Academy and Exchange, Ltd., of Boundary Road, Notting Hill, W., have sent us a copy of a working model of a petrol engine they have just issued. This is an extremely interesting production, as the action of a four-cycle engine is by its means very clearly demonstrated. On one side of the model there is a general view of the engine with the half-time gear exposed, showing how it is also utilised, on one side, to drive the water circulating pump, and on the other a magneto. The reverse side of the model gives a sectional view of the motor, and shows how the reciprocating motion of the piston is converted in a rotary motion of the crank-shaft, and also the method of operating the inlet and exhaust valves. Altogether the model is a very useful production and demonstrates the complete manner in which the National Academy have taken up the motor tuition question.



THE Danish Touring Club is organising an international congress for the discussion of touring matters, to be held in Copenhagen in 1909.

MR. ALFRED RICE, of the East Grinstead Carriage Factory,

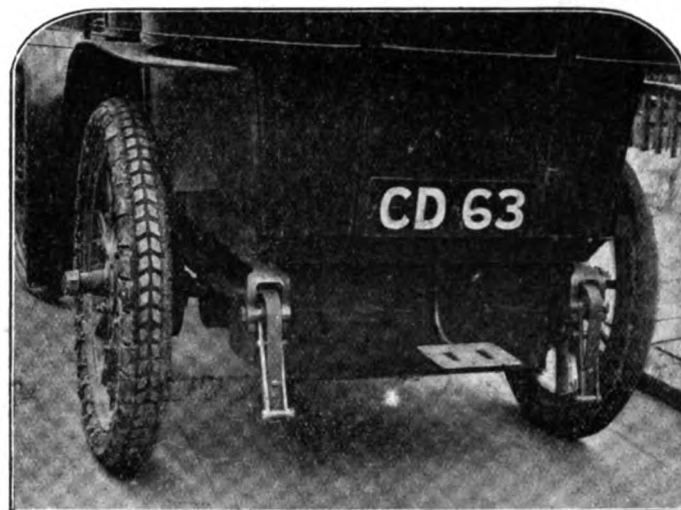
in the London Road of that Sussex town, is giving attention to the building of motor-car bodies.

PRINCESS VICTORIA OF SCHLESWIG-HOLSTEIN, who is at present paying a lengthy visit to Ireland, will, during her stay, do a good deal of motoring through the country.

AT a political meeting at Nutley, Sussex, the prospective Unionist candidate (Mr. H. S. Cautley) was asked if he would be in favour of the swine fever regulations being applied to "road hogs."

TURNER'S AUTOMOBILE WORKS, LTD., have a garage at the Carriage Companies' Buildings, Rusholme, Manchester, where the repair of cars is undertaken, accumulators charged, and automobile sundries generally supplied.

MESSRS. OLLIFF'S Motor Depot is about to open another garage in Middlesbrough in addition to that they already have in the Corporation Road. The new premises are in the Grange Road, and will be under the supervision of Mr. J. Nesham.



The Lever Spring Suspension as fitted to the rear springs of a car.
(See page 120 last issue.)

A WARNER autometer is under the observation of the R.A.C. on the Siddeley car on which the 3,000 miles trial of the Elastest filled tyres and Elastest movable flange rims is now in progress. Non-stop runs were made on the first five days of the event, the mileage being 760.

MR. T. H. D. BERRIDGE, M.P., speaking at Coventry the other day, said he wished to refer to the possibility of taxation of motor-cars by the Chancellor of the Exchequer, who, he had reason to believe, and cause to hope, had found the difficulty of fixing a basis so great that he might have to pass the matter by altogether.

THE annual motor-boat race meeting at Monaco is being held this week. The principal event on Monday was the fifty kilometres race, open to all racers without distinction. Five boats started, the result being a win for the Wolseley-Siddeley, in 56 min. 17 2-5 sec., the Panhard-Levassor being second, and Jeannette third.

THE improved Cape cart hood designed by Mr. T. D. Brock, St. Mary's Road, Ealing, W., is operated by merely raising a lever whilst on either side of, or inside, the car. The hood is thus automatically extended to its proper position without sagging of the sticks or damage to the body. The hood is being made by Fountain's Coach and Motor Company, Ltd., of Ealing, by whom it was exhibited at the Cordingley Show.

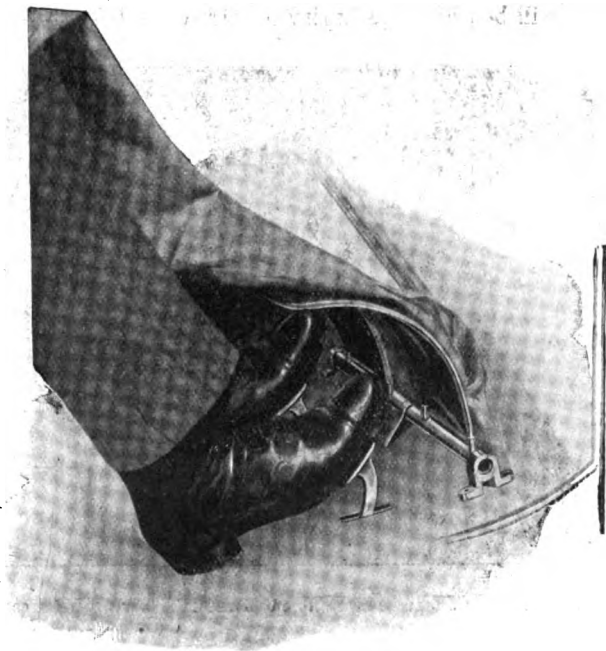
LORD and Lady Newborough, who have been at Cannes for some weeks, have gone for a motor tour to Pau and Biarritz.

At Pontypool, Mr. J. E. Woolley is opening a motor garage, and in addition to a repairing shop will also develop a department for instruction in motor-car driving.

An International School of Aeronautics has lately been established in New York City. The courses, which are arranged for home study, consist of lessons, accompanied by nearly 300 figures, diagrams and charts on separate plates. There are offered three courses, first, covering spherical balloons; second, dirigible balloons; third, heavier-than-air machines.

HER SERENE HIGHNESS the Infanta Dona Eulalia has granted Mr. Rowland Winn the title of purveyor to her royal household, with the use of her coat of arms on the invoices and labels in connection with his motor garage in Albion Street, Leeds. Mr. Winn was a pioneer motorist in Yorkshire, and we congratulate him upon the distinction conferred on him.

We illustrate herewith the useful pedal guard which has lately been put on the market by the Nonex Safety Tank Syndicate, Ltd., of 46, Dover Street, London, W. As will be seen, it consists of two light frames, which may be covered with patent leather or other suitable material. The frames are connected at their lower ends to a spindle carried by bearings



mounted on the footboard. Means are provided for adjusting the guard to any required angle. The device, which can be fitted to any car, not only acts in keeping off draughts from the feet, but in cold weather, as the illustration shows, permits the driver to make use of an apron or rug without any fear of the latter fouling the clutch and brake pedals.

THE date for closing the list of applicants for the Daimler Engineering Scholarships was originally fixed for March 31st, 1908, but enquiries for information and forms of application are so numerous that, apparently, there are many eligible for the examination who have not learnt of the scheme in time to make application. It has been decided, therefore, to extend the date of closing the list of applicants to April 30th, 1908.

IN view of the importance attaching to the results of motor-racing on their track, the Brooklands Automobile Racing Club have decided to appoint an official measurer and inspecting engineer, whose duties will be to see that the technical requirements of the rules and regulations are strictly complied with. For this purpose the club has retained the services of Mr. H. Waymouth Prance, A.I.E.E., A.M.I.A.E., whose extensive experience in car inspection work renders him particularly fitted for the appointment. Mr. Waymouth Prance will be in attendance at all race meetings on the track.

MESSRS. A. and C. Bridgland, Limited, of 33 and 35, London Road, East Grinstead, have a motor garage, where they stock motor accessories, petrol, &c.

AN inquiry has been received by the Automobile Co-operative Association, Ltd., for illustrated catalogues of small motor-cars suitable for the colony of N.Z.

THE Canada Cycle and Motor Company, of Toronto Junction, Ontario, has secured a contract from the General Post Office Department of the New Zealand Government for an 18-h.p. motor-van to be used in collecting the mails.

THE Arcade Motor Garage, Limited, has transformed one of the arcades in Aberdeen into a garage and showrooms for motor-cars. This is situated at that end of Union Street, Aberdeen, by which motorists from the south enter the city. Facilities for repair work are being set up.

SIR FREDERICK POLLOCK has written to the Westminster City Council calling attention to the amount of depreciation which was resulting from the motor-buses running in Bayswater Road. He states that his house is one of a block of six red brick houses erected eight or nine years ago. In consequence of the noise and vibration only three of the houses have found private purchasers. The plaster is cracked in every room, and the vibration of the walls, floors, and windows has become very serious.

CAPTAIN WINDHAM, the King's Messenger, who has been carrying momentous despatches between the King at Biarritz and his advisers in London, is a well-known motorist. For the first time in our history a taximeter cab has been employed to carry messages from the King to the incoming Premier, the Messenger arriving at Charing Cross on Monday and going to the Treasury in such a vehicle. When he found Mr. Asquith was not there he at once re-entered his motor-cab and went to Cavendish Square, W., with his message from his Majesty.

FROM Messrs. Chapman and Hall, Ltd., comes a copy of the first edition of the Sporting and Athletic Register for 1908. Within the 680 pages of which the book consists are given the records of all the important events in athletic games and every form of sport in the United Kingdom last year. Half a dozen pages are devoted to motoring, the results of trials and races both in this country and abroad being given. Every care seems to have been taken in the compilation of this annual publication, which will have considerable interest for sportsmen of every description.

THE Canterbury Automobile Association, which promoted the New Zealand Reliability Trial, has issued a statement of the results. In Class A, for cars of 12-h.p. and over, an 18-24-h.p. Siddeley and a 15-h.p. Talbot each secured first prizes, scoring full marks, and the second prize was obtained by a 15-h.p. vehicle of the latter make, which was one mark behind. In Class B the 10-h.p. Cadillac scored full marks and won the first prize; in Class C the 12-16-h.p. Clement-Talbot and the 15-h.p. Talbot each gained the maximum marks and tied for first prize, the 16-20-h.p. Argyll gaining the second prize, and being only four marks behind. Class D, for the cars of private owners, under 12-h.p., was won by the 8-h.p. Reo.

IN view of the near approach of the holiday season the Car Mart, Ltd., wisely take advantage of the present appropriate time to participate in the exchange of automobiles usually associated with this period of the year. Its establishment is at 279 and 299, Euston Road, N.W., and also at 72-73, Warren Street, London, W., the area being nearly 30,000 square feet, and so conveniently devised for the purpose of selling motor-cars that the vehicles can be inspected by natural light, as compared with the artificial illuminants by which cars are often examined. The system of business that is distinctive of the operations of the Car Mart, Ltd., consists in the second-hand cars being accompanied by a written expert report, so that the possible purchaser is provided with useful knowledge with regard to the automobile on offer. Special facilities are offered for the disposal of old cars taken by trading firms in part payment for new vehicles, and evidently the firm is well prepared to assist both the buyer and seller of vehicles that have already seen service, but which are good for further terms of usefulness.

CONTINENTAL NOTES.

The Elastic Wheel and Tyre Competition.

The annual spring and elastic wheel and tyre competition organised by the "Auto," of Paris, commenced on Tuesday, the 7th inst., and will extend to the 17th inst. The trial consists of a run to Nice and back, a total of 2,100 kilometres, and comprises eight daily trips of from 200 to 326 kilometres, two days being devoted to an exhibition at Nice, the final day being similarly spent in Paris. The vehicles to which the wheels are fitted are divided into five categories as follows:—Class 1, single-cylinder vehicles up to 100 mm. bore; two-cylinder ditto up to 80 mm. bore, and four-cylinder ditto up to 65 mm. Class 2, four-cylinder cars up to 85 mm. bore. Class 3, ditto up to 100 mm., and six-cylinder vehicles up to 85 mm. Class 4, four-cylinder cars up to 125 mm. bore and six-cylinder ditto up to 105 mm. Class 5, four-cylinder vehicles over 125 mm., and six-cylinder ditto over 105 mm. The minimum weight of the cars in running order, and including passengers in the different classes, must be respectively 750 kilog., 1,000 kilog., 1,250 kilog., 1,500 kilog., and 1,750 kilog. The rules provide that shock absorbers must not be used in conjunction with the springs. Each class is divided into two sections:—(a) In which no repairs and replacements of wheels or tyres can be made, and (b) in which they will be permitted in those cases where the reservation has been provided for in the entry form. Forty-two entries were received, but of these only the following twenty-one put in an appearance on the weighing-in day:—

| Tyre or Wheel. | Car. | Weight of Vehicle. kilog. |
|---------------------|-----------------------|---------------------------|
| Ducable ... | Delage ... | 900 |
| Metallo-Elastic ... | Le Metais ... | 843 |
| Sider ... | Aleyon ... | 830 |
| Spiro-Flexible ... | Renault ... | 798 |
| Ducable ... | Vulpes ... | 1,238 |
| Sider ... | Darracq ... | 1,100 |
| Touzelet ... | Ours ... | 1,510 |
| Ideale ... | Brasier ... | — |
| Lynton ... | Gregoire ... | 1,343 |
| Metallo-Elastic ... | Werner ... | 1,160 |
| Ducable ... | Mors ... | 1,470 |
| Gautier ... | Renault ... | 1,635 |
| M. Y. G. ... | Mors ... | 1,976 |
| Sider ... | Rebour ... | 1,197 |
| Ducable ... | De Dion-Bouton ... | 1,975 |
| Metallo-Elastic ... | Darracq ... | 1,823 |
| M. Y. G. ... | Darracq ... | 2,312 |
| Delta ... | Lorraine-Dietrich ... | 2,195 |
| Sider ... | Rebour ... | 1,570 |
| Ducable ... | Motobloc ... | 1,770 |
| M. Y. G. ... | Peugeot ... | 2,446 |

French Motor-Car Exports.

Judging from the returns for the first two months of the current year, the exportation of motor-cars and motor parts from France is experiencing a considerable set back. During the period named the shipments only attained a value of £693,920, as contrasted with £908,960 in the first two months of 1907, and £1,137,360 in the corresponding period of 1906. With the exception of the United States, Russia and Spain, every market shows a decline, the shipments to the United Kingdom having fallen from £368,880 to £286,600.

The Prince Henry Tour.

Several alterations in the conditions of the Prince Henry Tour, which is to be held from June 9th to June 17th, have been made, and the daily stages are in various instances either to be shortened or the route carried through different districts from those originally determined on. As now fixed the first day's run is from Berlin to Stettin; on June 10th, to Kiel; June 11th, rest in Kiel; June 12th, run to Hamburg, a speed trial being held en route between Rendsburg and Itzehoe; June 13th, exhibition in Hamburg; June 14th, run to Hanover; June 15th, to Cologne; June 16th, to Trier; and June 17th, to Frankfort-am-Main, where the tour will end. It has been decided to hold the hill-climb at Bacharach on the last day, and the formula for this event will be prepared immediately. In

order to prevent any racing during the event the authorities have decided that all the competing vehicles must be fitted with speed indicators. Entries close on the 15th inst. instead of the 1st inst. owing to the above-mentioned alterations. In reply to a question, the German Club states that the Rudge-Whitworth detachable rim is admissible, changing of rims being marked with one-tenth of a point, as well as each change of an outer cover or repair to the same.

Motor Racing in Italy.

A motor-car race was held on Sunday last on the Padua-Bovolenta road by the Automobile Club of Venice. The contest was over a distance of 10 kilometres, which had to be covered in both directions, classification being based on the averages of the two runs. The best time of the day was made by Trucco on an Isotta Fraschini (4 min. 53 sec.). The meeting was unfortunately marred by a serious accident. An 120-h.p. Itala, driven by the Count dal Torso, swerving to avoid another car travelling in the opposite direction, ran into the spectators assembled by the side of the road, killing one person and seriously injuring six others.

Miscellaneous Items.

An Aries 14-18-h.p. car recently made a very successful run from Paris to Prague, a distance of 745 miles. The French



The 24-h.p. De Dion Motor Van recently put in service in Sofia by the Bulgarian Post Office Authorities.

capital was left in the very early hours of a Saturday morning, and Prague was reached on the Sunday afternoon. The car carried its full complement of passengers and luggage.—An aero section has just been organised in connection with the Austrian Automobile Club.—The Northern Railway Company of France have lately put in service in Paris a special Brouhot car for the conveyance of passengers and their luggage to or from the Gare du Nord.—Seven new public motor-car services are about to be started in different parts of Bavaria by the Government of that country.—A motor gymkhana is to be held in Munich on July 20th, during the sporting exhibition to be held in the Bavarian capital this season.—The date of the Austrian Automobile Club's tour through Bosnia, Dalmatia and Herzegovina has been altered to May 3-14.—The Crown Princess Olga Alexandrowna, the sister of the Czar, has just ordered an N.A.G. car.—The Antwerp Automobile Club held an interesting reliability trial on Sunday last, victory falling to the Germain car driven by M. Perpere.—A hill-climbing competition was held on a two-kilometre course on the Bormes Hill, near Toulon, on Sunday last. The best time of the day—2 min. 5 sec.—was made by M. Hallut on a Mors.

The Cordingley Motor Show.

(Continued from page 129.)

THIS week we continue our reference to the exhibits at the recent Cordingley Show at the Agricultural Hall, London. From the following particulars, as well as from the descriptions which have already appeared, it will be gathered that the Exhibition was of an interesting character, the many new chassis on view being supplemented by a varied display of novel motor accessories.

Electrical Vehicles.

A novelty at the stand of the **ELECTRIC VEHICLE COMPANY, LTD.**, Earl Street, Westminster, S.W., was an electric parcel-carrier tricycle (Fig. 57). This is designed to carry loads up to 2 cwt. The motor

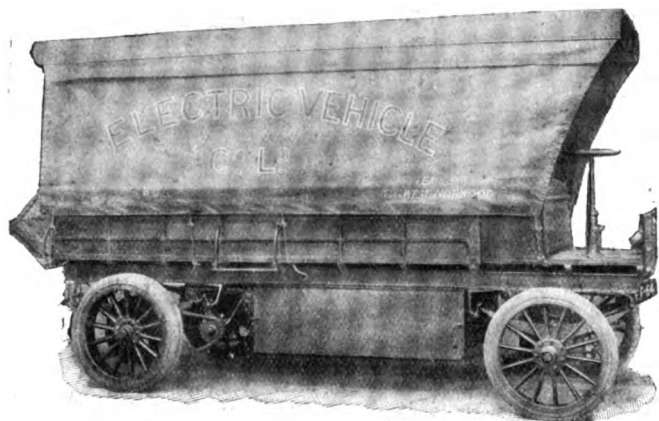


Fig. 56.—The Electrical Vehicle Company's Two Ton Van.

is supported at about the centre of the frame, and drives the rear wheel through a propeller shaft and bevel gear. A two-ton van was also on view. This is equipped with a battery of forty-two Tudor cells, having a capacity of 260 amp.-hours, sufficient to run the vehicle a distance of forty-five miles on one charge. The motor is supported at about the centre of the frame, and drives a differential shaft through spur gearing, the final transmission being by side chains. The controller is adapted to give six speeds forward and two reverse. This vehicle has during the past twelve months run a distance of about 14,000 miles in demonstration work. The batteries are supplied by the Tudor Company under a maintenance contract. Another commercial vehicle was one designed for loads from 20 cwt. to 30 cwt. In this the motor is located in the forepart of the frame, and is connected by a silent chain to one end of a cardan shaft, which in turn drives the rear axle through bevel gearing. The battery comprises forty cells, one charge being equal to a running distance of forty miles. A smaller vehicle on similar lines, to carry 5 cwt., was also on view. The pleasure vehicles, in which the motive power is supplied by electricity, comprised a landaulet with motor at front and cardan-shaft drive, and a neat little two-seated park phaeton with hood. The electric motor in this case is located about the centre of the frame, and drives the differential shaft by a silent chain, the final transmission being by two side chains. The battery, which consists of forty-two cells, is carried half at the back and half at the rear, the capacity being sufficient for a run of sixty miles on one charge. The controller is arranged to give six speeds forward and two reverse, the device being fitted with a "gate," which prevents the reverse being inadvertently put in.

The Kempshall Tyre.

Great interest is being taken in motoring circles in the performances of the Kempshall tyres, which are being placed on the market by the **KEMPSTALL TYRE COMPANY OF EUROPE, LTD.**, whose offices are at 1, Trafalgar Buildings, Northumberland Avenue, London, W.C. These are designed to overcome the side-slip problem, but vary from others before the automobile world in the fact that no metallic studs are used. In a recent issue we referred to the distinctive feature of the tyre, in which a series of rounded indentations serves to secure a good grip of the road surface and withstand any tendency to skid. A user who has

travelled over 1,200 miles on these tyres during the past winter reports that they show practically no signs of wear, while their non-skidding properties have been well proved. He purposely and repeatedly tried to get a good skid from them by going fast over greasy sets and jamming on the brakes, but failed every time.

Turner's Improved Tyre.

In the Inventors' Section of the Exhibition was a wheel demonstrating an improvement in pneumatic tyres for motor-cars and similar vehicles. In this the tyre, instead of being a continuous band around the rim of the wheel, is in the form of short sections, which the inventors, Messrs. **TURNER BROS.**, 39, Kempster Street, Lower Broughton, Manchester, assert, have a tendency to grip the road and so prevent the side-slipping too frequently associated with automobiles. Each section of the tyre is secured to the rim by a clip, with the result that the whole device is light and secure. One point of interest is, of course, that punctures can be easily located, and the necessary repairs carried out without hindrance, from the form of construction of the tyre.

Martin's Dust Suppressor.

MR. G. F. MARTIN, of Eastleigh, took advantage of the Show to draw attention to his device for suppressing the dust and mud scattered broadcast by the rapid movement of the wheels of motor-cars. Mr. Martin provides the road wheels with metal coverings which reach almost to the ground; by means of hinged flaps that can be regulated it is intended to keep the under portions of the car comparatively clean. Brushes are fixed close to the tyres just behind the point where they touch the ground, so that the dust and mud are not allowed to rise more than a few inches. The inventor estimates that his arrangement can be fitted to a car for a very small sum, so that it would not be a costly matter to give it a practical test.

Messrs. Nickells' Specialities.

In the Gallery, Messrs. **F. S. NICKELLS AND CO.**, of 2, Dornberg Road, Blackheath, London, S.E., were again to the fore with a miscellaneous exhibit of patent terminals, tubeless bicycle connectors,

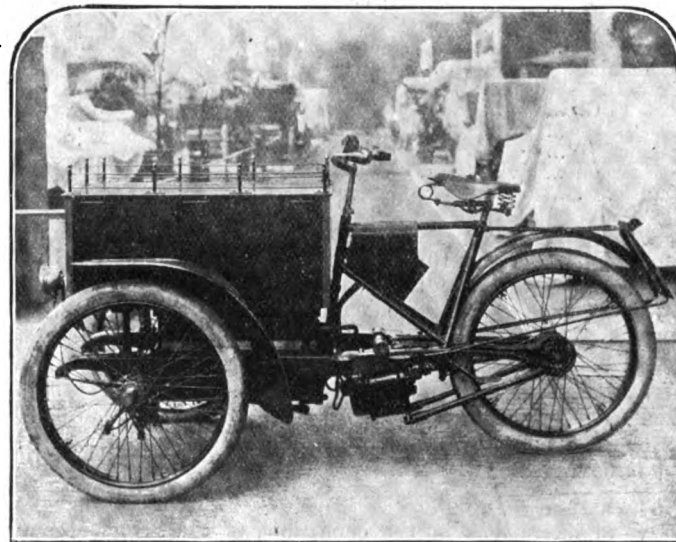


Fig. 57.—The Electrical Vehicle Company's Electric Parcel Carrier Tricycle.

Universal connectors to fit the valve of any motor-car or motor-cycle, deadbeat-reading tyre tester and compression tester, and other specialities of ingenious design. The Universal self-sealing connector brought out by this firm is a simple and ingenious device the value of which has been previously pointed out in our columns. No reference to this stand would be complete without mention of Nickells' patent rear tell-tale lamp, which will save the motorist from fines and the accompanying endorsement of licences.

Wheels, &c.

Messrs. SMITH, PARFREY AND CO., LTD., of the Pimlico Wheel and Motor Works, Fulham Palace Road, Hammersmith, London, W., had a large and representative display of their wheels for cars of every description, from those for large lorries down to those for cars of small degree. Artillery motor-wheels for delivery vans, for 'buses, and for pleasure cars occupied considerable space. In addition, the firm had a large collection of front axles and forgings for the various parts of automobiles, and also showed repaired cylinders and water-jackets. A section of the available space was devoted to bentwood goods, to wings for automobiles, and similar productions, in which Messrs. Smith, Parfrey and Co.'s wide range is well known. Messrs. Smith, Parfrey

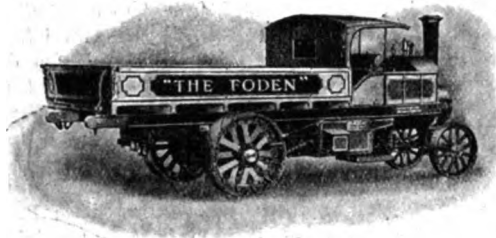


Fig. 58.—The Foden Steam Wagon. (See issue March 21st)

and Co., Ltd., are also interested in the A.P.S. shock absorber, the use of which reduces wear on tyres and engine alike. This leaves the action of the springs entirely free, and considerably eases the task of driving. The device regulates itself automatically during the first hundred yards of running to an air-pressure in the cylinder of from 50 lbs. to 60 lbs. per square inch, gradually increasing to 125 lbs. to 140 lbs. per square inch, according to the speed and road surface. Those interested in this type of absorber, and who did not attend the Show, can obtain full particulars from Messrs. Smith, Parfrey and Co., Ltd.

Lighting Motor Vehicles.

On the stand of Messrs. S. SMITH AND SON, LTD., we noticed a demonstration of the Leitner ignition and lighting system for motor vehicles. This is, in reality, a modification of Mr. H. Leitner's train-lighting equipment made suitable for road vehicles. A small dynamo, giving constant voltage over a good range of speed, is driven by gearing from the engine, and furnishes current to the cells. The dynamo not only keeps the ignition at its maximum efficiency, but, in conjunction with the ignition battery, provides sufficient current for the complete lighting of the vehicle, as well as for magnetic clutches or other electrical devices which may be required. The system has worked well in one of the motor-buses of the L.G.O. Company, and its extension to public-service vehicles generally would prove a boon to the travelling public.

The "Belmont" Non-skid.

A non-skid without studded treads was the feature of the exhibit of the "Belmont" non-skid shown by the company of that name, whose headquarters are at 15, Seething Lane, London, E.C. A band of a special fibrous material surrounds the cover in place of the usual strip of leather. This is constructed in such a way that it does not fray or shrink, and wears evenly and well. Age does not impair its efficiency, nor will it deteriorate by wet, while its suitability for all climates seems to have been satisfactorily demonstrated. The outer surface hardens with wear, and becomes more difficult to penetrate, while the gripping effect grows even more noticeable. Small stones or nails which become embedded in the material increase its non-skidding properties. The "Belmont" non-skid is guaranteed for 2,000 miles, and deserves a general test by motorists during the coming season.

The Motewood Exhibits.

The central feature of the display of the MOTEWOOD COMPANY, of Edmonton, consisted in a detachable wheel that is suggestive of strength, simplicity, and sustained service. One side of the rim is detachable, and is attached by being fitted into side pieces placed at an angle, so that when attached they are not likely to come off. Further attachment is also given, which is removable by a lever, and the device is freer than most from any loose pieces, bolts, &c. Another speciality shown by the company were the patent extension ladders for garages, &c., and also for reaching brougham tops, &c., in order to place luggage, &c., thereon without running any risk of scratching

the paintwork. The ladder has a channel steel liner running its entire length. This is strained to a high tension, and enables the use of very light timber, an advantage in connection with automobile use, to which we suggest it can be readily put.

Hoods and Accessories.

A large and representative display of the various sections of their automobile business was made by Messrs. S. SWAN AND CO., 212-216 and 228, Pentonville Road, King's Cross, London, N. In addition to cars, the firm showed a large selection of Cape-cart hoods, including side-entrance hoods complete with side curtains and the necessary fittings, and a remarkably cheap hood for two-seated vehicles. The Swan folding wind-screen was also on view. Several sets of new tyres were shown, and some lines in accumulators and coils attracted many buyers. Gear-boxes, back axles, radiators, and bonnets were in the section devoted to motor-car parts, and in accessories were head-lamps, horns, and the thousand-and-one goods that constitute the fittings for the modern motor-car. The exhibit testified to the ability of the firm to cater for all classes of motorists, and those who require any of the goods we have mentioned would do well to communicate with Messrs. Swan and Co.

The Wallis Steam Tractor and Wagon.

Messrs. WALLIS AND STEEVENS, LTD., of Basingstoke, exhibited one of their standard steam tractors and a 5-ton steam wagon. The Wallis tractor has become such an everyday feature of modern road traffic as hardly to require description. The one on view was intended for Messrs. Pickford, the carriers, and makes the twenty-fifth machine supplied to this firm. The engine is of the compound type, with link motion operating slide valves on the outside of each cylinder, so that the steam chests are readily accessible. The whole of the motion is enclosed, together with the change-speed gear. The boilers are of the locomotive multi-tubular pattern, the water being fed by a steam-driven automatic ram pump and injector. A water-lifter and hose are supplied. The tractor, which is provided with springs to both axles, has a patent draught-controlling arrangement, consisting of a pivoted baffleplate in the smoke box. The 5-ton steam wagon, of which we give an illustration in Fig. 59, is described by the makers as their standard tractor put between shafts. The boiler, engine, and countershaft, together with the front axle and steering gear, are practically identical with that on the tractor. The channel frames of the wagon are riveted to plates secured to the fire-box shell plates, and are continued to the smoke-box, where they fit into brackets, but are not fastened rigidly to the latter, so that the boiler is free to expand, independently of the channels. The compound engine is erected over

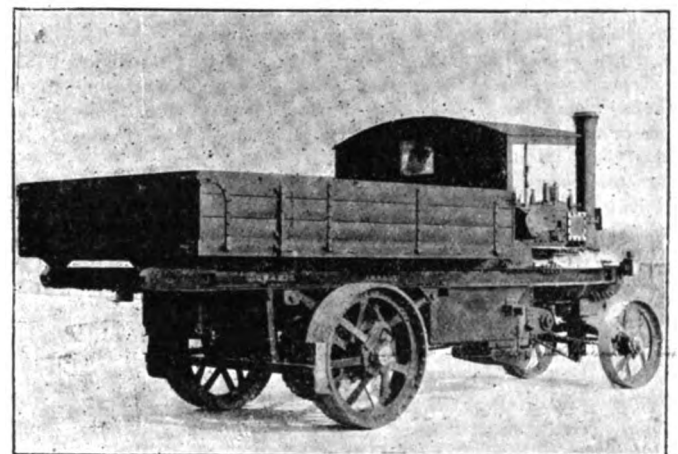


Fig. 59.—The Wallis and Stevens Steam Wagon.

the boiler, and all the motion is enclosed and run in oil just as in the ordinary type of under-type steam wagon engines. To stand the heavy tensile strain to which it will be subjected, cast-steel gearing is employed, the pinions being machine-cut to avoid noise and produce easy running. The drive is transmitted from the second-motion shaft by a Renold roller chain to the differential on the live back axle. Two speeds are provided for, and a locking arrangement is fitted to prevent one speed gear being thrown in before the other is out. An injector and crank-shaft eccentric-driven direct-acting pump feeds the boiler. We may add that, like the tractor, the wagon is intended for Messrs. Pickfords.

The "G.-L." Carburettor.

The sectional view of the "G.-L." carburettor in Fig. 60 will be of interest to the many visitors to the Show who saw this economical type of carburettor. It was exhibited by CARBURATION, LTD., of 85, Fleet Street, London, E.C., and is based upon the principle of supplying differing quantities of fuel at different compressions of the engine, the quantities supplied being further varied in relation to the engine speed. In the "G.-L." carburettor the necessary richness for starting is attained in a simple manner, the throttle being constructed in such a form that, at one point of movement of throttle lever, the throttle proper becomes

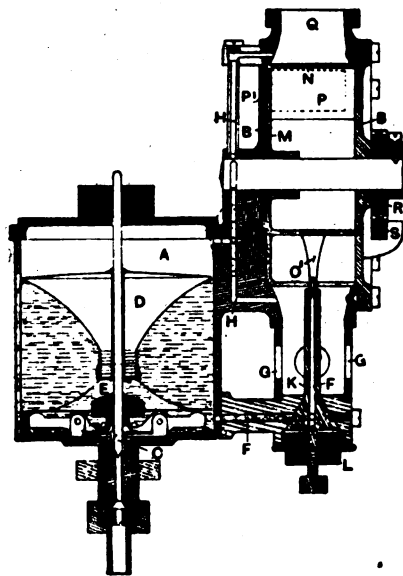


Fig. 60.—Section of "G. L. Carburettor."

- | | |
|-------------------------------------|---|
| A.—Float Chamber with Screwed Lid. | L.—Fastening for Jet. |
| B.—Throttle Casing. | M.—Throttle Disc. |
| C.—Needle Valve. | N.—Small-shaped Throttle. |
| D.—Adjustable Conical Float. | O.—Throttle Wall with Tapered Air Inlet. |
| E.—Spun Foot to Float. | O'—Jet Slot in Throttle Wall. |
| F.—Petrol Feed Tubes. | P. and P'.—Ports for admitting fresh air only for downhill. |
| G.—Main Air Inlet. | Q.—Outlet to Engine. |
| H.—The Balance Tubes of Controller. | R.S.—Rack and Pinion for actuating Throttle. |
| J.—Controller Adjustment's. | |
| K.—Ground in Jet. | |

wide open; at the same time nearly all air supply is closed. Turning the starting handle under this condition induces a good flow of petrol from the jet, accompanied by very little air, which both occur at the same time, so that the engine has no chance of refusing to start. Having placed the throttle lever at starting point, the handle is turned once or twice, and, where fitted with magneto, the engine starts immediately, or, in the case of a car using coil and accumulators, the engine starts on the switch. The vaporisation of the fuel is accomplished perfectly. Instead of attempting to spray the fuel as usual, a flat, curved surface is presented to the jet, the distance becoming greater or less in accordance with the throttle-opening. On reaching this surface the petrol spreads out into a thin film, which is swept upwards towards the engine by the incoming air, which, owing to the tapering form of the air passage, increases in velocity as maximum point of throttling is reached. This method of dealing with the fuel gives a very perfect vaporising effect, more in the nature of a surface than of a spray carburettor. In driving, the air-admittance port opens and closes in fixed proportion to throttle-opening, the proportion between inlet and outlet being such that correct mixture is allowed at extremely low speed, the throttle remaining in the same position; the tendency to take more petrol as speed picks up is counteracted by the "G.-L." controller; thus the mixture remains correct for all speeds, no matter at what position the throttle may be set.

The Davis Paraffin Carburettor.

In view of the ever-increasing cost of petrol and the increasing use of commercial motor vehicles and motor boats, special interest attaches to any new ideas with regard to carburetting or vaporising devices to enable paraffin to be successfully utilised as a fuel for internal combustion engines. We give herewith in Fig. 61 a sectional view of the carburettor which Mr. F. R. Davis, of Shawford, Winchester, has devised, and which has been put on the market by the DAVIS PARAFFIN

CARBURETTOR COMPANY. Since we previously noticed the apparatus, about a year ago, many changes have been made in the design, with the view of increasing the efficiency. The carburettor is made in two types, one in which it acts as a perfect engine governor and the other non-governed. As will be seen, the device consists of a cylindrical chamber surrounded by a jacket through which all or a part of the exhaust gases pass on their way to the silencer. This chamber contains a revolving fan or distributor mounted on a hollow spindle, driven from the engine by a pulley, gear, or sprocket wheel attached to a flange, at a speed of from 400 to 500 revolutions per minute. This distributor, assisted by the heated jacket, at once atomises the paraffin, which, mixing with the air, becomes thoroughly vaporised before entering the cylinders. The perfect proportion of air admitted is exactly regulated by a sliding throttle, keyed to a rod actuated by an extremely sensitive governor, supplemented by a control from the dashboard. The paraffin is supplied by a forced feed also controlled by the governor, which can only permit the exact amount necessary to reach the vaporising chamber. Petrol is used to start the carburettor, but after about a minute sufficient heat is generated to enable the apparatus to vaporise the paraffin, the petrol cock being then shut off and the one for the heavier fuel opened. The petrol is sprayed by a jet at the rear, and, falling on the revolving atomiser B, is vaporised and mixed with air which is drawn in through the inlet E by the suction of the pistons. The admission of air is regulated from the dashboard by the sliding cover E1 to suit the varying climatic conditions, and, as will be seen later, is supplemented by an automatic control, this combination of hand and automatic control giving the utmost delicacy of adjustment. The paraffin is afterwards allowed to enter by the needle valve F, the correct position of which is soon found to admit the right quantity. The paraffin throttle G now comes into action to accurately measure and adjust the supply, and this can be set higher or lower by the nuts H, so as to meet the requirements of each different type of engine. Next the fuel passes through the hole J into the pump chamber over the copper pipe L, through the spraying nipple into the vaporising chamber, the ball valve K preventing its return, and, falling on the revolving atomiser B, is spread and carried by centrifugal force against the heated walls of the chamber. The highly explosive vapour thus formed is then drawn into the cylinders through the induction pipe M. Both the throttle N and the paraffin throttle G are actuated simultaneously by the same rod, which slides through the hollow spindle Q, and in the governed type is worked in such a way that when the load is put on the engine and the speed consequently reduced the governor weights drop towards the centre, thereby admitting more air and paraffin, and consequently producing a greater

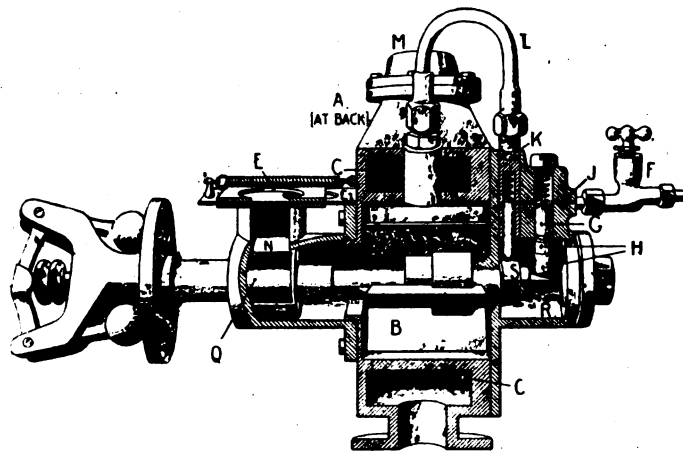


Fig. 61.—Sectional View of Davis Paraffin Carburettor.

volume of gas. On the other hand, should the engine race, the governor thrusts in the tapered rod under the fuel control piece G and closes both the air and fuel inlets. In the non-governed type the rod is made concave, and the action is reversed. As soon as the governor weights open the rod is thrust forward and the paraffin throttle G drops into the concave rod, and instead of cutting off the supply of oil, admits more, the air throttle N at the same time being projected towards the body of the carburettor permitting the admission of more air. The carburettor, which was shown fitted to a Blake 7.9-h.p. two-cylinder marine motor, is being made in sizes suitable for engines of from 2½-h.p. to 100-h.p.

Prested Electrical Novelties.

Representative of the excellent productions of the PRESTED MINERS' GAS-INDICATING ELECTRIC LAMP COMPANY, LTD., of Elthorne Road, Holloway, London, N., was the display made by that firm. They point to their large output and improved methods as enabling them to supply high-grade goods at moderate rates, and are referring clients to the results of the new plate used in the Prested batteries for the last eighteen months as proof of their capacity to give satisfaction both to those who own cars and those who ride motor-cycles. The coils are now guaranteed without qualification for twelve months, wear of platinum points alone being excepted. They have a coil with a single trembler for use with multi-cylinder engines, and this has already been adopted for the 1908 season by many leading motor-car constructors. We illustrate in Figs. 62 and 63 two important specialities in the Prested test lamp and the Prested plug. Both are



Fig. 62.—The Prested Accumulator Tester.



Fig. 63.—The Prested Sparking Plug.

good and reliable devices. Mention must also be made of the Prested contact maker. The brushes of this are of copper gauze, and present a constant surface to the commutator, while the fact that all the wearing parts are easily replaceable is a further point in its favour. Recently we published full descriptions of the leading specialities of this company, so that detailed accounts of their reliable instruments are now superfluous.

Repairing Tyres.

Recently we referred to the "Marles" emergency patch for dealing with bursts in motor covers introduced by the SOUTH-WESTERN MOTOR AND RUBBER COMPANY, 9, Royal Parade, Kew Gardens, London, S.W. This is a practical notion for repairing outer covers without the use of solution or vulcanising. The patch is slipped in between the cover and the tube, gripping the latter so as to hold it in position. Another speciality at the stand of this company was the "Grip" fluid for securing a firm and immovable jointing of rubber; hence its utility in dealing with motor tubes. The South-Western Motor and Rubber Company have specialised in this department of work, and their experience in rubber and tyre repairs is at the disposal of motorists generally.

Motor Bodies.

The Exhibition always brings new firms in the motor body building section of the trade to the front, and this year Mr. A. BARNETT was a newcomer, whose exhibit of a single landaulet body in wood and iron revealed his capacity for good work. Mr. Barnett's headquarters are at Thrapston, Northamptonshire, and from his works there he has sent out bodies for all classes of motorists to all parts of the country. His exhibit at the Show was much admired, and good business should result from his enterprise.

Motor-car Leads.

In addition to their dry cells, Messrs. SIEMENS BROS. AND CO., LTD., made a display of their motor-car leads for high or low tension. There is no need to dwell upon the necessity of securing that the leads connected to the sparking plugs should be reliable; nor is it necessary to emphasise the experience of this firm of makers with regard to electrical cables. The leads shown on their stand were very flexible, and were composed of the best quality of material throughout. The conductors consist of high conductivity tinned copper wires, No. 36 S.W.G., insulated with a thick layer of pure rubber next to the conductor, and then two layers of mixed rubber, the whole being vulcanised together.

The Prevention of Dust.

Messrs. WAYMAN AND MATTHEWS had a Bay in the Gallery, where they showed a 20-24-h.p. Junior chassis, the Jouvence non-skid, the Rapeasy tyre lever, successfully introduced to motorists at the 1907 Cordingley Show, and the Wapama patent dust device, for preventing the raising of dust by motor-cars. On page 88 of our issue for the 28th ult. reference was made to the success attained by this device in the trials organised by the R.A.C. One feature of the arrangement is the fitting of a double bottom to the car, so that a current of air passes beneath the vehicle, being deflected upwards at the back; but the fitting of detachable discs

on the ordinary wheels of the car is a most important part of the device. The revolution of the spokes of a wheel is a considerable factor in raising dust from the road, and the attachment of these discs so that the spokes are encased by a light thin strip of metal destroys their power in that direction, and prevents the raising of dust to a great degree. This has been well demonstrated both experimentally on the track and actually on the road. The headquarters of the firm who are conducting to the popularity of the motor movement by the introduction of such a desirable appliance, is 1, Albemarle Street, Piccadilly, London, W.

Leather and Accessories.

Considerable interest attached to the display made by Messrs. GEORGE JOHNSTON AND CO., of 110, Cannon Street, London, E.C., whose miscellaneous collection of goods required by the motor-car maker comprised many novelties. Rubber goods formed one section, and here were seen window strips, matting, twills, drills, &c. Several specimens of hides were exhibited for the upholstery of cars, and special fabrics for Cape cart hoods constituted another interesting department. In ironmongery for motor-body builders, carriage cloth, &c., were many specialities, and celluloid fittings, together with many sundries, made up a varied show, which demonstrated the varied character of the business done by Messrs. G. Johnston and Co.

The "Fastnut."

At the stand of Messrs. FASTNUT, LTD., attention was again directed to their device for holding nuts and securing them under any vibration. The main features of the "Fastnut" washer have been made familiar at the Cordingley's Exhibition for some years past, and the fact that accident insurance companies are making reductions on their premiums for the insurance of cars fitted throughout with this washer is a testimony of its value. The use of the "Fastnut" obviates the employment of check nuts, drilling bolts, and fitting castle nuts, split pins, &c., and effects economy of time and money. This device is now used by most of the leading motor-car makers, as well as by the chief engineering firms of the country.

The "Sprinter" Specialities.

The APPLIANCES AND GENERAL ENGINEERING COMPANY, LTD., of 3, Rosebery Avenue, London, E.C., showed the "Sprinter" detachable rim, in which the use of nuts and bolts is obviated, and any tendency to creep is successfully resisted. The rim can be easily detached, and, having been remounted, fits in slots, and is secured by a wedge-piece firmly held by a spring. The same firm showed the "Sprinter" petrol gauge, which is suitable for any gravity-fed car. The gauge is about twelve inches in height, and the amount in gallons is shown by pointers, which can be easily adjusted to suit any shape of tank.

A New Sparking Plug.

Recently we referred to the Reliance sparking plug introduced by Messrs. S. AND F. STEPHENSON. This is illustrated in Fig. 64, and attracted considerable notice throughout the Exhibition. In addition to

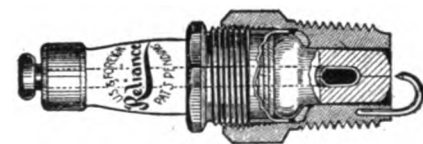


Fig. 64.—The Reliance Sparking Plug.

this speciality the firm also showed the Fulton marine motor engines. The carburettor is of good float feed type, making the engine very easy to start and economical in operation.

Cork Pavement.

In one corner of the Exhibition the CORK ASPHALT, LTD., of 33A, The Broadway, Hammersmith, London, W., showed specimens of their improved cork pavement for garages and other locations where a durable, non-slipping, non-absorbent pavement is desirable. It minimises the noise of vehicles passing over it. This form of cork pavement is absolutely damp-proof, very quickly drying, and easily cleaned. In the various places where it has been adopted the durability of substance has been well proved.

Larrad's Timer.

At the stand of LARRAD'S PATENTS SYNDICATE, Bexhill, the petrol motor valve timer, which was fully described and its operations diagrammatically illustrated in our issue of February 1st, attracted attention. As has been generally indicated to our readers, this is a device by means of which absolute synchronism in the setting of the inlet and exhaust valves of petrol motors is obtained with advantage to their power and silence when running.

Messrs. Fair and Co.'s Accessories.

Among the notable exhibits on the stand of Messrs. B. M. and W. D. FAIR AND Co., of 3, Great Winchester Street, London, E.C., was the high-tension Gibaud magneto, which, working on ball bearings throughout, has the merits of simplicity, accessibility, and sound construction. The firm issue a thoroughly practical series of instructions, a perusal of which will convince prospective purchasers as to its excellence. Other novelties shown on this stand included Noake's forced-feed lubricators, Roche ball-bearing back axles and "gate" change gear-boxes, Vermot springs and front axles, and the Percival control lever.

The "Hurmid" Engine.

At the stand of Messrs. HURST AND MIDDLETON, LTD., of Windsor

Road, Holloway Road, London, N., were examples of the "Hurmid" engines, Sharpe's silencers, and of broken castings as repaired by the Fitton Engineering Company, of 664, Old Kent Road, London, S.E. This company specialises in the repair of cylinders, differential cases, &c., and have won eulogy from many clients, including the chief engineer of the London General Omnibus Company, for the excellence of their work. The end of a Daimler differential casing was welded by them, the break being almost imperceptible. From the specimens shown it was evident that the Fitton Company is well able to



Fig. 65.—The Fitton Repair Work.

carry out every variety of work of this kind, a fact which secured them plenty of business at the Exhibition. A four-cylinder 18-h.p. "Hurmid" engine was shown, and also a selection of crank shafts, gears, and accessories. Referring to the engine, we may say it has four separate cylinders. The crank shaft is cut from a solid bar of steel and the bearings between each throw are lined with white metal. Mechanically-operated valves are fitted, these being located on opposite sides of the cylinders. They are interchangeable, and can be readily removed without any connection being disturbed. Altogether, the "Hurmid" engine is distinguished for simplicity and accessibility.

The Vulcan Specialities.

Speed indicating and recording instruments were the leading feature of the display of Messrs. WM. GRIFFEL AND Co., of the Vulcan Works, St. Thomas Street, London, S.E. The new 1908 Vulcan speed indicator, combined with distance and trip recorders, is notable for simplicity, and as the figures for recording distances are operated by mechanism entirely distinct from that operating the speed indicator, any possible imperfection in one cannot react on the other. The speed indication is obtained electrically, whilst the distance record is operated by a slowly-moving shaft, which, it is claimed, having no work to do beyond moving a small wheel on the dial one revolution in three minutes, is unlikely to cause trouble. This new instrument is supplied with 4-in. dial only, with nickel or brass finish. A special point is made of the adaptability of these and other Vulcan speedometers for fixing for driving from the back or front wheel, or even from the cardan shaft. There was also exhibited a new instrument which attracted considerable attention. This is a petrol meter and engine revolution counter, which is disposed for fixing on the dashboard, and has the dimensions of 8 in. by 4 in. by 2½ in. only. The arrangement is such that it can be readily fitted without any alteration to the car. The indications given show the petrol consumption per 100 turns of the engine, and can be read to as low as 1.5th fluid oz. The Vulcan distance recorder or odometer was also shown in various sizes, this instrument being adapted for fixing to the hub-cap of the road wheel, to which it forms a permanent attachment that can be removed with the hub-cap when occasion arises. No adjustment or operating devices are necessary, the rotation of the wheel giving the movement required. Exhibits of the Vulcan auto-tremblers, hot wire voltmeters, and high and low tension cables completed an attractive display.

The New Illuminant.

An important section of the Exhibition was that devoted to demonstrations of the practicability, economy, and efficiency of petrol gas for lighting, heating, and cooking purposes. In this direction the Cordingley Show has played an important educational part; and the various concerns that are specialising in the plant for the production of the new illuminant have recognised that fact. Those showing their system in

operation were the NATIONAL AIR GAS COMPANY, of 70A, Basinghall Street, London, E.C., which has an apparatus generating a gas composed of 98½ per cent. of air and 1½ per cent. of commercial petrol vapour that is, by automatic and thermostatic control, maintained uniformly under all conditions. The "DE LAITTE" GAS MACHINE SYNDICATE, LTD., 117, Middlesex Street, London, E., were represented by several plants, which can be supplied with capacity of from 15 to 1,000 lights. Showing similarly economical results was the plant of the PRAED PATENT SAFETY GAS LIGHT COMPANY, LTD., of 28, Victoria Street, Westminster, London, S.W., in which a small hot-air motor actuates an air propeller, and a small pump by which the requisite volume of air and petrol are delivered into the carburetting chamber. Yet another system shown was that made under Cox's patents by the NON-EXPLOSIVE GAS COMPANY, LTD., of Commercial Road, Westminster, S.W. In this the apparatus is of a fivefold kind, consisting of (a) hot-air motor, (b) blower, (c) sight-feed carburettor, (d) expansion chamber for petrol, (e) small holder acting as controller. In the case of all these systems the superiority of the light obtained over that of the ordinary coal gas was obvious, while the economy assured should lead to many inquiries following the successful demonstrations that were given through the week.

The Motor House.

In a conspicuous position in the main hall the MOTOR HOUSE, of Euston Road, London, N.W., made exhibition of several notable makes of vehicles, while in the Gilbey Hall, on the concluding day of the Show, they gave illustration of an important section of their business—viz., the sale of motor-cars by auction. Every Thursday throughout the year these take place, and, judging from the experience of those who attended the auctions on the 28th ult., such sales afford a most effective means of bringing buyers and sellers together, with apparent satisfaction to both parties.

The Stewart Speedometer.

The STEWART AND CLARK MANUFACTURING COMPANY, of 11, Denmark Street, Charing Cross Road, London, W., had an interesting display of their specialities for motorists, among which were a foot-warmer, in which the heat is maintained for twelve hours by the use of a special coal-brick retained within the device, and a long-distance siren, in which the volume of sound is under complete control. But the main feature of interest was the Stewart speedometers, which are guaranteed for five years, and attracted the favourable notice of visitors. The Stewart speedometer operates on the principle of centrifugal force, and combines accuracy with sound construction. One form of combination speedometer-odometer registers up to 50 m.p.h.; another registers up to



Fig. 66.—The Stewart Speed Indicator and Mileage Recorder.

60 m.p.h. In connection with the speedometer, mention must also be made of the swivel joints and flexible shafts which are used exclusively therewith. The use of these joints permits the shaft to be carried back to the dashboard without right-angle bends or any passing under the spring. In the shaft the core is made of file hard units hooked together into a chain, so that in the event of an accident a new link can be hooked on in a few moments without the aid of tools. The dial of the instrument has its good features. It is of 4-in. size, and the figures in black enamel stand out so distinctly that they can be read from the tonneau as well as from the driver's seat. The scale is evenly spaced, and the pointer is remarkably free from oscillation. It at once points to the exact speed at which the vehicle is travelling, and stays there, the instantaneous response to changes of speed being a noticeable merit.

Sealomatic Inner Tubes.

The Sealomatic inner tube, which has recently been described in our columns, was shown by Messrs. GILLESPIE AND Co., of 90-93, Fleet Street, London, E.C. These inner tubes are practically the same as ordinary inner tubes, the real innovation consisting of a lining of a patented material and another lining of a material made by a secret process. It is claimed that neither of these linings can be affected by either hot or cold air, by any metal or rust, or by any instrument that may penetrate it. The action of the two linings is simply to seal up any hole that may be made through them—a fact that was amply demonstrated every day during the Show. The Sealomatic inner tubes are put on the wheels and inflated in exactly a similar manner as the ordinary inner tubes, and are used at precisely the same air pressure. In addition to a selection of these specialities, the company attracted attention to some tyres containing the inner tubes, into which several nails had been inserted, while a tyre gauge was shown to prove that the pressure had in no way been affected by the treatment received.

Body Work.

An interesting display made by Mr. T. H. GILL, of 23, Chilworth Street, Hyde Park, London, W., included a patent direction stop signal for use at night-time, and serving a useful purpose. Here, too, was a folding wind screen, to fold either way and remain a fixture where wanted. Mr. Gill also showed a roomy laundulet body, well upholstered and indicating a good order of carriage work. The exhibit was completed by the Gratz speedometer, which was originally brought before the public at an earlier Cordingley show.

High Speed Turret Lathe.

Machine tools naturally found a place in an automobile exhibition that is recognised by the trade as sufficiently varied to embrace every aspect of the industry. This year the COLCHESTER LATHE COMPANY, Hythe, Colchester, made their *début* at the Cordingley Show with a selection of their excellent machines for the modern motor-car works. The company's 7½-in. centre self-acting, sliding, surfacing and screw-cutting gap lathe occupied a place on the stand. In this the headstock is very powerful, so that high-speed steel can be used to full advantage. A uniform range of speeds can be obtained suitable for all classes of work. The hollow spindle is bored to admit a 2 in. diameter rough bar, is fitted with ball thrust, and runs in ample parallel heading of special phosphor bronze. All the gearing is machine cut and guarded, and all pinions and reversing wheels are made of forged steel, and machine cut from the solid. The loose head has a large base, and is gripped to the bed by eccentric and handle. It has an accurately ground spindle, and is adjustable sideways for taper turning. The saddle is very heavy, with long bearing surface. It is of sufficient length in front of the bed to enable the largest diameter of work to be faced with one sitting of the tool. The rack and pinion are of steel, and the self-acting sliding motion is put in and out of gear by a small lever conveniently placed in front of saddle. The saddle and slide screws are indexed. The leading screw is ¼ in. pitch, fitted with phosphor bronze double clasp nut. The self-acting feeds are positive, and are reached by gearing from headstock to backshaft. They can be instantly changed by means of a lever placed in front of the bed within easy reach of the operator. The bed is of heavy and strong section, and fitted with a half-gap piece. The standards of the bed form change wheel and tool cabinets, each wheel having its own place and being easily accessible. The lathe besides being extremely powerful is also very accurate and easy to handle, and is supplied with 15 in. and 24 in. diameter face plates, catch plate, twenty-two machine-cut change wheels, travelling stay, double countershaft with pulleys 14 in. diameter, spanners, etc.

The Motoskate.

The Motoskate was one of the novelties shown by Mr. H. C. Slingsby, 142, Old-street, London, E.C., whose depôts at Bradford, Liverpool, Manchester, and other provincial cities, are well known to those who move about the country. In garages and motor establishments generally, the Motoskate serves a useful purpose in enabling one person to move a car from one position to another without any great exertion; and in crowded places will considerably help in washing and other operations. Placed on four such Motoskates a car can be turned completely round in its own length. The device is well and substantially made, being capable of sustaining a weight of one ton. There are many other conditions which the Motoskate can amply fulfil, and its adoption in the garages throughout the country is only a matter of its advantages being made known to the trade. A comprehensive exhibit of trucks, etc., for various industrial purposes was also on the stand allotted to Mr. Slingsby.

Aluminium Goods.

At his familiar stand in the Arcade, Mr. R. W. COAN again demonstrated his capacity for dealing with aluminium and repairing the same. Crank cases, &c., can be repaired by Mr. Coan—no matter how badly broken, as the specimens shown amply proved. Gear-boxes and all classes of castings for the motor trade form the staple portion of the exhibit, in which was also included the steering wheel with hollow rim and spokes, which is made warm by running the hot water from the circulating pipe through the wheel. This has long been before the trade, and having regard to the severity of the weather of late, is an invention that should be appreciated.

Waterproof Clothing.

A capital show of clothing for motorists was made by Messrs. SAMUEL BROS., LTD., whose establishment on Ludgate Hill, E.C., is popularly associated with the "Omne Tempus" cloth—a really rainproof cloth that contains no trace of rubber. Ocular demonstration was made of its qualities in resisting water, and its sevenfold virtues are thus summarised by Messrs. Samuel Bros., Ltd., viz.: It is porous, odourless, healthy, comfortable, well-fitting, cool, and uneccentric. To motorists who are out in all weathers "Omne Tempus" cloth comes as a boon and a blessing; and the firm's many descriptions of garments for sportsmen produced in this cloth naturally attracted great attention.

Lathes.

At the stand of Messrs. DRUMMOND BROS., LTD., of Rydes Hill, near Guildford, was a duplicate of the 5-inch centre screw-cutting lathe which the firm have supplied to the King's garage at Sandringham, a 3½-inch self-acting light lathe, a small hand-lever shaping machine, and a complete assortment of lathe accessories and small tools. In addition, considerable notice was taken of a "Workman's"

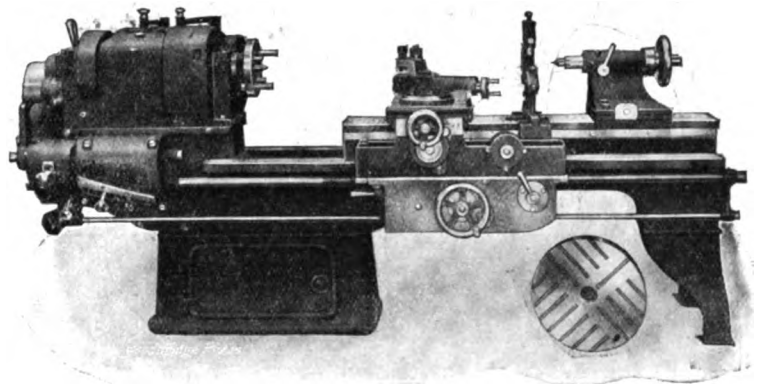


Fig. 67.—Drummond's 7½ in. High Speed S.S.S. Lathe.

6-inch raising to 9-inch lathe designed for professional repairers. This has an extra heavy girder-form bed, hand surfaced, and mounted on heavy cast-iron standards. A novel and effective form of raising piece has been introduced, in using which the accuracy of the lathe as to lineability is maintained. Further improvement consists in the tee-slotted table, which gives opportunities to the ingenious mechanic to find infinite uses for this lathe, the sound construction of which is distinctly notable.

Motor Lawn-mowers.

The petrol lawn-mowers of Messrs. RANSOMES, SIMS AND JEFFERIES, LTD., are to be found on the estates of many leading noblemen whose interest in automobilism is of a very practical nature. Among these are the Duke of Portland and the Earl Fitzwilliam. They are employed by several of the leading golf clubs and by the L.C.C., while they have given equally good satisfaction in cutting the grass of the cathedral close at Salisbury as on the lawns of the Tooting Bec Asylum. At the exhibition they were shown in three sizes, 42, 30 and 24 inch, operated by motors of 6, 4 and 2½ b.h.p. respectively. The power is transmitted by chain gear to the driving rollers and to the cutting cylinder through a reducing gear. This also acts as a clutch for starting and stopping the machine independently of the motor. The cutting cylinder can easily be put out of gear when it is required to roll the grass only. In the large machine the driver sits on a spring seat behind the machine, and has perfect control over every part. Simplicity of arrangement is the ideal that has been reached in the design of the Ransome motor lawn-mowers, and the fact that magneto ignition only is employed is a consideration of moment in country places. Altogether efficiency of work, as well as economy, are secured by these well-constructed machines.

The British Divisible Rim.

An interesting display was made by MAISON TALBOT, of 1, Long Acre, London, W.C., who showed a complete range of tyre sundries, mechanical air pumps, modulation exhaust whistles, and similar goods. But the *clou* of this exhibit was the British Divisible Rim. Most specialities of this kind are recommended as a means of getting the motorist home, or to a near garage. The British Divisible Rim is a practical means of supplying more than this, for it secures the changing of the damaged tube or cover in considerably less time than has hitherto been done. An advantage in favour of its introduction is that both the existing rims and the felloes can be utilised, and the weight of the wheel is only slightly increased in the process of adaptation. The rim is divided in the middle, and two rows of lugs are stamped inwards on it at distances of one and a half inches apart, as shown in Fig. 68. The locked rim has oblong slots across it, into which the lugs on the rim enter, securing the two parts being brought firmly together. By prising out one end of the locking rim it can be easily removed from inside the rim when that is off the felloe, leaving its two parts free, so that the cover can be removed or replaced. When the two parts of the rim are again placed together the locking rim can be easily brought into position and the whole device locked again. A security band fills the narrow channel between the beads in the base of the tyre, and prevents nipping and chafing, and generally adding to the life of the tyre. This band really constitutes a continuous security bolt, being secured circumferentially in place by a countersunk screw passed through a hole in the rim between the ends of the locking ring into a metal socket provided in the band diametrically opposite the valve, which is placed between its ends and



Fig. 68.—Removing the Locking Rim from the Divided Rim.



Fig. 69.—Removing one-half of the Divided Rim.

automatically clamps them in place. These are the main features of a device which has already been adequately tested and proved its value. In Fig. 69 is a divisible rim and tyre as detached from the wheel. This illustrates how one-half of a divided rim is replaced or removed in connection with the changing of the air-tube. Fig. 68 shows the locking ring being replaced or removed within a divided rim. The method of attachment to the wheel gives ample security. This is done by set screws with milled heads and coned points fitted in tapped holes in the felloe and steel tyre. When screwed up the bolts are fixed by butterfly lock nuts beneath the heads. Not only is security of attachment thus secured, but ease of detachment is a good point worthy of notice. In the British Divisible Rim Maison Talbot have a device which represented one of the most simple and efficient specialities of the kind in the show.

Metal Engraving.

The STANDARD METAL ENGRAVING COMPANY had a large and varied display of their specialities for the motor industry. These included a splendid selection of name-plates, from which we learn that the firm have supplied these to most of the leading firms in the trade. Radiator plates, step plates, and dashboard plates were shown, the work being of a very high grade. The Standard Metal Engraving Company have certainly a large connection in the industry, and its continuance is assured by the quality of the work done.

Simplex Detachable Rim.

The SIMPLEX DETACHABLE RIM SYNDICATE, of 26, Percy Road, Isleworth, London, S.W., showed the Simplex detachable rim, which can be easily attached or taken away. There is no complicated mechanism. A special security bolt is provided with steel plugs,

which pass through the rim into coincident holes. These plugs hold the rim firmly together. The washer of the security bolt is fixed to the underside of the felloes. Round the whole of the circumference a rubber ring is placed to make the joint watertight, and to remove the side of the rim all that is necessary is to unscrew the security bolts.

Lubricants.

Lubricants for motor-cars were the feature of the display of PRICE'S PATENT CANDLE COMPANY, LTD. The high-grade preparations of this firm have long been before the motoring public, and their specialities are so generally known that brief mention only is necessary on the present occasion. "Motorine" and "Oleogene" are the chief lubricants for general automobile purposes. For gear boxes "Belmoline" and "Battersea Gear Oil" have special merits. "Cirogene" and "Rangraphine" are prepared for chains; and, as a preservative for leather-faced clutches, "Curroleum" is recommended.

Miscellaneous.

In the Arcade Mr. W. HAYES, 44, Ball's Pond Road, London, N., showed the Jack-no-skid for motor-cycles, which combines in a very light form a jack and a non-skid appliance. This is operated by hand or foot, and is made to clip on the chain stays, and also to fit on to the back wheel spindle. It takes the form of small wheels, which are easily and automatically let down to the roadway when the surface is greasy.

Gre-solvent, for dissolving the grime and grease inseparable from the mechanical aspect of motorism, was shown by Messrs. BEANLAND, PERKINS, AND Co., of Leeds.

At the stand of Messrs. E. BROWN AND SONS many varieties of polishes were shown, including the Rolledge auto polish for cleaning the leather and enamelled parts of cars.

The CAR (AND GENERAL) INSURANCE CORPORATION, LTD., called attention to their system of insurance of motor vehicles.

Among the newcomers to automobile exhibitions were FOUNTAIN'S COACH AND MOTOR COMPANY, LTD., of the Grove, Ealing, London, W., who showed the Brock patent Cape cart hood for side-entrance cars. This is so designed that it can be set up for use by one man, whose unaided efforts are sufficient to easily bring it down again.

Fluxite soldering paste for soft soldering was shown by the AUTO CONTROLLER AND SWITCH COMPANY. This material will solder all metals except aluminium, does not corrode, and is extremely suitable for electrical work.

The "Runphar" non-skids were being shown by the ABERCORN MOTOR AND TYRE COMPANY, who are making a prominent feature of their "Runphar" chrome leather.

The CALMAN ASBESTOS AND RUBBER WORKS, LTD., had an excellent show of their motor tyres, which have come well to the front since their introduction to the motor world. The Calman motor tyre is made with square tread, plain and ribbed, while a non-skid tyre, with chrome leather band steel studded, is also shown.

The NATIONAL MOTOR ACADEMY AND EXCHANGE, LTD., had a stand from which they made known their facilities for giving really technical instruction in motor-cars, not only in the lecture room, but also on their track at Boundary Road, Notting Hill, W., which, by the way, is the only private track in London.

The OLIVER TYPEWRITER Co., LTD., took occasion of the opportunity to bring their machine to the notice of those responsible for the organisation of the commercial side of the motor industry.

Several good types of Cape cart hoods were exhibited by the CAPE CART HOOD COMPANY, whose range of folding and adjustable wind screens is complete. They have specialised in connection with side-entrance cars, as their exhibits amply testify.

The "O.S." speedometer has become favourably known since first introduced by Messrs. W. SEARLE AND Co., of 33, Glasshouse Street, London, W. It attracted considerable notice at the Show, as did also the Fulmen accumulators and the "A.V." plugs, the agencies for which have been acquired by the firm.

A fine show of nameplates, &c., for affixing to various parts of cars was made by Messrs. WEINBRENNER AND Co.

Both the MOTOR UNION and the AUTOMOBILE ASSOCIATION were represented, and among the miscellaneous exhibitors Messrs. J. and E. MARX showed stencil plates for marking the numbers on cars, and "Garleo" cloths for cleaning the same; the WEST END MOTOR-CAR PACKING Co. drew attention to their facilities for packing motor-cars; Mr. F. W. HALL had a collection of brass steps, &c., for cars; the GRESHAM PUBLISHING Co., and other publishers, had complete ranges of their publications for motorists and engineers; and other firms contributed to the variety and interest of the display.

Correspondence.

[Letters to the Editor should be addressed to the offices, 27-33, Charing Cross Road, London, W.C.]

THE TAXATION OF CARS.

To THE EDITOR OF *The Motor-Car Journal*.

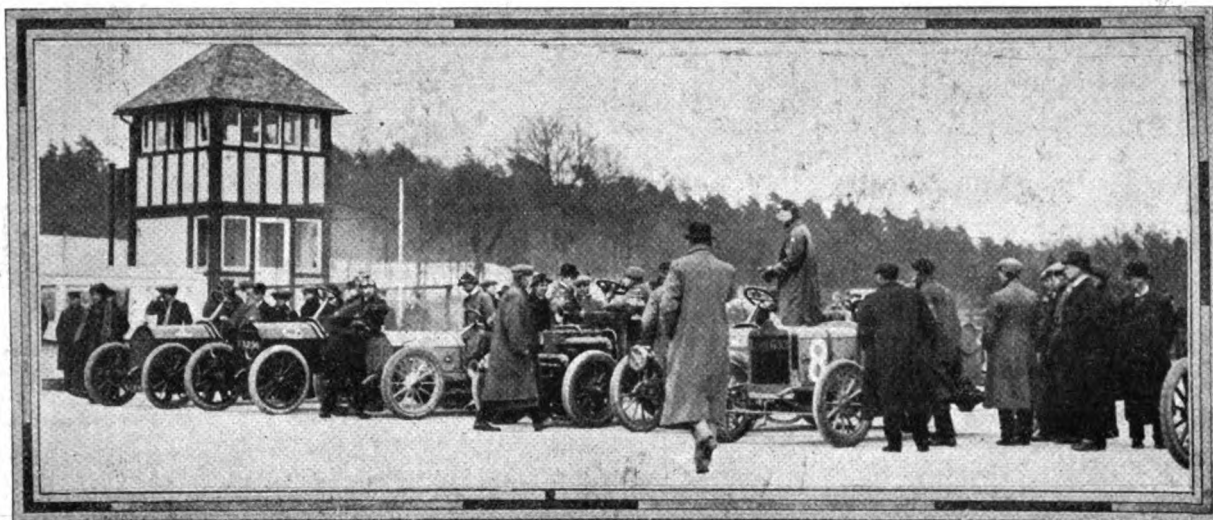
SIR,—I suppose that the general principles which may be held to justify the taxation of motor-cars are, first the fact that cars are "luxuries," and secondly the alleged serious damage which they cause to the "King's highway." With these principles I could not quarrel myself, but I venture to put forward a humble plea on behalf of medical men and others who, like myself, drive small low-powered cars, which practically do no harm whatever to the roads, and are already taxed to the extent of something like 24 per cent. of their value.

The damage, of which we hear so much, is produced almost exclusively by three causes, excessive speed, excessive weight, and above all by the use of steel-studded tyres; and undoubtedly when all these factors are combined, as they often are, the disintegrating effect upon the road surface is very great. But in the case of the small car the case is entirely different; indeed, I should be prepared to prove by actual experiment that my own car does not cause anything like so much "wear and tear" to the roadway as the ordinary cart and horse. I may say that the experiment has already been made by me on a small scale on my own carriage drive, while the dust, which I admit my car throws up (in consequence of the sucker-like action of the tyre combined with the draught caused by the rush of the car) is the inevitable product, not of the car itself, but of the impact upon the road of iron-shod hoofs and the friction of iron wheels.

and rejected or improved until the present-day motor-car, down to the wheels, is about as perfect as human ingenuity can make it. Even the wheel builders have risen to the occasion, and, by improving the quality of the wood used and the workmanship, have been forced by competition to supply a much more solid article than was good enough for horse-drawn wagons, but the fitting of the tyre to the rim or the rim to the tyre has had no attention worthy of remark since the time when R. J. McCreedy and Henry Sturmer advised us to carry an old tooth brush in our cycle tool-bag as a lever for our tyres. Next we get "one minute" tyre levers, a nice little set with notches to catch on to the spoke, but in this connection evolution has brought no assistance. In fact it is quite the reverse—stiffer tyre covers, tighter sizes, higher beaded rims increasing the difficulty. "Devolution" is the word, not Evolution, and the motorist groans and swears on the roadside over his punctures, and buys still longer levers.

Detachable rims or wheels only postpone the evil hour, and transfer the operation from a crowded thoroughfare and an irritating audience to a garage floor, where much wrestling and strong language may be indulged in without leading to a breach of the peace.

I think the time has come when we motorists should be supplied with something easier in the rim line. It will have to fit the present type of tyre, so that we may have no difficulty in procuring other tyres while on tour. It should be capable of being carried as a spare and exchanged easily on the roadway, but it does not interest us unless it enables us to



Racing at Brooklands.—The Amateur Handicap on Saturday last.

If any further tax is to be imposed, I am inclined to think that it should be graduated according to "horse-power." Many professional men like myself use a small car because they find it cheaper than a horse and "trap," and I submit that the two guineas a year which we already pay, in addition to registration fees, is quite enough; while, on the other hand, those people who are fortunate enough to be able to drive big cars of 30 or 40-h.p. would probably not be unwilling to contribute something further in the way of taxation if that taxation were applied where it is so much needed, to the better maintenance of the roads.—Yours truly,

WALTER CRICK.

DETACHABLE RIMS v. DETACHABLE WHEELS.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—Under this heading may be included almost the whole of a series of letters from prominent men in the motor world, which has been lately appearing in the motor Press and in the daily newspapers. Some of the writers have had very apparently a rusty "axe to grind," and others seem to use the opportunity for the sole purpose of reminding their friends of records won on racing tracks whilst posing as philanthropists, but none of them seem to have cared to expose the crux of the matter or the cause of the effect which they try to ameliorate, or perhaps they have not troubled to go deeper into the subject and ask, Why has all this trouble come about?

To my mind, the whole difficulty lies in what I term the very unmethodical, unmechanical system which is supplied to the motoring public for the fitting of their motor tyres to the rims supplied by the car builders.

Every other part of a car has been invented, attacked, criticised

exchange the air tube without the more or less brutal use of tyre levers. We are waiting for such, and anxiously await what the trade can do for us in this matter.—Yours truly,

"OLD MOTORIST," L.C.-6325.

THE SCOTTISH TRIAL.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—Noticing that rule twenty-one in connection with the Scottish reliability trials would entail a considerable extra expense to entrants, in the matter of registration, carriage and licence fees, insurance, &c., we addressed a protest to the secretary, and are very pleased to learn that the rule has been deleted.

We think that the thanks of the trade are due to the committee for this concession, because already expenses will be fairly considerable without the operation of Rule 21.—Yours truly,

ROBERT BURNS.

The Swift Motor Company, Ltd.

Rule 21 was to the effect that "no vehicle carrying a manufacturer's or dealer's general identification mark will be allowed to compete."

A BONUS SCHEME FOR DRIVERS.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—Last year I experimented with a bonus scheme for my motor man, the terms being that I would give him an extra £80 for the twelve months on the conditions that 2s. 6d. deduction was to be made every time that the car was stopped on the road by any trouble which would

have been avoided had the car received proper attention in the motor house, and, in addition, every time that on the road any signs of omission were observed which, however, might not compel me to stop. When I give below a list showing how he lost his money, and, considering that I generally drive about 2,000 miles a month, I think it is greatly to his credit that he only lost £2 2s. 6d. during the year. The car mostly used was a 14-22-h.p. Germain.

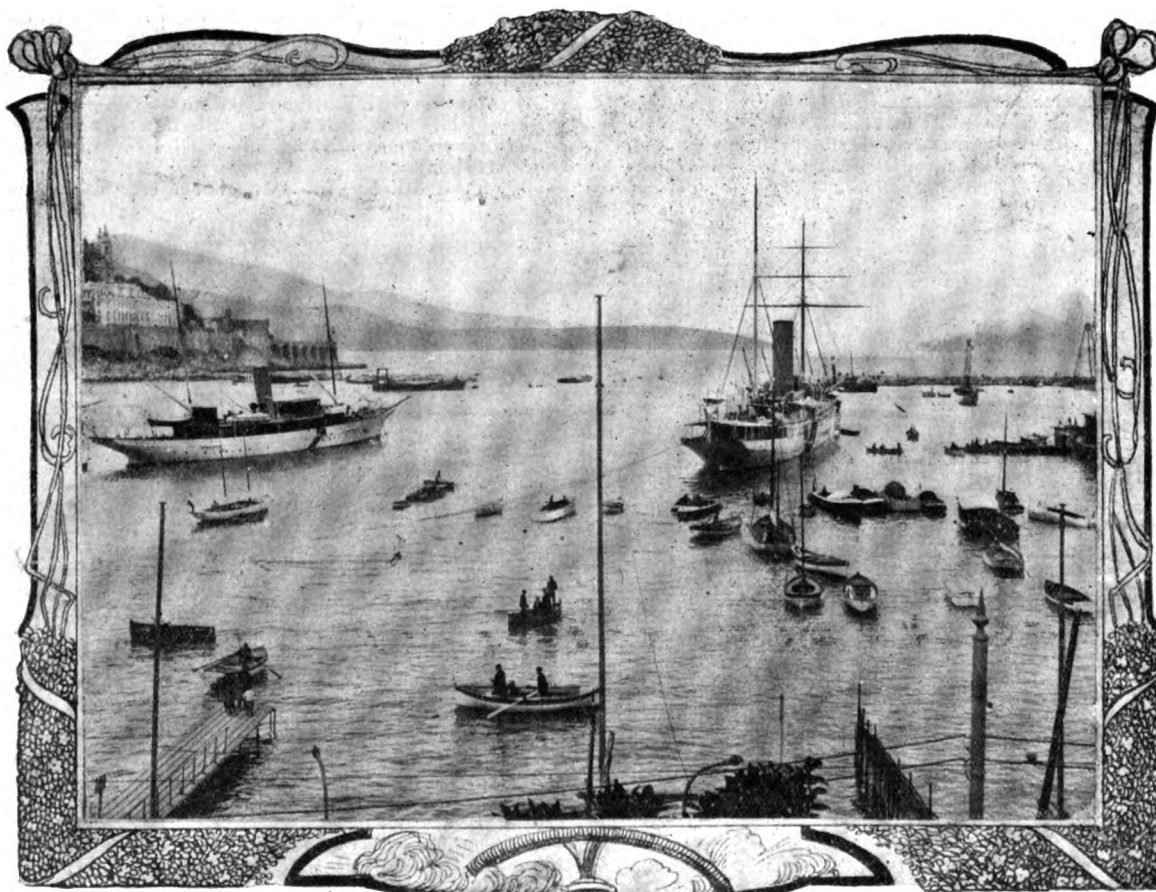
3. 3.07.—Petrol jet blocked.
24. 3.07.—Ran out of petrol twenty-one miles from the start.
28. 3.07.—Front off tyre had 40 lbs. only after fifty miles, he having omitted to fix cap on valve.
20. 4.07.—Rubber tube leaking each side of gas bag. Lamps burnt badly and then went out. (I had warned him to replace this tube.)
1. 5.07.—Blocked petrol pipe, and no washer on valve.
2. 7.07.—Blocked petrol pipe.
5. 7.07.—Magneto terminal loose.
6. 7.07.—Strap holding down magneto loose.
- 12.10.07.—Acetylene burners blocked.
- 19.10.07.—No paraffin in off side lamp after burning one hour.
- 1.11.07.—No pliers on the car.

not be hot, but should be allowed to act for some hours, after which the pipes should be flushed out with a hose as forcibly as possible. The solution should be carefully kept away from aluminium, which is attacked by it, though it has no appreciable action on brass or cast iron, and should not much vary from the strength recommended above. Possibly, as our correspondent refers to "soda," he may have used "washing soda," which would account for his non-success. Where hard water has to be employed, the addition of glycerine to it has some effect in preventing an adherent incrustation, besides its utility against frost. Scale may be conveniently removed from a cast-iron cylinder jacket by dilute hydrochloric acid, if the cylinder is detached from the car and all brass fittings removed, otherwise it is inadvisable.]

THE SETTING OF VALVES.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—I have been reading with interest the correspondence on the above. For the benefit of owners of Darracq engines that will not run slow I give you my experience. I own one of last year's 20-28-h.p. cars, a splendid car in every respect, but it would not run slow. I consulted



Motor-Boat Racing at Monaco.—A General View of the Harbour.

- 3.11.07.—No chalk used when putting in a new tube.
- 24.11.07.—Fan belt very loose; had to stop to take up.
- 21.12.07.—Piece of metal left in brake drum after overhaul, resulting in jamming of brake.
- 23.12.07.—Two bolts out on the induction pipe. Nuts loose on seating bolts of front cylinder.

I believe this bonus system is one which might be adopted with great advantage by those who use their cars largely for business purposes, and to whom, during their drives, delays mean loss of money and unpunctuality, quite apart from the ordinary annoyance of being hung up.—Yours truly,

A. DUCKHAM.

REMOVING SCALE FROM RADIATORS.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—I should be glad if you would kindly inform me through the columns of the *M.C.J.* a method of removing the crustation in the radiator and cylinder jackets, causing overheating in my car. I have tried a strong solution of soda and boiling hot water for forty-eight hours, but with poor results. Thanking you in anticipation.—Yours truly,

J. R. S.

[If "J. R. S." will use a solution of 2 lb. caustic soda to a gallon of water, he should find it efficacious in loosening the scale. It need

the Larrad Syndicate about it and they said that they could make the engine run as slow as one could wish, and, moreover, undertook to do so on the understanding of "no cure no pay." I personally saw the work carried out, and, to my surprise, saw them grind great lumps off the cams. I confess I was rather dubious as to the result, but as they undertook to give me a new cam shaft if the work was not satisfactory, I awaited developments, and saw the engine put together again. When I took the car out not only did the engine run much slower but it developed more power and had a more sustained pull when running slow on top speed. Needless to say I was more than satisfied with the results, and should "Interested Enquirer" ever be in my part of the country he is quite welcome to have a run in my car, and I think he would be convinced that the Larrad setting is correct for Darracqs.—Yours truly,

R. H. GRAHAME.

SOME inner tubes were found on the road near Claygate on Sunday. The owner can regain possession on application, with description, to Mr. George Riley, Oakfield, Walton-on-Thames.

THE PARIS-MADRID RACE, 1903.—Replying to "Chanfeur," owing to the many accidents in this event, the race was stopped at Bordeaux, at which place Mr. C. Jarrott was the second to arrive on his De Dietrich car.

THE OLYMPIA INDUSTRIAL MOTOR VEHICLE EXHIBITION.

(Continued from page 131.)

Among the important examples of engineering progress, visitors were able to note the complete range of "Aster" engines, including a new 9-h.p. single-cylinder, 10-12-h.p., and 12-14-h.p. double-cylinders, and several four-cylinder engines. Elsewhere in the Gallery Messrs. Burgess and Harvey, Ltd., had four and six-cylinder White and Poppe engines, as well as White and Poppe carburettors, and a 6-h.p. single-cylinder engine for motor-boats. The same firm had also a selection of components, shock absorbers, tools, and the "Anti-panne" patches for motorists in trouble on the road. Messrs. Drummond Bros., Ltd., had a selection of machine tools for motor repair work. Among these is a new High-speed All-gear Head heavy S.S.S. lathe, which will do a variety of work, ranging from the heaviest roughing cuts to the finest class of small work. It is fitted with a new design of traversing boring-carriage, and has reversing motion for screw cutting by lever on the apron, so arranged that screws cannot be "crossed" in cutting.

The "McCord" mechanical lubricators, which we described and illustrated on the 21st ult., were on the stand of Messrs. Easton and Melville, Ltd., who also had on view the "Warner" speedometers and the "Ilo" motor lubricants, the latter being a particularly fine grade of lubricating oil. Renold, Coventry, and Brampton chains were all represented in the Gallery, the former including the new pattern 2½-inch pitch bush-roller chain for motor-wagons, with thick side-plates ground on the faces. Of strictly utilitarian interest was the display of the Steel Barrel Company, Ltd., whose welded steel vessels are coming largely into favour with the motor trade. Rectangular tanks, steel barrels, and cylindrical drums were all comprised in the exhibit. The Safety Non-Explosive Reservoir Company, Ltd., made a first appearance at a motor show with their "Saercold" safety device for the prevention of the explosion of storage and transport barrels, tanks, &c., thus securing the trade against the dangers of petrol, &c. The essential features of the new appliance are—first, a hermetically-sealed safety-plug is provided, the metallic attachment of which readily fuses at a moderate temperature. Consequently, should the vessel be exposed to heat, the plug is blown out before the internal pressure can reach a point at which it would cause a burst. The second provision is a wire-gauze cylinder, protected from injury by a perforated metal sheath, which prevents the communication of flame to the gaseous contents of the vessel, on the principle of the Davy lamp. Sir Boverton Redwood and other authorities have testified as to the value of the system.

Many electrical devices of good repute were exhibited by the Prested Miners' Lamp Company, Ltd., their exhibit being almost a duplicate of that at Cordingley's Show, referred to elsewhere. A range of C.A.V. accumulators was presented by Messrs. C. A. Vandervell and Co., who also exhibited special lighting sets for motor-cabs, motor-buses, and other vehicles in public service. The "Lodge" ignition system, introduced at the November Show, had again a place in the Gallery, where it was shown as applicable to motor-boat engines, and also for heavy oil engines. Messrs. J. Lacoste and Co. exhibited their 1908 magnetos for single and multi-cylinder engines, the "Serisol" insulated terminals, their internal-wipe accumulators, and other electrical appliances of a high grade. The Bosch Magneto Company, Ltd., had working models showing the latest forms of their ignition apparatus. The standard high and low tension magneto was also shown in operation, as was the new dual system of ignition, the latter comprising an appliance for use in conjunction with a high-tension magneto, giving dual ignition, and starting from the dashboard without any alteration to the engine, and requiring no separate contact-breaker or distributor. Working models of the British-made "Simms" magnetos were shown by the Simms Manufacturing Company, Ltd., who had also on view a six-cylinder high-tension model working in conjunction with the Simms Duplex plug adapter. In order to show the high quality of the sparks obtained under bad conditions, a four-cylinder high-tension model was working with a "Simms" sparking plug in a thick oil bath.

Messrs. A. W. Gamage, Ltd., had a representative assortment of their thousand and one accessories for the car and the driver, as well as tools for roadside and workshop use. To particularise where such a comprehensive range was shown is almost impossible.

Considerable interest was being taken in the explanations of their system of instruction in automobile work given by the Motor Schools, Ltd., who had a portion of their equipment at Heddon Street, London, W., adjoining the stand of the *Industrial Motor Review* in the main Hall.

Several new models of lamps were shown by Messrs. Salisbury and Son, Ltd., whose "Anti-Dazzle" lens we fully described at the time of the last Olympia Show. They had their lamps located on the front portion of a chassis, where they were exhibited to full advantage.

Other interesting exhibits included radiators by Messrs. Orme, Evans and Co., Ltd., of Wolverhampton; the paraffin carburettors of the company of that name; magnetos, &c., by Messrs. B. M. and W. D. Fair and Co.; the Donisthorpe petrol meter, described in our report of the Cordingley Show, where also were illustrations of a speedometer made by Messrs. Smith and Son, and shown at Olympia; the "H.F." vulcanising appliances and complete retreat plants by Messrs. Harvey, Frost and Co., Ltd.; the "Marston-Megevet" honeycomb radiators and bonnets for commercial vehicles, produced by Messrs. John Marston, Ltd.; the castings and "Eatonia" bearings of Messrs. Willans and

Robinson, Ltd.; "Parsons" non-skids, sparklet inflators, and the new "Parsons' E.R." rim, the "Fastnut" washer, the "New Era" fire extinguishers for garages; the specialities of the Motor Supply Company, Ltd.; Messrs. Ross, Courtney and Co.'s valves, pumps, lubricators, and other accessories; the dissolved acetylene outfits of the Acetylene Illuminating Co., Ltd.; the "Omne Tempus" cloth for motorists' garments, on which Messrs. Samuel Bros. have specialised, and a new Cowey speed indicator for commercial vehicles.

THE SCOTTISH RELIABILITY TRIAL.

THIS will be held from June 15th to 19th. The list of entries is as follows:—

Class 1.—10-12-h.p. Swift, 10-h.p. Cadillac, 8-h.p. Clyde, 10-12-h.p. Chambers, 9-h.p. Adler, 10-h.p. Riley.

Class 2.—10-12-h.p. Coventry Humber, 12-14-h.p. Argyll, 14-16-h.p. Belsize, 10-12-h.p. Darracq.

Class 3.—15-h.p. Coventry Humber, 16-h.p. Bentall, 12-16-h.p. Vinot, 14-16-h.p. Argyll, 12-15-h. Hillman-Coatalen, 16-h.p. Bell, 12-h.p. Star, 15-h.p. Mass, 14-16-h.p. Darracq, 12-h.p. Shamrock, 12-h.p. Star, 16-18-h.p. Vulcan.

Class 4.—20-h.p. Beeston-Humber, 16-h.p. Sunbeam station car, 18-24-h.p. Swift, 12-16-h.p. Vauxhall, 20-h.p. Coltman, 14-16-h.p. Argyll, 16-20-h.p. Argyll, 24-32-h.p. Porthos, 20-h.p. Bell, 12-14-h.p. Singer, 15-20-h.p. Panhard, 15-20-h.p. Panhard, 25-h.p. Werbell, 28-h.p. Belsize, 20-h.p. De Luca-Daimler, 20-h.p. De Luca-Daimler, 20-h.p. Cadillac, 18-h.p. Minerva, 16-h.p. Star.

Class 5.—30-h.p. Beeston Humber, 20-h.p. Sunbeam, 20-h.p. White steam car, 25-30-h.p. Brown, 25-h.p. Deasy, 25-h.p. Hillman-Coatalen, 25-30-h.p. Ariel, 18-24-h.p. Panhard, 25-h.p. Atholl, special 18-h.p. Thornycroft, 25-35-h.p. Darracq, 26-h.p. Metallurgique.

Class 6.—24-h.p. Albion, 38-h.p. Daimler, 38 h.p. Daimler, 35-h.p. Vinot, 18-24-h.p. Piccard-Pietet, 40 h.p. Argyll, 30-40-h.p. Ariel, 30-h.p. S.P.A., 25-30-h.p. Maudslay, 30-h.p. Adler, 50-h.p. Darracq, 35-h.p. Deasy.

Class 7.—30-h.p. White steam car, 45-h.p. Sheffield-Simplex, 40-50-h.p. Ariel, 40-h.p. Armstrong-Whitworth, 35-45-h.p. Maudslay.

Class 8.—40-50-h.p. Rolls-Royce, 40-50-h.p. Rolls-Royce, 60-h.p. Thames, 35-h.p. Benz.

THE BROOKLANDS TRACK.

THE Brooklands automobile track was reopened on Saturday with an amateur private sweepstake, for which there were ten entries. The full course was 2½ miles, but the handicap consisted of a distance allowance.

For some three hours before the race the competitors ran their cars individually three times round the track, covering a distance of over eight miles. The handicapping was based on these trials and resulted in a remarkably close race between several of the cars, there only being one minute and three-quarters between the winning car and the last one to pass the post. Any car doing 5 per cent. better in the race than in the trial was to be disqualified.

The competitors were:—E. W. Hubbard, driving a 6-h.p. Siddeley covering a distance of nearly eight miles; G. Baxendale, a 14-h.p. Thornycroft, 15 miles; S. Sanderson, a 20-30-h.p. Unic, 18 miles; V. Lucas, a 20-h.p. Standard, 15 miles; S. G. Rendel, a 40-h.p. Berliet, 16½ miles; H. M. Bond, a 22-h.p. Berliet, 14½ miles; H. F. W. Farquharson, a 40-h.p. Berliet, 18 miles; P. F. Sterling, a 22-h.p. Berliet, 16 miles; D. Pigot, a 40-h.p. Berliet, 18 miles; and A. Lawford, a 50-h.p. Charron, 16 miles.

Rain began to fall before the race and continued throughout, but there was no sign of any skidding, and the contest was exciting from start to finish, only ten yards separating the first from the second and less than 20 sec. between the second and third. The winner proved to be the car with the smallest horse-power in the race—namely, E. W. Hubbard's 6-h.p. Siddeley; P. F. Sterling's 22-h.p. Berliet being second and G. Baxendale's 14-h.p. Thornycroft third. The official time was 17 min. 14 sec.

At the meeting at Easter there will be a race amongst owners of Sizaire et Naudin cars, and a number of private owners have entered their cars, including Colonel Cowper-Essex, Lieut. G. B. Hynes, Captain Horne, Captain James-Trevor, Messrs. Basil Gill, Dunbar Wilson, Scantlebury, Jenks, Millard, and Schofield.

THE South Western Motor and Rubber Co., of Kew Gardens, S.W., have just fulfilled an order for their "Grip cold cure fluid" for tyre repairing from Buckingham Palace.

IN the Australian Sealed Bonnet Competition six Talbots were entered and five won gold medals. The sixth lost because the owner raced a large car home and got in before time, and had marks taken off accordingly.

FROM their well-known works at Acton Vale, W., Messrs. Panhard and Levassor have recently issued a catalogue of "Specialities," a handsome book of forty-eight pages, containing some hundreds of illustrations of spares, accessories, and fittings adaptable to cars of any reputable make. It is safe to say that there are no Panhard parts or fittings, and very few of those belonging or readily adaptable to other cars of equal standing, which cannot be supplied on demand.

THE MOTORIST'S GATE TO THE CONTINENT.

BY STENSON COOKE.

"HELLO! He-e-e-l-o. That the A.A.? That the Secretary? Charles Jarrott speaking: "Say, you're shouting a good deal about this touring department of yours, and I am inclined to see what it really can do. This is Tuesday morning. I leave the Motor Club, London, on Thursday morning after breakfast, catch the mid-day boat from Folkestone, cross to Boulogne and reach the Franco-Italian frontier at—never mind. I shall drive a four-cylinder 40-h.p. car. I want a triptyque, a permis de circulation, eighty litres of petrol, tickets, a deck cabin facing south, and twenty pounds in French money. And I want a hole cut in the tariff wall of France big enough for me to drive through with a maximum of ease and a minimum of delay. Now, if the A.A. Touring Department is all you say, let it establish a record, let it spread itself. I send you a cheque to cover deposits of duty, &c., and you do the rest. Now, make things hum. Good-bye."

Be it explained here, for the edification of those who do not go down to the sea in motor-cars, that foreign countries abound in tariffs. This is to say, that you cannot sell an English or other strange motor-car in France without first paying a duty of about a sovereign sterling per

one odd records for everything under the sun, that of "clearing" a motor-car through Boulogne, timed by a watch, and this is how it was done.

A telegram from the Automobile Association was sent to the Marine Superintendent South Eastern and Chatham Railway Co., Folkestone:—

"Reserve space Charles Jarrott, car A.A. 6,000, first service Boulogne, April 2nd, arrives 11.30, leaves 11.55, deck cabin, south aspect, self and friends. Move."

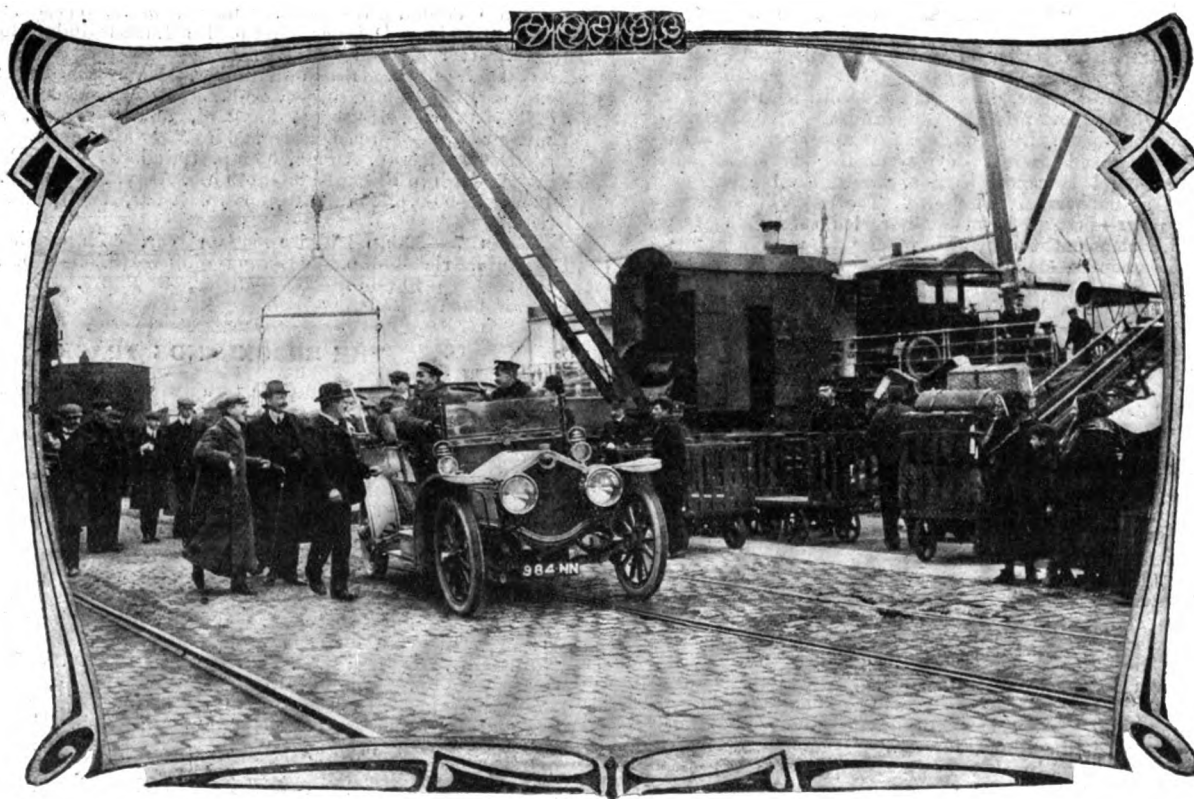
Reply to Fanum, London:—"Right."

From secretary Automobile Association to Major Stevens, Gare Maritime, Boulogne:—

"Charles Jarrott and car A.A. 6,000 arrives Boulogne first service April 2nd en route Italy, wants clearance permits circulation, but no licence, make violent love French Customs, establish record, want eighty litres essence."

Reply to Fanum, London:—"Right."

Thus did it come to pass that on Thursday, shortly after noon, as the S.E. and C.R. turbine steamer Queen rocked lazily by Folkestone Quay, within twenty minutes of her scheduled starting time, C. J.'s "forty" drifted quietly between coal trucks and empty baskets on to a neat contrivance called a stage. She was attacked by four deck hands, who lashed the wheels to corner rings while two others drained the petrol tank by means of rather incongruous wash hand basins. A Derrick then neatly swung the car aboard.



Mr. Charles Jarrott leaving Boulogne on his 40-h.p. Crossley en route for Monte Carlo four minutes after the arrival of the steamer.

cwt., "all in." And in order that the tourist shall not go behind this protection by means of specious explanations, every car, good, bad or indifferent, is mulct in certain deposits, not necessarily for publication, but as a guarantee of good faith, the said deposits being returnable as and when the car shall leave the shores of France. The principle is not combated, but the practice is so intricate, so strangled with red tape, that one may with reason put the number of unattached touring motorists at a decimal point per centum.

The motoring societies make motoring and touring easy. Instead of shivering in a cold bleak "douane" signing mysterious papers, and paying over mystical amounts in French coinage with an irritating impression of having been "had" over the rate of exchange, to say nothing of the haunting fear that some breach of circumlocutory law may involve entire loss of the money, the A.A. member in search of sunshine finds every difficulty smoothed. He wants to go to Bordeaux and Biarritz, via Boulogne? Very well. Forms printed in plain simple language are ready for him to sign. Deposits are taken at the offices in Coventry Street, W., tickets issued, seats engaged, petrol commandeered; in fact, he and his car are carried about with all the directness and without the unpleasant "school treat" feeling engendered by the ordinary touring bureau. He waves his A.A. permits in the face of humbled frontier officials and goes on his way rejoicing.

The system being almost perfect, all that remained was to beat every other system in the way of application; in short, to add to the million and

Gold laced officials looked on with complacency, they had nothing else to do. Once on deck the car was made snug—French numbers replaced English ones and polite officers showed the way to the deck cabin facing south—one of the only two aboard. Here were daily papers, *M.C.J.*, cigarettes, and other necessities of civilization. So much for Folkestone. At about 1.20, English time, a small army of baggy trousered democrats stood watching on Boulogne landing stage as the nose of the turbine cut a long white moustache in the sea two miles away. At 1.33 her steam ladyship nestled comfortably by the landing stage. Thence time was measured by fifths of seconds.

Before Mr. Jarrott's party had passed down the gangway the car was deposited on the quay. Men clad in blue overalls rushed to the petrol tank with cans of essence and wide-necked funnel. Gold-laced prototypes of Folkestone fluttered about with papers, gesticulated, advanced, retired, and set to partners. The A.A. official ran here and there, persuading the petroliers, coaxing the Customs, making himself generally indispensable. Amid all the bustle stood Major Stevens, Chef de la Gare Maritime, spick and span and imperturbable, the personification of "Bond Street in Boulogne."

Thanks to his admirable engineering the hole in France's tariff wall had been widened to pass an English car through complete with certified papers signed, permit, and fuel for nearly four hundred miles, in record time, for Charles Jarrott waved good-bye and headed due south at 1.37, exactly four minutes from the moment the boat stopped.

CLUBS AND ASSOCIATIONS.

ROYAL A.C.

THE legal department of the R.A.C. is now in working order, and during last month dealt with more than thirty cases. In addition, the department is dealing with speed limit inquiries at Hoddesdon (Hertfordshire, and Appledore (Devon), formal notice of opposition having been given in both cases.

A smaller size of the Club badge is to be prepared to suit small cars.

MOTOR UNION.

THE Barton and Immingham Light Railway Order came before the Board of Trade a few days ago for confirmation. Opposition was offered by Mr. Moresby White for the Motor Union. The opposition was to Section 24, which proposed to allow the construction of a level crossing over the Barrow and New Holland road.

Mr. White stated that the motor traffic which went from the South to the North *via* the New Holland-Hull ferry was not merely the traffic which went into Yorkshire, but a large proportion of the traffic which went to the Continent by ship from Hull. The New Holland route shortened the distance to Hull by sixty miles and upwards from London or any place in the Eastern counties, as compared with the route *via* Doncaster. For cars coming from north to south the road was also the one arterial communication. He asked that the company should be ordered to construct a bridge; the initial expense of a bridge would be greater than for a level crossing but the working expenses would be vastly less. The statutory power to compel a railway to replace a level crossing by a bridge applied to cases of public danger and not to the convenience of free transit.

The Marquis of Waterford, the Earl of Mayo and Mr. G. T. Langridge have been elected vice-presidents of the Motor Union.

The membership figures of the Motor Union for March show that during the month 364 individual members were enrolled.

The following gentlemen have been appointed a sub-committee to consider the relations between motor-cyclists and the Motor Union:—The Rev. Hassard Short, Messrs. F. Duncan Hindley, A. E. Newton, H. R. Mayo, A. Warner, A. G. Reynolds, and W. J. Lorkin.

HEREFORDSHIRE.

OWING to the difficulties which were raised by the Bromyard Rural District Council in the matter of the Frome's Hill Automobile Trials for the Hereford Motor Trophy, the Herefordshire A.C. have had to consider the question of another venue for the trials. A meeting was held at the local headquarters on Monday, the 6th inst. Mr. Fryer Roberts presided and others present were the Rev. H. G. Morgan, Dr. Green (Ledbury), Councillor E. W. Langford, Messrs. J. C. M. Vaughan, T. A. King, A. Kear, Hall (Ross), J. Parker, Butcher, Littledale, J. Parker and A. Townsend (secretary).

A letter was read from Mr. de F. Pennefather, of Kinnerley Castle, accepting the office of president of the Hereford A.C. for the ensuing year.

The Secretary said that he had seen the Chief Constable for Herefordshire, Capt. the Hon. E. S. Stanhope, at the new proposed venue for the hill climb, and he had stated that he had no practical objection. The hill that had been selected was the Cockshut, which was about twelve miles from Hereford, off the road from Hereford to Ledbury. The measurements of the hill were as follows:—

| Length in feet. | Surface Levels. | Rise. |
|-----------------|-----------------|------------|
| 730 ... | 311 to 396 ... | 1 in 8-58 |
| 310 ... | 396 to 412 ... | 1 in 19-37 |
| 760 ... | 412 to 414 ... | 1 in 380-0 |
| 330 ... | 414 to 421 ... | 1 in 47-14 |
| 520 ... | 421 to 445 ... | 1 in 21-66 |
| 700 ... | 445 to 556 ... | 1 in 6-3 |
| 330 ... | 556 to 595 ... | 1 in 8-46 |
| 384 ... | 595 to 611 ... | 1 in 24-0 |

Total 4,064 ... 311 to 611 ... 1 in 13-54

The rules applying to the competitions on this occasion are as appended:—

A. The power of the engines to be limited in order to prevent the cars exceeding the legal limit of twenty miles an hour.

B. No car to be allowed to go up or down the hill for practising purposes at any time. Infringement of this regulation to entail disqualification.

Assuming the hill to be three-quarters of a mile (it is just over) a car would have to weigh 4,265 lbs. in running condition not to exceed twenty miles an hour. When the engine is a 4 in. four-cylinder one for a car weighing 3,000 lbs., the four-cylinder engine must not exceed 3-35 in. in diameter.

Mr. Townsend added that Mr. Riley, of Patley Court, had given him permission to put cars in his field adjoining the road.

Mr. Langford proposed, and Mr. Parker seconded, that the hill climb trials for the Hereford Motor Trophy should be held on the Cockshut Hill on Friday, May 15th.

A further letter was read in regard to the provincial meeting of the General Committee of the R.A.C. After discussion it was unanimously

decided to extend a hearty invitation to the R.A.C. to hold the July meeting on the 11th of the month at Hereford.

Mr. Norman, representing the R.A.C., was present, and described the routine of the meeting to take place at Nottingham next month and stated that a programme of a similar character would constitute the day's business at the Hereford meeting. This met with the approval of the members of the club, and the chairman assured Mr. Norman of local automobilists doing the utmost to make the day a success.

The Secretary next read the balance-sheet, which showed a balance in hand of £141 12s. 9d. This concluded the business of the meeting.

Mr. de F. Pennefather, the newly-elected President of the Herefordshire A.C., resides at Kinnerley Castle, Kinnerley, a beautiful home amid the pastoral loveliness of West Herefordshire. Besides being an enthusiastic motorist, he is a keen sportsman and politician. He is the late master of the North Herefordshire Foxhounds, and is the selected candidate for parliamentary honours in North Herefordshire.

SHEFFIELD.

THE committee of the Sheffield and District A.C. at their last meeting passed the following resolution:—"That motor-cars being already taxed more heavily than horse drawn vehicles this association is of opinion that further taxation would be manifestly unjust and would seriously prejudice an important industry.

The club also wishes to call attention to the towing of one car by another after dark, the committee having had cases brought to their notice of accidents happening to pedestrians endeavouring to pass behind a car which had another in tow on a long line and being tripped up by the line. They invite suggestions as to the best means of giving a warning that one car is towing another.



The 15-h.p. Mors Landauet recently supplied to Lord Dunraven by Mors (England), Ltd.

The car is painted dark green picked out with fine white lines, and is upholstered in light drab cloth; the inside of the carriage is very roomy, with every provision for fixing two extra seats if necessary. When the hood is down and the front pillars and window dropped into their recesses, the car is to all intents and purposes a touring car.

EAST SURREY.

THE annual general meeting of this club was held at the White Hart Hotel, Reigate, on Saturday. The report and statement of accounts were unanimously adopted. The following officers were elected for the coming year, subject to acceptance of absentees. President, Capt. Rawson, D.L., J.P.; Vice-presidents: Sir G. Livesey, C.E., Sir A. Rendel, Messrs. H. Bell, J.P., H. N. Corsellis, J. B. Purchase, and C. J. Whittington. Hon. secretary and treasurer, Mr. David J. Barry. The following gentlemen were elected on the committee:—Messrs. G. H. Bowden, N. Colman, E. H. Goad, T. Owden Hart, H. Hughes, H. R. Kempe, H. Roeling, C. H. Whittington and J. Whittington. Messrs. J. B. Purchase and C. H. Whittington were appointed representatives of the club on the General Council of the R.A.C. Messrs. G. H. Bowden and D. J. Barry were re-elected representatives on the general committee of the M.U., and to a similar position on the new body formed by the R.A.C. Mr. A. Macaire was re-elected hon. auditor.

It was decided to limit the number of official repairers to one to each district, and the following were appointed for 1908, subject to signing the usual agreement:—The Reigate Garage, Ltd., London Road, Reigate; Messrs. Chalmers and Co., High Street, Redhill; Mr. W. C. Look, Dorking. The following agents were re-appointed for the supply of petrol, &c.:—Messrs. T. S. Marriage, Bell Street, Reigate; Mr. T. Watts, Charlwood.

A discussion took place with regard to the taxation of motor-cars, and the following resolution was passed:—"That any monies raised from the taxation of motor-cars and other vehicles should be devoted to the maintenance of roads in a satisfactory and dustless condition, and that such monies should be controlled by a central department formed for

that purpose." A vote of thanks to the chairman, Mr. C. H. Whittington, concluded the proceedings.

WEST SURREY.

THE Annual Petrol Consumption Trial of the West Surrey A.C. was held on Saturday over a course of 22½ miles on the Petworth road.

The formula on which the results were adjudged was: (Petrol in oz.) ÷ (weight of car and loads in lb.), competitors being permitted to take one or more passengers, all being weighed at starting.

First place was secured by Mr. R. W. Buttemer's 14-h.p. Renault (last year's winner), with a consumption of 114 oz., or 31.95 miles per gallon, p/w being 0.347, while Mr. H. W. Moffat's 20-h.p. Rolls-Royce was second with 117½ oz., 31 miles per gallon, its figure of merit being 0.385. The remaining results were:—

| | | | |
|--|------|--------|-------|
| A. Leon (14-h.p. Renault) ... | 26.9 | m.p.g. | 0.438 |
| H. H. J. Burke (14-h.p. Spyker) ... | 27.2 | " | 0.444 |
| Dr. Minchin (8-h.p. De Dion) ... | 28.9 | " | 0.63 |
| G. H. Gill (10-h.p. Victoria) ... | 28.9 | " | 0.65 |
| J. F. Kimber (8-h.p. Rover) ... | 28.6 | " | 0.581 |
| Dr. G. Hall (8-h.p. Rover) ... | 32.4 | " | 0.588 |
| W. G. Crothers (9-h.p. Darracq) ... | 30.6 | " | 0.639 |
| A. King (16-h.p. Rover) ... | 20.1 | " | 0.649 |
| R. S. Robertson (10-h.p. Siddaley) ... | 22.4 | " | 0.675 |
| Col. Swaine (9-h.p. Cadillac) ... | 20.5 | " | 0.837 |
| E. E. Pulman (16-h.p. Aries) ... | 14.5 | " | 0.92 |

The competitors were hospitably entertained by Col. Fairtlough, chairman of the club, from whose house the start took place, and who acted as judge in conjunction with Mr. O. O. Wrigley.

INCORPORATED INSTITUTION OF AUTOMOBILE ENGINEERS.

BEFORE the Incorporated Institution of Automobile Engineers, on the 8th inst., Mr. J. S. Napier read a paper on a system of cost, book-keeping, and records suitable for a motor-factory. He defined the objects of correct costing as:—(1) To determine quickly whether a profit is being made on the business or not. (2) To determine the cost of manufacturing an article, series of articles, or an order as a whole. (3) To determine the cost of each operation or series of operations on a given article, and by comparison find out which method of doing the work is the most profitable; it will be seen that having this information (and as all manufacturing is made up of only a few simple operations on each piece), it is possible to estimate the cost of other or similar work which may be required to be made in the future.

A list of symbols for materials and for operations was given, as well as those for Standing Shops Orders; the checking of time cards by means of clock recorders explained, and various useful tables, &c., were suggested with a view to facilitating the commercial side of industrial work.

The second general meeting of the graduates' section of the London branch of the above institution was held on Tuesday of last week. The chair was taken by Mr. Leslie H. Hounsfeld, and the debate was opened by Mr. Percy Bishop on the side of live axle, Mr. D. M. Power taking the side of chain drive. In the discussion Messrs. Eric C. Smith, L. H. Hounsfeld, P. Jones, W. Hooper, G. C. Taylor, C. E. House, H. V. Hutt, G. Wickham, T. E. B. White, and C. Thomas took part.

MOTOR.

THE enterprise of the Committee of the Motor Club in securing the s.s. "Princess Beatrice" together with a good position to view the Varsity Boat Race, on Saturday, was rewarded by the great demand for tickets. The boat had more than its full complement, and many members had to be refused.

THE CYCLE AND MOTOR TRADES BENEVOLENT FUND.

THE monthly meeting of the Executive Committee was held on the 1st inst., Mr. E. M. Mayes in the chair, when the treasurer reported a balance of £510 in the bank. Fifty-one subscribers, ten members, and one life member, were elected.

Sums of money were granted in six cases to subscribers, one of whom is in a sanatorium, three had already been in receipt of relief for some months, and in one case a sum of money was voted to pay for the funeral expenses of a child that had died.

The Organizing Committee announced that the preliminaries for the formation of a Glasgow centre were in good hands, and that arrangements were on foot for the formation of a centre in Edinburgh; also that a number of consults were being appointed in the London district preliminary to dividing the metropolitan area up into postal districts, each having its own centre committee.

Mr. A. J. Wilson, of 154, Clerkenwell Road, London, E.C., is the honorary secretary and treasurer.

LEWISHAM.

THE open handicap hill climb of the Lewisham A.C. for motor-cycles was held on Carter's Hill, Underriver, Kent, on Saturday, H. B. Renner being hon. secretary and clerk of the course.

There were fourteen entries in the class for motor-cycles with single-cylinder engines; eleven in the class for cycles with two or more cylinders; five for light weight motor-cycles not exceeding 95 lbs. in weight; one for motor-cycles with side car attachment, and three for passenger motor-cycles.

The fastest time was credited to G. L. Evans on a 3½-h.p. Rex motor-cycle in the single-cylinder class, and in the twin-cylinder handicap F. Applebee, jun., F. W. Applebee, sen., and O. C. Godfrey did fastest times, all on 5-h.p. Rex cycles.

SCOTTISH.

THE annual general meeting of the club was held on Monday, in Glasgow, with Mr. Henry M. Napier in the chair. In submitting the annual report the chairman drew attention to the satisfactory progress which had been made by the club during the past year, the membership now being 1,048 and the cash in hand at January 31st last being over £2,000. He referred to the work of the club in connection with applications by local authorities for speed limits, and pointed out the satisfactory results in numerous cases.

Sir J. H. A. Macdonald, K.C.B., Lord Justice-Clerk of Scotland, was re-elected president of the club, and Mr. J. Stewart Cowans, O.A., Edinburgh, as auditor for the ensuing year.

The following gentlemen were elected to the General Committee:—

Messrs. John Adam, Dr. Adam, Dr. Wm. Allen, Professor Barr, Dr. Blair, Major John Craig, A. Hunter Crawford, J. B. Talbot Crossbie, Wallace Fairweather, A. W. J. Fergusson, Major Jas. W. Fraser, E. Graham Guest, Henry E. Gordon, Sir Duncan E. Hay, Bart., John M. Hendry, Jas. W. Hunter, J. H. Irons, D. P. MacLagan, Geo. Macmillan, Andrew Melvin, T. Blackwood Murray, John S. Napier, Henry M. Napier, Jas. R. Nisbet, Geo. F. Paisley, J. H. Paterson, H. Prosser, John Reid, Wm. Reid, C. Basil Richards, John M. Ross, J. B. Shanks, Thos. Shaw, W. L. Sleigh, Robert J. Smith, Professor Stanfield, Thos. Symington, Dr. Dawson Turner, Wm. Weir, and John Wilson.

At a meeting of the General Committee at the close of the general meeting the following elections were made:—Chairman of the General Committee, Mr. John Adam, of Larchgrove; Vice-Chairmen of General Committee, Mr. Henry M. Napier, Mr. John Wilson.

It was agreed to ask the Marquis of Tullibardine and the Right Hon. A. J. Balfour to accept the office of vice-presidents of the club, and Mr. Robert J. Smith was re-appointed secretary.

The report of the general committee of the Scottish A.C., which was submitted to the Club at their meeting on Monday, showed a membership for the year ending January 31st of 965. Since the close of the financial year eighty-three further new members have been added. The cash balance was £2,245.

Reference was made to the various inquiries which had been held concerning speed limit applications, legal defence of members undertaken by the Club, the work of the Touring Committee, which included the appointment of 136 hotels and sixty-seven repairers, and the expenditure of £500 on road signs, warning signals, and the like, disciplinary action with regard to complaints of inconsiderate driving of motor-cars and the affiliation with regard to the R.A.C.

THE Newcastle Motor Club will hold a speed-judging competition at Belsay on Good Friday.

THE Acorn Hotel, Temple Street, Birmingham, is now the headquarters of the Birmingham M.C.C.

THE Barnoldswick Motor Club has just held its inaugural run. Mr. Fred Baldwin, the local postmaster, is the hon. secretary, and the membership already numbers about thirty.

In spite of the weather, which was both cold and wet, there was a good muster of the Junior A.C. members for the club's opening run to Bognor on Saturday. Some went down in the morning in order to have a day by the sea, the remainder arriving at the Royal Norfolk Hotel, where accommodation had been arranged, in time for dinner. Sunday morning was spent at Bognor, and after lunch the return trip was made via Pulborough, with a stop at Burford Bridge for tea.

AUTOMOBILE ACCIDENTS.

LAST week we reported an accident in Hertfordshire, when a motor-car was alleged to have knocked down a woman with fatal results. At the inquest the doctor said that the fractures were consistent with being struck in the back by a motor-car lamp, and the coroner advised the jury to return an open verdict, which they did.

AN unfortunate accident has occurred at Walmer, a collision having taken place between the motor-car of the Rev. H. Ellison, rector of Hothfield, and a bicyclist. Mr. Ellison applied the brake and ran up the kerb to avoid the mishap, and it was largely owing to his presence of mind that the accident was not more serious.

THE Daimler Motor Company, who are steadily developing their foreign trade, have just issued a French catalogue giving full particulars and illustrations of the various types of vehicles, which should be of assistance in extending their business in France.

INTERNATIONAL TOURING CAR TRIAL.

As in the case of the Commercial Vehicle Trial, a separate department has been formed by the R.A.C. in order that the work may be efficiently carried out. This department is located at 112, Piccadilly, W. Entries at double fees will be accepted until Tuesday next.

The following gentlemen have been nominated as judges by the Trial Committee:—Capt. F. E. Dyke Acland, Mr. G. H. Baillie, Capt. R. K. Bagnall-Wild, R.E., Mr. W. Worby Beaumont, Major T. H. Cochrane, R.E., M.V.O., Mr. F. C. A. Coventry, Mr. E. H. Cozens-Hardy, Lt.-Col. R. E. B. Crompton, C.B., Col. H. C. L. Holden, R.A., F.R.S., Mr. Wilson Noble, Mr. Mervyn O'Gorman, Mr. J. Lyons Sampson.

The 20-h.p. and 30-h.p. White steam cars entered by Mr. Frederic Coleman, and a 35-h.p. Benz car, entered by Benz et Cie., have not yet been classified; otherwise the classification of 151 entries is as follows:—

CLASS 1.—(Cars up to 6.4-h.p. R.A.C. rating).

Entrant. Car and stated h.p.

De Dion-Bouton (1907), Ltd. ... 8-h.p. De Dion-Bouton.

CLASS 2(a).—(Cars from 6.4 to 9.4-h.p. R.A.C. rating).

Morgan and Co., Ltd. ... 9-h.p. Adler.

CLASS 2(b).—(Cars from 9.4 to 13-h.p. R.A.C. rating).

Anglo-American Motor-Car Company ... 10-h.p. Cadillac.

British Automobile Commercial Syndicate, Ltd. ... 10-13-h.p. Zedel.

CLASS 3.—(Cars from 13-16-h.p., R.A.C. Rating).

De Dion-Bouton (1907), Ltd. ... 12-14-h.p. De Dion-Bouton.

Singer Motor Company, Ltd. ... 12-14-h.p. Singer.

Star Motor Company, Ltd. ... 12-h.p. Star.

British Automobile Commercial Syndicate, Ltd. ... 15-18-h.p. Zedel.

Capt. J. D. Johnstone ... 15-18-h.p. Zedel.

S. Straker and Squire, Ltd. ... 12-14 h.p. Straker-Squire Shamrock.

CLASS 4.—(Cars from 16 to 20.8-h.p., R.A.C. Rating).

Humber, Ltd. ... 10-12-h.p. Coventry Humber.

Vauxhall Motors, Ltd. ... 12-16-h.p. Vauxhall.

Clement-Talbot, Ltd. ... 15-h.p. Talbot.

Panhard and Levassor ... 15-h.p. Panhard.

Panhard and Levassor ... 15-h.p. Panhard.

Hillman-Coatalen Motor Car Company ... 12-15-h.p. Hillman-Coatalen.

Daimler Motor Company (1904), Ltd. ... 20-h.p. De Luca-Daimler.

Daimler Motor Company (1907) Ltd. ... 20-h.p. De Luca-Daimler.

Belsize Motors, Ltd. ... 14-16-h.p. Belsize.

CLASS 5.—(Cars from 20.8 to 25.6-h.p., R.A.C. Rating).

Humber, Ltd. ... 15-h.p. Coventry Humber.

Humber, Ltd. ... 20-h.p. Beeston Humber.

Brown Bros., Ltd. ... 25-30-h.p. Brown.

Clement-Talbot, Ltd. ... 20-h.p. Talbot.

Panhard and Levassor ... 18-h.p. Panhard.

H. M. Hobson, Ltd. ... 20-30-h.p. Nagant-Hobson.

Star Engineering Company, Ltd. ... 16-h.p. Star.

Bertelli, Wayman and Armfelt ... 20-24-h.p. Junior.

Minerva Motors, Ltd. ... 18-h.p. Minerva.

J. I. Thornycroft and Company, Ltd. ... 18-h.p. Thornycroft.

CLASS 6.—(Cars from 25.6 to 32.4-h.p., R.A.C. Rating).

Humber, Ltd. ... 30-h.p. Beeston Humber.

Ariel Motors, Ltd. ... 25-30-h.p. Ariel.

Deasy Motor Car Manufacturing Company ... 25-h.p. Deasy.

Belsize Motors, Ltd. ... 28-h.p. Belsize.

Morgan and Company, Ltd. ... 30-h.p. Adler.

CLASS 7.—(Cars from 32.4 to 40-h.p., R.A.C. rating).

S. F. Edge, Ltd. ... 40-h.p. Napier.

Daimler Motor Company (1904), Ltd. ... 38 h.p. Daimler.

Daimler Motor Company (1904), Ltd. ... 38-h.p. Daimler.

Hillman-Coatalen Motor Car Company, Ltd. ... 25-h.p. Hillman-Coatalen.

Sir W. G. Armstrong, Whitworth, and Co. ... 40-h.p. Armstrong-Whitworth.

CLASS 8.—(Cars from 40 to 46.4-h.p., R.A.C. rating.)

Ariel Motors, Ltd. ... 30-40-h.p. Ariel.

CLASS 9.—(Cars from 46.4 to 52.8-h.p., R.A.C. rating.)

Rolls-Royce, Ltd. ... 40-50-h.p. Rolls-Royce.

Rolls-Royce, Ltd. ... 40-50-h.p. Rolls-Royce.

| Entrant. | Car and stated h.p. |
|---|----------------------------|
| Deasy Motor Manufacturing Company, Ltd. ... | 35-h.p. Deasy. |
| Sheffield-Simplex Motor Works... | 45-h.p. Sheffield-Simplex. |
| Jarrott and Letts, Ltd. ... | 60-h.p. Lorraine-Dietrich. |

CLASS 10.—(Cars from 52.8 to 60-h.p., R.A.C. rating).

| | |
|--------------------------|-------------------|
| S. F. Edge, Ltd. ... | 60-h.p. Napier. |
| Milnes Daimler, Ltd. ... | 60-h.p. Mercedes. |
| Ariel Motors, Ltd. ... | 40-50-h.p. Ariel. |

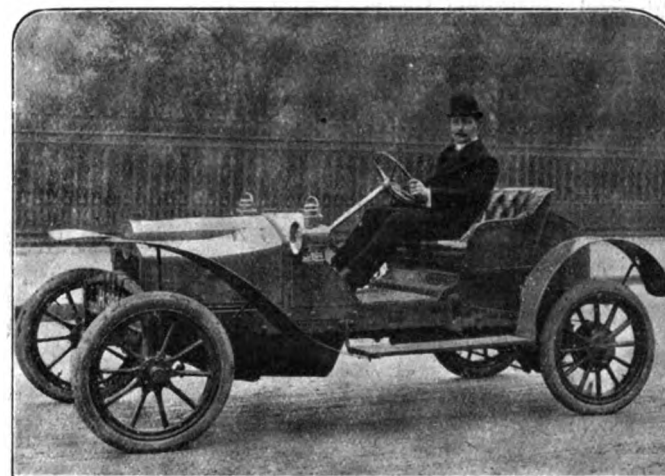
In the "Morning Post" of Tuesday, Mr. H. Massac Ruist gave a tabulated statement showing to what proportions the motor trade will be represented in the forthcoming trial.

His figures show 153 different makes of cars represented in this country, 103 of which are not included in the entries to date for either the R.A.C. or Scottish A.C. tests. Only twenty-one makes of cars will figure in both trials, forty-one will participate in the Scottish event alone, and thirty-one have been entered only in the R.A.C. trial.

CASES UNDER THE MOTOR CAR ACT.

EXCEEDING LEGAL LIMIT.

There were thirty cases at Kingston Police Court on Thursday, April 2nd, and fines were inflicted ranging from £5. In one case, where Lieut. Rupert Williams was summoned for driving in a manner dangerous to the public, Mr. Frampton put in a strong defence, but the Bench convicted and fined him £10 and costs. There was a summons against Mr. Taneborne, driver to Colonel Sutherland, for committing an offence under the Motor Car Act at Cobham, but Mr. Staplee Firth,



Mr. W. M. Letts at the wheel of the new 12-h.p. Daimler.

The new vehicle, which has been submitted to exhaustive trials by Messrs. Jarrott and Letts, has a single-cylinder engine of 120 mm. bore by 120 mm. stroke.

who appeared for the defence, secured a dismissal. This was the only case out of the thirty that was dismissed.

DANGEROUS DRIVING.

Ignatius Dracopoli, of the Ritz Hotel, London, was on Monday fined £20 by the Haywards Heath bench, who also suspended his licence for one month, for dangerously driving a motor-car on the Brighton road at Slaugham.

The magistrates expressed their determination to put a stop to fast motoring on Sundays over dangerous cross roads. Notice of appeal was given.

EXCEEDING THE LEGAL LIMIT.

For driving a motor-car at thirty-one miles an hour, an official of the Motor Union has been fined £2 at Guildford.

On Monday five motorists were fined by the Arundel County magistrates for exceeding the legal limit in the parishes of Walberton and Poling.

At Steyning Petty Sessions, on the same day, three London motorists were fined for exceeding twenty miles per hour on Ashington Common, in the parish of Washington.

As an evidence of the wear-resisting qualities of Rover gears and differential the Rover Company, Ltd., of Coventry, have sent us a photograph of the gear portion of an 8-h.p. Rover in the possession of Miss Dorothy White. The car was bought in May, 1906, and since that date has averaged from 200 to 300 miles weekly. It was taken down at the Bridgnorth Garage a little over a month ago, and the report was given that the vehicle was in splendid condition, the gears showing not the slightest sign of wear.

FORTHCOMING EVENTS.

APRIL.

- 11th (Sat.).—Annual open Flexibility Contest of the Crystal Palace A.C. Opening meeting of the Nottinghamshire A.C. at Edwinstowe. Sheffield A.C. meet the Rotherham and Workson sections at Barlboro at 3.30 p.m.
- 12th (Sun.).—Run to Cambridge of the Essex M.C., the Walthamstow M.C., and the Western District M.C.
- 16th (Th.).—Leicester A.C. at Ashby-de-la-Zouch.
- 16th—20th.—Easter Tour of the Motor Cycling Club.
- 17th (Good Friday).—Lincs. M.C.C. meet at Mablethorpe. Meet of the Leeds, Newcastle, Sheffield, and Bradford M.C.C.'s at Richmond.
- 18th and 20th.—First meeting of the Brooklands A.R.C. for 1908.
- 20th (M.).—Hull A.C.C. and Scarborough M.C.C. at Bridlington.
- 25th (Sat.).—Open Motor-Cycle Hill Climb of the Hertfordshire C.A.C. Opening meet of the Yorkshire A.C. at the Hotel Majestic, Harrogate.
- Quarterly trial of the A.C.U.
- 25th (Sat.) to May 25th.—Industrial Vehicle competition of A.C.F.
- 26th (Sun.).—Southend M.C. run to Thatched House Hotel, Epping.

MAY.

- 2nd (Sat.).—Impromptu pace judging competition of the Sheffield A.C. at Ollerton.
- 9th (Sat.).—First provincial meet of the R.A.C.—to be held at Nottingham, by invitation of the Nottinghamshire A.C.
- 10th (Sun.).—Targa Florio Race.
- 16th (Sat.).—Fifty miles Consumption Trial of the Hertfordshire C.A.C. Liverpool A.C.'s opening meet of the season.
- 21st (Th.)—25th.—Reliability Trial of the Irish A.C.
- 23rd (Sat.).—Clipstone race meeting of the Notts A.C. Meeting of the Yorkshire A.C. at Helmsley. Meet of the Motor Union at Lincoln.
- 25th (M.).—Industrial Vehicle Competition of the A.C. de France.
- 28th (Th.).—Visit of the Aero Club to Aldershot.
- 30th (Sat.).—Meet of the Herts C.A.C. at Hatfield Park.
- 31st (Sun.).—Southend M.C. run to Saracen's Head Hotel, Dunmow.

JUNE.

- International Aeronautical Federation conference in London.
- 5th—6th.—London-Edinburgh twenty-four hours' run of the Motor Cycling Club.
- 8th (M.).—Cars competing in the International Touring Car Trial will arrive at the depot.
- Start of the International Touring Car Trial of the R.A.C.
- 9th (Tu.).—Touring competition for Prince Henry of Prussia's prize begins.
- 13th (Sat.).—Hill climb of the Notts A.C. at Oakhamoor. Speed Trials of the Lincs. A.C. at Grimsthorpe.
- 15th—19th.—Scottish Reliability Trial.
- 20th (Sat.).—Meet of the Hull Auto Cycle Club and the Lincolnshire Motor Cycle Club at Brigg.
- 27th (Sat.).—Hill climb of the Midland A.C. at Shelsley Walsh. Saltburn beach races. Buxton meet of the Manchester and Lincolnshire clubs. Members of the Cheshire A.C. will participate in the Gymkhana of the Manchester A.C.
- 28th. (Sun.).—Southend M.C. run to Grand Hotel, Clacton.

JULY.

- The Land's End to John o' Groat's Trial of the Auto C.C. will be held.
- 6th (M.).—Grand Prix A.C.F. (Voiturette section).
- 7th (Tu.).—Grand Prix A.C.F. on the Dieppe Circuit.
- 11th (S.).—Provincial meet of the R.A.C. at Hereford.
- 16th (Th.).—Club meet of the Notts A.C. at the Hop Pole, Ollerton.
- 18th (Sat.).—Annual Gymkhana of the Herts C.A.C. at The Grove, Watford, by permission of the president, the Earl of Clarendon.
- Meet of the Liverpool and Cheshire A.C.'s at Delamere.
- 25th (Sat.).—Petrol Consumption Tests of the Motor Cycling Club.
- Annual Open Hill Climb of the Midland A.C.
- 26th (Sun.).—Southend M.C. run to Coach and Horses, Quendon.

AUGUST.

- 29th (Sat.).—Meet of the Lincolnshire Motor Club at Lincoln.
- 30th (Sun.).—Southend M.C. run to Great White Horse Hotel, Ipswich.

SEPTEMBER.

- 5th (Sat.).—Aston Hill climb of the Herts C.A.A.
- 27th (Sun.).—Southend M.C. run to White Hart Hotel, Braintree.

LIGHTING-UP TIMES—LONDON.

| | | | |
|-----------------|-----------|-----------|-----------|
| April 11th—7.38 | 13th—7.40 | 15th—7.42 | 17th—7.44 |
| 12th—7.39 | 14th—7.41 | 16th—7.43 | 18th—7.45 |

Secretaries of automobile clubs are invited to forward their programme of fixtures as soon as arranged.

ROAD REPORTS.

ILFORD.—On Sunday the police inaugurated a timing arrangement over a distance of some 240 to 280 yards in the High Road, Ilford. It was worked between Richmond Road and the end of the limit (Sunnyside Road). Two members of the West Essex A.C. were in attendance during the morning, and stopped many cars in time to warn the drivers.

PUTNEY.—The Wandsworth Borough Council has decided to adopt the suggestion of the Police Commissioner that a signpost should be erected warning drivers of motor-cars approaching the dangerous crossing at the Junction of Upper Richmond Road and Roehampton Lane, Putney.

BELFAST.—The annual report of the Belfast centre of the Irish Roads Improvement Association is a record of good work done, and reference is made to the improvement which is noticeable on most of the thoroughfares in the city and also the roads leading out of it.

A CHAUFFEUR EXONERATED.

At the Central Criminal Court, John Kitchener, motor-car driver, of Loudoun Mews, Loudoun Road, South Hampstead, was charged on the 1st inst., on a coroner's inquisition, with the manslaughter of Charles Cox. The latter was acting as flagman to a steam-roller on Cherry Tree Hill, when he was knocked down by a motor-car, driven by the accused, and received injuries from which he died. Mr. Arthur Gill, who appeared on behalf of the Public Prosecutor, stated that the Grand Jury had thrown out the bill against the accused, and in the circumstances it was not proposed to offer any evidence against him on the coroner's inquisition.

By direction of the judge, the jury returned a formal verdict of not guilty, and Kitchener, who had been on bail, was discharged. Mr. Justice Walton said he was satisfied that there was no reason for thinking that this accident arose from any culpable negligence on the part of the accused, otherwise the case would have proceeded.

BUSINESS NEWS.

LAST week a man entered the premises of the Hyde Park Motor Stores, 18, Brompton Road, London, S.W., and stole a pair 870 by 109 non-skid covers. He was unobserved, and the loss should suggest the necessity of increased watchfulness on the part of those in charge of such establishments in London, as the incident is by no means an isolated one. Police court proceedings are now being taken against three men in connection with the theft.

THE catalogue of motor accessories for 1908 issued by Messrs. Benetfink and Co., Ltd., Cheapside, London, E.C., extends to 120 pages, and will be of interest to motorists in the City.

MESSRS. MARKT AND Co. advise us they have recently considerably reduced the price of the Veeder hub odometer.

THE United Motor Industries, Ltd., who have taken up the agency for the Non Fluid oils, which have long been favourably known in America, have issued an attractive circular from their Poland Street (London) branch, which will doubtless be of interest to our readers.

AFTER exhaustive tests of the various makes of tyres the War Office have placed their contract for tyres with the Avon India Rubber Company, Ltd., Melksham, Wilts., the manufacturers of these well-known British tyres. This is a significant tribute to their strength and endurance, as the demands of military tyres are perhaps as severe a test as it is possible to make.

TO CORRESPONDENTS.

All communications intended for insertion in this Journal or relating to Editorial matters should be addressed to THE EDITORIAL DEPARTMENT, MOTOR-CAR JOURNAL, 27-33, Charing Cross Road, London, W.C., and must be written on one side of the paper only. Letters must in all cases be accompanied by the name and address of the writer, as no notice will be taken of anonymous communications.

The Editors cannot undertake to return MSS. or drawings, although every effort will be made to do so in the case of rejected communications. Where such are regarded as of value, correspondents are requested to retain copies.

The Editors do not hold themselves responsible for the opinions expressed by their correspondents, or for statements and facts which do not appear in the editorial columns.

To insure insertion communications and contributions must be in the Editors' hands by Tuesday forenoon of the week in which the same are intended to appear. Disappointment may be caused by non-compliance with this rule, and to avoid this earlier receipt, if possible, is necessary.

Photographers, both professional and amateur, are invited to send photographs of current events or of motoring scenes and incidents. The fee, if any, required for reproduction should be stated in each case, otherwise no liability will be accepted.

The Editors and Publishers beg also to state that they will accept no responsibility for unsolicited contributions, even if used, unless payment for same is directly specified in forwarding, and the terms arranged before publication.

THE Motor-Car Journal.

VOL. X.]

LONDON, SATURDAY, APRIL 18, 1908.

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COMMENTS.



NEW rules continue to come from the track at Weybridge, where good motoring sport is promised this Easter. The latest Supplementary Regulation suggested by the B.A.R.C., and formally approved by the Royal A.C., is to the effect that "every driver or mechanic taking part in any race shall be a male person, unless the race proposition expressly states otherwise." This, apparently, is an intelligent anticipation of the possible invasion of the track by lady drivers, and is following the regulation of the International Touring Car Trial, which excludes ladies from participation therein. The regulation appears somewhat hard on those fair motorists who have attained distinction in the arduous Scottish Trials of the past, but, on the whole, has been accepted by the bulk of competitors without protest. The extension of the rule to the track will secure even more universal approval.

Canadian and British Motor Laws Compared.

CANADIAN motorists are much exercised as to the future of motor legislation in the Dominion, and one or two points of difference in the existing law there, as compared with that in operation in this country, may be of interest. The registration of the car in Ontario is an annual event, the fee being four dollars for the first year and two dollars for subsequent periods. When the owner disposes of his automobile the registration of the same goes with the machine, the transfer being recorded with the authorities for a fee of one dollar. Speaking generally, the regulations follow the laws in vogue in this country, but the owner of the motor vehicle is, in the Canadian province, held responsible for any violation of the Act in which his car is concerned. No motor-car there is allowed to carry a search-light, and the maximum speed in cities and villages is ten miles an hour; outside such centres of population the maximum speed limit is fifteen miles per hour. After three convictions for certain offences connected with the speedy driving of motor cars, terms of imprisonment are imposed without the option of a fine.

A Visit to India.

NOT for a long time have we attended such an agreeable function as that which was held in London on Monday evening, when a number of representatives of the Press and of the agents of the Standard Motor Company, Ltd., met at dinner to meet Mr. Charles Friswell on his return from his four months tour in India, Burmah and Ceylon. As one of the oldest motor agents in the country Mr. Friswell is already well known as an enterprising man of business, to which, if we may judge from the way he interested the visitors in an account of his travels for upwards of two hours, he could now add that of a popular lecturer. In an inimitable free and easy style, which it is impossible to reproduce in cold type, he recounted some of the novel impressions of a first visit to our Eastern Dependency—among others, how he found that the hotels did not provide beds and how he could hire a man-servant at from 2d. to 3d. a day,

this not including board and lodging! From Bombay he took us, in his story, to Agra, with its marvellous temples, and afterwards to Delhi, Cawnpore, Lucknow, Benares, the great religious centre, and Calcutta, which latter he described as a business city so dirty that rats seemed to have first call on the hotel bedrooms. From Calcutta Mr. Friswell sailed to Rangoon, in Burmah, and thence by water proceeded to Ceylon, an island the beauties of which he considers are beyond comparison.

The Standard Car.

TURNING from pleasure to business Mr. Friswell afterwards briefly recounted how he had become associated with the Standard Motor Company, Ltd., and claimed that his long connection as a motor agent placed him in a special position, as a motor-car manufacturer, to realise the requirements of "brotheragen's." Every effort was being made to render the Standard cars, not only of the highest grade, reliable and simple, but to turn them out at prices well within the limits of modern buyers. He then outlined certain detailed improvements that have recently been effected in the chassis, and wound up with stating that as a result of his trip to India the seeds had been sown which should quickly make the Standard car one of the most popular in that great country. Altogether Mr. Friswell's story of his trip to the East was of absorbing interest.

Motor Cabs in London.

SOME commonsense regulations have been framed and came into operation on Wednesday in connection with the motor-cabs now plying for hire in London. It is provided that where motor-cabs are standing in "ranks" the drivers of the first two must be with their cabs and be ready to be hired at once by any person. Those cabs behind on the "standing" must move up as vacancies occur. It is further provided that no disabled vehicle shall remain on the rank unless the repair can be made at once. Should the disablement not be of such a nature a notice must be at once placed on the cab to the effect that it cannot be used and will be removed for repair.

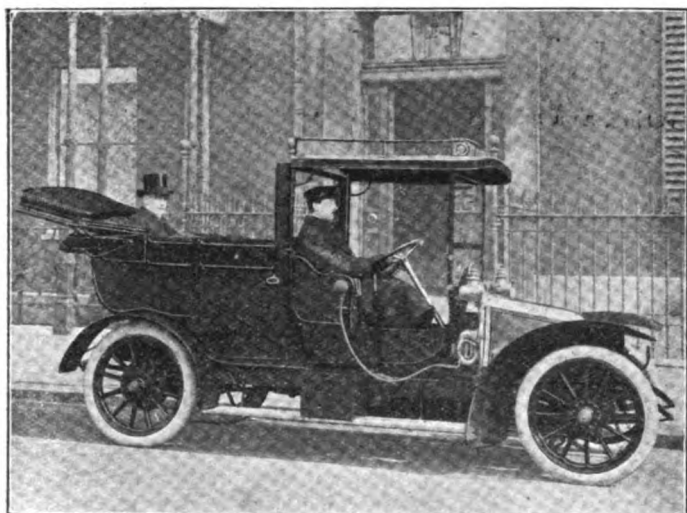
The Restriction of Speed.

SOME of those authorities that in the earlier stage of their automobile knowledge obtained Orders for the restriction of the speed of motor vehicles through their areas are apparently reconsidering their decisions—a fact which should be noted not only by other authorities which may be in danger of hasty acceptance of suggestions for the restriction of speed, but also by those who have charge of the motorists' case in Parliament. One of the Scottish County Councils is seeking to secure the cancelment of its speed restriction order, and at the next meeting of the Glossop Town Council the rescinding of a resolution in favour of a speed limit lower than that recognised by Parliament will be fully discussed. At the 1st meeting the matter was raised, when it was pointed out that there were many reasons to be urged against a ten-mile speed limit for the town. This was a slower speed, one gentleman pointed out, than that at which a horse trotted, or about half the rate at which the tramcars travelled, and was actually two miles an hour less than a good runner could do in the time. More

over, the Motor Car Act was quite able to deal with these drivers who endangered the lives of the people without regard to any such extraordinary application to the Local Government Board.

Motoring Bishops.

MANY of the Bishops whose dioceses are of a rural character, with parishes at long distances from each other, have been thoughtfully provided with motor-cars, enabling them to thoroughly conduct their visitations with the maximum of human comfort and the minimum of human labour. In this way the Bishop of Southwell is now enjoying the ease of motor travel recently provided by his friends around Nottingham. Now comes the turn of those responsible for the ecclesiastical oversight of urban and town districts. Following the examples of the friends of the Bishops of Liverpool and Newcastle, those who have admired the good work done by the Rev. C. G. Lang as the Bishop of Stepney have provided him with a motor-car, rendering him independent of the inconvenience of London suburban stations and enabling him to get to many more meetings than would otherwise be possible. An old friend of the Church in East London has promised an annual sum sufficient for its main-



The Bishop of London in the 14-20-h.p. Renault Landauet just supplied to him by the Motor Supply Company, Ltd.

The carriage is a very handsome one, being painted dark purple, and is fitted with all the latest contrivances. The coachwork is by the Connaught Motor and Carriage Company. The Bishop has now disposed of all his horses and carriages, and will in future use motor-cars only.

tenance. In accepting, the Bishop expresses his hope that it may enable him to do his work in the East-end with less strain to himself, and with greater usefulness to the Church and the people. This week, also, we are able to prove the motoring interests of the Bishop of London.

Motor-car Imports and Exports.

MARCH proved another quiet month as far as imports of foreign motor-cars and parts into this country are concerned, a decrease, as compared with March, 1907, of £62,346 being recorded. Of complete cars only 433 were imported during the month, of the value of £155,157. The number of chassis imported was 282, valued at £79,525, while parts were responsible for £142,502, giving a combined total for March last of only £377,178, as against £439,524 in the corresponding month of last year, and £415,650 in March, 1906. The gross imports of cars (1,111 in number), chassis (750), and parts during the first quarter of the current year amounted to £998,063, as contrasted with £1,164,767 in the corresponding period a year ago. Turning now to the section relating to the exports of British automobile productions, these again also show a slight decrease—from, in the aggregate, £110,594 in March,

1907, to £104,006 last month. Altogether 182 complete cars (£65,461) and 20 chassis (£6,195) were despatched from this country in March, as well as parts to the extent of £32,350. The gross shipments during the three months ending with March are returned at £311,128, which contrasts with £315,602 in the first quarter of last year.

A Run into Wales.

ONE of the most charming of the Easter tours likely to be enjoyed by the motoring clubs this year is that of the Liverpool Motor Club, the officers of which have arranged a four days' programme as follows:—

Friday (17th).—Start Glegg Arms, 11.30 a.m., Chester to Ludlow, about 90 miles.

Saturday (18th).—Ludlow, via Wye Valley to summit of Eisteddfa Gurig Pass (close to source of river Wye), and via "Devil's Bridge" to Aberystwith, about 95 miles.

Sunday (19th).—Aberystwith, via Barmouth, Pass of Aberglasslyn, Beddgelert, Vale of Gwynant, and Swallow Falls to Bettws-y-Coed, about 90 miles. Dolgelly is 78 miles from Liverpool, and early starters on Sunday may meet members there about noon, or at lunch at 1 p.m. at Barmouth, ten miles from Dolgelly.

Monday (20th).—Bettws-y-Coed, via St. Asaph, home, about 90 miles.

We have been anticipating the pleasures of this trip by dipping into Mrs. Rodolph Stawell's "Motor Tours in Wales and the Border Counties," just published by Messrs. Hodder and Stoughton. It is divided into five sections—Shropshire, North Wales, the heart of Wales, South Wales, and the Wye Valley, while seventy excellent photographs add to the interest of the volume. Many guide books, presumably for motorists, have been compiled by writers who have gone by rail, horse vehicle, and cycle from place to place. The contrast between books thus written and the present volume is decidedly in favour of Mrs. Stawell, whose sense of literary proportion is nicely gauged. She never wearies with hackneyed reiteration of "ivy-bound castles," and the like, but tells the story easily and well, and then—"we had a lovely run before us down the valley, but if we are prudent we will drive slowly in the neighbourhood of Corwen." Such sentences delight the heart of the motorist and prove of practical value to all who travel by road.

Following the Trials.

A MATTER of convenience to pressmen has been arranged by the Scottish Automobile Club in connection with that part of the forthcoming great trial which will run through their territory. They are making arrangements to secure for members of the Press accommodation on Free-lance cars, which will leave the official headquarters each morning to witness the hill climbs, or view interesting points on the route. Hitherto, those who have followed the trials in a journalistic capacity have been in the long procession and unable to depart from the official routine, with the result that many interesting incidents have been lost. The new policy of the Scottish Automobile Club is one that will commend itself to a good many people, and readers as well as writers should benefit therefrom.

A Trio of Provincial Meets.

THE Royal A.C. has arranged three provincial Meets for the present year, and the first of these will take place on the 9th prox., at Nottingham, where a cordial welcome will be given both by the municipal authorities and by the county gentry of the district, the latter being headed by the Duke of Portland. Hereford has also been selected for a provincial Meet, and the enthusiasm of the motorists in the Cider county has previously been so well shown that no doubt will be felt as to the reception there. The third gathering will open up comparatively new ground, for not since the Club, under its old name of the A.C.G.B.I., visited Cromer has the central motoring organisation journeyed into Norfolk. Towards the end of the present summer the R.A.C. will hold its third Meet at Norwich,

and, seeing the proximity of that place to Sandringham, it would seem to crown the efforts of the year if Royal presence could be added to Royal patronage on that occasion.

Anticipating the Dust.

ALREADY many residents in the villages on the great main roads are looking forward with some amount of perturbation to the return of the motor-car to the road in the large numbers usually associated with the spring and summer seasons. Not only is the matter receiving the consideration of rural and other councils, but in some districts public meetings are being held to discuss the alleviation of the nuisance in a practical way. At Forest Row, near East Grinstead, a few evenings ago, a meeting was held, with the Rev. A. J. Swainson in the chair, to consider the question of tarring the roads for the coming summer in preference to watering with a view to laying the dust. Last year the roads were treated in

will suggest a form of mental enterprise for the longer afternoons that are now upon us.

The Nomenclature of Villages.

If the plans of the United States Post Office department are carried out, it will no longer be necessary for motorists on tour to ask the name of a town. The 70,000 postmasters in the United States are to be instructed to add to the words "post office" on the signs which designate their respective offices the name of the town or hamlet in which the office is located. Those who have toiled along on British highways and byeways have often been inconvenienced by the lack of information as to the names and place where it should be prominently displayed, viz., at the Post Office. We believe it is a regulation of the British Post Office that the names of villages shall be conspicuously set forth; but neglect is frequently discovered by motorists who go farther afield. Insistence on such



Hill Climbing in the South of France.

A 24-h.p. De Dietrich was last week driven to the summit of La Turbie, near Nice, along the narrow winding mule track, which, in a distance of 2½ miles, rises about 1,640 feet.

this way, the County Council paying half the cost, the other moiety being raised by local subscriptions. Several speakers urged that this course should be repeated this year, and ultimately it was resolved to do so, a committee being appointed to carry out the work.

The Tow Rope.

CASES have lately arisen in Sheffield and one or other important provincial centres where accidents have happened to pedestrians not observing the presence of the second vehicle when endeavouring to pass cars which had others in tow on a long line. Sometimes they are tripped up by the connecting line with dire results to themselves. So serious has it become in the cutlery centre that the attention of the local Automobile Club has been called to the matter, and the committee is now inviting suggestions as to the best means of giving a warning that one car is towing another. This is a new problem that will have to be considered, particularly by trade firms, and probably its solution

names being displayed should become an international instruction to the postmasters of every country, as a matter of convenience to natives as well as to foreigners.

Lights on Vehicles in Scotland.

THE Lights on Vehicles (Scotland) Bill which has been introduced by Mr. H. A. Watt, supported by Mr. C. D. Rose as well as by members more particularly associated with the northern part of Britain, is based on the provisions already enforced on this side of the Tweed; hence the hope that its adoption by Parliament may not be long delayed, and uniformity thus secured in Great Britain with regard to the carrying of lights on vehicles at night. As we have previously shown, the Act in its application to England has not raised any difficulties worth consideration, and its extension to Scotland in the public interest should be only a question of time, and that a very short one.

SOME EMERGENCY REPAIRS.

BY E. T. HUMPHRIES.

BEFORE the advent of the cycle or motor-car those with more than ordinary intelligence knew little of nuts and bolts, or even which way to screw the former on to the latter, and the use of an adjustable spanner was a thing of untold mystery. Much water has, however, run under the bridge since then, and with the more general use of the motor quite a little army of automobile mechanics has sprung up. But such must not conclude that these elementary experiences make them engineers, and anything that will help and assist users to effect small repairs in their private garage with their own resources, or with the aid and use of the local workshop, will be of interest.

The old adage of "a stitch in time, &c.," was never more applicable than to self-moving vehicles, and oftentimes, after a little experience, more serious repairs may be undertaken, with the result that at the end of the year the cost of upkeep is much lower than would otherwise be the case, also an oversight during construction, which afterwards affects the efficient working of a car, may be corrected. Such an instance recently came under the writer's notice; the car in question was giving fairly good results, but the cylinders were not all running "true." The valves were looked to and the usual sources of trouble explored,



Motoring under Difficulties in Florida.—A Cleveland Car on the Indian River Prairie.

but without any appreciable improvement. A further examination revealed the fact that on the cylinder head of No. 3 the ribs (which were on all of them) had not been properly cleaned off, with the result that there was a feathered edge on each rib. These edges, being very thin, became red hot, owing to the heat from the explosion, and though the surface would be much less, it would, owing to the intense heat, act upon the gases similar to an overheated cylinder; the gases would, in coming into touch with these over-heated portions, expand to such an extent that the cylinder capacity for available useful gases would be reduced, and thus could not receive its full charge of forceable explosive mixture. The foregoing is not an isolated case of the kind known to the writer. The ribs being dressed off to a rounded even surface, the engine gave better results than it ever had done before.

A similar trouble arose with a Humber car, but from quite a different cause; an overhaul had been made, and the vehicle on being taken out ran well for about three miles, when it suddenly stopped. A superficial investigation was made to locate the cause, but without the desired result, and another car had to be sent for to take back the disabled

one. On arriving home everything possible was done; this performance was repeated three times, and on each occasion the car stopped identically at the same spot. This seemed so weird that a most careful research was made, and at last the cause of the trouble was found and attributed to the following: Magneto ignition was being used, and just prior to the first breakdown new plugs had been fitted; these had very large metal ends, through which were the usual apertures for the spark. These metal ends getting very hot and retaining the heat they caused pre-ignition, and so explosions would take place, in all probability, on the upward stroke instead of the reverse, and so this defect acted in a similar, but in an intensified form, as the feathered ribs referred to in the preceding experience. With new and smaller ended plugs the trouble ceased.

An engine with two combustion heads cracked with the frost was the subject of an interesting repair and one that required few tools. Being of a Continental make it meant much delay to obtain new ones, so it was then decided to attempt a good repair of the fractured cylinder heads. At that time the writer was instructing a number of improvers, and made this an example for demonstration. A hole was drilled at the farthest extent of each crack and tapped, and a stud screwed in level inside and out. The fractures were cleaned out and brazed, and the whole allowed to stand for some days, having been dressed over with salammoniac to assist corrosion. With another cracked combustion head in a De Dion car the repairs were effected by shrinking three narrow iron bands round the outside clear of the connections, the contraction of these bands which when cold would be a tight fit, effectually, to all appearances closed up each crevice, but, to run as little risk as possible, each fracture was rusted up with salammoniac. In both the foregoing cases the repairs were quite satisfactory.

Recently, the following happened near Aldershot, and the details of such experiences, with an account of the measures taken, may assist any user who should meet with a similar misfortune. When motoring with a 30-h.p. car, and wishing to save time, a bye-road was taken, when suddenly the car sunk into the ground and became firmly embedded. Every effort was made to move it either backward or forward under its own power, but without effect, and at each revolution the wheels ploughed themselves deeper into the mire. Failing to move it at all, two horses were obtained from a neighbouring farmhouse, but equally without favourable results. Leaving the car until the morning, trenches were cut behind each wheel, giving a gradual slope, some 9 in. by 3 in. planks being laid down up to each hind wheel. A screw jack was then placed under the axle immediately inside the rear wheel, and raised until the plank was pushed under the wheel. This was done with all four wheels. The earth under the car was cleared away, but it must be noted that this was not done until the wheels had their proper load, for, as usual in such cases, the differential was aground. The car was now easily moved out backwards under its own power.

A cracked steering wheel is not an unknown thing, and if such takes place *en tour*, in a part far removed from a repair shop, and unless the user can "engineer" a repair upon his own account, much delay and inconvenience may result. A break of this description happened to a car with the writer when recently in Scotland. The hub cracked right across, and to such an extent that the wheel revolved round the steering pillar without any effect on the front wheels. The only place where any repairs were possible was a blacksmith's shop about a mile away. The wheel was taken off and the writer took it to the shop. Finding a small odd plate of iron, he got the smith to heat it, and over the "hub" of a farmer's waggon wheel that was in for repairs to hollow it in the centre, through which a hole was drilled. As the tools available were very limited, there was no drill large enough to make the hole such that it would take the pillar, so a taper drift (bar of iron) was forced into the hole, which made it a nice fit on the steering pillar. Holes were drilled through the plate and each spoke; the whole riveted together with perfect success, so much so that up to the present it has not been thought worth while to obtain a new wheel. The whole operation only took some two hours to effect.

GOSSIP FROM PARIS.

NOTWITHSTANDING all the splendour of last year's Automobile Salon held in November there was something wanting, and that something was the presence of the usual crowd of English visitors. Why did they not attend the Show in the same numbers as on previous occasions? The Syndical Chamber of the automobile trade evidently thinks that the date had a good deal to do with it. At any rate it has just decided not to hold the Show again in November, but to revert to the old custom of opening it in the second week in December.

It was predicted that the crisis in the automobile industry would go on growing in intensity till the end of June. Fortunately the turn for the better has come sooner than was expected. The demand for new cars, though of course not so brisk as at this time last year, is nevertheless improving. There is another phenomenon which is worth noting. It is the demand for good second-hand cars. Till recently the sale of even the best second-hand vehicles was difficult. Now there is a brisk demand for them. It is reported that even several English intermediaries have come to Paris to buy good second-hand cars of medium horse power.

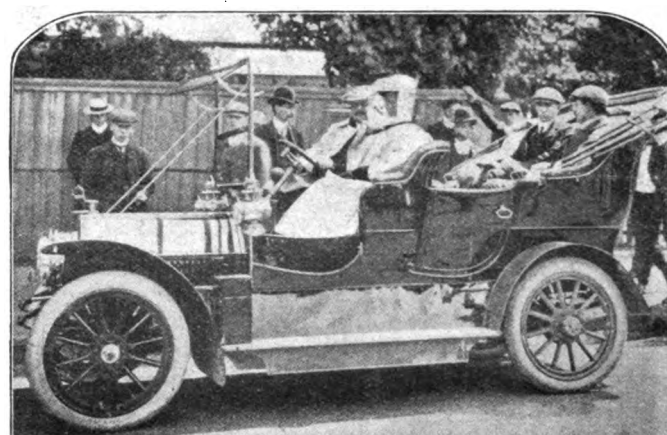
By his flight of 3,925 metres M. Delagrance last Saturday evening deserved and obtained an ovation from the crowd of spectators he certainly will never forget, and the hearty congratulations of all interested in aerial navigation. He is now the record man of flight, having beaten Mr. Henri Farman's performance by 1,920 metres 20 centimetres. Also the officially recorded time he remained in the air was 6 min. 30 sec., or 3 min. longer than Mr. Henri Farman. If he had not, unfortunately, just grazed the ground with one of the wheels of his aeroplane his performance would have been a distance of about 8 kilometres or five miles flown in 9 min. 15 sec. After shaking as many as he could of the hundreds of hands which were outstretched towards him M. Delagrance declared that when he landed he was utterly exhausted. He meant that the tension of mind had been so great that even if his motor had been able to hold out he could not have gone much further. The physical exertion of steering an aeroplane while looking after the motor is considerable, but the mental strain is yet greater. The "Flying Man" has to be more than all awake.

I HAVE an English friend who crossed the Channel for the first time in his life a few days ago. His admiration of the Ville Lumiere is somewhat tempered by his disgust at the condition of the Boulevards and streets. It is fortunate he arrived after the barriers enclosing about half the Place de la Concorde had been removed, otherwise I do not know what he would have said, especially if he had been told that they were there because the ground was unsafe even for a child to walk on. It is not, however, only the extraordinary number of thoroughfares half blocked with hoardings round the works for the construction of the Metropolitan Railway, &c., but the bad driving and the manner in which the traffic is regulated which astounded him. My friend could not find words strong enough to qualify the driving of the majority of the cabbies and their utter disregard for the pedestrians. Indeed, he witnessed with me a most unedifying scene on the Place Chateaudun. After nearly running over a lady and two children, a cabby whipped up his horse, which knocked a cyclist off his saddle. The unfortunate man just avoided being trampled under the horse's feet, but he did not escape the cabby, who slashed at him with his whip. How the matter ended I do not know, as our taxicab carried us quickly away.

THE driving of the taxi-cab chauffeurs was not much more highly appreciated by my friend than that of the cabbies, but it was the motor-buses which amazed him the most. And that is really not astonishing. Where the drivers were recruited and what orders they receive from their employers I cannot say, but

their recklessness, which is constantly causing most regrettable accidents, is undeniable. There are not more than a hundred motor-buses plying in the whole city, while there are at least ten times that number in London. Yet my English friend declares they make as much noise as all the London buses put together. Though France has the honour of being the cradle of automobilism, she has allowed herself to be surpassed by her neighbour across the Channel, at least in the way of buses. The fact that the concession in virtue of which the Paris Omnibus Company enjoys a monopoly will expire in May, 1910, and that the negotiations for its renewal have not yet been concluded, may have something to do with it. Not being sure of preserving their monopoly, the directors of the company refused until last year to listen to any of the proposals made to them for transforming their rolling stock.

WHEN, after long hesitation, they did at last announce their intention to give the Parisians motor-buses like those the Londoners have had at their disposal since 1904, everybody expected wonders. When they were put on the streets the vehicles were indeed wonders. The company having a large stock of three-horse omnibus bodies had ordered that the chassis should be made to fit those bodies instead of building appropriate bodies for the chassis. The result was naturally deplorable. The passengers perched up high on the knifeboard complained and continue to complain that the vibration and swaying is so strong



Mr. A. Morton, President of the Canterbury (New Zealand) Automobile Association, at the wheel of his 15-h.p. Humber Car.

they cannot even read a newspaper, and those inside declare they are cramped up and deafened by the rattling noise. Then there are the shopkeepers and proprietors of the houses along the routes taken by the buses. The small tradesmen in the narrow streets affirm that their goods are spoiled by the dust the heavy vehicles raise in dry weather and by the mud sent flying by them in wet weather. As for the landlords, many of them have already commenced legal proceedings against the omnibus company for the deterioration of their property from the repeated little earthquakes produced by the constant passing of the lumbering cars. No one demands their suppression, but everyone insists on reasonable modifications being made to obviate the inconveniences of the present vehicles.

THE Committee of the Chamber is showing great diligence. Taking into due consideration the indications of competent persons, it has demolished M. Barthou's Bill, and in doing so it has won the applause of all connected with the automobile industry and of M. Barthou himself. That is a phenomenon not often witnessed. But the Minister had the good sense to recognise he drew up his Bill without knowing much about the question. The amended, or, I might say, the new Bill will contain none of the objectionable stipulations referred to in the M.C.J., but it will be time enough to speak of the proposed measure when it comes on for discussion in the Chamber.

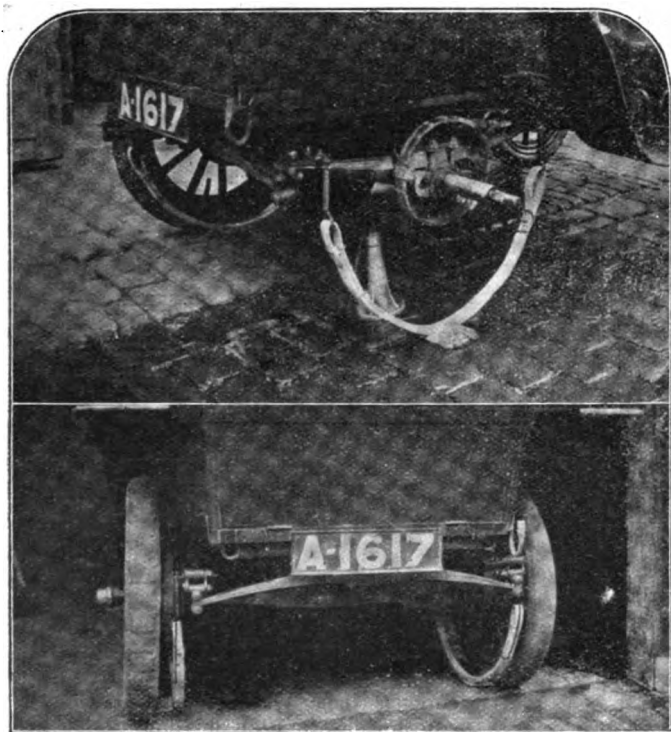
MARNEY.

B

A NEW NON-SKID DEVICE.

A FEW days ago we were afforded an opportunity of taking a short trial run on a light car to test the merits of a new and somewhat novel non-skid device which has lately been brought out by the Portman Garage, of Portman Mews North, Portman Square, London, W. As will be seen from the two illustrations given below, the arrangement consists of a long strip of leather, the two ends of which are suspended by the medium of springs from the frame of the car. The leather thus hangs down in the form of a loop, the extremity of the curve of which just touches the ground inside the wheel track. At this point the loop is provided with three or four short pieces of leather, furnished with steel studs similar to those of a non-skid band. As will be seen from the lower picture, these projections extend towards the road wheel, to which it presents a bevelled or wedge-shaped surface.

The idea of the device is that directly either of the rear wheels shows a tendency to skid it meets the leather grip, when all further sideways movement is arrested. The car on which we made the trial run was fitted with plain tyres, and, notwith-



standing that the driver did all he could to cause a skid by choosing a greasy road and occasionally applying the brakes suddenly, not once did the vehicle deviate from its proper course. We are not able to say how the device would answer on a heavy touring car, but, so far as light vehicles are concerned, it certainly appears to be an effective arrangement, and one which enables plain tyres to be used in place of the more costly non-skid variety; it adds but little to the weight of the car, and, being hidden behind the wheels, forms an inconspicuous yet useful safeguard.

MESSRS. S. F. EDGE, LTD., have brought out a new electric dashboard lamp which fulfils the double purpose of indicating whether the tail light for illuminating the number plate is alight or not, and also for reading indications on dials of clocks, speedometers, distance recorders, pressure gauges, &c. The light on the dashboard is coupled in series with the electrical tail lamp, so that, should anything happen to the latter which would cause it to go out, the light on the dashboard would similarly go out, and give an indication of the state of affairs to the driver.

MOTORING IN SOUTHERN INDIA.

TO undertake a journey of 230 miles, with short stoppages for breakfast, paying tolls and Custom House inspection, in a motor-car over rough and rocky roads full of ruts, deep holes, and unmacadamised, unlit by municipal lamps, in cloudy weather, and where human beings are few and far between, and to accomplish it without any accident, not even the running over of a "pi" or a country fowl for breakfast, is an enterprise which may not be devoid of interest to your readers. I, therefore, give the following particulars of a trip I recently made from Bangalore to Pondicherry and back. I left Bangalore early one morning—at 2 a.m.—with three up in an 8-h.p. Darracq. The weather was rather chilly, and the municipal lamps, which were a *dele noir* to the station, emitted a lurid light. We passed through Hosur over the ghauts to Krishnagherri, where the sun was seen rising, and next proceeded to Ootancari, and were stuck in the sand in crossing the two rivers. But this difficulty was soon tided over, and after breakfast we ran on to Teruvanamali by the well-known citadels of Gingee, now almost in ruins. Gingee, a city once of great historical importance, appeared to be thoroughly ugly, and cramped, squalid and uncomfortable and filthy. The streets through which we had to pass were reeking with uncleanness, and the houses or huts appeared to be built on one arbitrary plan—the ungraceful form of a dry goods box. The sides are daubed with a smooth white plaster, and tastefully frescoed above and below with discs of cowdung placed there to dry. This gave it the romantic appearance of having been riddled with cannon balls, and imparted to it a very warlike aspect. Grey lizards, those heirs of ruin, of sepulchres and desolation, glided in and out among the crumbling stones of the old fort, or lay still and sunned themselves.

From Gingee we proceeded to Tindivanam, Vanur, and thence to Pondicherry. Considerable difficulty was experienced in crossing the eight miles before entering the capital of the French possessions in the East. The roads are so abominably bad that, suffice to say, it took us an hour and a half to accomplish four miles. What might have terminated in an accident was happily averted. It was still dark when the car was about to enter the French boundary, when the tollgate man impeded the road by placing a pole to prevent carts passing (without a light). But for an electric lamp I was carrying the car would have dashed into the pole and caused some damage. This was exactly what occurred to another car which shortly followed. We arrived at Pondicherry at 7 p.m., thus accomplishing the journey in seventeen hours, inclusive of the stoppages referred to above and a detention of three-quarters of an hour at the custom house, for inspection of contraband articles. On this trip, it may be added, 10 gallons of petrol were used.

The return journey was accomplished with greater facility. Leaving Pondicherry at 3.30 a.m., to avoid the first few miles of bad roads, we took a cross country route by Tomb de Anglaise, Mailam, Vallam, getting on the high road near Gingee. Thence we made a straight run to Krishnagherri, where we had breakfast about noon, and returned to Bangalore, *via* Hosur, at 7.30 p.m. On the return journey only 7½ gallons of petrol were consumed. The trip may be considered to be a record one for this part of the world, as it was accomplished without any break-down or mechanical trouble, although the road near the ghauts is in a disgraceful condition.

G. J. INGRAM-COTTON.

FROM the Star Engineering Company, Wolverhampton, comes a copy of the new catalogue of Star cars which gives full particulars of these well-known vehicles. For the 1908 season five models are being built, viz., 9-h.p. two-cylinder, 12-h.p., 16-h.p., and 20-h.p. four-cylinder and 30-h.p. six-cylinder, with either chain drive or live axle as desired. In addition to a very complete description of each type, illustrations are given of the main components of the chassis, such as the engine, gear-box, live axle, &c. At the end several pages are devoted to letters from satisfied users of Star cars.

MR. C. E. PILCHER, of 16, Montem Street, Thorpedale Road, Tollington Park, London, N., has opened a motor repair shop.

MR. JOHN DRAKE, of the High Street, Egham, who has also an establishment at Englefield Green, undertakes the repair and maintenance of motor lawn mowers.

SOME days ago a motor-car was found unattended near the schools at Ottershaw. On being discovered it was towed to a piece of common land, where it remained two days until the police appeared on the scene. It has since transpired that it was driven from the direction of Chertsey and left by the roadside.

SPRINGLIKE weather favoured the races organised by the Royal Artillery at Aldershot on Wednesday, last week. The ground was kept by mounted men of the Royal Horse and Field Artillery, and several regimental coaches and drags were to be seen, while the place set aside for motor-cars was crowded.

AT Bow Street (London) Police Court, a chauffeur, who was fined for exceeding the speed limit for motor vehicles in St. James's Park, asked for time for payment. The magistrate said that if did not pay distraint would be levied. Had he any goods? Defendant: Yes, sir; a wife and six children. He was allowed time.

IN connection with the Cordingley Show, Automobiles de Luxe, Ltd., of 146, Offord Road, Liverpool Road, Islington, London, N., had a stand from which they were able to make known their facilities for the hiring of cars for pleasure and other parties—a branch of the automobile business that should soon present an encouraging expansion.

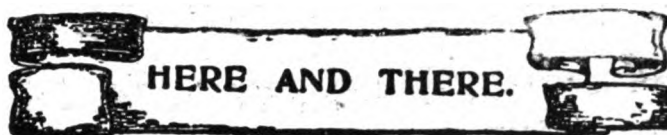
TRAMCARS and other vehicles propelled by horses have apparently experienced a slump during recent years. The trams are often to be found as poultry runs in rural districts, and at an auction sale of horses and omnibuses at Herne Hill, the maximum price realised for the vehicles was 5 guineas, the minimum being £3 15s. Horses were obtained at an average of 15 guineas each.

THE Isle of Wight Steam Packet Company are now conveying a limited number of cars between Southampton and Cowes daily by each of their ordinary passenger steamers, the 8.30 a.m. from Southampton and the 9.40 a.m. from Cowes excepted. They cannot, however, undertake to convey motor-cars on Bank Holidays, an exception which those who intend to motor that way at Eastertide should note.

THE sporting element in the motor world is apparently not confined to any one section, for a feature of the race meeting at Brooklands is the support which is being given to it by members of the second-hand car trade. For example, we learn that Messrs. Corry Hurford, Ltd., of Great Portland Street, London, W., have entered for two of the races, Mr. Hurford driving a 60-h.p. Mercedes in the Continental Stakes, and Mr. Adams a 6½-h.p. Griffon in the first motor-cycle race.

A GREAT automobile carnival was held in New York on the 7th inst. in celebration of the tenth anniversary of the commencement of motor-car building in America. Altogether close upon 2,000 cars joined in the procession, including vehicles of various ages and of every conceivable type. The procession was made up of five divisions, the first, which contained the oldest machines, being followed immediately by cars of the very latest type. In the third division were decorated touring cars, in the fourth commercial vehicles, the fifth and last consisting of advertising features.

A NEW record in the 90-h.p. class of the Brooklands Automobile Racing Club was established on Friday of last week, when D. Resta, driving a four-cylinder Mercedes (of 76-h.p. R.A.C. rating) covered ten laps of the course in 18 min. 37.75 sec. His speeds varied from 87.95 to 91.85 miles per hour; the time for the "flying half-mile" was 18.85 sec., which gave a pace of 95.49 miles per hour. Resta was well toward covering the fifty miles record when the bursting of his off-side front tyre compelled him to be content for the day with his half-mile and ten-laps achievements.

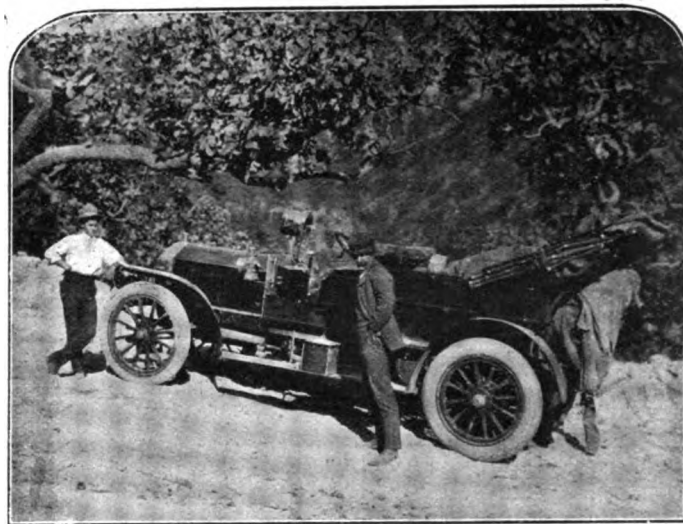


A NEW motor garage is being opened by Mr. Arthur Robertson at Aboyne—on the route of the Scottish Reliability Trials of 1906 and 1907.

THE works of Messrs. C. A. Vandervell and Co., at Warple Way, Acton Vale, London, W., will be closed from Thursday the 16th until Tuesday the 21st inst., over the Easter holidays.

ON Friday evening last the 18-h.p. Siddeley car fitted with Elastex filled Dunlop tyres completed 1,500 of its 3,000 miles trial under the official observation of the Royal Automobile Club. So far the trial has been entirely devoid of incident—simply a series of most enjoyable days' runs.

MR. SEEGER, who, in addition to being managing director of the Compania Mexicana de Vehiculos Electricos, is sole agent for Napier cars in Mexico, recently asked Messrs. S. F. Edge, Ltd., to build him vehicles capable of negotiating the roughest of roads and the steepest of hills. In stating his requirements Mr. Seeger drew a very vivid picture of the class of roads and hills which he had specially in mind, and went on to say that one car was destined for a potential customer who lived at a place called Tepic, on the West Coast of Mexico, and isolated from the rest of the country in that no railway has yet been constructed across the mountain range which runs north and south. Mr. Seeger's



client therefore commissioned him to purchase a car capable of crossing these mountains, and travelling on what are probably the worst roads in the world. A special colonial type of Napier six-cylinder car, constructed with the engine and all working parts carried high above the ground to admit of the vehicle traversing the roughest roads and fairly deep fords and other irregularities of the ground, was sent out. The photograph reproduced herewith shows the car half-way up the mountain pass of Cuesta de Ingenieros, en route across Mexico. It triumphantly surmounted all the difficulties of a long and arduous journey, and was delivered to its prospective owner, Don Faustino Somellera, in perfect running condition and to his entire satisfaction.

RECENTLY we recorded how a motor-car in the Fen district had narrowly escaped projecting its occupants into one of the dikes of Lincolnshire. Now comes news of a motor vehicle jumping a bank at the junction of the Birmingham Canal at Wednesfield and dashing down an incline into the water. Fortunately the driver, Mr. Henry Jones, of the Wolverhampton Works, Wednesfield, was able to fling himself from the vehicle just as it reached the water, from which he emerged with nothing worse than having had an uncomfortable ducking. Mr. Jones was approaching the bridge when a woman was seen walking in his way, and in order to avoid her he turned his car suddenly, with the result that he was carried over the embankment. After some difficulty the car was rescued from the canal.

MESSRS. W. AND H. KING, of 2, London Road, East Grinstead, are letting motor-cars out on hire.

THE MARQUIS DE MONZELY ST. MARS has purchased a 40-h.p. six-cylinder Napier for racing purposes at Brooklands during the coming season.

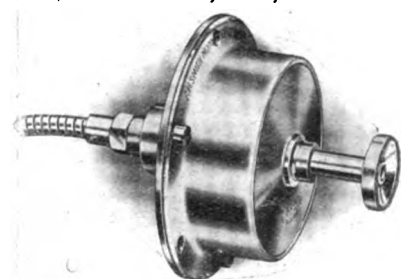
FACILITIES for the collection and delivery of parcels in the rural districts of Kent will be provided in connection with the new motor postal service to be established between London and Dover.

IN the new American-built Stearns car, a feature of the motor is that the crank case is cast with a bedplate across its forward end, which forms a support for the radiator, thereby taking the latter entirely away from the chassis frame and making it a unit with the engine.

IN the Back Fern Avenue, Newcastle-on-Tyne, a new garage is being opened under the style of the Jesmond Motor Works. The proprietors are Messrs. Robinson Brothers, who have another establishment in the Portland Road, Newcastle-on-Tyne, and who are well placed to be of assistance to local as well as visiting motorists.

AT Bournemouth, Mr. McAule has completed the improvements to his motor garage in the Holdenhurst Road. In addition to accommodation for over 100 cars he has sleeping accommodation for forty chauffeurs, so that visitors at that delightful resort will find every facility for having their vehicles completely under supervision during their stay.

REFERENCE has already been made in these pages to the pneumatic starting device lately brought out by the F. H. Smith Motor Accessories, Ltd., of Datchet. We are now able to give



an illustration of the apparatus, which is designed to be screwed on the dashboard, from which extends a small flexible pipe to the float chamber of the carburettor. Within the casing is a small piston, and by depressing the push button an increased atmospheric pressure is put upon the petrol

in the float chamber, and a larger supply is forced through the carburettor into the engine. It is claimed that not only does it replace the usual carburettor "tickler," but that, being an actual sprayer instead of a flooding arrangement, the usual trouble often experienced in starting a petrol engine is practically eliminated. Another important feature of the device is its value in instantly detecting the cause of missing or want of power in a motor while running on the road. If the lack of power is from want of petrol the engine will at once show the increased power because of the extra charge given by a stroke of the piston. On the other hand, if the want of power or missing be caused from electrical faults, the engine power will not be improved—in fact, an increase of petrol supply will tend to retard the engine if the charge is normal to commence with. The apparatus is neatly finished and can be easily fitted to any carburettor.

ON Saturday Queen Alexandra and Empress Marie motored from the station of Six Mile Bottom to Egerton House, on the outskirts of Newmarket. They were to have rejoined the train at Fordham at 5.25 p.m., but at nearly half-past six there were no tidings of the Royal party, and telegraphic inquiries failed to reveal their whereabouts. Mr. George Flanders, who had his motor-car in the station yard, was approached, and readily placed the vehicle at the disposal of the officials. Police Superintendent Winter, of Newmarket, was accordingly driven by Mr. Flanders in search of the Royal travellers, but, failing to locate them after proceeding a considerable distance, decided to return, and the royal cars arrived at the station from another direction at the same time over an hour late. The Queen on alighting was met by various officials, and her Majesty expressed her regrets that there had been a prolonged delay owing to a wrong road having been taken. It also transpired that a tyre of one of the Royal cars was badly punctured during the journey to Fordham, and an emergency cover had to be fitted before the car could proceed.

EARL AND COUNTESS CAIRNS, who have been lately staying at Pau, have gone for another motor tour through the South of France.

AT the City Motor Works at Elgin, Mr. A. Paterson has made considerable extensions for the coming season. His garage will have accommodation for between thirty and forty cars.

THE automobile battle of flowers which took place recently in the Jardine Public, Nice, was the most beautiful fête of the season. There were over fifty cars taking part in the battle, many of them being very beautifully decorated.

LYXAVON is a liquid soap for motorists introduced by Messrs. Sydney Maitland and Co., of Prospect Place, Barnsbury, London, N., the merits of which were amply demonstrated at Cordingley's Motor Show. It quickly brings about the desired effect, and has the advantage of being pleasant to use.

A CORRESPONDENT at Bangkok, Siam, reports that the trade in motor-cars and in motors to be placed in the hulls of locally-built boats remains extremely brisk, and hardly a week elapses without several cars and half-a-dozen motors for boats arriving at Bangkok. Many of the cars are French, supplied through the agency of British firms, but most of the boat motors are of British make.

SOME alarm was caused in Pall Mall on a recent evening when an alarm of fire was given at the old War Office buildings. It is understood that the cause of the outbreak was a spark from an adjoining chimney falling on some matting which was placed over the roof of the building, which is in the course of demolition to make way for the new clubhouse of the R.A.C. Considerable damage was done to the roof, which eventually fell in.

THE Car and General Insurance Corporation, Ltd., which has done much for motorists in connection with insurance matters, now issues an "unlimited" policy granting indemnity from damages through mechanical breakdowns, accidental injury to tyres, lamps, accessories, &c., insurance of paid drivers, medical expenses, damage by fire or explosion, accidental damage during transit by rail or water, loss of car and claims by the public.

A SIMPLE and yet troublesome difficulty occurred with a motor; a run of about ten miles had been taken without any disturbing element, but when an attempt to start on the return journey was made, the engine refused to run. After trying the usual things, a more minute examination was made of the carburettor, and quite a seating of water was found in the bottom; this was dried out and a start made. At first it seemed a puzzle how, even during a recent storm, this deposit could have got where it did, but on looking over the bonnet a small hole was found that solved the mystery.

MESSRS. MERCREDY, PERCY, AND CO., LTD., of 34, Lower Abbey Street, Dublin, and 516, Birkbeck Bank Buildings, High Holborn, W.C., have recently issued a new edition, making the fifth, of "De Dion-Bouton Motor Carriages: their Mechanism and How to Drive Them," by R. J. Mercedy. This book has been again brought fully up to date, so as to cover the new models of these vehicles introduced up to the end of the year 1907. It has been considerably increased in size, the idea of the author being to enable the user of any type of De Dion car, from the earliest to the latest, to find in the booklet answers to any question which may arise regarding the adjustment or repair of the car, of whatever age.

THE following census of motor vehicles was taken by Mr. R. B. Robertson from his office overlooking the Thames Embankment, London, between the hours of 10 and 11 on the morning of April 2nd. During the hour 391 motor vehicles passed along, these consisting of 223 taxicabs and 168 private carriages, comprising thirty-two different makes. The total of 168 was made up as follows:—Daimler, 26; Renault, 21; Panhard, 16; C.G.V., 11; Mercedes, 10; Electromobiles, 8; Delaunay-Belleville and Darracq, 7 each; Napier and De Dion, 6 each; J. and B., 5; Dennis, Argyll, Clement and Siddeley, 4 each; Talbot and F.I.A.T., 3 each; Deasy, Hotchkiss, Gregoire, Rochet-Schneider, Mors, Humber, Brasier and Lanchester, 2 each; Gobron-Brillie, N.E.C., Nagant-Hobson, Unic, Berliet, Prunel and Minerva, 1 each.

CONTINENTAL NOTES.

British Motorists in France.

Among the recent visitors to France from England are:—The Duke of Westminster, Major Cowes, Mr. Percy Wyndham (75-h.p. Mercedes), General Field (40-h.p. Mercedes), Major Cardwell (30-h.p. Renault), Col. W. H. Fergusson (30-h.p. Panhard), Sir John Gladstone (45-h.p. Siddleley) and Mr. and Mrs. Mosenthal (40-h.p. Delaunay-Belleville).

Electric Motor Fire Engines in Berlin.

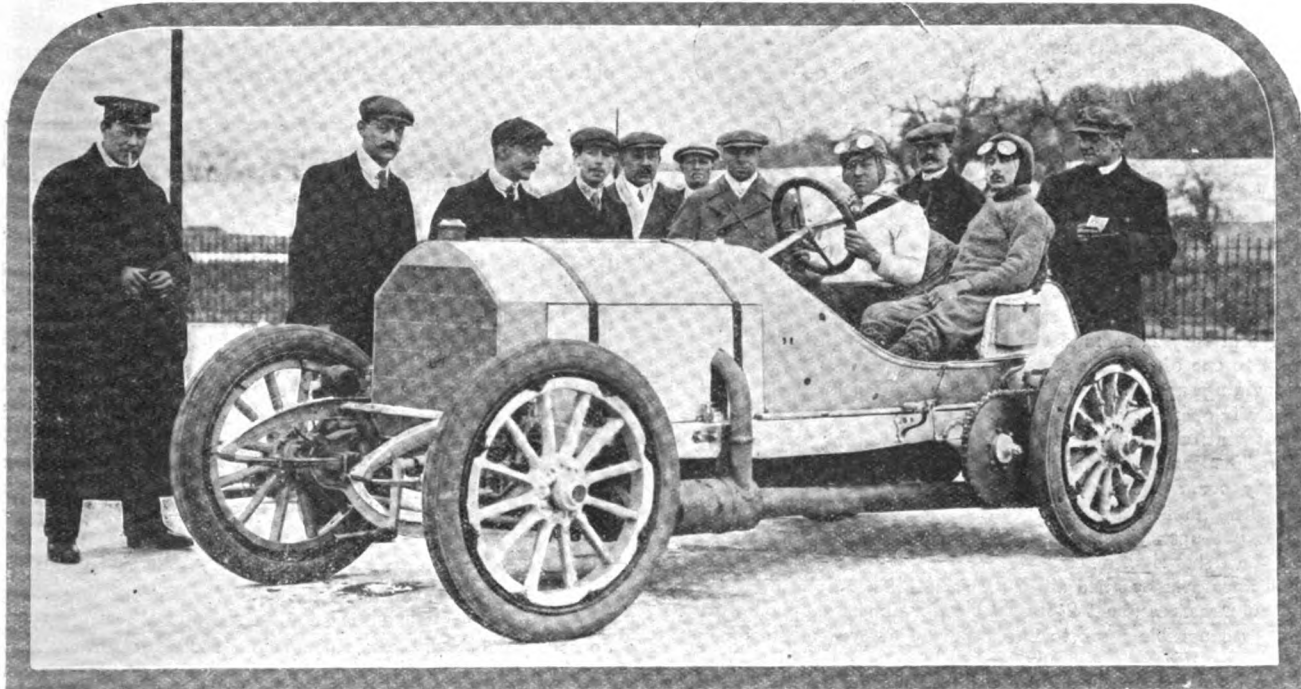
About two years ago the municipal authorities of Berlin granted a sum of £2,500 for the purpose of experiments with self-propelled fire engines, and Herr Reichel, the chief of the fire brigade, decided to have a steam engine and an electrical vehicle built for the purpose. Both vehicles have been subjected to long-distance runs, and the results are embodied in a report recently issued by the chief officer. As far as the electric fire engine is concerned, Herr Reichel states that as a rule it made two journeys daily. The runs were not merely limited to the city and suburban districts, but were extended to numerous localities situated at a distance of from 22 to 25 miles from Berlin. For instance, journeys were repeatedly made to Oranienburg, Zossen,

King Edward in Spain.

On the 10th inst. King Edward, attended by General Sir Stanley Clarke, left Biarritz with a few friends in motor-cars for an excursion into Spain. The Royal party passed through Behobie, the last French village on the old post road from Bayonne to Madrid, then ascended the valley of the Bidassoa, the boundary between France and Spain, which they crossed near the historic Isle of Pheasants, the scene in 1659 of long international conferences which lasted for four months and culminated in the Peace of the Pyrenees. The island has become extremely narrow owing to the gradual encroachment of the water. The trip was continued through the Spanish plain to the village of Navarta. The return was made by the way of the Mana Pass and the Basque villages of Espelette and Cambo. The drive was favoured throughout by fine weather.

Miscellaneous Items.

It is reported that a new 65-h.p. Mercedes car fitted with a novel design of engine is about to be put on the market.—The first Renault motor-cab in Berlin was put in service on the 7th inst.—The French Automobile Club has decided to hold the annual event known as the Coupe de la Presse on the Dieppe



Record Breaking at Brooklands.—Rosta Preparing to Start on his Mercedes.

Bernau, Potsdam, &c. The principal object of these distant runs was to thoroughly test the motors and the battery on hilly and badly paved roads. The motors enabled the engine to mount all gradients admirably. During a single week in June, 1907, the vehicle covered a distance of 611 miles, that is to say, almost the same mileage as is traversed by a horsed steam fire engine on an average in a year—620 miles. The chief officer has now resolved, as a result of the experiments, to introduce electric fire engines for use in the inner parts of the city and the near suburbs, leaving steam motor fire engines for employment beyond those districts.

The A.C.F. Grand Prix Race.

It is announced that the Mors Company, after abstaining from races for some years, is building a trio of cars for this year's A.C.F. Grand Prix event, and that Jenatzy will probably be seen at the wheel of one of the vehicles, which will be fitted with four-cylinder engines, 155 mm. bore by 170 mm. stroke. Ignition is by low tension magneto, the clutch is of the Mors metal band type, and the transmission by a three-speed gear-box and side chains.

circuit on August 2nd, 3rd and 4th next.—The German Imperial Automobile Club recently held its annual meeting in Berlin, when it was announced that the Club has now nine life members, 1,210 ordinary members, forty-three lady members and 385 extraordinary members. The Club issued during the year 3,300 certificates to tourists wishing to cross the boundary under the tryptique system, against 1,800 the previous year.—The Dutch Automobile Club announces that it will probably this year replace its annual Scheveningen automobile week by a commercial vehicle and fuel economy test.—Considerable interest is just now being shown in a twin pneumatic tyre for industrial motor vehicles which is being developed by the Michelin Company.—The death is announced from Monte Carlo of M. Michel Werner, one of the inventors of the Werner motor-bicycle, at the early age of forty-six years.—A motor-bus service is shortly to be started between Fiume and Trieste, Austria.—A series of flying kilometre speed trials was held by the Algerian Automobile Club near Algiers on Sunday last. The best time of the day (29 sec.) was made by Gerin on a Renault.

Accessories for Spring Touring.



THE delightful weather of Monday—coming after a week-end which was dreadfully dull and cheerless in London—revived hopes for Easter touring, and has caused many a car to be overhauled in anticipation of pleasurable times in the country during the next few days. With the coming of Easter motor-cars will return to the road in increased numbers, and many motorists who have allowed their vehicles to remain in the garage during the winter will find several renewals in their equipment are required. In many cases these will not be obtained until Necessity drives them to the expense; but the wise person will take early care to acquaint himself with the conveniences and comforts brought out by firms who have specialised on the accessories of the automobile. Hence the review of such novelties which we give on the present occasion, reserving some other useful devices for reference in our next issue.

A New H.F. Vulcaniser.

Messrs. HARVEY FROST AND Co. have raised the practice of vulcanising tyres into an exact science. They not only advise motor traders and motorists with regard to the treatment of faulty tyres, but they have organised a technical branch for the instruction of repairers which may be dignified by the name of "Academy." There men are being equipped with the necessary knowledge to enable them to become experts in the use of the vulcaniser, and an acquisition to those firms able to claim their services. While thus developing that part of the tyre repair business which is concerned with trade on a large scale, the firm have also catered for the motorist possessing only one car or so. For him they have reduced their system to one of extreme simplicity, providing appliances of a handy and easily operated character. Their latest introduction is the H.F. "Baby" vulcaniser, shown in Fig. 1, ready for a tube repair. Compared with the first apparatus of this class put upon the market, this is indeed a lightweight machine.

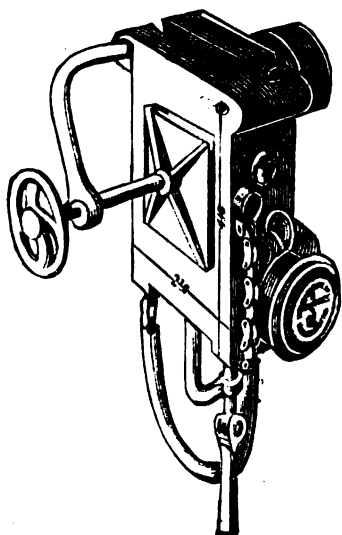


Fig. 1.

The original apparatus weighed about 4 cwt.; this is only a few pounds in weight. It measures about 2½ in. by 4½ in., and is supplied with a series of interchangeable faces to fit any make of tyre moulds, being obtainable for any form. Thus any portion of the crown of the tyres or the sides right down to the bead can be easily and quickly repaired by means of the "Baby" vulcaniser. Its portability and efficiency should warrant it becoming regarded as an indispensable part of the car equipment, for it can be stowed away in the tool box or in any odd corner of the car. Should a cut or burst occur, it can be readily repaired, the steam being raised to the necessary temperature in a very few minutes by the use of a small quantity of methylated spirits. Thus the troubles associated with tyres can be permanently overcome when on tour, and the fact that the device is sold at a very reasonable rate is another factor that should lead to many inquiries being sent to Messrs. Harvey Frost and Co.'s headquarters, 39, Great Eastern Street, London, E.C. They have several demonstrating centres, where it can be seen in operation and maintaining the claims put forth on its behalf by the inventors.

Specialities for Motorists.

During recent years the motor department of the EAST LONDON RUBBER COMPANY has grown to good dimensions, the concern having striven to supply novelties of real value to motorists. For the present year they are recommending many standard goods, such as the Amac carburettor, for which they are the metropolitan selling agents. This is specially intended for use with motor-cycles and tri-cars. They have also the Kerry distributor, a feature in connection with which is that the low tension brushes can be taken out without interfering with the wires. The internal high and low tension contact bobbin can be easily withdrawn for cleaning purposes. The "Kerry" wind-

screen, Hay's electric vulcaniser, the Stewart speedometer, and other specialities are also stocked at their showroom in Great Eastern Street, London, E.C., where is a large assortment of Stepney wheels, Brampton, Coventry, and Renold chains, &c. The East London Rubber Company have also a repairing shop, in which they specialise on making replacements to pattern—a department in which they have attained considerable distinction.

The Gabriel Horn.

Messrs. BROWN BROS., LTD., of Great Eastern Street, London, E.C., inform us that the King is now using the Gabriel horn on two of his cars, and is also having another one fitted to a third motor-car. This Royal appreciation of a very resonant and musical motor-alarm will doubtless induce many motorists to consider the adoption of the device, which is illustrated in Fig. 2. The alarm is actuated by the exhaust, and the appliance consists of a single tube sub-divided into three chambers, from each of which a distinct tone is produced. The exhaust gases are received into an expansion reservoir which is in the horn itself, from which they are distributed evenly to the three compartments under a steady pressure, when a far-reaching alarm is produced. An important point is that the volume of sound is always under the easy control of the operator, so that he can give the comparatively unobtrusive alarm advisable in city traffic and a more far-reaching tone



Fig. 2.

necessary when in the country. The remarkable freedom from complicated parts and minor matters which would be likely to get out of order is an important merit, and the Gabriel horn can be attached to any make or size of car. It can be fixed in any desired position, and is manipulated by means of a pedal from the floor of the vehicle. By this means a wire cord is made to operate a valve which opens the pipe of the horn, closing the silencer exit simultaneously; thus the whole exhaust is directed through the horn. Just as in the Gabriel horn Messrs. Brown Bros., Ltd., have an accessory by which the motorist can have complete control and modulation of his alarm, so in their Autodipee lamp the firm have a light which can be equally well modified in town traffic. To this, however, we hope to make reference in an early issue.

A Novel Valve Grinder.

Several useful adjuncts to the equipment of the motorist have been introduced by Messrs. Markt and Co., who are well identified with the Jones Speedometer and other acknowledged standard fittings. An excellent appliance to obviate the loss of power, petrol and temper resulting from neglect of the valves of the engine is now being brought to the notice of motorists by Messrs. Markt and Co., whose London headquarters are at 6, City Road, E.C. This is the Brown Valve Grinding Set, illustrated in Fig. 3. The object of the device is to make easy the task of grinding in a valve, while the work can be done in about one-fourth of the time required by more usual methods. The outfit is simple. It consists of the grinder itself, the spring valve lifter, and a small box of compound furnished for use with the apparatus. This compound is a combination of lubricant with a high grade material to produce

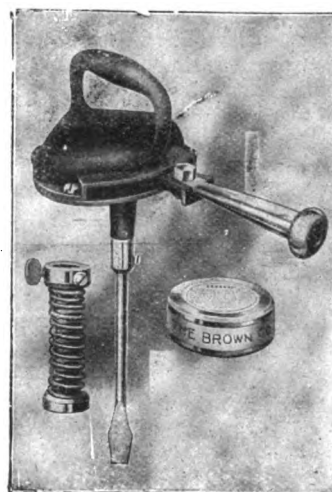


Fig. 3.

friction, and provides an excellent abrading material. The Brown valve grinder is easily dismounted, and can be carried on the car without inconvenience. Little skill is required in the use of the tool, by which good work can be done in a minimum of time.

The Turco Electric Vulcaniser.

Introduced towards the close of last season, the Turco Electric Vulcaniser of the UNION RUBBER CHEMICAL CO., LTD., of Shaw Street, Ashton New Road, Manchester, has attracted considerable notice. The task of preparing the device for the vulcanising operation is simple, it being merely connected by means of a flexible cord to any 4-volt accumulator, care being taken that the latter is fully charged. As soon as the connection is made, the machine is ready for the repair, an operation which occupies twenty minutes, and requires no attention. In Fig. 4 the Turco Electric Vulcaniser is shown at work upon an outer cover. It is designed to deal with extensive repairs on both air tubes and outer covers, and is fitted with flat and concave vulcanising plates both $1\frac{1}{2}$ in. by $1\frac{1}{2}$ in., in the No. 1 4-volt. type. The inner tube repairs are performed on the flat plate, while, as can be seen from the sketch, outer cover repairs may be vulcanised without the removal of the tyre from the wheel. In the No. 2 8-volt type the amount of current absorbed is at the rate of 3 amperes per hour at 8 volts—a voltage readily obtained by coupling two 4-volt. accumulators in series. Although the ordinary ignition accumulator installed on the car is sufficient for the purpose, the Union Rubber and Chemical Co., Ltd., have brought out a new accumulator, which is specially constructed for rapid discharge—a fact which renders it particularly useful where a number of consecutive operations are required to be effected.

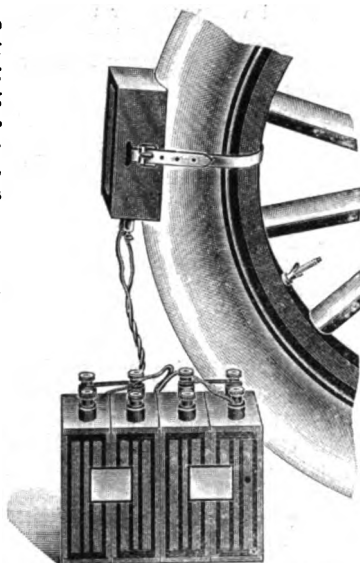


Fig. 4.

Tools and Similar Accessories.

The name of Messrs. BRANSOM, KENT AND CO., LTD., is well known to our readers, and they have several interesting accessories for the new season. Among these is the B.K. wipe contact-breaker for use in connection with trembler coils, a new feature being the use of a spring in place of the rollers used in some earlier types of contact-breakers. They have many types of exhaust-valve removers, a new one being the B.K. Simplex valve spring compressor. At their extensive show-rooms, 40, Great Eastern Street, London, E.C., we had the opportunity a few days ago of inspecting their complete range of horns of various types, including a new model of the "Universal" horn, which emits a loud tone not at all unmusical. It is of very elegant design, and is supplied nickel-plated or of polished brass, complete with 3ft. 3in. of flexible metal-braided tubing, together with a detachable cover to the mouth. This horn can be fixed either on the right or left of the car, and is likely to be much seen on the road during the coming season. Another extensive range of specialities for which this firm is responsible is in connection with jacks and other tools. The B.K. double extension light motor jack is being brought out for the convenience of those who have small cars and do not wish to add to their expenses to an inordinate degree. The B.K. jack is supplied at a reasonable price. When closed it is 8 $\frac{1}{2}$ in. in height, has an instantaneous lift of 11in., and a geared lift to 14in. At this season of the year mention may also be made of the back luggage carrier, made to fold conveniently at the rear of the car, and to let down when required for trunks, etc. This is made adaptable to all makes of bodies. Besides the usual sparking-plugs of well-known makes, Messrs. Bransom, Kent and Co. are placing upon the market the Bo-ko. The body of the plug is steel nickel-plated, and the solid nickel electrodes are so fitted that the sparking points cannot be deranged. Tool kits, and a score of other accessories indispensable to travelling motorists, are also to be seen at the firm's show-rooms, or provincial motorists will find them illustrated in the new catalogue issued during the present week.

Wind Screens.

Under the guidance of Mr. H. H. Dixon, manager of Messrs. LOWE, BEVAN AND CO., Birmingham, our Midland representative recently went through one of the largest and oldest coach-builders' ironmongers' factories in the country. The firm were one of the pioneers in

turning attention to the motor trade, and now their motor department is the most important side of the business. The journey from shop to shop was an education as to the detail and the infinite number of patterns necessary to carry on a large business of this description. As the firm have comparatively recently removed to Scotland Street, they took the opportunity of fitting up their works with the most modern labour-saving machinery and appliances. Owing to the nature of their business, their factory is really a series of small shops, and a number of electric motors of from 15 to 25 h.p. are distributed throughout the premises to drive the necessary machinery. There are something like twenty departments, such as polishing, close-plating, electro-plating, patterns, wind screen, woodwork, forging iron parts, enamelling, warehouses, smiths' shop, beading shop, show-rooms, etc., etc. In the latter we were shown a number of new designs and devices that are shortly to be placed on the market. One of their recent productions is the "Royal" patent wind screen, suitable for landaulette or limousine. The fittings are so constructed that the front folding glass can be set forward at any angle with a single movement, and by the same movement in the opposite direction the swinging glass can be stored away in the roof of the canopy. The company are having a large demand for their hoop-stick separators, which prevent the canvas from chafing when the hood is closed. Within the last few months the firm have taken in a wing adjoining, which they have fitted up as a machine and forging shop, and are now in a happy position, being able to manufacture on the premises everything they require from the raw material, thus saving a great amount of time. The firm have been working overtime all through the winter, and have not known for years what it is to be slack. Mr. Dixon informed us that during the last few months they have, amongst other things, turned out over 1,000 wind screens.

Trunks for the Holidays.

No holiday equipment for the car would be complete without attention to the requirements of the luggage carried by the motorist. Messrs. J. B. BROOKS AND CO., LTD., of Great Charles Street, Birmingham, are catering particularly in this direction, and have several excellent novelties in grid trunks, limousine roof and canopy trunks, and other specialities economising space and conducing to comfort and convenience on the car. In Fig. 5 we illustrate a pair of the firm's weather-proof grid trunks fitted to a 35-h.p. Daimler. These weather-proof trunks, shaped to the body of the car, and coloured to harmonise with the general decorative effect, are well known. In this the lower trunk has, in addition to the customary

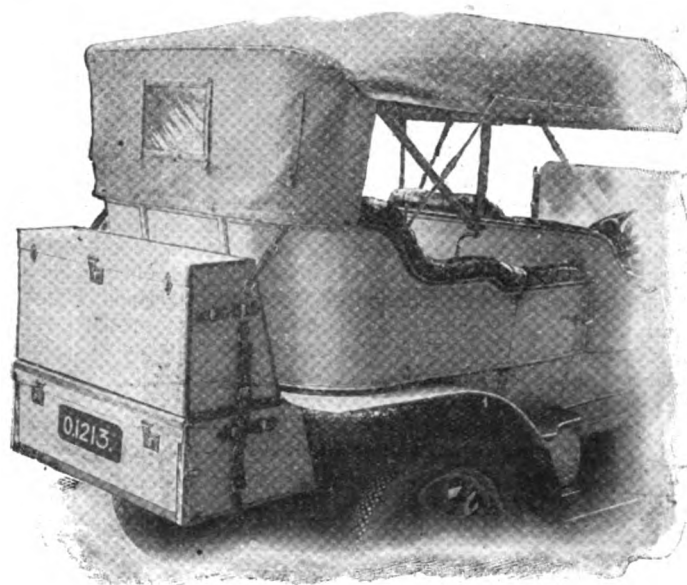


Fig. 5.

lid, a folding front, which can be opened independently of the top lid; thus the contents are made available without disturbing the upper trunk in any way. In connection with this the firm have patent trunk-holders, which secure the trunk in a very neat way, securely holding it in position. They are easily unfastened, and should contribute to the comfort of the motorist on tour. Circular tyre boxes are another useful speciality, these being intended to economise space to the best advantage.

In addition to the novelties mentioned on the foregoing pages, others have been found in the showrooms of well-known firms, while several that were exhibited at the recently Cordingley Show deserve extended reference. Hence the following notes on specialities which have lately been the subject of considerable interest amongst practical motorists anxious that the various additions to their car equipment should be thoroughly up to date.

Headlights and Accessories.

Many interesting specialities were shown by the MOTOR ACCESSORIES COMPANY, including the "Fanphare" lamp, "Auto" lamps, the "Turn-

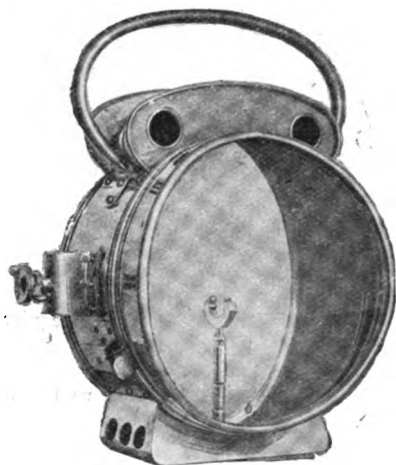


Fig. 6.—The "Fanphare" Lamp.

over" generator, new Ardee "Tell-tale" lamp, "New Era" fire-extinguisher, &c. The Ardee tail light indicator is an ingenious and reliable means of getting over the difficulty associated with the tendency of tail lights to go out and leave the motorist to pay the fine and costs. It can be fixed to existing lamps, and operates by expanding the air in a small chamber fixed over the flame in the tail lamp. The expanding air is carried to the front of the car by a small tube. There it lifts a shutter from over an aperture fixed in the lamp on the dashboard. When the tail light fails, the air quickly cools, causing the shutter to fall and obstruct the light of the bull's-eye, thus informing the driver of the risk he runs. For use in garages and motor-houses of large degree the "Waste Not" handcock of this company will be found useful. This tap fits on the hosepipe, and by holding the handle, a good supply of water can be directed on cars, &c.; when it is dropped from the hand the supply is automatically shut off, thus preventing waste. A leading novelty, however, was the "Fanphare" headlight, in which the rays of light are directed in a fanlike configuration, securing the light being transmitted laterally in a horizontal plane instead of being emitted upwards to affect the vision of pedestrians and others on the road. This desirable result is secured without obscuring the lens of the lamp, and all the rays of light are utilised. A lens of plano-convex cylindrical form, with an appropriate reflector, are used, and altogether the construction and design of this new headlight are equally commendable. Tail-lamps, magnetos, sparking-plugs, and a host of other accessories make up a representative display in their showrooms at 55, Great Marlborough-street, London, W.C.

Cape Hoods.

The BRIXTON CARRIAGE BUILDERS, of 56, Railton Road, Brixton, London, S.W., had an utilitarian display of their Cape cart hoods. This is a department in which they have specialised for some years until they have attained a high position in the trade. The special point of the hoods is that they are covered with a waterproof material of double thickness, rendered the more impervious to rain and wet by the rubber coating between. At the back of the curtain of the hood a large window is provided; brass or nickel beading is around the edges, and special neck joints are also provided. Of excellent material and design, the hoods of the Brixton Carriage Builders were notable in the section of the Show in which they were on view. The hoods are remarkably light, consistent with their durable qualities, and more than 2,000 were made last year—certain evidence of their good reception by motoring experts.

The "Boreas" Air Compressor.

Among the novelties in the Gallery was the "Boreas" motor-car air compressor introduced by Messrs. LACY-HULBERT AND CO., LTD.,

of 91, Victoria Street, S.W. This compressor has been specially designed for use on the car, where it can be readily driven from a shaft by means of belt, chain, or gearing, or by coupling direct. Its speed may be 500 to 1,000 r.p.m. It will not overheat, is silent in action, and will pump air up to 300 lbs. per square inch. The compressed air may be stored in a cylinder of suitable size, and is then available instantaneously at any time for inflating tyres, starting the engine, operating control apparatus, supplying pressure to fuel or lubricant, and a variety of other purposes. If it is not convenient to fit the compressor to the car it may be driven by a small electric motor from any electric light circuit or by any small shaft in a garage, workshop, or private house, and a store of compressed air may be carried on the car and replenished when required. Motorists will admit that it is very important that the pressure in the tyres should be maintained at a proper point, and this can be readily and easily effected in a few minutes by the use of the apparatus, which should attract some considerable notice.

Messrs. Lyell and Co.'s Novelties.

Several distinctive features of interest were to be found on the stand of Messrs. J. C. LYELL AND CO., LTD., 55, Victoria Street, Westminster, London, W.C. Among these was the "Clair" silencer, which, in addition to efficiently securing its object, does so with an absence of sooting and back pressure, that constitutes a decided advantage. Some idea of its arrangement will be gleaned from the accompanying illustration (Fig. 7). A series of metal cups fit one into the other, but do not bottom, so that there is a space left between each. Holes drilled in the base of each cup allow the gases to pass through from one cup to another in succession. The end cup is formed with a pipe outlet, through which the gases ultimately emerge. The cups are held in position by an outer flanged case, which is bolted to a cover, which also has a flange, and carries a union for connecting the silencer to the engine. The noise caused by the exhaust gases is completely suppressed, and the power of the engine is in no way reduced. The escape of the gas is made direct. The silencer achieved distinction in the trials organised by the Auto Club de France, and has maintained its reputation since in this country. Several models of the "Patrick" water circulating pumps were shown, and special mention may be made of the "Ursus" tyres and bands, which Messrs. J. C. Lyell and Co. have marketed with success. The distinctive feature of this non-skid consists in the use of steel bars in place of the familiar round stud. These bars are so securely affixed to the steel back plate that they cannot be pulled out, and it is claimed that this form of protection has greater durability

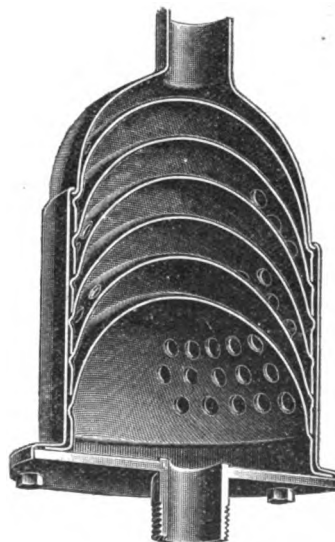


Fig. 7.—Section of the "Clair" Silencer.

than that which has become customary. Between the band and the cover a layer of asbestos cloth is placed, which will prevent the heat from reaching the rubber—a real point of excellence. In the electrical section of their display, the firm showed the "Zulu" change-over switch, which provides a complete interrupter for both circuits. This can be employed in conjunction with any magneto or coil, and can be adapted to any car. Among other accessories exhibited by Messrs. J. C. Lyell and Co., Ltd., were voltmeters, goggles, sparking plugs, metallic filament lamps, folding jacks, and, in fact, a very complete range of motor-car goods.

The Lubrimeter.

On the stand of Mr. J. E. GARRATT, 96, Southwark Street, London, S.E., was the Coventry Simplex motor to which we recently referred, and also the Lubrimeter, as illustrated in Fig. 8, in the form suitable for a double chamber engine. As its name indicates, this appliance is a device for showing the maximum and minimum levels of the oil in the crank chambers. This is done by means of a lamp fitted on the dashboard, and, as will be seen from the small inset drawing, showing a red or white light to demonstrate whether there is too little or too much oil respectively. In the illustration A B are two contact points through

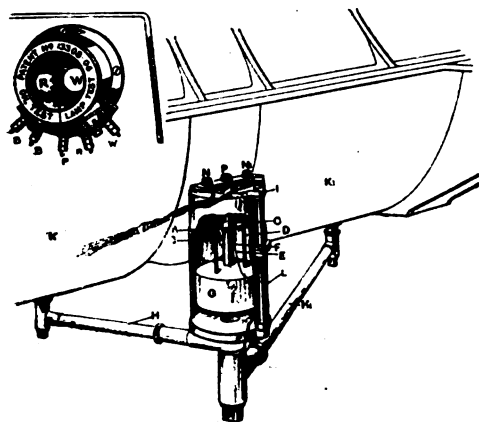


Fig. 8.—The Lubrimeter as fitted to a double-chamber Engine.

which electrical connection is made to the red lamp, the lighting of the white one being secured by C D. E is the lead wire; F the spindle up and down which the float G slides; H and H' are pipes leading to the instrument from the crank chamber, the latter being adjustable to any angle; I is the insulated plate upon which the terminals N and N' and P are fixed; two halves of the crank chamber are shown in K K; L is an adjustable rod for adjusting the float to any desired oil level; S is the switch for distinguishing the level of the oil. When the button is pressed the white light glows if the oil is over-abundant; if there is too little oil the red lamp becomes lighted; should the level be right there is no glow at all. Sa is the switch for distinguishing the electrical circuit, and when this is pressed and both circuits are in order both lamps glow. The adoption of this appliance will prove a great convenience to the motorist, offering, as it does, a check on all systems of petrol engine lubrication. By means of the electric lamp indicator on the dashboard he can ascertain the exact quantity of oil existing in the crank chamber, and so obviate foul exhaust and similar objectionable features. The use of the Lubrimeter will also secure economy in the use of oil, while the fact that it can be fitted to any car gives it interest to every owner and driver.

"Pushon" Specialities.

Mr. H. J. HARDING, of 211, Northumberland Park, Tottenham, N., and also of Paris, has several useful novelties, characterised by good finish as well as design. His "Pushon" connection for motor-car and motor-cycle tyres is a notable feature of his collection. This connection, when simply pushed over the valve, instantly makes an air-tight joint. The compressed air from the pump holds an intumed rubber lip tightly on the valve, and the greater the pressure the greater the "hold." We noted that the rubber lips are interchangeable, and can be easily refitted when worn (only after some months, however) by gripping the valve thread. A new plug and tyre tester is also marketed, the latter having a large gauge registering correctly up to 160 lbs. per square inch. The connection is on the principle already described, and the gauge is of a reliable description. Mention may also be made of Mr. Harding's triple-band brake for motor-cycles. This is fitted concentrically to the spokes on either hub, a split ring being passed round inside the hub spokes, and the brake clamped together by ten screws. Vulcanising fluids and repair outfits are also included in Mr. Harding's stocks.

Pettett's Safety Filler.

PETTETT'S PATENT SAFETY FILLER COMPANY had a large exhibit of interesting appliances for motorists, the principal one being their patent safety motor filler, adaptable to all motor spirit-cans, to prevent the waste of motor spirit. At previous exhibitions we have fully described this appliance, by means of which filters are dispensed with, while the presence of a wire gauze prevents foreign matter getting

into the tank. It will empty and filter a two-gallon can of petrol in about 30 seconds. A car or container can be filled in the dark as easily as in the light, while the fact that it is impossible to overfill the tank lessens the danger of fire or explosion. At this stand the Kasmoid time-recording machine was on view, an excellent method of checking the time of employees which has been adopted in many motor works. Samples of the motor lubricants of the PURE OIL COMPANY, LTD., of Neasden, London, N.W., were also on view, as well as two excellent spanners—the "Gryp," a practical ratchet spanner which will successfully tackle the most awkwardly-placed nuts, and the "Newleva," for nuts in confined places, and which is able to turn those otherwise impossible to work except by hammer and chisel.

Bailey's Miloscope.

One of the novelties of merit is the miloscope, introduced by BAILEY'S MOTOR MILOSCOPE COMPANY, of 225, Oldfield Road, Salford, Manchester, and illustrated in Fig. 9. This is made under Fielding's patent, and shows the speed in miles per hour, as well as indicating the total mileage of the trip. It is remarkably clear from complicated mechanism, and has only one bearing and one moving part. The instrument depends on centrifugal force, as indicated if a vessel of liquid is rapidly rotated round its vertical axis. In such a case the liquid will fall in the centre and rise up the sides of the vessel, the surface assuming a concave form. The miloscope acts on this principle. It is a revolving vessel, consisting of two parts, an upper and a lower connected together by three tubes, one of which in the centre is of glass, the outer ones of brass. The lower chamber and the tubes are filled with liquid; on revolving the instrument round its vertical axis the liquid falls in the glass tube and rises through the brass tubes into the upper vessel, taking up a level varying according to the speed. A float in the centre tube acts as a pointer, and the speed can be read off a scale. The scale is longer than that on any circular dial indicator, and the divisions are practically equal in length. The instrument is hermetically sealed; the liquid cannot freeze or evaporate. The Miloscope runs on one ball bearing only. It is instantaneous in action and quite

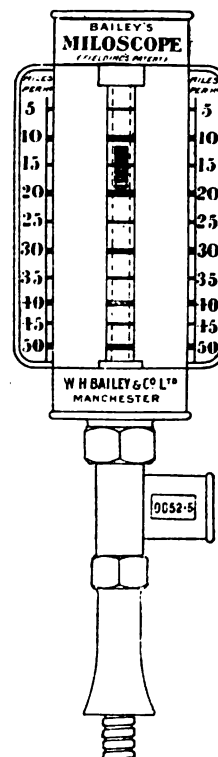


Fig. 9.—Bailey's Milometer.

dead-beat, giving good open indications from zero to fifty miles on a length of scale $4\frac{1}{2}$ in. The instrument is driven by friction from the front wheel of the car through a flexible shaft. It is easily fitted, and various forms of attachment are supplied by the makers to fit any make of car. Other specialities of this firm include Bailey's "open-door" tyre carrier—an effective device for carrying Stepney wheels, Cave's detachable rim, or the Rudge Whitworth spare wheel. Motor watches, tyre testers, and lubricators have also received the attention of this concern.

The Ara Vulcanising System.

Demonstrations of the Ara system of vulcanising tyres without heat have recently attracted considerable attention to the ARA MATERIAL PATENTS AND MANUFACTURING CORPORATION, whose headquarters are at 33, Chancery Lane, London, E.C. Fig. 10 illustrates the whole mechanism involved, from which it will be seen that it is "simplicity itself." By its means repairs can be effectually made to slits in inner tubes, punctures, bursts, cuts in covers at a trifling cost, and in the minimum time. The principle involved is that of the collection of small pieces of raw rubber in a container, vulcanising them by immersion, and welding them together so as to produce a homogeneous material of high-tensile strength. This is applied by pressure to the tyre

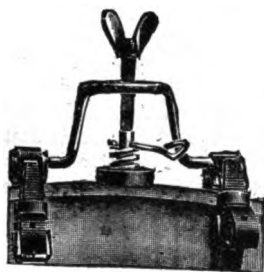


Fig. 10.—The Ara Vulcanising Outfit.

to be repaired by means of the thumbscrew shown in the illustration, and the work is done in the short space of about five minutes. A new exhibit in the Ara display was a patent motor vulcanising stand for use in garages, workshops, &c. This is to enable the operator to readily deal with the heavier class of vulcanising work on covers and tubes. It is provided with three presses, enabling three different repairs to be accomplished at one time, thus considerably facilitating the work of repairers.

Petrol.

At their stand in the Show, Messrs. CARLESS, CAPEL AND LEONARD had samples of their standard petrol for this country, as well as of petrol suited for use in tropical climates. Fuel oil for metallurgical purposes, the "Carline" lubricating oils for the bearings and cylinders of motors, the "S." lubricating oil for air or water cooled motors, and refined French colza for carriage lamps, etc., were also shown. The firm had also a large selection of their petrol storage tanks, which are well known to the trade and the motoring public. They also showed their patent benzine safety lamp. The latter has been especially designed for lighting buildings where motor cars are kept, and can be readily lighted without being opened, and locked so that only a powerful magnet can open it.

The Morris Non-skid.

The MORRIS PATENT NON-SKID TYRE SYNDICATE, of 65, London Wall, London, E.C., take advantage of the occasion to make known the special points of the Morris non-skid tyres, as well as of an improved form of electric lamp for motor-cars. The latter has a new form of lens made of Bohemian glass, into which a 6-c.p. lamp is inserted. The effect is to give a light of exceptional penetrating power at a reasonable price. The Morris non-skid possesses some points of special interest in view of the agitation now going on with regard to studded tyres. In this new type the central part of the tread is grooved, and a chain inserted, the effect of which is to give immunity from slipping. Another form consists in the insertion of small metal troughs about two inches long by an inch wide and three-eighths of an inch deep. These can be of aluminium or heavier metal as desired, and are filled with solid material. The troughs are fixed on the same principle as the familiar metal studs, and each is attached to the other by a bolt, the whole device constituting, it is claimed, an efficient preventative of skidding.

Russian Petrol.

In the Gallery, rows of unfamiliar yellow tins made known to motorists the presence of the PETROLES DE GROSNIY (RUSSIE) SOCIETE ANONYME, of 101, Leadenhall Street, London, E.C., who are placing on the British market the P.G.R. motor spirit in two-gallon tins. It is claimed that this is a source of power for internal-combustion engines that will not soot and that will prove satisfactory as regards speed, power, cleanliness, and economy. The company intend to popularise this Russian product among British motorists during the coming season,

and their representation at the Exhibition should go far in that direction. The annual production of the company is approximately nine million gallons, and three grades of spirit are to be offered, viz., .705-.710, .725, and .750-.760. The first will be of a low density, and will generally be of the .705 degree, the second grade will be uniformly .725, whilst that in the third category will be specially suited for commercial vehicles. Tests and experiments on the Continent have given the new supplies a favourable introduction, and its advent to this market is a matter of universal interest and importance.

The Collex Wheel.

Fitted to a car which was available for daily trial trips, the Collex wheel suggests further developments towards finality in motor-car construction. The rim is collapsible, and enables the cover to be taken off and a new one put on again in a few seconds without any stretching of the beaded tyre or nipping of the inner tube, thus obviating risk of damage. When the tube has been placed in the cover the collapsible rim is placed inside. The security bolts are then put in, and by means of a lever the rim is made up complete. Altogether the device is both simple and effectual. We have seen a car fitted with four of these wheels, which has already run 500 miles with success. With the Collex wheel it is really not necessary to carry a spare wheel, as the tyre can so easily be taken off the collapsible rim and another put on without difficulty. The PATERSON MOTOR WORKS, 40, High Row, Darlington, are the agents for the device.

Speed Indicators.

In connection with instruments for the accurate and reliable registration of the speed of motor-cars, the name of Messrs. S. SMITH AND SON, LTD., of 9, Strand, London, W.C., naturally occurs to the ardent motorist. Their stand at the Show was as complete as ever, and gave a full representation of the numerous specialities offered by the firm. Visitors to the Exhibition were informed of some reductions in prices about to be established, which should have the effect of increasing the hold which their speed indicators and other instruments of precision have upon those who indulge in the joys of speed. These lessened prices have been made possible owing to the gradually increasing output, and the system of standardisation which has been closely followed at the works until economy in production has been brought down to the minimum. It is now possible for the much-quoted "man of moderate means" to obtain an indicator registering up to 40 m.p.h. complete with mileage recorder and clock, as shown in Fig. 11, for a really low price. The acceptance of such indicators to controvert police evidence is now almost a rule in some courts, and, in any case, the indicator is a useful piece of evidence where constables are prone to economise in the use of truth.

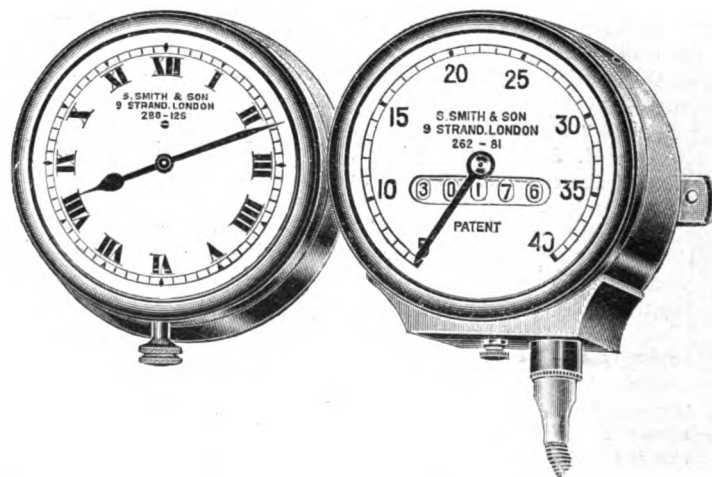


Fig. 11.—Smith's Combined Speed Indicator and Watch.

Reference may be made to some of the specialities of Messrs. S. Smith and Son. Their "Runabout" indicator records speed accurately up to 40 m.p.h., and a total mileage up to 10,000. The same mechanism is employed as is used in the firm's "Perfect" indicators, which have been supplied to many Royal motorists. This cheaper form is recommended as especially serviceable for small cars. In addition to speed indicators, the exhibit included the "Perfect" communicator for giving directions to the chauffeur by merely pressing the button in the interior of an enclosed car. Thereupon a bell rings and a light appears on the dial opposite the driver. A combined electric and bulb horn and a new milometer are other new specialities for 1908.

Correspondence.

[Letters to the Editor should be addressed to the offices, 27-33, Charing Cross Road, London, W.C.]

DETACHABLE RIMS v. DETACHABLE WHEELS.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—“Old Motorist,” in your issue of the 11th inst., complains that the detachable wheels do no more than transfer the changing of the tyre from the palpitated flurry of the road to the spacious leisure of the garage; but surely even this is no small thing. There are many things that if done slowly are by no means irksome, while if done in a violent hurry they are extremely distasteful and even dangerous to health. For example, most of us devote from two to three hours a day to eating, and most of us enjoy it, but if this same amount of eating had to be done in a quarter of an hour we doubt very much if this necessary occupation would be so popular as it is now.

Of course everybody admits that if tyres never wore out, or if they could be changed and inflated more easily than is now the case, it would be a great improvement, if at the same time the facilities were not accompanied by other serious disadvantages. But in the present state of the art of tyre making it is surely desirable to enable the motorist to eliminate the delays on the road due to tyre trouble and to ensure that the tyre shall be changed under garage conditions giving ample time and proper facilities for the work, thus avoiding damage to the tyre and unnecessary strain to the operator. —Yours truly,

JOHN V. PUGH.

THE EXPIRY OF LICENCES.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—I have just had a summons from the police for driving a motor-car after the term of my licence had expired. It was taken out just over thirteen months ago with the London County Council and had run out without any notification being sent to me of the fact. To make matters worse my employer has also been served with a summons for employing an unlicensed driver. I should be glad if you would inform me as to the maximum penalty to which each of us is liable, and whether it is in order for the police to summon the employer for something which is not his fault but entirely the act of the forgetfulness of another person. —Yours truly,

CHAUFFEUR.

[As we pointed out in our issue of the 21st ult. the London County Council is one of those authorities which do not trouble to inform the holders of motor-car licences as to the expiration of the terms for which they are granted. In Section III., Sub-section I., it is a contravention of the Act to either drive without a licence or employ a person whose licence has expired, and the police are acting quite within their powers in this matter. The maximum fine allowed by the Act in each case is £20, but this has not, to our knowledge, yet been inflicted, considerably smaller sums being the rule.]

REMOVING SCALE FROM RADIATORS.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—I notice that you recommend the use of hydrochloric acid for cleaning out clogged water jackets and radiators, but I would like to draw your attention to a danger which is very serious, if an excess of acid be used: If a weak solution of acid be used, there is no doubt that in the first place it will attack the deposit from the water, but if there be an excess of acid, the metal of the radiator will be dissolved rapidly, and I would therefore advise that a very weak acid solution be used, say about 0.1 per cent., and that the dose be repeated until there are signs that the deposit has considerably diminished. I certainly would stop the treatment whilst there is still a little of the deposit left. —Yours truly,

A. DUCKHAM.

LIGHTS IN MOTOR-CABS.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—I venture to suggest to the various motor-cab companies the advisability of providing some means of lighting up the interior of their vehicles at night time. In a motor-bus it is possible to read one's evening paper comfortably, but in a motor-cab this is, at present, not possible. The convenience is one which would be, I am sure, much appreciated by many more than—Yours truly,

F. ROBERTSON.

TESTING CARS AND THE EMISSION OF SMOKE.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—I am extremely pleased to see that the Chief Constable of Coventry has issued a circular to the local motor-car manufacturers asking them to endeavour to abate the nuisance caused by the emission of smoke from cars out on test. During the past year or so this trouble has grown to a very serious one, and I sincerely trust that makers concerned will show their appreciation of the manner in which the police authorities have approached the subject by giving strict instructions to their drivers not to over-lubricate their engines when testing cars on the road. I quite appreciate the fact that cars must be tested, but there is

no reason why greater care should not be taken in preventing them from being a serious annoyance to the general public. —Yours truly,

A WARWICKSHIRE MOTORIST.

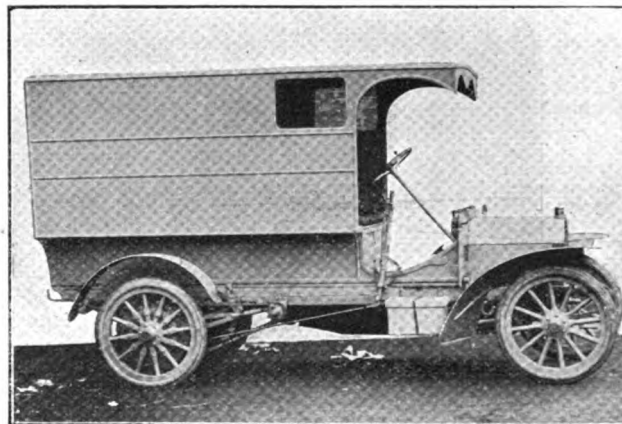
IGNITION TROUBLES.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—I should be glad if you, or any readers of the *M.C.J.*, could give me any help in connection with the trouble I am experiencing with the engine of my single-cylinder car. I find that sometimes the first spark from the plug is a very good one, but that the succeeding ones gradually get weaker. Is this the fault of the accumulator, coil, or the sparking plug? —Yours truly,

W. STEPHENSON.

[The most probable cause of our correspondent's trouble lies in the accumulator, as the spark being good at first and gradually getting weaker points to the battery being exhausted, though it has enough pressure to start. The result should be the same with both the new and the old plug; but, as our correspondent found the engine would start with his old plug and not with a new one, this result is most likely due to the fact that the points of the old plug were in better adjustment to suit the power available, which would be weak. The voltage of the accumulator should be tested with a voltmeter or four-volt lamp. If the lamp glows brightly for a few moments and then gradually dies away to a dull red, the accumulator requires charging.]



The Star Delivery Van recently supplied by the Star Engineering Company to Messrs. Lever Brothers, Port Sunlight.

The vehicle is provided with a 9-h.p. two-cylinder engine, and has three speeds forward and a reverse. Solid tyres 3½ in. diameter are fitted, and the van is built to carry 12 to 15 cwt. The machine has proved so suitable for the work it is intended for that the Star Company have received an order for a large number of the same.

THE SUNDAY SALE OF PETROL.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—I am glad to see that a clause has been added to Lord Avebury's Sunday Closing (Shops) Bill, protecting the sellers of petrol from the penalties which would otherwise have been enforced on them. While there are, of course, many motorists whose cars are in daily use, there are thousands of others whose opportunities for motoring are confined to the week-end, to whom the difficulty of obtaining supplies of spirit on Sunday would prove a real hardship. Even now, without any restriction on the sale of petrol, it is not an easy matter to procure supplies on Sunday, as I found out a year or so ago when returning home from a vacation in the North. We had got as far as High Wycombe, on the Oxford-London road, and, although I still had a quantity of spirit in the tank, I thought it wise to lay in a reserve so as not to be hung up on the road. This was easier said than done, however, as it was only after much delay that I found a place where petrol could be secured. —Yours truly,

W. T. RAWLINSON.

A LAD picked up the front lens of an acetylene car headlight on Sunday afternoon on the Hogsback. The owner can have the same on sending particulars to Mr. H. F. Knight, of Barfield, Farnham, who will transfer any reward to the lad who found it.

REPLYING to “Clifton,” who asks as to the prospects for a motor engineer going from this country to New Zealand, we learn from the Agent General for the Colony in London that he “is not advised that the demand for motor engineers is at all in excess of the supply.”

ROYAL.

THE Marquis of Salisbury, Sir W. H. Manning, the Acting Governor of the Nyasaland Protectorate, the Rev. Bruce Cornford, M.A., and the Rev. R. J. Campbell, M.A., have been elected as individual associates of the R.A.C.

New members of the Royal A.C. include His Highness the Maharaj Rana of Dholpur, the Earl of Malmesbury, Col. the Hon. E. Stuart-Wortley, C.B., Sir C. T. Metcalfe, Bart., and Capt. Sir C. J. Graves-Sawle.

A small sub-committee of the R.A.C. has been appointed to oppose the clauses of the Licensing Bill, so far as they deal with clubs.

The following gentlemen have been elected as stewards of the R.A.C. subject to their willingness to serve:—The Duke of Sutherland, K.G., Lord Stanley, C.B., Sir David L. Salomons, Bart., Sir J. H. A. Macdonald, K.C.B., Sir W. G. D. Goff, Bart., the Hon. Arthur Stanley, M.V.O., M.P., Col. H. C. L. Holden, R.A., F.R.S., Messrs. C. D. Rose, M.P., E. H. Cozens-Hardy, Charles Hardy, P. S. Foster, and F. P. Armstrong.

The R.A.C. Year Book Committee is now composed of Messrs. F. P. Armstrong, C. W. S. Crawley and the editor of the club journal.

At least two members of the R.A.C. are concerned in the recent Ministerial changes. The Earl of Crewe, who now becomes Secretary of State for the Colonies and leader in the House of Lords, joined the club last year. Lord Lucas, the new Parliamentary Under-Secretary for War, has been a member since 1905.

The regulations and entry forms for the speed race to be held in the Isle of Man in the early part of October have now been finally approved. The race is essentially a chassis race, and has been instituted as a sport.

MIDLAND.

HEREFORD has been decided upon by the Midland A.C. as the headquarters of the reliability trials at Easter. On Good Friday there is to be a run from Hereford to Symond's Yat, on the 18th inst. from Hereford to Tewkesbury, and on Easter Sunday from Hereford to the Speech House in the Forest of Dean. The reliability trial will take place on Easter Monday, the route being from Hereford to Ledbury, Gloucester, Newnham, Chepstow, and Monmouth, back to Hereford.

BRISTOL AND GLOUCESTERSHIRE.

THE annual report of the Bristol and Gloucestershire A.C. shows a satisfactory financial position and an increase of nearly forty members during the year, making a total of 142 at the end of the annual financial period. Reference is made to the fact that during the year the Cheltenham Town Council intended to apply for a speed limit order for the town, but upon conference with the club officials it was agreed that the latter should place warning signs at the main road entrances, whereupon the local authorities promised to withdraw their application to the L.G.B.

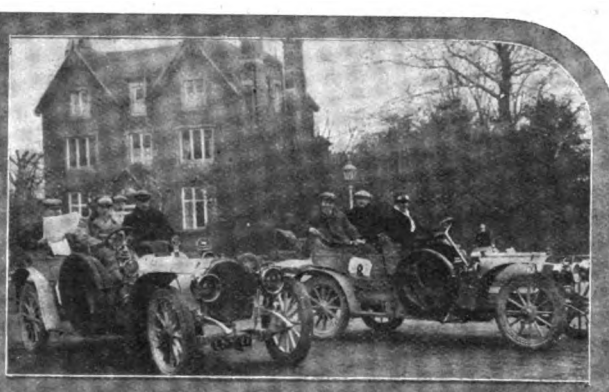
SOUTHERN.

A SUCCESSFUL house dinner was held on Thursday of last week, followed by a general meeting, in which the runs and competitions for this season were discussed. A large number of members, wishing to show their appreciation of Mr. W. Lorkin, the general secretary, made this the occasion to present him with a silver cigarette box and cigar case.

April 25th is the date of the opening run to the Glen Arms, Ewell.



Messrs. Oscar Cupper and Warwick Wright on their Metallurgique Cars.



The Porthos Cars.

THE CRYSTAL PALACE AUTOMOBILE CLUB'S FLEXIBILITY TRIAL.

Photos by

ing contest only. The two most important regulations are the following:—

"The race is for cars the D²a (diameter of the cylinders in inches squared and multiplied by the number of cylinders) of whose cylinders shall not exceed 64, i.e., whose R.A.C. rating is not greater than 25.6 h.p. Cars fitted with internal combustion engines shall not have less than four working cylinders."

"The minimum weight shall be 1,600 lbs., which shall exclude the driver, mechanic, petrol, oil and water, spare parts, spare tyres, and tools."

In connection with the Nottingham meeting of the Royal A.C. on the 9th prox. the following Nottingham firms have agreed to provide motor accommodation at a uniform rate (viz., to stand cars in garage, 1s. per night, washing 2s. 6d. each):—A. R. Atkey and Co., Ltd., Trent Street; H. Belcher, Parliament Street; Bennett and Co., 2, Talbot Street; R. Cripps and Co., Ltd., Arkwright Street; and the Welbeck Hotel, Milton Street.

MOTOR UNION.

A NUMBER of members have recently communicated with the Union on the subject of the claims which have been made upon them in connection with the use of cars which do not bear a licence plate in respect of certain patents of which Messrs. De Dion Bouton (1907), Limited, claim to be the owners in this country. The matter has been before the Legal Cases and Legal Reports Committee of the Union for some time past, and in view of the large number of members who appear to be involved it is receiving very close investigation. All automobilists upon whom claims have been made of the nature above indicated who are owners of unlicensed engines of this make are requested to communicate with the Secretary to the Motor Union, 1, Albemarle Street, Piccadilly, London, W.

[Campbell-Gray.]

Two attendance prizes, kindly given by Mr. Grottick, are to be competed for this season, for the greatest number of official runs put in by members, ladies and gentlemen respectively. A members' speed-judging competition will be held at an early date, open to all types. An innovation in the club runs will be Thursday evening runs during the summer months.

The following have accepted office for the current year:—President, G. Howlett; vice-presidents, Messrs. W. Howlett, Col. Mark Mayhew, I. H. Mitchell, Staplee Firth, H. L. Doulton, F. C. Patterson; chairman, A. Vicars; vice-chairman, B. Grottick; committee, Messrs. Pugh, Brodie, Patterson, Connor, Worger; sports secretary, A. W. Holt; social secretary, A. C. Belcher; reporting secretary, K. Davies; general secretary, W. L. Lorkin; auditors, J. W. Cufley, G. Fisher; riding officer, F. S. Fitch; Motor Union representatives, Messrs. Vicars, Lloyd, and Lorkin.

THE INCORPORATED INSTITUTION OF AUTOMOBILE ENGINEERS.

A MEETING of the council of the institution was held at the Institution of Mechanical Engineers, S.W., on Wednesday of last week, when the following were elected members of the institution:—Messrs. R. J. Sully (Cardiff), E. C. Baxter (Assam), A. M. Thomson (London), J. I. Emery (Crowborough), P. A. Sharman (Hitchin).

The following committees were appointed:—

FINANCE.—Messrs. Dugald Clerk, Col. R. E. Crompton, Dr. H. S. Hele-Shaw, T. B. Browne, F. C. A. Coventry, T. C. Pullinger, Henry Lea.
GRADUATES' SECTION.—Messrs. Dugald Clerk, Dr. H. S. Hele-Shaw, A. Craig, L. H. Hounsfield, T. C. Pullinger, A. Sharp, Douglas Mackenzie, D. J. Smith, Chas. Wheeler, F. R. Simms.

PUBLICATIONS AND EDITING.—Messrs. Dugald Clerk, Col. R. E. Crompton, Dr. H. S. Hele-Shaw, L. A. Legros, Douglas Leechman, R. K. Morcom, J. Lyons Sampson, and A. Sharp.

STANDARDISATION.—Messrs. Dugald Clerk, H. Austin, A. Sharp,

C. R. Garrard, Henry Lea, F. L. Martineau, T. C. Pallinger, J. S. Critchley, and Chas. Wheeler.

THE SCOTTISH TRIAL.

IN accordance with Rule No. 7 the Committee of the Scottish A.C. have resolved to accept in any one class only one car of any specific make, type, and horse power. This course has been adopted in all former Scottish Trials and is, in the view of the committee, the most equitable and just to all competitors. In consequence there will be a slight reduction in the number of vehicles competing in the Scottish trial, although it will not affect the aggregate number which will be going over the course.

SCOTTISH MOTOR TRADE ASSOCIATION, LTD.

AN extraordinary general meeting of the members of the Scottish Motor Trade Association, Ltd., was held in the Carlton Hotel, Edinburgh, on Friday of last week. Mr. Thomas Shaw (Messrs. Thomas Shaw, Ltd., Dundee), president, presided. A meeting of the council was also held on the same day. Mr. Thomas Shaw presided. There were also present, Messrs. W. L. Sleigh, J. H. Paterson, James Gibbon, and A. G. Rennie.

The following new members were admitted:—The Maudslay Motor Company (1907), Ltd., 60, Piccadilly, London, represented by Cyril C. Maudslay; Mr. Alexander Paterson, City Motor Works, Elgin; Messrs. J. Cairn and Co., 24, Annandale Street, Edinburgh; John Graham, 362B, Leith Walk, Leith; and W. Blues, The Garage, Pitlochry.

Scottish Motor Trade Association Hill-climbing Competition.—In consequence of the majority of the members favouring a hill-climbing competition confined to its members, the following gentlemen were appointed as a committee to make arrangements for this event, which will probably take place in the autumn. Messrs. J. H. Paterson (convener), Thomas Shaw, W. L. Sleigh, A. G. Rennie, and R. R. Smith. This competition will be of a purely sporting nature, and advertising the results will be prohibited.

Owing to the inroads which have been made into the interests of legitimate motor manufacturers and traders businesses through price cutting and other practices the Scottish Motor Trade Association find that they could not adopt any practical remedy consistent with their memorandum of association, as such questions were out with the objects therein set forth. Accordingly at a recent meeting of the leading Scottish motor traders, called by the council of the Scottish Motor Trade Association, Ltd., it was unanimously decided to form the Scottish Motor Trade Alliance, the primary objects of which are to maintain prices, prevent price cutting and other objectionable practices, and to take every possible means to protect the interests of those engaged in the motor industry. This alliance will be in constant communication with the motor trade societies. In order to be thoroughly effective, the whole trade should combine and work in union, and with this in view the council of the alliance have fixed the annual subscription at a nominal sum of 5s. The council has further authorised the immediate formation of local centres, which will not only increase the sphere of influence of the alliance but will give every trader throughout the country an opportunity of taking an active interest in the protection of his own business without inconvenience and expense. Local centres have already been formed in Edinburgh, Glasgow, Dumfries, Fife, Dundee, Aberdeen, and others will be formed on the application of five members in the district for which the centre is desired. Rules have been framed and are now being issued to the whole motor trade in Scotland. Members desiring to join may obtain full information from the general secretary, Mr. David A. Fairley, G.A., 13, York Place, Edinburgh, or from the undermentioned gentlemen, who are conveners of the local centres already formed. Messrs. Thomas Shaw, 32, Reform Street, Dundee; J. H. Paterson, 10, Bonaccord Street, Aberdeen; A. G. Bennie, 60, North Wallace Street, Glasgow; John Love, Carlyle Road, Kirkcaldy; W. E. Townsend, 56, Belford Road, Edinburgh; and A. G. Penman, Queensberry Motor Works, Dumfries.

CRYSTAL PALACE.

ON Saturday the Crystal Palace A.C. were to have held their open flexibility contest in accordance with the R.A.C. and S.M.M. and T. standards for touring cars. Considerable time was occupied in measuring and weighing the nineteen vehicles in the trials, and when the cars arrived at Bexhill none were allowed on the track, workmen preventing access by laying piping across the road. Thus the officials were frustrated, owing, it was rumoured, to some legal proceedings in progress.

THE Duke of Argyll has consented to become hon. president of the Aero Club of the United Kingdom.

MESSRS. MARTIN, of Magnet Wharf, Bow Bridge, London, E., are making a speciality of dealing in shop-soiled and second-hand commercial motor vehicles, and have in stock a number of well-known types of chassis suitable for cars, motor-buses, or lorries.

REVERTING to the article in last week's issue with reference to the visit of Mr. C. Jarrott to the Continent on his 40-h.p. Crossley car, fitted with Continental tyres, we learn that the latter behaved splendidly and that they were in perfect condition on reaching Monte Carlo.

THE IRISH RELIABILITY TRIAL.

THE following entries have been received:—

SECTION I.—OPEN.

Class A (Chassis price, under £150): E. Lisle, jun., 10-h.p. Royal Starling and 8-h.p. Imperial Starling; H. S. Huet, 10-h.p. Royal Starling; P. L. D. Perry, 15-18-h.p. Ford (two cars); Rover Company, Ltd., 6-h.p. Rover; Phoenix Motors, Ltd., 8-h.p. Phoenix.

Class B (Chassis price, £150 to £200): H. E. Edwards, 9-h.p. Adler; Robert Burns, 10-12-h.p. Swift; Smeddle Kennedy Motors, 8-10-h.p. S.K. Simplex; Chambers Motors, Ltd., 10-12-h.p. Chambers; P. L. D. Perry, 15-18-h.p. Ford (two cars); F. E. Carter, 10-12-h.p. Swift; T. W. Murphy, 8-10-h.p. Rover; Rover Company, Ltd., 8-10-h.p. Rover; Anglo-American Motor Car Company, 9-h.p. Cadillac (two cars).

Class C (Chassis price, £150 to £250): W. Phillips, 10-12-h.p. Humber; Chambers Motors, Ltd., 10-12-h.p. Chambers (two cars); Riley Cycle Company, Ltd., 12-h.p. Riley; J. W. Buchanan, 10-12-h.p. Humber.

Class D (Chassis price, £250 to £350): G. W. Hands, 16-20-h.p., Calthorpe; Russell Fletcher, 16-20-h.p. Calthorpe; Leslie Port-r, 16-20-h.p. Calthorpe; Robert Burns, 18-24-h.p. Swift; J. B. Ferguson, Ltd., 14-16-h.p. Argyll; W. Phillips, 15-h.p. Humber; British Motor Loc Syndicate, Ltd., 18-h.p. Motobloc; P. A. G. Bell, 16-h.p. Bell; A. Rawlinson, 14-16-h.p. Darracq; W. F. Pearce, 12-14-h.p. Gladiator.

Class E (Chassis price, £350 to £450): A. Armitage, 18-22-h.p. C.C.C.; J. Percy Dean, 20-h.p. Scout; D. H. McDowell, 20-h.p. Beeston Humber; H. P. McConnell, 16-20-h.p. Stella; W. G. Wilkinson, 20-h.p. Rover; Anglo-American Motor Car Company, — h.p. Cadillac; S. T. Robinson, 15-h.p. Talbot; A. G. Power, 14-16-h.p. Berliet.

Class F (Chassis price, £450 to £550): F. Eastmead, 20-h.p. Sunbeam; Clement-Talbot, Ltd., 15-h.p. Clement-Talbot (two cars); A. Rawlinson, 25-35-h.p. Darracq; S. T. Robinson, 25-h.p. Weigel; S. T. Robinson, 28-h.p. Minerva; Knox Browne, 22-h.p. Berliet; A. G. Power, 40-h.p. Berliet.

Class G (Chassis price, £550 to £700): Thomas Henshaw, 35-h.p. Daimler; W. F. Pearce, 35-45-h.p. Gladiator.

Class H (Chassis price, exceeding £700): S. F. Edge, 60-h.p. Napier.

SECTION II.—LIMITED.

Class B (Chassis price, £150 to £200): Captain Hamilton, County Donegal, 8-10-h.p. Darracq; J. G. Drury, Dublin, 8-10-h.p. Rover; F. E. Carter, Sunderland, 10-12-h.p. Swift; T. W. Murphy, Dublin, 8-10-h.p. Rover.

Class C (Chassis Price £150 to £250): T. MacGregor Greer, County Tyrone, 12-14-h.p. Shamrock; P. Hallinan, Middleton, 12-18-h.p. Riley.

Class D (Chassis price, £250 to £350): John Browne, Santry, County Dublin, 15-h.p. Coventry Humber; J. H. Kenny, Dublin, 14-16-h.p. Argyll.

Class E (Chassis price, £350 to £450): Colonel Kingscote, County Limerick, 14-22-h.p. Germain; H. B. Browning, London, 20-h.p. Rover.

Class F (Chassis price, £450 to £550): T. MacGregor Greer, County Tyrone, 24-h.p. Minerva; R. W. Morris, Waterford, 18-24-h.p. Gladiator.

Class G (Chassis price, £550 to £700): Thomas Henshaw, Dublin, 35-h.p. Daimler; T. L. Plunkett, Portmarnock, 48-h.p. Daimler; A. N. Johnstone, London, 24-30-h.p. De Dietrich.

CASES UNDER THE MOTOR CAR ACT.

THE CAR AS OBSTRUCTION.

At Bow Street (London), Police Court, J. B. Taneborne, c'auiteur to Col. Sutherland, was summoned by the police for causing an unnecessary obstruction in Exeter Street. The police-constable declared that a motor-car was left outside the Criterion Restaurant for forty minutes, and that he caused an obstruction. On cross-examination by Mr. Staplee Firth he admitted that he did not see the motor-car arrive, and it was shown in evidence that it had not been there more than twenty minutes, and Mr. Marsham dismissed the case.

REAR LIGHTS.

At the Liverpool Police Court a motor-car driver was summoned for not having a light on his car so as to illuminate the identification mark. From his evidence it transpired that he was in charge of a new motor vehicle which he was trying before handing over to the purchaser. A breakdown had occurred on the road which had delayed his getting back before sunset. Despite this explanation a fine of 10s. and costs was imposed.

EXCEEDING THE LEGAL LIMIT.

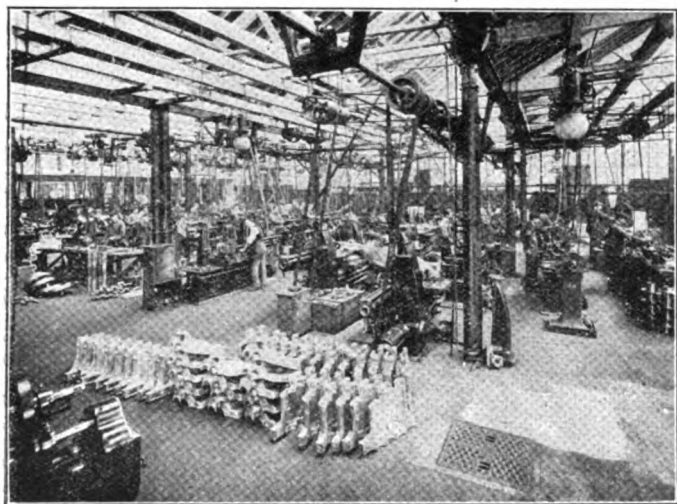
Half a dozen motorists have been fined sums of £5 and £6 with costs at Kingston for exceeding the ten mile speed limit in Richmond Park.

At the Brentford Petty Sessions several motorists have just been fined for exceeding the legal limit on the Bath road at Hounslow. In one case the defendant objected that that particular thoroughfare was wide and there was no traffic about at the time he was stopped. The chairman of the bench replied that it was only through the action of the magistrates that the inhabitants of that district were prevented from attacking motorists with bottles and stones owing to the excessive speed of many of their cars. Allowing two seconds extra on the time alleged by the police the bench then imposed a fine of £1 per mile for every mile in excess of the legal limit.

THE LORRAINE DIETRICH WORKS AT BIRMINGHAM.

ABOUT the middle of last year, realising the importance of the English market, the Société Lorraine de Dietrich and Co., de Luneville, France, arranged with a few friends in England to form a company for the purpose of purchasing a factory and manufacturing the well-known De Dietrich cars in this country. Immediately £100,000 was privately subscribed, partly by the French company and partly on this side, the Board of the new company being composed of the following:—Lord Ribblesdale, chairman, Sir West Ridgeway, Prince d'Arenberg, Baron A. de Turckheim, M. Henri Estier, M. de Neuville, M. Carnot, M. Leon Turcat, and Mr. W. M. Letts. They then proceeded to look out for a factory, and, realising the importance of Birmingham as a manufacturing centre, bought the Ariel Works, at Selly Oak, with its machinery and freehold land, and at once started to erect more shops. Although the designs were not passed until late in the year the first car was tested and put on the road for the Olympia Exhibition, while, to show that no time has been lost, it may be mentioned the output is now three cars per week, and it is hoped in the very near future to increase this to six.

On Wednesday, last week, at the invitation of the Lorraine Dietrich Company, we, in company with a number of other motorists, paid a visit of inspection to the works and found them well adapted for the purpose, being conveniently arranged and equipped with machine tools of the latest type. The ground floor covers 6,697 sq. yards; the total area of the old building consisted of 25,077 sq. ft., while the new premises represent an addition of 25,439 sq. ft. The number of men employed at the present time is between three and four hundred. The works are under the management of Mr. C. Sangster and Mr. Drummond. The



A Part of the Machine Shop.

THE BROOKLANDS TRACK.

THE following are the entries for races to be run on Saturday, the 18th:—

Third 26-h.p. Standard Class Race: Theo. Masui, 25·6-h.p. Germain; S. F. Edge, 25·6-h.p. Napier; Walter Phillips, 25·6-h.p. Humber; Miss D. Levitt, 25·6-h.p. Napier; J. W. Stocks, 25·6-h.p. De Dion.

Third 40-h.p. Standard Class Race: S. F. Edge, 38·4-h.p. Napier; Walter Phillips, 38·4-h.p. Humber; Marquis de Mouzilly St. Mars, 39·6-h.p. Napier; J. A. Holder, 38·1-h.p. Daimler; Capt. G. Ll. Hinds-Howell, 40-h.p. Iris.

Second Surrey Stakes: S. F. Edge, 38·4-h.p. Napier; Marquis de Mouzilly St. Mars, 39·6-h.p. Napier; Capt. G. Ll. Hinds-Howell, 40-h.p. Iris; G. F. Heath, 41·9-h.p. Darracq.

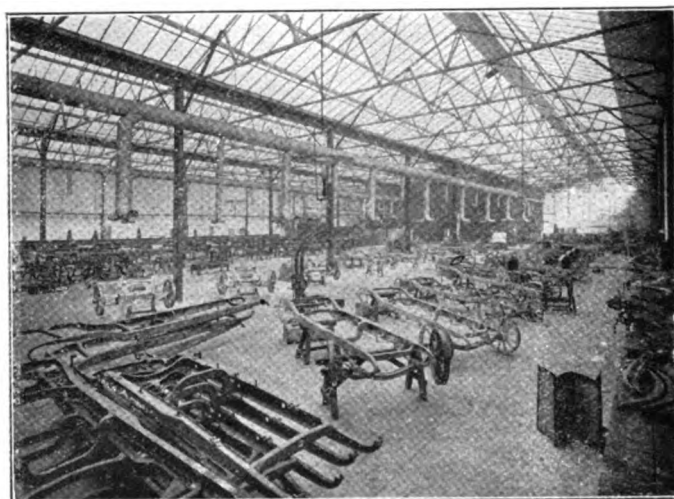
Brooklands Cup (handicap for private competitors): O. L. Bickford, 22·4-h.p. Ford; G. C. G. Moss, 27·2-h.p. Arrol-Johnston; Howard G. Nalder, 35·7-h.p. Berliet; Anthony van Hoboken, 35·7-h.p. Mercedes; C. A. Bird, 34·5-h.p. Mercedes; J. L. Farmilos, 24·8-h.p. Mercedes; C. L. Woodward, 24·8-h.p. Renault; G. Russell-Miller, 22·4-h.p. de la Buire; O. S. Thompson, 36·1-h.p. Austin; T. Faulker, 24·8-h.p. Mercedes.

Sizaire et Naudin Cup: Baldwin S. Millard, Basil Gill, G. F. Scantlebury, G. A. Schofield, F. G. Linscott, Colonel T. Cowper-Essex, Captain A. Horne, G. Bayard Hynes, Capt. T. C. J. James-Trevor, and R. C. Empson. All these will race on 8·9-h.p. cars.

Spring Stakes: P. D. Stirling, 35·7-h.p. Berliet; Douglas Pigot, 35·7-h.p. Berliet; H. F. W. Farquharson, 35·7-h.p. Berliet.

On Easter Monday the programme will be as follows:

Third 90-h.p. Standard Class Race: S. F. Edge, 90-h.p. Napier;



The Chassis Erecting Department.

THE LORRAINE-DIETRICH COMPANY'S WORKS AT SELLY OAK, BIRMINGHAM.

cars are, however, still being designed by Messrs. Turcat and Mery, and follow the De Dietrich practice.

Lord Ribblesdale presided at the luncheon which followed the inspection of the works, and in his speech welcoming the visitors stated that in 1884 the De Dietrich Company were in existence as engineers in Alsace, afterwards moving to Luneville in 1870, where railway stock, from trucks to magnificent saloons, were at present being made. Ten years ago they started building motor-cars, and had continued with success in this industry. Last year they took further works at Argenteuil, twelve miles from Paris. Already they had a great interest in the Isotta Fraschini works in Milan, and now they had the new works at Birmingham, as they fully realised the patriotic trend in motor-car purchasers. The considerable increase in the output of the De Dietrich Company resulting from the opening up of works in different countries enables the aggregate of its general expenses to be divided over a much greater number of vehicles, and permits the price of each to be correspondingly reduced. Moreover, the division of work over several departments enables each establishment to be set apart for the manufacture of one or two types only, an important factor in the production of high-grade vehicles at relatively low prices.

THE MIDLAND RUBBER COMPANY, LTD., Ryland Street, Birmingham, have reduced the prices of Midland motor tyres, plain, grooved and steel studded covers, tubes and retreading, and have issued a revised list in which the latest prices are given.

ILCO oils have been thoroughly tested for efficiency amongst the motoring public, and have won excellent opinions wherever they have been used. Those motorists who wish to test the oils should drop a note to Messrs. Easton and Malville, 85, Shaftesbury Avenue, W.C., for particulars of their latest introduction.

F. R. Fry, 76-h.p. Mercedes; Ernest de Wilton, 76-h.p. Mercedes; Guy Lewin, 80·4-h.p. Hotchkiss.

Continental Stakes: S. F. Edge, 38·4-h.p. Napier; Marquis de Mouzilly St. Mars, 39·6-h.p. Napier; Clement-Hobson, 48·6-h.p. Brasier; Corry Hurford, 48·6-h.p. Mercedes; F. R. Goodwin, 43·4-h.p. Star; O. Copper, 43·2-h.p. Metallurgique.

Naval and Military Cup: Sir George Abercromby, Bart., 58·1-h.p. Fiat; G. C. G. Moss, 27·2-h.p. Arrol-Johnston; D. G. Watt, 40-h.p. Napier; J. Bullough, 41·9-h.p. De Dietrich; Capt. S. C. Holland, 32·8-h.p. Gohron.

First Brooklands Motor Cycle Race: A. G. Forster, 7·9-h.p. N.L.G.; H. Bashall, 3½-h.p. Triumph; W. G. McMinnies, 3½-h.p. Triumph; W. W. Genu, 7·8-h.p. Minerva; E. Gwynne, 5-h.p. Vindec Special; H. A. Cooper, 3½-h.p. Triumph; E. C. W. Fitzherbert, 6-h.p. F.N.; H. Shanks, 2½-h.p. Chater Lea; G. Schink, 6-h.p. N.S.U.; F. Toman, 4½-h.p. Laurin and Klement; J. B. Hanafin, 5-h.p. Vindec Special; O. C. Godfrey, 5-h.p. Rex; A. G. Reynolds, Vindec Special (T.T. type); O. L. Bickford, 5-h.p. Vindec Special; H. A. Collier, 3½-h.p. Matchless; C. R. Collier, 6-h.p. Matchless; E. Kickham, 7-h.p. Leader (Peugeot engine); W. H. Wells, 5-h.p. Vindec Special; G. L. Evans; H. Reed; W. Pollard; J. C. Davis, 5½-h.p. Rex; F. W. Applebee; C. Hurford, 6-h.p. Griffon.

Tyre Change Plate: S. F. Edge, 25·6-h.p. Napier; J. W. Stocks, 25·6-h.p. De Dion; P. L. D. Perry, 22·5-h.p. Ford; P. L. D. Perry, 22·5-h.p. Ford.

Private Sweepstakes for Private Competitors: Sir George Abercromby, Bart., 58·1-h.p. Fiat; Clement-Hobson, 48·6-h.p. Brasier; Anthony van Hoboken, 48·6-h.p. Mercedes (and others).

The racing will commence at 3 p.m. on each day.

WATER SUPPLY CHARGES IN SCOTLAND.

THE right of water authorities to levy charges on owners for water used for washing cars used for private purposes only was brought before the committee of the Scottish A.C. by a member with a view to an opinion as to the validity of the charge being given in the general interest. The Committee caused inquiries as to the practice generally to be made, and, after taking the opinion of the Club solicitor on the subject, have authorised the publication of the following memorandum:—

Section XII. of the Water Works Act, 1863, makes it clear that where carriages are kept for private use (which includes motor-vehicles), the water used for washing them falls within the domestic supply, and cannot be charged extra. This section is incorporated into many of the Scottish local Acts, and accordingly, to a large extent, rules the question in Scotland.

Under the Burgh Police Act, however, which applies to all burghs in Scotland, with the exception of Glasgow, Dundee, Dunfermline, Greenock, and Edinburgh, or towns scheduled as having Water Acts of their own, authority is given to charge for the supply of water for washing private carriages (which would include motors), and to the extent of which this Act applies, the general provision under which the charge is incompetent is not applicable. Where, however, the burghs have private Water Acts, which have incorporated the provisions of the Water Works Act, 1863, it is believed that the section of the Burgh Police Act, under which it is legal to charge for the supply for private carriages as a non-domestic purpose, would not apply.

The Public Health Act, 1897, empowers the local authority to supply water for domestic use, and also to supply surplus water for other purposes specified in that Act. This Act incorporates the Water Works Act of 1863 in its entirety, and therefore by implication provides that water for washing private carriages is included in the supply for domestic purposes with special charge therefor.

The Committee in the course of their inquiries have discovered that numerous local authorities have been making charges for the supply of water used by hose or otherwise for the washing of private carriages (which include motors), and which charge would consequently appear to be incompetent. Regulations or by-laws or rates of charges made in terms of any Act of Parliament, under which the water supply of any district is administered, cannot create a liability for payment if the Water Works Clauses Act is incorporated in the local or other Act applicable. The Committee are satisfied at the same time that payments already made could not be recovered.

The water used by medical men for the washing of motor carriages used in professional work does not fall within a supply for business purposes.

AUTOMOBILE ACCIDENTS.

AN accident has occurred to a motor party when trying to mount Saddlescombe Hill, half way between Poynings and Brighton. Mr. Williamson was touring in his car and mistook the road after passing Henfield, encountering the very dangerous Saddlescombe Hill. About half way up the car began to run backwards and the sprag was dropped, with the result that the car turned completely over, and the occupants were thrown out. Fortunately they escaped with nothing more than a shaking and a few scratches. A passing cyclist hurried to the nearest telephone office, and in less than half an hour Mr. Moore, of Preston Street, Brighton, was on the spot with a break-down gang of six men and two cars, one of which carried the occupants of the car to friends.

ON Saturday an accident happened in Newcastle Avenue, Worksop. A motor-car belonging to Mr. Crow, of Leeds, in which were three ladies, was proceeding along the avenue, a 'bus used for conveying miners to and from Steeley Pit being in front. Both were on their proper sides and the driver of the motor blew his horn several times heralding his approach. When the car was within a few yards of the 'bus the driver of the latter suddenly drew his horse across the road with the intention of turning up a side lane, the result being that the car dashed into the 'bus with great force, throwing all three ladies out of the car. The splash-board on the left side of the car was torn off, but the car was not otherwise damaged, and although badly shaken the ladies escaped serious injury, and were able to proceed on their journey.

A MOTOR-CAR belonging to Dr. Prendergast, of Hanley, was being driven along Trent Vale, Stoke, on Saturday afternoon, when a boy named Cartlidge dropped off the back of a bread van in front of the motor-car, which passed over his head, causing injuries from which he died the same night.

A MOTOR-CAR, going from the direction of London, on Tuesday, knocked down a six-year-old boy in London Road, St. Albans, inflicting injuries to the head and hands. The car drove straight on. A young man who was with the boy failed to note the number of the motor-car, but says it was a dark brown one. The Herts police are making inquiries into the affair.

A SERIOUS collision between a motor-car and two cyclists occurred at old Windsor on Sunday evening. The cyclists were returning from Windsor, and on rounding the corner near the Wheatsheaf Hotel met a motor-car coming in the opposite direction. The car caught the cyclists, and dragged them over 60 ft. before it could be pulled up. One was pitched against a wall, and was found to be bleeding profusely. Dr. Scott attended to the cyclists, and drove one to the Windsor Infirmary, where he lay unconscious for some time. The occupants of the car took the other back to Shepperton.

ROAD REPORTS.

WHETSTONE.—Whetstone has become a dangerous place so far as motorists are concerned, the watchful police at that point of the Great North Road having lately secured several convictions at the Highgate Police Court.

RENFREW.—Of the expenditure of £9,000 on the roads of the Gorbals division of Renfrewshire, the surveyor estimates that £1,100 is due to heavy motor traffic on the Kilmarnock road as well as by general motor use throughout the district.

LEICESTERSHIRE.—Motorists who tour through the picturesque parts of the Midlands should beware of the well-known village of Evington, near Leicester. On entering the village from either end one is confronted with three of the most dangerous curves in the county, all within a couple of hundred yards. Each curve is bordered with high hedges, rendering it practically impossible for drivers of motor-cars, &c., to perceive or hear any danger ahead.

HAYWARDS HEATH.—The Haywards Heath Urban Council, owing to the reckless speed at which motorists frequently drive past dangerous crossings in the town, have applied to the East Sussex County Council to secure for them a speed limit.

SUSSEX.—The following main roads are being repaired:—Bolney and Handcross; Selsfield and Turner's Hill; Chailey North Common and Gold Bridge, Newick; King's Head, Chailey, and Sheffield Park Station; Ditchling Village and Wivelsfield; Lewes and Isfield; Ringmer and Halland; Hadlow Down and Buxted and Cooper's Green; Five Ash-down and Tunbridge Wells; Stonegate, Ticehurst, and Burwash Common; Brightling and Wood's Common; Wood's Corner and Punnett's Town; Bodiam and Junction Inn; Cripp's Corner and Staple-cross.

MIDHURST.—There is a speed limit in force at Cuckfield—the non-observance of which has led a couple of motorists to the Midhurst Petty Sessions, where fines of £5 were imposed.



The Jackson 8-h.p. Doctor's Car.

The vehicle is provided with detachable dickey seat and rear tool box, side doors, lift-up centre arm, enamelled leather Victoria hood, folding glass screen, &c.

CUCKFIELD.—The Cuckfield Urban District Council has decided to tar about two miles of roads in their area.

MERTON.—The Merton Urban District Council is taking steps to have the speed of motor-cars in the principal thoroughfares limited to ten miles an hour. The roads which are used by great numbers of motorists are High Street, Morden Road, Kingston Road, West Barnes Lane and Coombe Lane. The Surrey County Council has been petitioned with a view to its having the wishes of the District Council brought before the Local Government Board.

BLAIRGOWRIE.—A section of the Blairgowrie District Committee of the Perth County Council is considering a list of fifty dangerous places in the district which the surveyor suggests should have red triangle warning notices erected. The surveyor has also reported that it will be necessary to increase the thickness of metal coatings on the road to at least one third more than formerly in consequence of the growing motor traffic.

EDINBURGH.—At the Convention of Royal Burghs, held at Edinburgh, the Assessor for Melrose moved a resolution to the effect that Town Councils should have power to impose the ten-mile speed limit on motor-cars where they consider necessary, and that the matter be remitted to the Annual Committee. The question of the speed of motor-cars, he held, should be in the hands of the Town Council entirely, and he would safeguard this by the condition that the Town Council would not be at liberty to impose a limit until they had a majority of three-fourths or two-thirds of the Council. After some discussion it was agreed that the motion, as moved by Mr. Dunn, be adopted.

We learn that the recent successes in Norway and Sweden of the Darracq car have called forth such a number of enquiries that Messrs. A. Darracq and Co., Ltd., have decided to send Mr. H. B. Cook, with a demonstrating car, to establish an organised representation in Norway. Mr. Cook left London on Friday last week for Christiania, from which centre he will make an extended business tour throughout the surrounding countries, to fix up agencies.

FORTHCOMING EVENTS.

APRIL.

- 16th (Th.).—Leicester A.C. at Ashby-de-la-Zouch.
 16th—20th.—Easter Tour of the Motor Cycling Club.
 17th (Good Friday).—Lincs. M.C.C. meet at Mablethorpe.
 Meet of the Leeds, Newcastle, Sheffield, and Bradford M.C.C.'s at Richmond.
 18th and 20th.—First meeting of the Brooklands A.R.C. for 1908.
 20th (M.).—Hull A.C.C. and Scarborough M.C.C. at Bridlington.
 25th (Sat.).—Open Motor-Cycle Hill Climb of the Hertfordshire C.A.C.
 Opening meet of the Yorkshire A.C. at the Hotel Majestic, Harrogate.
 Quarterly trial of the A.C.U.
 25th (Sat.) to May 25th.—Industrial Vehicle competition of A.C.F.
 26th (Sun.).—Southend M.C. run to Thatched House Hotel, Epping.

MAY.

- 2nd (Sat.).—Impromptu pace judging competition of the Sheffield A.C. at Ollerton.
 9th (Sat.).—First provincial meet of the R.A.C.—to be held at Nottingham, by invitation of the Nottinghamshire A.C.
 10th (Sun.).—Targa Florio Race.
 16th (Sat.).—Fifty miles Consumption Trial of the Hertfordshire C.A.C.
 Liverpool A.C.'s opening meet of the season.
 21st (Th.)—25th.—Reliability Trial of the Irish A.C.
 23rd (Sat.).—Clipstone race meeting of the Notts A.C.
 Meeting of the Yorkshire A.C. at Helmsley.
 Meet of the Motor Union at Lincoln.
 25th (M.).—Industrial Vehicle Competition of the A.C. de France.
 26th (Tu.).—Motor Gymkhana on the links of the Ross Golf Club at Alton Court—Mr. T. H. Coombes, "Montrose," Rose, is the hon. secretary of the event.
 28th (Th.).—Visit of the Aero Club to Aldershot.
 30th (Sat.).—Meet of the Herts C.A.C. at Hatfield Park.
 31st (Sun.).—Southend M.C. run to Saracen's Head Hotel, Dunmow.

JUNE.

- International Aeronautical Federation conference in London.
 6th—6th.—London-Edinburgh twenty-four hours' run of the Motor Cycling Club.
 8th (M.).—Cars competing in the International Touring Car Trial will arrive at the depot.
 Start of the International Touring Car Trial of the R.A.C.
 9th (Tu.).—Touring competition for Prince Henry of Prussia's prize begins.
 17th.—Close of Prince Henry Touring Competition in Germany.
 13th (Sat.).—Hill climb of the Notts A.C. at Oakmoor.
 Speed Trials of the Lincs. A.C. at Grimsthorpe.
 15th—19th.—Scottish Reliability Trial.
 20th (Sat.).—Meet of the Hull Auto Cycle Club and the Lincolnshire Motor Cycle Club at Brigg.
 27th (Sat.).—Saltburn beach races.
 Buxton meet of the Manchester and Lincolnshire clubs.
 Members of the Cheshire A.C. will participate in the Gymkhana of the Manchester A.C.
 28th (Sun.).—Southend M.C. run to Grand Hotel, Clacton.

JULY.

- The Land's End to John o' Groat's Trial of the Auto C.C. will be held.
 6th (M.).—Grand Prix A.C.F. (Voiturette section).
 7th (Tu.).—Grand Prix A.C.F. on the Dieppe Circuit.
 11th (S.).—Provincial meet of the R.A.C. at Hereford.
 16th (Th.).—Club meet of the Notts A.C. at the Hop Pole, Ollerton.
 18th (Sat.).—Annual Gymkhana of the Herts C.A.C. at The Grove, Watford, by permission of the president, the Earl of Clarendon.
 Meet of the Liverpool and Cheshire A.C.'s at Delamere.
 25th (Sat.).—Petrol Consumption Tests of the Motor Cycling Club.
 Annual Open Hill Climb of the Midland A.C. at Shelsley Walsh.
 26th (Sun.).—Southend M.C. run to Coach and Horses, Quendon.

AUGUST.

- 29th (Sat.).—Meet of the Lincolnshire Motor Club at Lincoln.
 30th (Sun.).—Southend M.C. run to Great White Horse Hotel, Ipswich.

SEPTEMBER.

- 5th (Sat.).—Aston Hill climb of the Herts C.A.C.
 Provincial meet of the R.A.C. at Norwich.
 27th (Sun.).—Southend M.C. run to White Hart Hotel, Braintree.

LIGHTING-UP TIMES—LONDON.

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|-----------------|-----|----------|-----|----------|-----|----------|
| April 18th—7.56 | ... | 20th—8.0 | ... | 22nd—8.4 | ... | 24th—8.7 |
| " 19th—7.59 | ... | 21st—8.3 | ... | 23rd—8.6 | ... | 25th—8.9 |

Secretaries of automobile clubs are invited to forward their programme of fixtures as soon as arranged.

BUSINESS NEWS.

MR. F. BULLOCK has opened large new motor showrooms, garage, and workshops in Strangeways, Manchester.

THE hire department of the Daimler Motor Company, Ltd., is now located in new premises at 112, Wardour Street, London, W.

CAGNO, who is to drive one of the team of three Itala cars in the Grand Prix, has, we learn, been doing his utmost to find a weak spot in the Dunlop detachable rims, with which his car, like those of the Bayard, Porthos, Motbloc and Austin teams, is fitted. His tests have included such performances as tearing around the course at racing speed, taking corners almost on the "wrong" side in an endeavour to wrench tyres and rims from the wheels, driving a circuit with both rear tyres deflated, at sixty miles per hour, and driving a circuit with the toggle-joints of one fore and one rear wheel rim unfastened. In short, he has done everything conceivable to separate tyre and rim from wheel, but in 200 miles, hard trying he has failed to strain, unlock, or in any way damage the Dunlop rims.

AMONGST the numerous users of Stepney spare wheels in India are the following:—H.H. Maharaja of Cooh Behar, H.H. Maharaja of Balrampur, H.H. Newab of Rampur, Maharaja of Natore, Raja Bahadur of Dighapattya, Maharaja Sir Prodyat Tagore, Raja Durga Prasad Singh Bahadur of Jherria, and the Raja Bahadur of Mahisadal.

THE models issued by the Daimler Company of their 30-h.p. car have met with a great reception by the motoring public. Although attention was first drawn to these nearly four months ago, requests are still being received, and their post-bag the other morning contained, amongst others, a postcard from Salisbury, Rhodesia, asking for one of these models, while the next turned out to be an acknowledgment from Winnipeg, Canada.

"EVERYTHING for the Motor Car" is the heading given the new catalogue of the Motor Accessories Company, of 55, Great Marlborough Street, London, W. In the course of seventy pages it fully acts up to this title, the accessories illustrated being comprehensive of everything likely to be required by the motorist on tour.

OF varied interest was the aeronautical section organised by Messrs. Spencer Bros., Ltd., at Cordingley's Show, whose photographs of scenes taken from the cars of balloons in mid-air were a centre of observant criticism. Messrs. C. G. Spencer and Sons were also busy during the week arranging for passengers for forthcoming balloon ascents, while their airships attracted much attention. Mr. J. Tucker had a good selection of aeronautical outfits. The model of the Farman aeroplane was a popular exhibit, and several types of gliders interested the public, while the three-cylinder "Buchet" motor lent by Major Baden-Powell was also on view.

WE are glad to learn from the Clement-Talbot Company that the sales of Talbot cars during March, as compared with the sales during the corresponding month of 1907, show an increase in monetary value of 70.5 per cent. That this is not simply a sudden rush of orders can be gauged by the total increase of the business over the past five months, which is 63.5 per cent. in cash value, as compared with the same period a year ago.

IN connection with the Motor Car Exhibition to be held in Moscow next month, the Organising Committee have appointed Messrs. Langstaff, Ehrenberg and Pollak, 17 and 18, Basinghall Street, London, E.C., the official shipping agents for the handling and clearance of goods for the show. The firm are in a position to give inclusive rates from any place in England to free stand Moscow, either by water via Riga or by rail via Paris, from which place they will despatch a special train consisting exclusively of goods for the exhibition.

THE receiver and liquidator of the Enfield Autocar Company has sold the assets of the company, comprising the freehold factory, plant, and stock, including a number of finished cars, to Messrs. Alldays and Onions, Ltd. We understand that it is the intention of the new proprietors to continue the manufacture of Enfield cars at Redditch, as well as the Allday cars at their Birmingham works.

FOR some time past a rumour has been prevalent in Paris that Mr. Darracq, the managing director of Messrs. A. Darracq and Co., Ltd., has the intention of resigning his position at the close of the company's current year of operations, viz., September 30th next. We are, however, officially informed that there is no ground whatever for the report in question. The existing engagement of Mr. Darracq does not expire until September 30th, 1910, and, provided his health and strength continue, he has neither the desire nor the intention to alter his relations with the company, in any case, anterior to that date.

THE DUNLOP RUBBER COMPANY, LTD., of the Manor Mills, Aston, Birmingham, have issued a new catalogue of their Dunlop solid rubber tyres for motor-buses, carriages and cabs.

MESSRS. W. GALLOWAY and Co., Gateshead-on-Tyne, have opened a depot for the sale of Stanley steam cars at 13, West Street, Shaftesbury Avenue, London, W.C.

A RECORD order for Stepney wheels has just been received by the Stepney Wheel Company from a French Cab Company, namely for 1,160 wheels.

ONE of the largest dealers in motor and cycle accessories in the Midlands is Mr. Felix Chapman, Steelhouse Lane, Birmingham. His chief lines are lamps, accumulators, plugs, oils, electric horns, chains, jacks, tyres, volt meters, &c. He has just issued a comprehensive list, which will be forwarded on application.

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COMMENTS.



A BILL providing that dog owners shall be responsible for any injury caused by their dogs, without any evidence as to previous misconduct on the part of the animal, has been introduced by Mr. J. Dundas White, the member for Dumbartonshire. Dogs have always been a nuisance to motorists, who owe many accidents to them. In the past, however, it has usually been impossible to get any satisfaction from the owner unless it could be proved that the dog had been known to bite or attack people. The Dogs (Injuries to Persons) Bill also provides that damages under £5 can be recovered under the Summary Jurisdiction Act, and in view of the forthcoming second reading our readers should endeavour to enlist the support of M.P.'s on behalf of the measure.

Roads and Wheel Design.

Not often do the provincial daily journals so seriously consider questions relating to automobilism as the "Manchester Guardian," which has just published a suggestive article by Mr. A. J. Metcalfe, C.E., who affirms that "after repeated tests and trials it has been demonstrated that a bituminous or tarry grouting or binding material for macadam roads is the most satisfactory, and when the roads are treated properly in good weather dust and mud are almost abolished, and at the same time disintegration of the road-surface is prevented." After considering various reforms in the manner of constructing roads he points out how, in the case of the railway, the permanent way and the rolling stock are always looked at relatively to each other—a point of view that he brings to bear in considering the question of roads and motor-cars. In order to cause the rain to drain quickly from the road-surface a certain amount of cross-fall or convexity is required, and to meet this convexity the wheels of traction engines, motor lorries, and so forth should be bevelled so that an equal pressure will be distributed over the whole width of the wheels and the tendency to cut or grip the road-surface will be thereby abolished.

An Engineer's Suggestion.

MOTOR lorries, according to Mr. Metcalfe, should have the driving wheels increased in diameter, if not in width, as wheels of small diameter allow but limited contact with the road-surface, and thus give a more concentrated grip, with greater grinding action and quicker wear. Motor-cars should have more free vertical space given between the road-surface and the "under-run" of the chassis or car-body, and all abrupt projections there should be prohibited, as they increase immensely the eddying and scurrying of the wind under the car as it rushes along, and blinding clouds of dust are the consequence on ordinary macadam roads. Drivers of traction engines and motor lorries could assist the road engineer by not keeping in the same track repeatedly, and so could motor-car drivers by taking turns and bends at easier speeds, which would considerably lessen the cross-friction and wear at these places and also make the roads safer for themselves and other users.

No Speed Limit for Belfast.

At length the Local Government Board for Ireland has given its decision with regard to the application made at Belfast for a speed limit of ten miles per hour. Upon full consideration of all the evidence given at the inquiry, the Board does not feel justified in consenting to the proposal, so that the matter remains as it was before the application. We congratulate the Belfast motorists upon the success of their opposition. This will, doubtless, have a good effect in assisting their organisation into a Club, in order to watch any future inroads which may be made upon the rights of those who own cars in the North of Ireland.

A Welsh Declaration.

IN connection with this matter of the speed limit we are pleased to learn that the Glamorgan County Roads and Bridges Committee, which has been considering the report of the Royal Commission for some months, has just come to the conclusion that the speed limit of twenty miles per hour should be abolished, and that the police and other authorities should rely solely upon the clause relating to driving to the public danger in connection with prosecutions. This is certainly a step in advance, for not many local bodies have yet publicly proclaimed in favour of this abolition. Those, however, that have given the matter careful consideration are gradually realising that the arbitrary twenty miles per hour cannot be supported on the ground of public safety. At the same time, we would suggest that there is need for a clear definition of what is meant by "driving to the public danger," and it should be well established that where no one is upon an open country road nor in sight the police have no authority to charge motorists with driving with disregard to the safety of those who are absent.

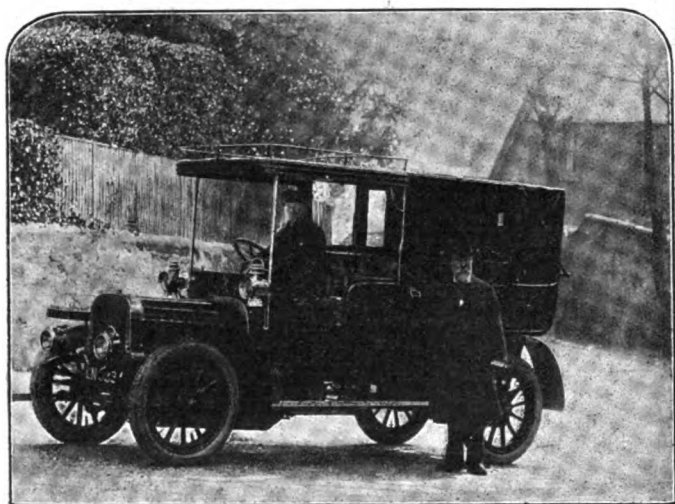
Advertising on Trial Routes.

THE extensive advertising which was adopted last year by tyre manufacturing companies over the Scottish Trial route gave rise to a deal of comment on the part of the public and of local authorities generally. In view of a possible repetition of the enterprise the Scottish A.C. recently took up the matter with a view to arriving at some agreement which would prevent the disfigurement of the landscape in this fashion by the erection of huge placards, hoardings, and the like during the ensuing trials. Approaches were made to the leading manufacturing companies and suggestions given to this effect which were so favourably received that a definite proposal was put forward, by which all the companies were to enter into an agreement so that from a given date until the expiry of the trials they would not send out or erect any more prominent roadway signs or placards, except, perhaps, in one or two principal towns through which the trial may pass. The Continental, Dunlop, North British Rubber, and Palmer Companies have expressed their concurrence in the proposal and their willingness to enter into an agreement on the lines suggested; but the Club inform us that the Michelin Company have written regretting that they cannot enter into any arrangement in view of the fact that they have already made arrangements for erection of road signs on

most of the principal roads in Scotland, and that these, not being yet completed, will be receiving attention at the time of the trials. Consequently the committee regret that they cannot proceed further in the matter.

Naval Men as Mechanics.

FROM time to time we have referred to the interest which naval and military men have taken in the examinations promoted by the R.A.C. for efficiency in driving and proficiency in mechanical matters. Another instance of this enthusiasm was seen at Plymouth the other day, when about 30 candidates attended an examination by the Club inspector at the motor school of Mr. Frank Davis, in Buckwell Street, Plymouth. During the last six months soldiers from various regiments stationed there have received instruction at the School, and the sailors had attended classes organised by the Admiralty. After the usual written and *viva voce* examinations a driving test was conducted through the most crowded streets of the town, including George Street, West Hoe, Mutley and Peverell. At most of the naval and military stations similar good work is being done, equipping the defenders of our country for suitable employment when returning to civil life.



Sir Charles Simeon King, Bart., and his new Argyll 16-20 h.p.

The "Reliance" Motor 'Bus.

IN Ireland, as in England, the motor-bus is becoming a recognised factor in the conveyance of people from point to point. Those responsible for the development in the Emerald Isle appear to be christening their vehicles after the manner of Hancock, Gurney, Church, and other early workers on this side. Thus, "The Reliance" is the cognomen of a motor-bus which has just gone into service in the north of Ireland for the convenience of the inhabitants of Portaferry and the regions beyond as far as Newtownards, thus linking up a district that has been without quick transit with the Belfast and County Down Railway Company's line. Parcels as well as passengers will be carried.

For Road Inspection.

CROYDON, some of the residents of which are anxious to impose a restricted speed limit on motor-cars passing through the borough, is now to employ a motor vehicle. At the last meeting of the Town Council, by a majority of two to one, it was decided to adopt a recommendation of the Road Committee to hire an automobile for the use of the road surveyor. They had obtained estimates and had ascertained that the cost of hiring a mechanically-propelled vehicle would not exceed the amount annually paid for horses and trap, the pre-

sent cost of horses, trap, and driver being £235. In moving the recommendation Councillor West pointed out that in Croydon there were 122 miles of roads; the committee employed 500 men and the surveyor was responsible for the spending of a sum of about £100,000. It was necessary, therefore, that the Surveyor should be able to get about quickly and supervise the work, and it was expected that a considerable saving would result. In the course of the discussion Count Denning said that Croydon was only a small place and suggested the purchase of a Welsh cob and a light trap—a suggestion that Councillor West regarded as extraordinary coming from a gentleman who used two motor-cars in his business.

Cars in Croydon.

THE movement to reduce the speed limit of motor-cars in Croydon, and to secure a better regulation of traffic, has received a further impetus from a meeting at which the West Ward Ratepayers' Association unanimously adopted resolutions in its support. On the other hand, the Thornton Heath Ratepayers Association, one of the largest in the borough, having discussed the same resolutions, adopted one in favour of reducing the speed of all traffic in the borough, it being pointed out that it would be ridiculous to allow tradesmen's carts and trams to go through the streets at a faster rate than motor-cars. At both meetings it was agreed that an eight-mile speed limit from West Croydon to the Swan and Sugar Loaf Hotel was desirable. At the Thornton Heath meeting a letter was read from Dr. Jackson, the borough coroner, in which he mentioned that he had held several inquests on people killed in the borough by motor-cars, but in no case had there been any proof whatever of fast or reckless driving. He believed the public outcry against motor vehicles, and the heavy penalties inflicted, had done much to impress motor drivers of all sorts with the risk they ran in travelling up to anything like the present legal limit in main roads, such as the Norbury-to-Purley route. Personally he was not in favour of doing anything at present.

On the Sands at Saltburn.

THE arrangements have now been completed for the holding of the annual speed trials of the Yorkshire Automobile Club on the sands at Saltburn on Saturday, June 27th. Owing to considerations of tide it will be necessary to commence operations at half-past eight o'clock in the morning, but, although this may cause a little inconvenience, it will remove many of the difficulties which occurred last year, when the trials began at two o'clock. The course itself will be a kilometre in length, but the sands will be roped off for a distance of two miles. The finishing post will be opposite Agar's Gap, which allows half a mile for the cars to pull up in. It is hoped that many prominent racing motorists will take part in the trials. The Hon. A. Lee Guinness will attempt to create a world's record for the flying kilometre. Amongst the other competitors who are expected to take part are Mr. Warwick J. Wright, Mr. A. Farnell (Bradford), and Mr. R. Winn (Leeds). There will be fifteen events in all, and amongst those who have promised cups are Earl Fitzwilliam (president of the club), Mr. D. H. Thornton, of Birkenhead (vice-president), and the various branches of the Yorkshire A.C. In our "Club News" we refer to the programme in greater detail.

An Australian Hill Climb.

ON the 14th ult. the Automobile Club of South Australia held a hill-climbing contest at Burnside, near Adelaide, over a course 4 m. 148 yds. long, and with gradients ranging from 1 in 25 to 1 in 8. In that district the speed limit for motor vehicles is 20 m.h.p., and for "this occasion only" the Attorney-General had suspended the operation of the Motor Vehicles Act passed by Parliament last year—a concession that was necessary, as the winning car made an average speed of nearly 26½ m.p.h. The contest was the third and last of a series for a trophy presented by the president, Mr. T. Barr Smith. On the first trial

there were more than thirty contestants; they fell to seven in the concluding event, the first three in the end being Mr. H. Low Smith on his 20-h.p. Talbot, Mr. R. Morton on his 12-16-h.p. Talbot, and Mr. V. Lewis on his 10-12-h.p. Talbot, their respective times for the climb being 9 min. 17 sec., 11 min. 13 sec., and 14 min.

A Ballooning Party.

MOTORING having lost its early excitement, country folk are now taking to the air, and the balloon party at Lord Llangattock's lovely place near Monmouth at Easter is evidence of the advance. The well-known aeronauts, Count d'Oultremont, president of the Belgian Aero Club, and Count Castillon de Saint Victor, one of the founders of the Aero Club de France, came to England to join the country house ballooning party which was given by Lord and Lady Llangattock for their son, the Hon. C. S. Rolls, at their seat, The Hendre, Monmouth. Four balloons were taken down to Monmouth for ascents in the neighbourhood on Saturday, Monday, and Tuesday. Among the guests were the Hon. Claude Brabazon, who took part in the Gordon Bennett race in America last year; Captain Grubb, R.E., of the War Office, who

regis of the Institute of Chauffeurs will prove useful in encouraging chauffeurs to a high standard of automobile excellence. We like the idea carried out by the Manchester A.C. at their Bamford meeting the other day, when, without any previous notice, the engines of the cars taking part in the trip were inspected for general condition and cleanliness, prizes being awarded to those most notable in these respects. These inspections will be conducted periodically by the Manchester Club, and the chauffeur who obtains the most marks at the end of the season will be given some special mark of distinction.

Seeing London.

LAST summer the Great Western Railway Company brought passengers from the country and enabled them to see London before returning home in the evening; now the system of inspecting London from the motor char-a-banc is being developed, and on Monday a number of sightseers boarded such a vehicle in Adam Street, Strand, and were driven around the historical parts of the City. In the afternoon the West End was similarly invaded, and apparently the motor char-a-banc for sight-seeing purposes is being successfully instituted as a feature of the growing varieties of automobile traffic in the Metropolis.



Racing at Brooklands.—A View of the Spectators' Enclosures on Easter Monday.

was with Mr. Rolls in the balloon race from Brussels, in which they landed on the Biscayan coast; Mr. Philip Gardner, who recently made a night trip from London to the Jura mountains, in Switzerland; Mr. Frank Butler, one of the pioneers of automobilism; Lieutenant Hilhouse, R.N., and Dr. Lockyer, a director of the South Kensington Observatory. Count Castillon de Saint Victor was identified with Count de la Vaulx in the world's longest balloon voyage from Paris to Russia, and Count d'Oultremont once crossed the Channel from Paris to Hull.

Encouraging Drivers.

It is gratifying to find automobile organisations recognising the importance of the chauffeur in the public appreciation of the motor movement. That he can play a leading part in bringing the opprobrium of the non-motoring public upon our heads is well known; that when he takes the car out without authorisation something discreditable often happens is proved week after week. When such delinquencies become known he expects some sort of disapprobation finding expression. This being the case, he has a right to look forward to some meed of praise when meritorious work is done. In London, the competitions initiated by those responsible for the Argyll and Napier cars has done something, and that now in progress under the

American Organisation.

THE motorists of the United States apparently have faith in organisation, and the American Automobile Association has no fewer than thirty State associations, comprising at least 200 clubs, within its ranks. Gradually they are endeavouring to secure something like uniformity in the legislation of the various States, and hope ultimately to get rid of the chaos that now prevails, resulting in uncertainty as to speed, &c., whenever motorists cross the boundary line of any State. Much good work is thus being done, with commendably little friction.

MOTOR char-a-banc excursions to places of interest in the neighbourhood, which proved so popular last season, were resumed at Bexhill on Good Friday.

AT Westcliff-on-Sea a number of taximeter cabs arrived in the town on Saturday, and will be placed on the cab-ranks as soon as the necessary licences have been obtained.

THE number of visitors to the Southampton district for the Easter holidays has been much greater than usual, and an important development in motor traffic has begun here with the Eastertide. There are to be daily excursions through the New Forest and other beautiful spots in Hampshire.

HOLIDAY NOTES FROM BRIGHTON.

IT would be no exaggeration to say that, during the Easter holidays, Brighton became the great central rallying point of the English motoring world. Mind you, even the most patriotic Brightonian will condescend to admit that there are other seaside holiday resorts in the country, but he rejoices in the knowledge that the perpetual attractions and traditional fascinations of his own beautiful town are a natural magnet, drawing in its direction every week-end all the year round the biggest stream of petrol-driven traffic known on any highway out of London. To some extent the motorist might almost be hailed the saviour of the situation in Brighton, for the sovereignty of the once-vaunted "Queen of English watering places" has diminished considerably in lustre—not so much through any fault of her own as because of the levelling influence of modern progress, aided and abetted by the now extraordinary accessibility of her foreign rivals. "Long-stayers" among her fashionable visitors are not so numerous as they used to be, by any means, and yet, thanks mainly to the motor-car's inspiration, her vogue as the paradise of the metropolitan week-end is stronger than ever. The business people of Brighton are hoping that Mr. Joseph Lyons' dazzling scheme for the creation of a magnificent kursaal right down on the sea front will enable the town to cry an exultant "Quits!" with Monte Carlo, Ostend, and the rest—but that is a goal that the uncertainties of Parliamentary inquisition and different factors of local opposition to the project may render a very distant outlook yet awhile.

IN the meantime, fully recognising the importance of the motoring patronage it enjoys, Brighton has risen to the emergency within the last two or three years. Spacious public garages continue to multiply in the land, and the principal hotels lay themselves out, as it were, to win the suffrages of the car-whirled, road-borne strangers within their gates. And yet a certain influential gentleman, who shall be nameless, recently tried to persuade the people of Brighton that, on the whole, her motor-travelling patrons do her no good, because of the here-to-day-and-gone-to-morrow spirit that mostly determines their movements. The enduring fascination of the car undoubtedly is a temptation to be continually "on the go"—but the Brighton hotel-keepers have their own opinions on the subject as to which class of visitor spends its money the more freely. The railway company, by-the-by, counts on "getting its own back," if the projected kursaal becomes *un fait accompli*, by means of luxurious Pullmans that are to do the journey from town within the hour.

BY Saturday night the Brighton garages, like the hotels, were crowded literally to overflowing, and it was often heart-breaking work for late-comers to secure accommodation for "man and beast." At the structurally gigantic, socially smart, and essential "goey" Metropole they had motoring visitors by the score—Mr. Alfred du Cros a unit among them—though the harassed book-keepers, appealed to for information on the subject, protested their inability to pick them out from the crowd, while the garage manager had no time to take more account of the cars committed to his charge than their numbers. The Grand Hotel hard by was bubbling over with a similar superabundance of prosperity, and its recognised garage close by, that of the Brighton and Sussex Motor Works, Ltd., which, of course, accommodates the cars of visitors elsewhere, was in a state of mechanical turmoil practically all day long. Sir John and Lady Bell, the Lord Mayor and Lady Mayoress of London, left their car there, as also did Mr. Wertheimer, of artistic renown, Lady Hope, Colonel Wyllie, Mr. Simpson Hinchcliffe, and Mr. E. Wormald, to mention just a fractional part of its Easter clients.

WITH such a plethora of traffic on the front—big touring cars and dainty landaulets gliding disdainfully past fussy, rattling, clanking little "runabouts," taxi-cabs, quite a recent

importation to Brighton, rushing to answer the imperious calls constantly ringing from the hotel porticos, and a few patrician horse-carriages and common or garden cyclists looking rather bewildered in the whirr and bustle of things, it was difficult to pick out anything particularly notable, though there was lots of it about. But one of the finest turn-outs noticed on Saturday was certainly a handsome 40-h.p. Napier, all dark green and gleaming silver, belonging to Mr. Tyzbek, of Haywards Heath. One noticed it at leisure in the garage of the Old Ship, amongst the visitors at which historic hostelry, with its nearly two centuries-old assembly room, where the fine ladies and their cavaliers of the Regency period, when George IV. kept gay Court at Brighton prior to his accession to the Throne, danced many a lively measure, were Mr. C. H. Stephens, Mr. D. B. Atkins, and Mr. L. H. Phillips, who had motored down south from Birmingham and district.

THE startling change that came over the aspect of nature on Easter Sunday qualified the charm of the road considerably. Visitors who motored down to the seaside in a fairly sunny though decidedly wintry morning were not enamoured of the return journey prospect by any means. For an hour or two during the afternoon Brighton was dim as November twilight, and a regular blizzard bore down on the scene, with driving sleet and blinding snow that ensured wholesale cancelling of arrangements for car drives in the neighbourhood. The Royal York Hotel, perhaps the most popular rendezvous of the motoring fraternity, had many callers for luncheon, and well-known personages in the professional and industrial car world. Among its visitors were Mr. F. C. Baisley, of the Gladiator company, Mr. Warwick Wright (Metallurgique), who brought a small party with him, and Mr. Bell, the manager of one of the principal metropolitan taxi-cab enterprises, who was accompanied by M. Lotery. Miss Kitty Gordon, the well-known musical comedy "star," motored down with her husband, Captain the Hon. T. Beresford, to sing at the Palace Pier concerts on Monday, while Miss Constance Collier and Miss Margaret Cooper were other artistic celebrities arriving at the Royal York.

MR ALFRED VANDERBILT, the young American multi-millionaire who is going to revive the old-time coaching traffic 'twixt Brighton and London on May 4th, and will himself drive ordinary paying passengers up and down day by day during the next six weeks, arrived by motor on Sunday morning and lunched at the Metropole.

THAT hotel, too, was the *locale* of a festive little gathering of London pressmen and others invited by the directors of the Electrobus Company to celebrate the first long-distance run of an electrically-driven omnibus out of London. Unfortunately, the vehicle itself, with about twenty expectant guests on board, fired its axle on the way, and arrived at its destination nearly two hours late. The luncheon had to get along without them, for other members of the party had taken the precaution either to motor down in the ordinary way or come by train. Mr. Thomas Garlick, representing Sir Henry Dering, who was unable to be present, presided at the "festive board," supported by Mr. Jacob Atherley, Captain Taylor, Mr. Musgrave, Mr. Roberts, and others interested in the Electrobus venture. Several of these new vehicles will soon be running in the streets of Brighton, and their many points of superiority over the petrol-driven type—with the noise and other drawbacks of which some of the populace are unpleasantly familiar—were duly emphasised during the more or less convivial speeches that succeeded a perfectly Lucullan display of hospitality. "SAXONIAN."

"TURCO" specialties of importance to the motor trade and motorist alike include the matting paint and the tyre paint of the Union Rubber and Chemical Company, Ltd., Manchester. The latter is for renovating the appearance of tyres which have become soiled or discoloured from use or long acquaintance with shop or repair establishment.

CONTINENTAL NOTES.

The Prince Henry Reliability Tour.

The entry list at ordinary fees for the Prince Henry Reliability Tour, which is to be held in June next, closed on the 15th inst., when it was found that no less than 145 cars had been entered. Germany is represented by twenty-four makers and 107 vehicles; France by seven manufacturers and nine cars; Belgium by four and eleven respectively; Italy by three and five; Austria by two and five; Switzerland by two and three; and England one maker and one car—a Napier.

The Elastic Wheel and Tyre Competition.

The spring and elastic wheel and tyre competition organised by the "Auto" of Paris came to an end in the French capital last week, when of the twenty-one cars which set out for the journey to Nice eleven safely arrived home. Each class was divided into two sections:—(a) In which no repairs and replacements of wheels or tyres could be made, and (b) in which they were permitted in those cases where the reservation had been provided for in the entry form. The awards are as follows:—Class 2, cars of a minimum weight of 1,000 kilogs.—Section A: 1, Vulpes car fitted with Ducasble tyres and driven by

Prince Henry of Prussia as Inventor.

Prince Henry of Prussia, who, as is well known, is an ardent motorist, has just applied for a patent for a method of keeping the glass wind-shields of motor-cars free from mud or other dirt which might prevent the driver from having a clear view. It is a simple apparatus, composed of two movable bands of rubber placed on each side of the glass screen. A handle within convenient reach of the driver sets in motion the two bands which pass rapidly to and fro over the glass, thus cleaning it whenever the operation is necessary.

Light Cars in France.

The tendency amongst French motor-car manufacturers to cater for the growing demand for light cars is growing apace, for it is now announced that the C.G.V. Company, who have hitherto devoted their attention to cars of relatively high power, are now introducing an 8-10-h.p. two-cylinder model and a 12-14-h.p. four-cylinder vehicle.

A Useful Warning.

In view of the exodus of cars from Paris at Easter, the notice issued last week by the Chairman of the Touring Committee of the A.C.F. urging motorists to drive their vehicles with prudence came as a timely warning. The notice points



Rigal at the Wheel of one of the Clement-Bayard Cars for the A.C.F. Grand Prix Race.

Barriaux, no time lost due to tyre troubles. Section B: 1, Darracq car with Sider tyres, 1 h. 20 min. delay; 2, Ours car with Touzelt wheels, 1 h. 45 min. delay. Class 3, cars weighing over 1,250 kilogs.—Section A: 1, Mors with Ducasble tyres; no time lost. Section B: 1, Rebours car with Sider tyres, 4 h. 55 min. delay. Class 4, cars over 1,500 kilogs.—Section A: 1, De Dion with Ducasble tyres; no time lost. Section B: 1, Rebours car with Sider tyres, 4 h. 5 min. delay; 2, Delaunay-Belleville with M.Y.G. tyres, 1 h. 58 min. delay; Class 5, cars over 1,750 kilog.—Section B: Peugeot with M.Y.G. tyres, 5 h. 42 min. delay.

Speed Trials in Algeria.

As briefly mentioned in our last issue, a series of flying kilometre speed trials was held by the Algerian Automobile Club on the 12th inst. on the road between Algiers and Boufarik, when the best time of the day was set up by Gerin on a Renault 1907 Grand Prix racer (29 sec.). In the single-cylinder car class Baron de Vivier was the fastest on his Sizaire-Naudin (55 3-5 sec.). The four-cylinder (91 to 100 mm. bore) class resulted in a win for J. Narbonne on a Pilain (49 sec.), while in the 111 to 125 mm. bore four-cylinder section the fastest time (48 3-5 sec.) was set up by Mesquich on a Turcat-Méry.

out that just now, when the French Parliament is considering the question of motor regulations, any excessive speed or imprudent driving may have serious consequences on the development of the automobile movement.

Miscellaneous Items.

Six entries have so far been received for the St. Petersburg-Moscow race, which is to be held on May 31st, viz., a Die-rich, a Fiat, two Lion Peugeots, a Diatto-Clement, and a Humber. —Three Ital'as, three Isotta-Fraschinis, three S.P.A.s, a Berliet, a Junior, and two Zusta have so far been entered for the Targa Florio race, which is to be held on May 10th. —Prince Borghese has placed an order in France for an aeroplane built to his own designs, with which he intends to carry out a series of experiments near Rome. —The Association Touriste du Morvan (France) is organising a hill-climbing competition for May 31st over a four-kilometre course on the Autun-Montgen road. —The first of the new Panhard racers for the A.C.F. Grand Prix event is now being tested on the road. —A public-motor-car service is to be established at the end of May between Reichenhall and Thunsee, Germany. —A new 24-seated single-deck steam bus built by La Société des Générateurs Économiques has just made its appearance in Paris.



A Public Motor Car Service has recently been started between Enghien, St. Gratien, and Deuil, France.

The vehicles employed are of the De Dion 12-h.p. two-cylinder type, and have accommodation for eight passengers. The illustrations above depict (1) the Garage, (2) Buses waiting at the railway station at Enghien, (3) Loading up, (4) Two of the buses hired by a wedding party, (5) One of the stopping places, (6) Passing through Enghien, (7) the terminus at Deuil.

GOSSIP FROM PARIS.

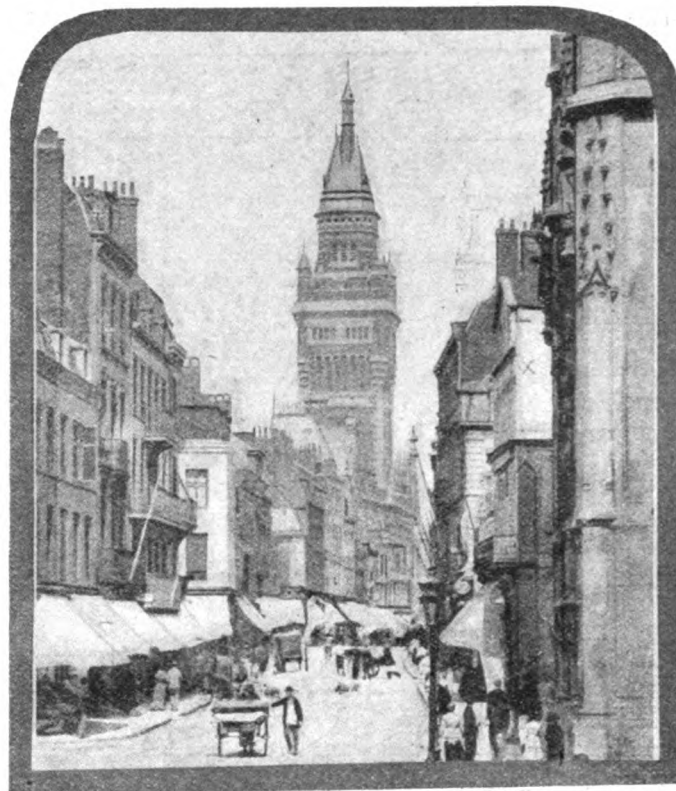
ONE of the numerous motorists who have been practising on the Dieppe circuit declares he covered it eleven times in one day. If he really did accomplish that feat, and if he should meet with no accident in the Grand Prix race, his car, which is not one of the best known, may carry off the prize. To cover the circuit eleven times in a day the speed must have been formidable or the endurance of the driver almost phenomenal, as a motorist, who has won several big prizes and who has driven round the Dieppe circuit more than twenty times, tells me that, with the good racing car he had, he could not cover the circuit in less than 50 or 55 minutes on account of the necessary slackening of speed in the towns and villages. It may be his competitor's car is swifter, and in that case the result of the Grand Prix of 1908 will be a great surprise to the motoring world.

"PUT a beggar on a horse and he'll ride to the d—l" is an old saying with much truth in it. But with the best will in the world it is impossible to drive a 6-h.p. motor-car up-hill at the speed of thirty miles an hour. A gentleman touring in the Department of the Drome, and approaching the little town of Tain, which counts only about 3,000 inhabitants, was, however, last week stopped by an officious gendarme, who pretended he had been guilty of furious driving! The owner of the little car protested in vain that the vehicle was incapable of committing the offence, so he will have to appear in the police-court to hear himself condemned to pay a fine, if not to imprisonment, because the police magistrates always take the word of the policeman or gendarme as gospel and never listen to the defence. Even if the little car, which is not much bigger than a bath chair, were to be dragged into court to prove its incapacity to infringe the speed regulations its owner would be condemned all the same. On appeal, the "delinquent" will surely be acquitted, but the stupidity or excess of zeal of the Tain gendarme will have cost him a lot of worry and several louis. Tain should be marked with a red cross as dangerous on the way-book of all English tourists.

MOTORISTS travelling from Calais to Paris must make a short *détour* on account of the building of a new bridge at Saint Rémy. On arriving at that place they should follow the road to Coquerel, Longpré, Bettencourt, and Airaines, to rejoin the main road there. In running from Paris to Calais the best road is, on arriving at Liancourt, to proceed to Bray-les-Mareuil, Caubert, and Abbeville. Among the English motorists at present in France are Mr. and Mrs. Woodward and party, 30-h.p. Dietrich; Mrs. Thurlow, 30-h.p. Delaunay-Belleville; Mrs. Fitzgerald, 35-h.p. Renault; Mr. and Mrs. Bridgeport, 30-h.p. Brasier; Mr. Cardwell, 40-h.p. Mercedes; Mr. and Mrs. Peavey, 28-h.p. Delaunay-Belleville; Mr. and Mrs. Rhodes Emmot, 20-h.p. Talbot; Lord Dunleath, 40-h.p. Siddeley; Captain C. Hamilton, Napier; Mrs. Hassell, 20-h.p. Dietrich; and Mr. Dempster, 35-h.p. Daimler.

M. ARCHDEACON is a convinced believer in the utility of offering prizes. He told me the other day that nothing could further the interests of aviation so effectually and so cheaply as the offering of big prizes. He with M. Deutsch had put up the prize of £2,000 won by Henri Farman. Well, if he and M. Deutsch had used that money in making an aeroplane he admits it is quite likely it would have been a bad one and that it would never have left the ground. Thus but little if any progress would have been made. On the contrary, by offering the prize a great impetus had been given to the movement for the conquest of the air, in which inventors had already spent ten times more money than the amount of the coveted reward. When the £2,000 were captured M. Archdeacon feared the ardour of the inventors would slacken, so he at once set to work to get other rich people to institute prizes. He rejoiced to see M. Armengaud offer his £400 to the first man who shall remain a quarter of an hour in the air, and applauded Messrs. Michelin for instituting their challengecup and £800 for the longest distance

covered every twelve months for a period of eight years, and their grand prize of £4,000 for a flight from Paris to Clermont Ferrand. But that is not enough for M. Archdeacon. He wants annual prizes of £40,000 or at least £20,000 during five years. With that reward in sight he is sure inventors would set their wits to work and effect the definitive conquest of the air in an incredibly short time. He has, with the object of founding those prizes, written to numerous millionaires, and among them Mr. Carnegie, Mr. Pierpont Morgan, Mr. Gould, Mr. Vanderbilt, Mr. Rockefeller, &c. If it is necessary he will, he says, go to America to demonstrate to them that they will never have a better opportunity of showing their generosity and of, at the same time, securing for themselves the eternal glory of having aided in the solution of a problem destined to transform the world for the better. M. Archdeacon is an enthusiast, and it is a pleasure to hear him speak of the considerable improvement in the physical and moral condition of the peoples of the world which he foresees will follow the conquest of the ethereal element by man.



Touring in France.—The Rue de l'Eglise, Dunkirk.

THE weather has not been favourable for the flights of aeroplanes, but the high wind which has prevailed many days has not prevented the flight of "canards." They have flown across the Atlantic and from all parts of Europe to the French capital. According to several of them the feats of Farman and Delagrange are nothing to those which will be achieved very shortly by the new machines being built in various countries. No doubt the Michelin prize of £4,000 for a flight from Paris to Clermont Ferrand will be captured one of these days, but, perhaps, not so quickly as some inventors imagine. Even the Brothers Wright seem to acknowledge that. Indeed, if the report which comes from Dayton is authentic, they have sold their secret to M. Lazare Weiller for the moderate sum of £20,000. I say "moderate," because not very long ago those inventors demanded four or five times that amount. I have not the pleasure of M. Weiller's acquaintance, and have not been able to ask him if the report is true, but the cablegram speaks of the sale of "patents," and till now the world had imagined the Brothers Wright had none.

MARNEY.

THE BROUHOT 9-H.P. BELT-DRIVEN CAR.

IN several recent issues we have had occasion to refer to the increasing attention which French motor manufacturers are now devoting to the construction of cars of much smaller power than those they have hitherto turned out. The Renault and De Dion concerns have, of course, always been well to the front in the manufacture of light cars, but the Brasier and Brouhot firms have not previously been associated with this class of automobile. The new Brouhot vehicle, of which we are this week able to give a description, is particularly noteworthy, inasmuch as the design is of an exceedingly simple character, the main drive being by belt—a form of transmission which has, in France, been usually looked upon with disfavour.

The frame, which is of pressed steel construction, is supported on semi-elliptic springs at the front, while those at the rear are, as will be seen from Figs. 1 and 2, of special design, they being practically halves of long semi-elliptics. The engine is of the vertical single-cylinder type, 105 mm. bore by 130 mm. stroke; it has mechanically-actuated valves, and is mounted at

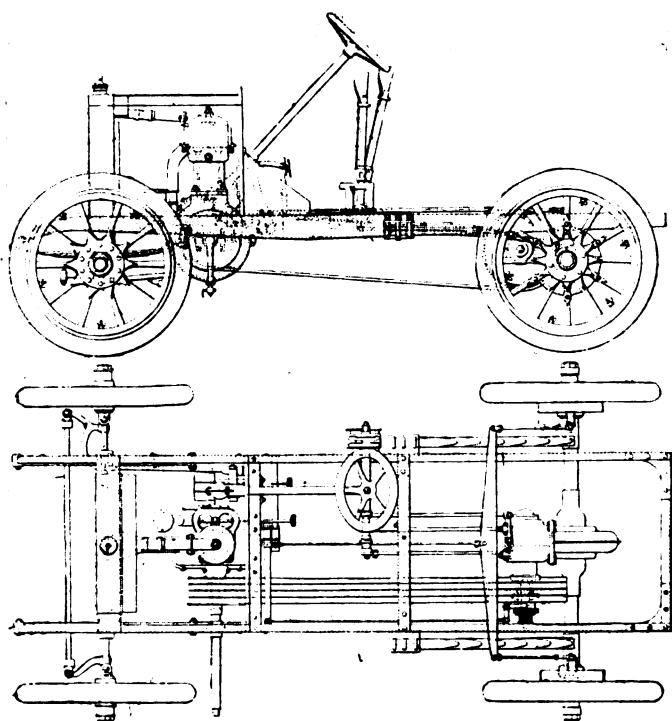


Fig. 1 and 2.—Elevation and Plan of Chassis of Brouhot 9-h.p. Belt-driven Car.

right angles to the usual position—that is to say, the crank shaft is parallel with the axles. The ignition is by high-tension magneto, and the water circulation on the thermo-syphon system, no pump being employed. A special form of carburettor furnishes the mixture, the air and fuel inlets being varied in accordance with the position of the throttle. Coming now to the transmission, reference to Fig. 2 shows that, mounted on the side of the extended crank shaft, is a pulley driving through a long wide belt a similar pulley on the end of the change-speed gear shaft in front of the rear axle. Three speeds and a reverse are available; the second and third speeds are direct to the live axle through one or other of two pairs of pinions, while the first speed and reverse are obtained by intermediary gears. The belt, which is entirely protected from mud and dirt by an undershield, has not to be shipped on to loose pulleys to disconnect the engine from the driving wheels as in the old form of belt transmission; instead a cone clutch is mounted within the rear belt pulley so that this can be converted into a fast or loose pulley as desired, by means of a pedal. The usual order of brake control is reversed—a pedal actuates the internal ex-

panding brakes on the hubs of the hind wheels, while a hand lever brings the enclosed one on the differential into action.

Before putting the new car on the market the Brouhot Company, whose works are at Vierzon (Cher), France, have submitted it to extended trial and claim that the vehicle, from its general simplicity and liberal proportions, is extremely low in up-keep cost. It is being made in two lengths of chassis, one for a two-seated car and the other for a light side-entrance four-seated phaeton.

SOME USEFUL NOTES.

MOTOR-HORNS which have been exposed to the rain and dust occasionally refuse to sound. If the india-rubber bulb is taken off and a piece of thin paper passed between the lips of the horn this will clear the obstruction. Care must, however, be used not to open out the lips when doing so.

IN engines which have separate exhaust pipes and no compression taps a cylinder which is missing may easily be detected by dropping a little—a drop or two is enough—water on the exhaust pipes. Needless to say, the water is not converted into steam by the exhaust pipe of the offending cylinder.

A LEAKING or broken petrol pipe is a somewhat annoying accident to be met with on the road, but it may be temporarily repaired by cutting out the leaky portion and joining the severed ends by means of a short length of rubber tubing of suitable size, the connecting ends of the rubber being bound by wire to their respective ends of the copper pipe. In the absence of a soldering iron for making a permanent repair, or of rubber tubing, one may be able to drive a few miles with the following makeshift:—Take narrow strips of cloth, torn from a handkerchief, soap them well, and wind tightly over the junction of the broken ends, which should first have been filed off squarely; then take adhesive tape and wind firmly over the cloth, beginning at quite a distance beyond it in each direction.

THE best method of getting at an unknown trouble, *e.g.*, loss of power, is to eliminate the different probable sources of trouble one by one, as by this method the cause of the difficulty can always be found. After trying and renewing, if necessary, the inlet valves, do likewise with the exhaust, and whilst with the exhaust examine the timing and make sure that this has not been interfered with. Next pass on to the ignition, and see if the accumulators (if these are used) are fully charged, or, at any rate, showing four volts. Many a time have weak accumulators been found at the bottom of an unknown trouble. Unless the car is missing fire badly the contact may be left alone, as this cannot alter; but, of course, if the car has been in other hands, it is well to see that the firing cam is correctly set. The carburettor is an article which, unless it is either stopped up, or flooded, cannot alter itself. A thorough cleansing of a carburettor with petrol is, however, a very good thing.

IN the work of taking apart the mechanism of a car great care should be taken to so arrange matters that no mistakes may be made when the parts are put together. When gears are unmeshed which have to do with the timing of the valves or the ignition, they should be so marked that they can be remeshed in the same relation. The usual way of accomplishing this is to mark the tooth of one gear of a pair and the two teeth of the other gear, between which this tooth meshes, by means of a prick punch and hammer. If the caps are taken off any bearings or bushes are removed it is essential, unless the exact manner in which they should be replaced is perfectly obvious, that these parts should be so marked as to permit of no doubt. The mixing of the halves of split bushes from different pairs of the same sizes should be guarded against, and the confounding of upper and lower halves should be avoided. Unless these precautions are observed, it is quite possible to bind a shaft in reassembling.

ARIEL MOTORS, LTD., have lately supplied a 30-40-h.p. Ariel car with special double phaeton body to Senor Joao da Fonseca Cruz, of Lisbon.

In Bondgate Without, at Alnwick, the Northern Garage, Ltd., have an extensive depot, from which they conduct a large business in hiring motor cars.

OUR advertisement columns often contain interesting news, as, for instance, last week's *Journal* had an invitation from the Municipal Council of Johannesburg for tenders for a self-propelled ambulance carriage.

THE Board of Trade has ordered the promoters of the Barton-Immingham Light Railway to provide a bridge in lieu of the proposed level crossing of the road in the parish of Barrow-on-Humber—a policy that should become general.

THE long distance Trial of Elasties-filled tyres has come to an end. Up to the time when we went to press more than 2,700 miles out of the 3,000 entered for had been completed, and a non-stop performance had characterised the run each day from the start.

THE value of the motor-cars and parts exported from the United States during February last amounted to only £69,672 as compared with £88,740 in the corresponding month of last year. The United Kingdom heads the list with £25,470, Italy being second with £12,756.

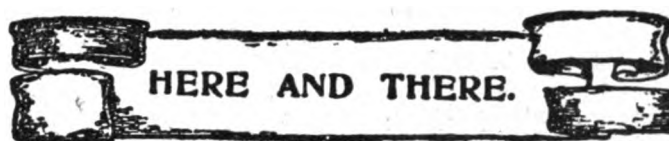
THE Oxford Watch Committee have received a formal application for the licence of twenty motor-cabs, to commence plying for hire on May day. It is stated that local cabdrivers will be given an opportunity to drive the new vehicles, and in this way the displacement of labour will be avoided as far as possible.

WHAT is the greatest height to which a car has ever been? Messrs. Willways, motor agents, Bristol, have just received a letter from a gentleman who is in the Government employ in India, who writes that he has driven his 10-12-h.p. Humber four-seater to a height of 4,300 feet above sea level. On the drive they rose 4,000 feet in twenty miles, and some of the corners required three reverses to negotiate.

A POLICEMAN in plain clothes has been signalling drivers of motor-cars passing through Llanfair to stop. One of his victims, who was charged at the Menai Bridge Petty Sessions, explained to the magistrates that all kinds of people tried to stop him, and on one occasion after he had been stopped he was told that his wheels had been revolving—not, by any means, an isolated instance of such obvious knowledge being communicated to motorists.

THE official opening of the garage of the Oldham Motor Company, Ltd., at the Harding Carriage Works, Werneth, Oldham, was an occasion of much local interest. Councillor W. T. Cooper is the chairman, and Councillor Bulloch the vice-chairman of the directorate, with Mr. R. R. Eglin as manager. The concern promises to attain considerable prominence among the business establishments of the town. There is accommodation for over thirty vehicles in the garage, and a very large shop for repair work.

AMONG the lubricators that have attracted attention at both the Cordingley and Olympia Shows has been the Noakes system of positive sight feed lubrication shown by Messrs. B. M. and W. D. Fair and Co. By means of this device the oil is forced direct to the cylinders and bearings, the motorist being able to watch it doing its work. By a few movements of the compressed air pump a pressure of 15 to 20 lbs. is indicated on the dial, which is all that is necessary until the oil tank requires refilling. The oil is forced through a liquid (half glycerine, half water), and rises in any required number of globules per minute, and from thence, still under pressure, through the feed pipes direct to the engine and bearings. The valves regulating the supply can be quickly adjusted, and automatically lock themselves on the patent locking bar. The liquid magnifies the oil passing through it, and a stoppage in any particular feed pipe can be instantly detected by the oil ceasing to rise through the corresponding sight-feed glass.

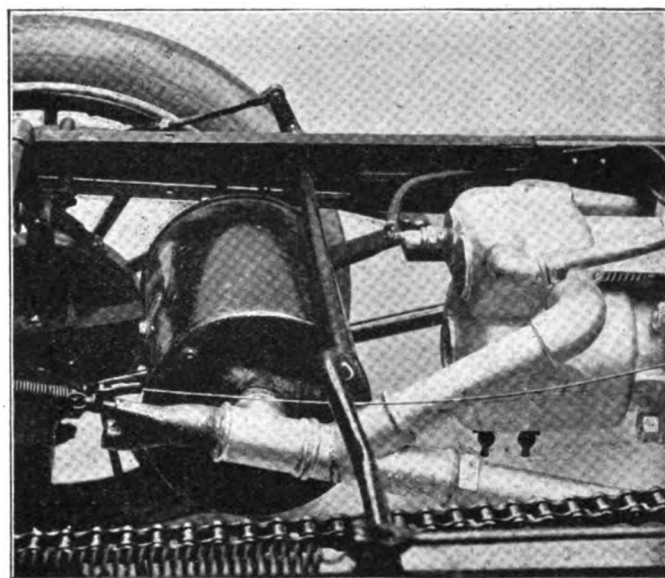


THE receipts from motor-fine in the Kingston Petty Sessions Division for the quarter ending March 31st amounted to £1,000.

By nineteen votes to sixteen, the Bradford City Council has authorised an application for power to borrow £1,250 for the purchase of a petrol fire engine.

THE Atlas Engineering Company, Ltd., Manchester, has been registered with the Registrar of Joint Stock Companies. The primary object of the concern is to manufacture on a large scale their patented resilient road wheels, which are now being used, among other firms, by the Daimler Motor Company, Ltd., the Wolseley Co., and the Vanguard Motor Omnibus Company, Ltd.

WE illustrate herewith a new type of silencer, which is being supplied by Reo Motors, Ltd., as a standard fitting to the new 18-22 h.p. Reo "Flying Greyhound," which renders the exhaust most silent with a minimum back pressure. It will be observed that the silencer is of exceptionally large diameter, and that the end plates are securely fixed to the main part of the apparatus by four long bolts, which pass through its entire length. The photograph also clearly shows a "cut-out" which is fitted at the end of the union of the exhaust pipes. The



powerful spring seen at the extreme left closes the free passage, when naturally the exhaust gases pass through the silencer. When the wire cable is pulled, the spring is then extended and the cut-out is opened. One of the special features of the device is the method by which it is brought into operation, this being by a small pedal placed on the extreme right of the footboard; a small catch is fitted so that it is not necessary to keep the foot continuously on the pedal when it is desired to make use of the cut-out.

DURING the Easter holidays many London motorists went as far as Marlborough, seventy-five miles from town, where the Ailesbury Arms Hotel has a good garage with two inspection pits.

THE Institute of Chauffeurs, Ltd., are organising a Proficiency Competition which is free to all professional chauffeurs in private service. This closes on July 31st, and those desiring to compete for the gold and silver medals as well as the money prizes should attend with their cars at the Victoria Street Garage, 94, Victoria Street, Westminster, S.W., any week day on or before that date between the hours of 3 and 5 p.m. The winners adjudged will be those who obtain the highest number of marks in the following order:—(1) references, (2) condition of engine and gears, (3) condition of body lamps, brass work, &c., (4) general smartness and civility, (5) an examination paper on special points in driving and roadside repairs.

IN Union Street, Plymouth, Messrs. Collins and Sons have an extensive motor repair shop.

THE Earl of Ilchester has ordered a 42-h.p. chassis from the Daimler Motor Company, Ltd.

A MOTOR depot and garage has been opened in the St. Andrew's Road South, St. Anne's, by Messrs. Richard and Herbert Lonsdale and Mr. Preston.

MESSRS. G. MAIN AND CO. have a well-equipped garage and motor work shop in the Parade, Leamington Spa, which has been well patronised during the holidays.

THE Daimler Company have again been honoured with an order for a Daimler car from the Prince of Wales. His Royal Highness has now purchased four cars of this make.

THE Legislature of Prince Edward Island has voted a resolution favouring the exclusion of motor-cars from the province, and will shortly introduce a Bill to carry out the resolution.

SOME interesting tests have lately been carried out at the works of the Electric Ignition Co., Ltd., Sparkbrook, Birmingham, which demonstrate the high degree of operation and low current consumption which have been attained with the E.I.C. ignition coils. The tests, which were made on a four-cylinder single trembler coil, using a 4-volt current throughout, were as follows:—A, running at continuous discharge with gap at atmospheric pressure; B, running at continuous discharge with gap under pressure; C, running through commutator with gap



at atmospheric pressure; D, running through commutator with gap under pressure. The results obtained were:—Test A—Current used $1\frac{1}{2}$ amps., sparking perfectly regular, 9,000 sparks per minute. Test B—Highest pressure 200 lb. per square inch, current used $1\frac{1}{2}$ amps. Test C—Sparking regular, one spark per commutation up to 5,000 revs. of engine; current used $\frac{3}{4}$ amp. Test D—Sparking regular at one spark per commutation up to 5,000 revs. of engine, under 150 lb. pressure per square inch, current used $\frac{3}{4}$ amp. The E.I.C. coils, of which we give an illustration, are of the highest grade manufacture and are guaranteed for two years.

AT a meeting of the Mechanical branch of the American Association of Licensed Automobile Manufacturers lately held in New York, Dr. Charles Edward Lucke, of Columbia University, who has been making some very exhaustive tests with alcohol, as a fuel for internal combustion engines, delivered an address on the subject. Dr. Lucke's remarks were principally in making comparisons in the tests he had made with the use of alcohol for automobile engines as compared to those for stationary use. He pointed out that with certain types of motors he could start with alcohol as easily as petrol by the use of a spray carburettor with the ordinary needle valve. He did not feel that the time was opportune for a universal adoption of alcohol for practical use, especially in automobile engines, owing to the absolute necessity for a minute adjustment of the carburettor and the ignition which could not be had in motor-cars, owing to the inexperience of many drivers and owners.

A MOTOR garage together with repair shop is being opened in Denmark Street, Middlesbrough, by Messrs. Day and Hanson.

THE Daimler Company have received an order from the Right Hon. the Earl of Harrington, of Elvaston Castle, for a 36-h.p. Daimler detachable limousine.

MR. R. C. LEHMANN, M.P. for Harboro', while motoring near his house at Bourne End, Bucks, last week, sustained a broken wrist through the back-firing of his car.

THE Corporation of Glasgow have consented to draft a new bye-law making it an offence to throw on the streets glass or other materials objectionable to users of rubber tyres.

WHAT is claimed to be the oldest house in the United States has lately been converted into a motor garage. It is located at St. Augustine, Fla., and was built 343 years ago, in 1565.

THE Briarcliffe Trophy Race, which is to be run on the 24th inst., is attracting considerable attention in the United States. The contest is over a course of 300 miles, and the competing cars include a Maja, Fiat, Bianchi, Renault, Panhard, as well as several of American origin.

THE New York Taxi-Cab Company has adopted the word taxi-cab as a trade mark, and, claiming that they coined the word on or about May 9th, 1907, and have since continuously used it, are issuing a general notice warning all persons and corporations against the use in any manner, shape or form of the word "taxi-cab" in respect to motor-cabs or vehicles of any other kind.

MUDIE'S SELECT LIBRARY, LTD., have recently instituted a system of book delivery by motor-vans within a ten to twenty mile radius of London. Each car is in charge of a competent man, who fully understands the whole of the inner working of the library service, enabling books to be exchanged as advantageously as at the head office. The service is, we learn, running quite smoothly and satisfactorily, and will be a permanent feature.

MR. E. R. HEWITT, who has been experimenting with alcohol for industrial motor vehicle purposes, recently gave some interesting data on the results of his work, at a meeting of the Mechanical Branch of the American Association of Licensed Automobile Manufacturers. Mr. Hewitt adapted an engine to the use of alcohol for a five ton truck. On petrol, with a full load, the vehicle ran $4\frac{1}{2}$ miles per gallon. On using the motor without readjustment, only over two miles per gallon of alcohol could be obtained, but on raising the compression from 75 to 120 pounds he was able to get over five miles to the gallon of alcohol. He pointed out that it was necessary in this case to place the carburettor as near the engine as possible in order that the mixture would be sent into the cylinder at not less than 72 degrees. In cold weather he was able to overcome the loss in the vaporisation by surrounding the admission pipes with the water jackets, which kept an even temperature for the vapour until discharged into the cylinder.

THE Victoria Garage, St. Stephens Road, Norwich, have recently installed a special electro-magnetic dynamometer in their garage. By its means the purchaser of a vehicle can ascertain whether he has the horse-power that is guaranteed by the seller. The device consists of six essential parts, viz.:—(1), the magnetic brake; (2), the brake shaft and rollers; (3), the idle shaft and rollers; (4), the tachometer; (5), the holding back and holding down chains; and (6), the controlling switchboard. The machine is so arranged as to enable the operator at the latter to control the speed and braking effect on any car fixed to it. The brake is capable of absorbing, under normal conditions, energy amounting to 40-h.p. when running at 760 r.p.m. The idle shaft, as its name denotes, is used to run idly and act merely as a guide to keep the motor wheels in their proper place. The holding back chains are for the purpose of preventing the car leaving the rollers. They are attached to the back axle, and can be adjusted to the required extent by the use of an ordinary spanner. The tachometer is arranged so as to give direct readings in miles per hour, and also in revolutions per minute, the latter being used for calculating the horse-power, and the former to enable the driver of the car to know the speed at which he would be travelling if he were on the road.

EASTER NOTES.

OWING to the very cold and wintry weather, there were not so many motoring visitors to Cheltenham this year as last. Among the visitors to the Queen's Hotel were Sir Walter Vaughan Morgan, of Brecon, on his Panhard, Mr. E. W. Hann, of Aberdare (Lanchester), Mr. Morice, of Datchet (Siddley), Mr. Johns, of Winchester (Winton), and others on various cars, including six Daimlers, three Minervas, two each Darracqs, Humber, Itala, and Mercedes, as well as Argyll, Berliet, De la Buire, De Dietrich, Fiat, Napier, Thornycroft, and Belsize.

DROITWICH, as a motoring centre, is becoming more generally recognised, to which the well-made macadam roads radiating from the town naturally contribute. The motoring visitors at the Worcestershire Brine Baths Hotel during the Easter Holidays included Messrs. G. Neilson (40-h.p. Napier), E. H. Thurburn, of Rothiemay, N.B. (15-h.p. Siddley), A. L. Wigley, of Nottingham (20-h.p. Beeston Humber), F. Johnson, of Mansfield (15-h.p. Humber), and D. M. Hollins, of Manchester (50-h.p. Leon Bollee).

A LARGE number of motoring parties have been visiting the town of Fowey.

COMPLAINTS of the excessive speed of motor-cars in Weston-super-Mare have lately been frequent, especially in the Locking road (i.e., the Bristol road). If the speed is persisted in there will be trouble. At present police traps are almost unknown in this county, and local car-owners strongly object to strangers giving the police an excuse to take action.

THERE were a goodly number of motorists at Leamington Spa for the holidays, several well-known faces from Coventry being seen at the Clarendon Hotel.

IN view of the fact that the steam roller is generally *en evidence* in the Lake District in March and April, motorists journeying thither have paid particular regard to the road-repairing work on the Windermere-Grasmere-Keswick road, as well as others in the locality. Beyond Ambleside the road has been in excellent order as far as Dunmail Raise. The new descent to Wythburn is in perfect order, but motorists who wish to take the western shore of Thirlmere will find the turn at the bottom even more awkward than before, the angle being acuter. Another £20 would have doubled the value of this improvement. Keswick has just got rid of the roller from its streets, and the continuation of this road to Cockermouth by either side of Bassenthwaite Lake is free from trouble. The Borrowdale road from Keswick is damp and bumpy as usual up to Lodore, and then is in average condition up to the head of the vale, as is the alternative route along the west of the lake. A new road has been made by the Honister Slate Quarries up to the summit of the pass, which can be used on payment of 1s. for a motor-car, as we learn from the "Manchester Guardian." It dives off with a bold zigzag to the right immediately on leaving Seabothel, and, having a more uniform gradient, will in time be a much easier road.

AT Dover the proportion of motorists among the visitors was distinctly notable. Just before the holidays a second large garage was opened, in connection with the Lord Warden Hotel, for the accommodation of visitors' cars. Both garages were crowded with vehicles during the Easter.

AT Matlock Bath many motorists have been staying, and among the visitors at the Royal Hotel, Matlock Baths, during Easter were Messrs. Wade, Hull (Daimler), Moor, Hull (Darracq), Jonas, Sheffield (Darracq), Howell, Sheffield (Daimler), Adams, Sheffield (Humber), Tallent, London (Ariel), Gamble, Rainhill (Fiat), Harris, Calne (Daimler), and Allen, Worksop (Swift). Elsewhere in Derbyshire many motorists were seen on the road, and quite a record number passed through Buxton, where Mr. G. W. Hodgkinson's garage was busy in attending to their wants.

AROUND LAMPETER BY MOTOR-'BUS.

MOTOR-'BUS services are now getting into swing for the season, and from all quarters news of the popularity of this means of reaching unknown corners of the land reaches our office. Motor char-a-bancs, too, will be largely employed, and altogether the public employment of motor vehicles is likely to receive a great impetus this year.

Meanwhile the Great Western Railway Company is getting its fleet of a hundred motor-buses into order, and we are able to reproduce a familiar scene outside the railway station at Lampeter. It is through the ancient and interesting capital of Carmarthenshire, and by the line running thence northwards through the "sweet shire of Cardigan" to the sea coast, that the holiday-makers of Swansea, Cardiff, the Southern Marches, Bristol, Bath and the West of England generally reach the "Garden of Wales." The vehicle has seemingly only just quitted Carmarthen when the traveller finds himself amongst the oak-clad gorges of the Gwili, and begins to realise the fact that the approaches to the "Garden of Wales" are scarcely a whit less beautiful than the Garden itself. Now he looks down on winding brooks as clear as crystal, on thatched cottages of indescribable quaintness, on gardens bright with flowers, on verdant hedgerows, or on broad expanses of common land thickly studded with patches of golden gorse; now the eye rests



on tree-covered slopes, shady glens, and, looking upwards, on mountain tops standing out boldly against a sky almost Italian in the deepness of its colouring.

Lampeter is only nine miles to the north of the haunts of Lewis Glyn Cothi, and as we descend into the valley of the Teify (declared on competent authority to be the finest trout stream in all Wales, to say nothing of its salmon and sewin) a view may occasionally be enjoyed of the Carmarthenshire lowland, spreading away seaward in the direction of New Quay, Aberayron and Aberystwith. It was a place of note long before it became the Alma Mater of the Welsh "Church Establishment," and there arose on the banks of the Teify certain collegiate buildings of reposeful aspect, sufficiently important to remind one forcibly both of the Cam and the Isis. The modern stronghold of Welsh clericalism is every whit as picturesquely situated as the citadel of the Calvinistic Methodists. St. David's College has the power of conferring degrees, and possesses a hall, quadrangle and chapels with the other architectural appurtenances of the educational system practised at Oxford and Cambridge. Lampeter is certainly one of the beauty spots of the Cardigan hinterland, and is always looked upon with affection and veneration by those who receive their classical and religious training within the walls of Bishop Burgess's useful and carefully maintained foundation. From Lampeter four or five most agreeable excursions may conveniently be made. There is a public motor service to Aberayron, and then the visitor can go by the same means of transit on to Aberystwith, keeping close to the coastline and passing through Llanrhystyd, or, by arranging for a special car, one may follow the course of the Teify to its junction with the sea beyond Cardigan.

ACCESSORIES FOR SPRING TOURING.

AMONG non-skids which have attained considerable popularity with motorists is the Ryley detachable device, introduced by Mr. J. A. RYLEY, 234, Martineau Street, Birmingham. This is of the chrome leather type, and is fitted with steel rivets securely inserted. The "Ryley" detachable non-skid has merits of durability, and those who favour this type will be interested in the ease with which it can be taken from the tyre. In the new list for the season which Mr. Ryley has issued are illustrations of many standard accessories, including the "Heron" motor pump, in a size which makes it specially suitable for garage use, in which connection it will doubtless be seen by motorists when on their spring tours.

Exhaust Valve Removers.

In our last issue we referred to the B. K. Simplex valve spring compressor brought out by Messrs. BRANSOM, KENT AND CO., LTD. This is illustrated in the accompanying sketch. The same firm have also an exhaust valve remover, adjustable to suit any type single-cylinder engine. The "Duplex" adjustable valve spring compressor for two, three or four cylinder engines is also marketed by Messrs. Bransom, Kent and Co. This compresses two springs, at the same time holding spring and collars in position, while the inlet or exhaust valves are removed for examination, cleaning or regrounding.

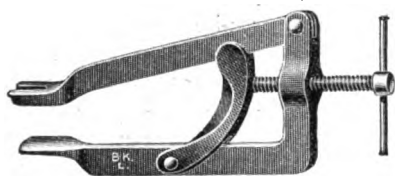


Fig. 1.

Wind Screens.

One of the important matters which motorists will do well to see to at this season of the year is the fitting of wind screens calculated to effect the purpose of protection from the weather with the least possible trouble in getting into position. One of the first firms who recognised the necessity for the folding screen for motor-cars was Messrs. LOWE, BEVAN AND CO., of the Clarence Works, Birmingham, and they have a selection of such devices for cars of all types. One of their notable patterns is the "Pioneer," in which the top glass frame is automatically raised by patent telescopic tubes fitted with springs, and regulated to the required line of vision by thumb screws in the centre of the telescopic tubes. No time need be occupied in unscrewing the glass frame, this being released by its fastener, and automatically rising to the required position. The "Combination" folding wind screen is another interesting device. This can be used in five different ways, namely, (1) as a straight screen, (2) half, (3) bottom half angled, (4) top half to open outwards, (5) bottom half straight and top half angle towards the steering wheel. We have also seen the "Kenilworth" folding screen, the fittings of which are so arranged that the bottom half of the device can be regulated at any required angle. It can also be used with the bottom half in upright position and the top portion inclined towards the steering wheel. If necessary, the "Kenilworth" wind screen can be used as a straight screen, and should it be desired, half folded down to form a half screen. It does not matter in which of these positions the screen is placed, as all the divided glasses are wind and rain proof. These specialties of Messrs. Lowe, Bevan and Co. are characterised by substantial work, and good finish, which combined with excellent design, have given them favour among motorists.

A Safety Lamp for Garages.

Too great care cannot be taken with regard to the avoidance of fire in houses and stables where motor-cars are kept. It is generally known among those who own cars, considerable risk is caused by the ignition of the vapour from petrol by the use of open lights in garages. Even in ascertaining the causes of breakdowns on the road at night-time, care should be taken. Hence we welcome the excellent safety lamp for the use of motorists brought out by the UNITED MOTOR INDUSTRIES, LTD., of 45 and 46, Poland Street, London, W. These are made in two sizes, viz., (1) that for the inspection of the car in the motor house and for the repair outfit on the car, and (2) that specially designed for fixing in garages. The lamps occupy but little space, and will burn well in a high wind, while the low prices at which they are supplied should commend them to our readers as an economical and efficient precaution against fire and explosion.

The Rotax Speed Indicator.

In the spring the motorist's fancy rightly turns to thoughts of travel. Then it is that the desire to know something of the extent of his

journeys comes upon him; more than that, the magisterial procedure in police courts has warned him of the wisdom of having some accurate mechanical answer to the assertions—often mechanically made by force of habit—of the constabulary officers who waylay those who motor. Recently we investigated the merits of a new indicator and recorder, which the ROTAX MOTOR CO., of 43 and 45, Great Eastern Street, London, E.C., are bringing to the notice of motorists. This not only registers the speed at which the car travels, but it declares with unerring fidelity the actual rate at any particular period of the journey, thus giving the owner a most effective answer should constables exaggerate and sergeants set down aught in malice. The device is in a compactly arranged case, and combines a timepiece, a mileage indicator, a trip recorder and a speed recorder. As will be seen from Fig. 2 there are four dials plus that which occupies the central position, but which is removed for the purpose of the illustration, in order to explain the mechanism more clearly. At the top is the clock, set by means of the key which opens the instrument. Three dials are employed in connection with the mileage recorder; that to the right indicates distance 0 to 100 miles, and is intended for daily use. To the left are smaller dials, one showing up to 1,000 miles, and the other indicating up to ten times that distance. The speed dial gives the speed in miles per hour. The Rotax instrument has a flexible shaft, with a screw connection to the recording device. The other end is fitted to the front wheel of the car. Every working part of the device is gear driven. In the sketch M is a sealed compartment, within which is a disc, which receives motion from the shaft, and communicates it to a wheel. The turning movement affects a screwed spindle, the motion of which is checked by gearing mechanism at the lower portion of the device. Below M in our illustration is seen the spindle engaging with the indicating pointer on the front of the instrument.

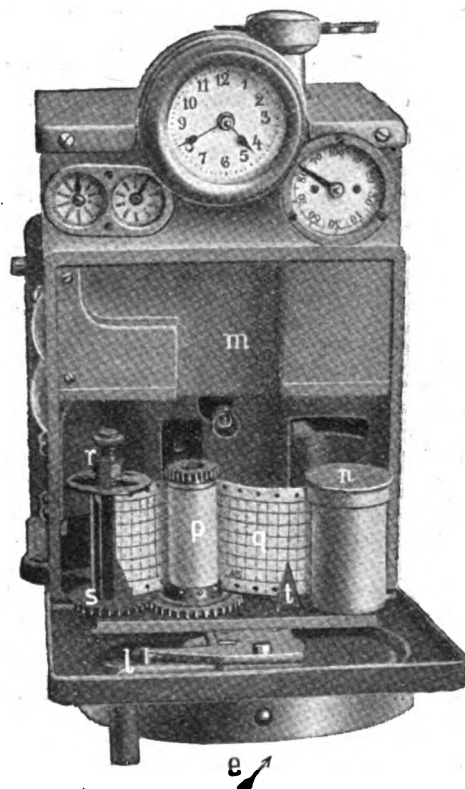


Fig. 2.

The recording takes place on a tape contained in N. This is unwound, passing behind the time-indicating pointer T. From this it is led behind the carrying roller P. R is a spring on the winding roller S, which secures the tape in its taut position. The tapes are supplied in any readings—4 to 30 m.h.p., 10 to 80 m.h.p., 15 to 120 m.h.p., and so on. The recording pointer consists of a steel point, which scores a white line on the blue perforated paper, and enables the motorist to see at what particular speed his car was travelling at any particular hour. The machine has the appearance of being a "good engineering job," is strongly constructed, and admirably designed. The Rotax Motor Co. have such confidence in their device that they guarantee every speed indicator for twelve months—an assurance that is warranted by the excellent lines upon which it is made.

Correspondence.

[Letters to the Editor should be addressed to the offices, 27-33, Charing Cross Road, London, W.C.]

POPULARISING BROOKLANDS.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—The authorities at the B.A.R.C. have not yet learned the way to draw the crowds; the relaxation of much of the stringency that disconcerted early friends of the course has done something to create a better feeling, but much has yet to be done.

Cannot the public be interested? On Monday the thing that the public liked best of all was to see the way in which the tyre of the Ford car was inflated and the vehicle speeding again before the De Dion was set going. That provided the element of uncertainty in full view of the spectators. They were not quite sure of the result until they saw the cars under the winning flags. And they voted that the best event of the day.

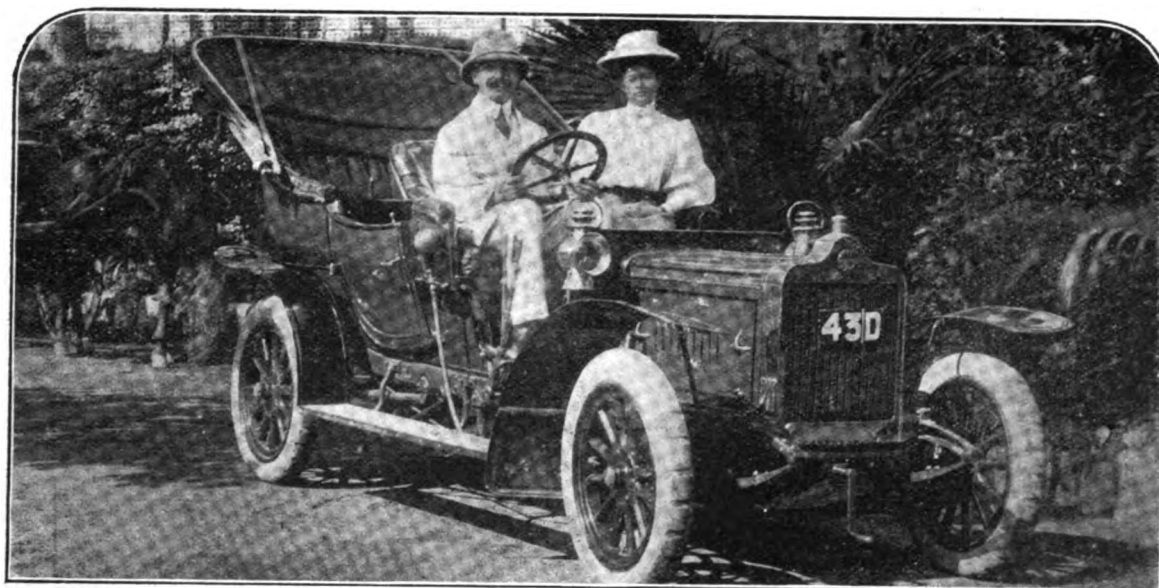
Now we need not transform Brooklands into a circus; but more of such events will have to be introduced if the crowds are to flock to Weybridge on race days. Why not let the starts and finishes all be in full view of those who pay half a crown to have a fleeting impression of a car travelling in the distance.—Yours truly,

ONE WHO WENT.

owing to unequal wear on the cams, also wear of the tappet guides, and it is rather a tedious job to be continually taking up wear in these parts. I always try to keep my own car accurate, and am glad to say I get very good results, but, candidly, it is a trouble, and one which very few people will probably take.

As we are on the subject of valve setting, what have some of your correspondents to say about the Adams engine which was shown at Cordingley's Show? This engine, it will doubtless be remembered, had an auxiliary exhaust, the piston uncovered small holes about $\frac{1}{2}$ in. from the bottom of the firing stroke. This relieves the exhaust valve of all pressure when it opens on the up stroke, and in my opinion, if the cooling is properly effected round the auxiliary exhaust, this system should effect a complete scavenge and give more power. This system, or rather one closely resembling it, has been tried on gas engines, but the difficulty was with the cooling of the auxiliary exhaust. Unfortunately, I had not time to go well into the Adams engine, so I cannot give details of the inlet valve setting, which I am curious to know, as the speed claimed for this engine is, I believe, about 3,000 revs. per min.—Yours truly,

INTERESTED ENQUIRER.



Mr. and Mrs. Charles Friswell on their "Standard" Six-cylinder Car in Bombay.

TWO SHILLINGS PER YARD.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—I read that at Midhurst Petty Sessions, before Sir Hugh Wyndham and other magistrates, a farmer was fined 20s. and costs for being drunk when in charge of a horse. Evidence proved that he was trotting down hill, the cart was overturned, the horse bolted, and a constable was dragged ten yards and his arms and feet were injured.

At the same court, on the same day, before the same Sir Hugh and presumably the same other magistrates, five motorists were fined £5 each for exceeding the speed limit, and, mark you! not a word of public danger.

We submit, for the consideration of Sir Hugh and the other magistrates, that if a drunken man be allowed to drag a constable ten yards for 20s., by the rule of three, a sober motorist should be allowed the privilege of dragging a sergeant fifty yards for £5.—Yours truly,

HENRY MOORE.

THE SETTING OF VALVES.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—I was very pleased to read the letter from Mr. R. H. Grahame. A letter like this from, I presume, a private owner, is practically conclusive as to the value of this setting for this particular engine—I say "practically," as there is no mention as to whether anything else was altered. It is a well-known fact that the majority of engines can be made to run slow by carburettor alterations, but I presume in this case the valve setting was the only thing disturbed. The letter from "Ajax" is of interest, and while I quite agree with him that mathematical accuracy is desirable in valve setting, the only unfortunate part is that the valves will not remain mathematically accurate for very long,

SCREW-PROPELLED RACING CARS.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—I note with particular interest in a recent issue an illustration of Mr. Farman's proposed application of the aerial propeller to racing cars (terrestrial). Of course it is quite practicable, and the system has advantages, providing always that a propeller worthy of the name is used, i.e., one that does not waste half the power applied.—Yours truly,

SIDNEY H. HOLLANDS.

A CHOKED FLOAT CHAMBER.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—As I have received many useful hints in the past from the columns of the *M.C.J.*, I venture to send you some particulars of a difficulty I recently experienced which may be interesting and useful to other readers. For some time past the engine of my single-cylinder car has caused me considerable worry. Everything appeared to be all right; in the stable it would start up on the first turn of the handle and run continuously. On the road, however, it would only run about half a mile, and then, after a slight popping sound, come to a stop. After a few minutes' delay I got the engine going again, but with the same result—another stoppage in about half a mile. Thinking the matter over quietly, I came to the conclusion that I must take the carburettor down and thoroughly examine it. During the Easter holiday I devoted a morning to the task, which proved by no means an easy one, as the nuts and bolts appear to be placed in the most inaccessible places. However, I eventually got it down, and then carefully took it to pieces. The jet, the float, the needle valve, all seemed in order. Below the float chamber I noticed four nuts; these I removed, and by a little gentle force I de-

tached the union which connects the petrol pipe with the float chamber. It was here that I found the cause of the trouble. The union is T-shaped, and was choked with a dull-red sediment, as was also a fine wire gauze—of the existence of which I was previously unaware—between the union and the float chamber. After giving all the parts a good clean out I re-assembled them and after some delay got the carburettor once more into place. Although the work took considerable time it was well spent, as the annoying stoppages have ceased to trouble me. In future I mean to give occasional attention to the clearing out of the union, notwithstanding its inaccessibility.

While on the subject I should like to give vent to a grumble against designers. Why do they put those parts that require attention in such unget-at-able positions? On my car, for instance, not only is it difficult to clean out the carburettor, but it is almost impossible to do anything to the water circulating pump.—Your truly,

SUBURBANITE.

DETACHABLE RIMS v. DETACHABLE WHEELS.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—Having been a reader of your most valuable journal for some time, I noticed in a recent issue that "Old Motorist LC 6325" is in trouble with mounting tyres. Detachable rims are a little comfort, if only to

so great a convenience at all times that I think my experience may prove of interest to many of your readers who may not be aware of its advantages.—Yours truly,

C. G. E. STEVENS NASH.
Capt. R.G.A.

THE LOCATION OF THE ACCELERATOR PEDAL.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—No car is now reckoned complete without an accelerator pedal, and the position in which this is placed has an important bearing on the general ease of control. Its usual position is to the right of the brake pedal, and more often than not much too closely adjacent to the latter for safety. Some drivers habitually keep the right foot resting lightly on the brake pedal in towns, so as to be ready for any emergency, disengaging the accelerator pedal and controlling the engine speed entirely by the hand lever. The majority of drivers, however, prefer the contrary method, setting the throttle lever for slow running position and using the right foot indiscriminately for braking or speeding up the engine, enabling the foot to be rested flatly on the floor board in the intervals of free running. A tight squeeze, such as a child suddenly darting across a road, discloses the inadequate means of control, for in the hurry of doing something without deliberation or thought a mistake can easily be made,



The Hon. Mrs. Peel and her Humber Car at the gates of Cassiobury Park, Hertfordshire.

prevent one getting locked up for using strong language on the roadside. I am of the same opinion as your correspondent, as I find stiff tyres and strong language go together, as the former seem as if they will not go on at all until the latter is added to the work. I am pleased to think I can give your correspondent the information he requires. There is a detachable rim that is patented and being tested at the present time; it is to be known as the F. P., and only requires one minute to take off the tyre or to take out the tube and put in a new one of any make. He will be able to take off his rim and fix it again in three minutes, making a complete change in four minutes. I have seen it done and timed the man, so can speak from facts.—Yours truly,

R. FLINT.

SOME USEFUL ACCESSORIES.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—In your issue of the 11th inst. I see that you state you will be glad to hear of any accessory which has been found of value in actual use. The pedal guard illustrated in the same issue is a case in point. I have used one of these on a "Baby Peugeot" for about a year, during which period I have driven in all weathers. The guard has enabled me to use an apron without any fear of it fouling the pedals. I have found it

the accelerator being depressed instead of the brake. On two occasions, when seated beside the driver, I have seen bad accidents only averted by the narrowest of narrow shaves owing to this very reason, and by making careful observation of the vagaries of quite a number of professional and amateur drivers I have become convinced that many otherwise inexplicable accidents are due to this very cause.

I venture to suggest, therefore, that to obviate trouble the accelerator pedal should be at the minimum distance of 4 in. to the right of the brake pedal. It would also be well to arrange the two pedals—the accelerator and brake—so that they work in opposite directions, one being pressed down and the other pushed forward, so as to render it a physical impossibility for a driver to make a mistake. Perhaps some of the readers of the *M.C.J.* will give their views on the subject.—Yours truly,

HARROGATE.

THE Automobile Association will be glad if the firm whose trade identification marks are F.M.F. will be good enough to communicate in confidence with the secretary, at Prince's Buildings, Coventry Street, London, W.

EASTERTIDE MOTOR RACING AT BROOKLANDS.—Dunlop tyres were fitted to more than half of the cars securing "places" in the events of the Brooklands Easter race meeting.

RACING AT BROOKLANDS.

THE cold, unseasonable weather which prevailed may have been largely responsible for the lack of public interest in the opening race meeting of the season on the Brooklands Track, Weybridge, which was held on Saturday last. So far as the officials were concerned everything was done to not only render the programme an attractive one, but to carry it through without any needless and tiring waits between the events. But, notwithstanding this, the number of spectators did not show any increase over those at last year's meetings. It would seem that, from the general public's point of view, something more will have to be done to induce them to swell the "gate." At present all that they can see is the parading of the favoured few in the paddock, the cars slowly running down the straight to the starting point, and, after a long wait, the cars dash along the fork at the back of the enclosure, and, finally, they sprint along the finishing straight to the winning post. Added interest in the proceedings would be given to the spectators if it could by any means be arranged for the starting line to be located nearer the enclosure than at present, as then they would be able to watch the operations of marshalling the competitors and furthermore of noting how they get into their stride. As it is many of the events are started almost out of sight, and it is only by the sounding of the bell that the public are made aware that the race has commenced.

The first event of the day was the Spring Stakes of 5 sovs. each, for cars propelled by means of internal combustion engines only, of a cylinder dimension 81 to under 91. Weight 2,500 lbs. Distance, about five miles. There were only three competitors, all driving 35.7 h.p. Berliets, the winner being Mr. D. Pigot, Mr. P. D. Stirling being second, and Mr. H. F. W. Farquharson third. The winner's speed was equal to sixty-two and a quarter miles per hour.

The second race was a novelty, inasmuch as it was confined to Sizaire-Naudin single-cylinder cars (120 mm. bore and stroke). The contest was over a distance of three miles, the Sizaire et Naudin cup being offered to the winner and a medal to the second. Ten entries had been received and of these nine faced the starter. Mr. J. F. Scantlebury led the way home and finished about ten yards in front of Mr. B. S. Millard, Mr. J. A. Schofield being third. An average speed of 39½ h.p. was attained by the winning car.

Event No. 3 was the third 26-h.p. race of 82½ sovs., for cars of a cylinder dimension 61 or under. Weight, 2,000 lbs. Distance, about 3 miles. Five competitors turned out, including two Napiers, a Germain, a Humber, and a De Dion. Newton on a chain-driven Napier was quickest away, but round the top banking Browning, also on a Napier, made a splendid effort to overtake him, the two coming down the finishing straight almost abreast. The result was F. Newton (Napier), 1; J. F. Browning (Napier), 2; J. W. Stocks (De Dion), 3; C. W. A. Brown (Humber), 4; and J. de Puelle de la Nippe (Germain), 5. The latter was put out of the contest by a broken valve tappet spring.

The next event was the Brooklands Cup, a handicap for private competitors, the entrant of the winner to receive the cup, and the entrant of the second a medal. For cars of a cylinder dimension 105 or under, to be entered and driven by private competitors of the Brooklands Automobile Racing Club. Distance, about five miles. There were eight starters, the result being: Mr. H. G. Nalder, 35.7 h.p. Berliet (1,051 yds. start), 1; Mr. G. Russell-Miller, 22.5 h.p. de la Baire (1,844 yds. start), 2; Mr. C. A. Bird, 34.5 h.p. Mercedes (scratch), 3. The winner went ahead on the completion of the first lap, and entered the finishing straight with a good lead.

There were only five competitors—two Napiers, a Daimler, an Iris and a Humber—in the third 40-h.p. race of £82 10s. for cars of a cylinder dimension 100 or under. Weight, 2,500 lbs. Distance, about 3½ miles. The Daimler retired early owing to ignition troubles, but the others kept close together until about the half distance. Newton on the Marquis de Mouzilly St. Mars' Napier, however, drew away and won by about two lengths; F. G. Cundy (Napier), being second; W. G. Tuck (Humber), third. A speed of 62½ miles an hour was attained by the winner.

The last race of the day was the second Surrey Stakes of 5 sovs. each, for cars of a cylinder dimension 95 to under 105. Weight, 300 lb.; distance, about three miles. There were only three competitors—two Napiers and an Iris—and for almost a lap the trio of cars ran almost bonnet to bonnet. The Napiers, however, pulled away, and entering the straight they ran practically side by side until just before the tape Draper (Napier) managed to forge ahead, and win by half a length. F. G. Cundy (Napier) was second and E. S. R. Thorne on Capt. G. Ll. Hinds Howell's Iris third.

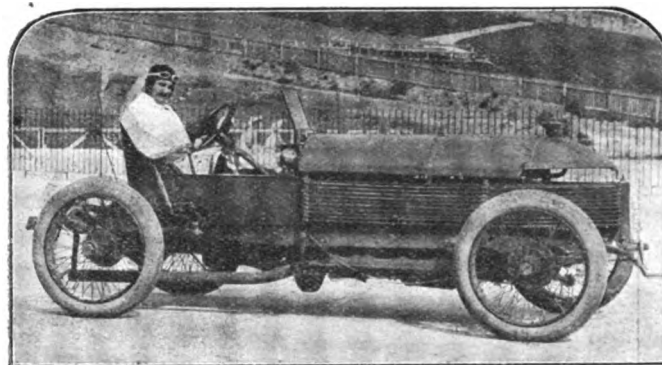
On Easter Monday there was a better attendance than on the Saturday, and popular interest was evident in the first and last events, of the programme, viz., the Continental Stakes, in which Mr. O. Cupper's victory by about a length gave a tinge of excitement to the proceedings. Again, in the Tyre Change Plate the celerity of Mr. H. A. Bates in changing his tyre provided the spectators with the "something to see" that had been lacking. The first motor-cycle race on this track provided another novelty, but the riders were quickly scattered over the course, where they seemed somewhat lost. The fastest time of the day was made by Newton on the 90-h.p. Napier in a race which produced the only protest of the Easter meeting—a protest which, however, was unsustained. The contest for the Naval and Military Cup was run in a snowstorm, driving the public to shelter, and constituted an element of danger for the succeeding event. Punctually to the hour of three the

first race was run, this being the Continental Stakes over a five-mile course, starting from the railway side. Unfortunately Mr. Cory Hurford was a non-starter in this, the best race of the day. Mr. Oscar Cupper on his 48.2-h.p. Metallurgique made a splendid start and kept going well, F. Draper going in hot pursuit past the fork. The lead of the Metallurgique was maintained, and coming into the straight victory was secured at the rate of 78½ m.p.h., the win being extremely popular. Draper, who drove the 39.6 Napier of M. de St. Mars, was second, a length or so behind. E. G. Cundy (38.4-h.p. Napier) was third; F. R. Goodwin (43.4-h.p. Star) fourth; and Clement Hobson (48.6-h.p. Brasier) fifth.

The first Brooklands motor-cycle race was over a course of 5½ miles, and was won by W. Cook on Mr. A. G. Forster's 7.9-h.p. N.L.G. two-cylinder machine at a speed of 63 m.p.h. Quite half a mile separated him from the second, E. Kirkham, on a 7-h.p. Leader. C. R. Collier, 6-h.p. Matchless, was third, other competitors returning in the following order:—W. McMinnies, 3½-h.p. Triumph; W. H. Wells, 5-h.p. Vindec; M. Geiger, 6-h.p. N.S.U.; J. Slaughter, 3½-h.p. Triumph; J. C. Davis, 5½-h.p. Rex; E. Fitzherbert, 6-h.p. F.N.; F. W. Applebee, 5-h.p. Rex; H. Reed, 7-h.p. Dot; G. Adams, 6-h.p. Griffon; H. A. Collier, 3½-h.p. Matchless; H. A. Cooper, 3½-h.p. Triumph; H. Shanks, 2½-h.p. Chater; E. Gwynne, 5-h.p. Vindec; W. W. Genn, 7-h.p. Minerva.

The Naval and Military Cup was for cars owned and driven by commissioned officers on the active list. The weight was 2,800 lb. for vehicles of a cylinder dimension 100, and 3½ lbs. allowed or added for every 0.1 difference of dimension. A five-mile course was run, the winner being S. Gore Browne on Capt. S. C. Holland's 47.6-h.p. Gobron. His speed was 64½ miles per hour. J. Ballough (41.9-h.p. Districh) was second, 43.2.5 sec. behind the Gobron. G. C. Moss (27.2-h.p. Arrol-Johnston) had trouble with water in the petrol, and Sir G. Abercromby (58.1-h.p. Fiat), after running the leader close nearly the whole course, had to stop owing to the breaking of an ignition tappet.

As the Naval and Military Cup race had been run in a snowstorm, the track was damp for the next event, in which the skidding of the cars



The Brooklands Race Meeting.—Newton on the 90-h.p. Napier.

was very noticeable. This was the third 90-h.p. event over a 5½-mile course, and brought out a quartette of competitors, who finished in the order named:—F. Newton, on 90-h.p. Napier; Resta, on 76-h.p. Mercedes; F. Guy Lewin, on his 80.4-h.p. Hotchkiss; and E. de Wilton, on his 76-h.p. Mercedes. Resta, on his 76-h.p. Mercedes, got well away, but Newton steadily gained, and we had the enjoyment of a really keen contest. On the Byfleet banking Newton travelled at a great pace, and, taking a wide sweep, seemed likely to pass the Mercedes, but his car appeared to slide down the banking and touch the rival vehicle. Expert handling of the steering wheel got the cars clear, and he came along the straight 100 yards ahead. On examination in the paddock, the spokes of both the wire wheels on the left-hand side of the Napier were seen to have been cut and bent, while on the right hand side of the Mercedes the metal of the front wheel hub cap was torn away as well as several of the hub plate bolts. Resta lodged a protest on the ground of a foul, but the stewards overruled it on the ground that such must be either wilful or negligent.

The Private Sweepstakes, arranged as a handicap, brought out a quartette of competitors, the winner attaining a speed of 70½ m.p.h. In the result, Clement Hobson, who started from scratch on his 48.6-h.p. Brasier, won by 100 yards, the other competitors being A. Van Hoboken, 48.6-h.p. Mercedes, 600 yards start, who finished second, followed by Sir George Abercromby's 58.1-h.p. Fiat, which was on scratch, and F. N. Lloyd's 20.1-h.p. Clement-Talbot, which had 1½ miles start.

The concluding event of the meeting was the Tyre Changing Plate, in which, at a specified place during the race, the complete tyre of the right hand back wheel had to be replaced by the spare tyre carried; this had to be duly fixed and inflated by hand pumping. F. Newton, on the 25.6-h.p. Napier, was the first to reach the changing station, the driver of the 25.6-h.p. De Dion being second. H. A. Bates and E. Anthony, on 22.5-h.p. Fords, were third and fourth, and both got away before the De Dion, the ultimate order of the finish being: 1, Newton; 2, Bates; 3, Anthony.

CLUBS AND ASSOCIATIONS.

ROYAL A.C.

THE next meeting for the consideration of the applications of candidates for membership of the club will be held on the 6th prox. The club has now 3,424 members, not including associates enrolled under the new scheme. The number of associates elected up to the present is 225.

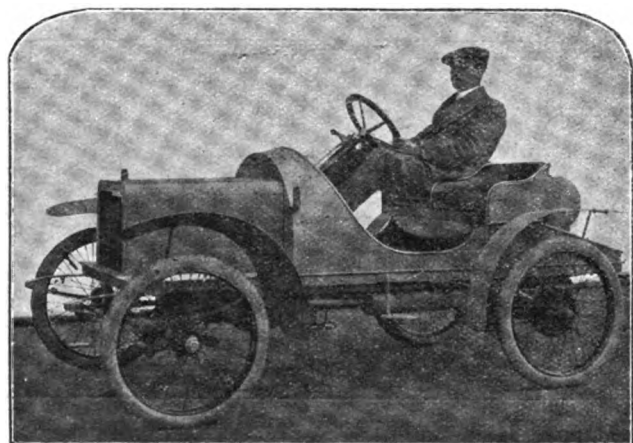
Examinations have been held during the past two weeks at Southport, Plymouth, and Colchester. Examinations will be held at the Naval Motor School, Portsmouth, on April 24th; Royal Hotel, Plymouth, on May 2nd; and Spa Hotel, Tunbridge Wells, on May 16th.

The Kent Automobile Club is presenting a gold medal to the candidate who obtains the highest relative number of marks for mechanical knowledge at the examination on May 16th, and as this examination is open to owners of cars in addition to professional drivers, a large entry is anticipated.

MOTOR UNION.

A MEETING of the Committee of Medical Motorists which has been appointed by the Motor Union to protect the interests of the general body of medical men using motor-cars was held at 1, Albemarle Street, London, on the 15th inst. Dr. C. B. Lockwood, F.R.C.S., was elected chairman of the committee, and Dr. J. L. Lock, M.A., M.B., vice-chairman.

The question of the position of doctors in reference to the proposed taxation of motor-cars was considered, and it was resolved that a letter be sent to the Chancellor of the Exchequer embodying the following resolution:—"That in the opinion of medical motorists any additional



We illustrate above a smart little 6-h.p. Rover just turned out by the Rover Company to a special order.

It will be noticed that the body closely follows the well-known lines of the Continental racing cars, and is somewhat after the type used in the small cars in the French Voiturette Race of last year. Anticipating a demand for this type of small car, the Rover Company propose shortly to standardise it.

taxation upon motor cars would not be equitable and would press with special severity upon medical men who use motor vehicles to enable them to carry out their professional duties."

The new tariff of the Metropolitan Water Board for water for washing cars was considered, and it was resolved that the proposed charge of 20s. per car per annum was excessive and unfair as compared with the rate for water for horse carriages, and it was resolved to approach the Board upon the matter.

The Finance Committee of the Motor Union, in their monthly report to the General Committee, state that the receipts from January 1st to March 31st amounted to £6,151 3s. 1d., as compared with £4,248 14s. 5d. for the corresponding three months of 1907.

THE MOTOR UNION AND SCOTTISH A.C.

CORRESPONDENCE has passed between Mr. W. Rees Jeffreys, secretary of the Motor Union, and Mr. R. J. Smith, secretary of the Scottish A.C., relative to the recognition of hotels and repairers north of the Tweed. In the first letter Mr. Smith drew attention to the fact that the Motor Union were communicating with hotels on the official list of the Scottish A.C., and went on to say that his committee "would be sorry to have to put themselves into communication with those holding the Club's official appointment and to have to recall the existing certificate, but the committee instruct me to state that, unless your circular is immediately withdrawn, they will have no alternative but to take action in the matter at once." Mr. Rees Jeffreys replied that "The Motor Union could not obviously again place itself in a position by which it could be peremptorily deprived of its local correspondents, its local solicitors, its local repairers and hotels, by the action of a body over which it had no control. Direct

official appointments by the Motor Union have become necessary, but there is no reason why the Motor Union appointments should not run side by side with those of the Scottish A.C. My committee are anxious to co-operate with your Club, both to exchange information and to reciprocate benefits. Your committee will, however, recognise that the interests of its Scottish members, as well as of those motorists from England, Wales, and the United States, who tour in Scotland during the season under the aegis of the Motor Union, demand that it should have an organisation which is under its direct control."

The final letter is from Mr. R. J. Smith, whose committee "regret your intimation that the Motor Union is unable to discontinue the appointment of official hotels and repairers in Scotland. My executive have instructed the recall of the existing certificate. They cannot see how, after your action, your committee could expect these certificates to be exhibited alongside those to be issued by the Motor Union, and consequently are unable to see how their recall and replacement by others from which the Motor Union name is omitted can, as you suggest, be interpreted as an act of open hostility to the Motor Union. They would respectfully suggest that the Motor Union have opened hostilities."

WOLVERHAMPTON.

THE Wolverhampton A.C. have commenced their season's out-door work with the customary meet in the West Park. This year the official return of the members to the road was made under favourable conditions and between sixty and seventy cars of all sorts and conditions were assembled. The gathering was particularly interesting in view of the contrast it afforded between some modern examples of the motor-vehicle and one of the earliest products of the industry. This car was one of the little Mabley's, seating two persons, and running about on three wheels.

Those who attended the meet included Messrs. T. A. Stirk, 10-12-h.p. Sunbeam; F. F. Sharp, 16-20-h.p. Sunbeam; T. T. Mills, 18-h.p. Daimler; Walter E. Evans, six-cylinder Napier; S. Bayliss, 20-h.p. Sunbeam; T. Cureton, 16-20-h.p. Sunbeam; J. Dyke (Willenhall), 10-12-h.p. Sunbeam; G. Evans, 30-h.p. Austin; J. W. Davis, 28-36-h.p. Daimler; E. Genna, 20-h.p. Sunbeam; J. H. Jones, 16-20-h.p. Sunbeam; F. Eastmead, 20-h.p. Sunbeam; E. Lisle, 16-h.p. Star; Joseph Evans, 28-36-h.p. Daimler; C. H. Shacklock, 20-h.p. Aster; Leigh, 20-h.p. Turner; F. Gibbons, 20-h.p. Minerva; Eason, 10-12-h.p. Starling; Dickinson, 9-11-h.p. Talbot; Truselle, 9-11-h.p. Talbot; S. R. Rhodes, 12-h.p. Star; J. Lisle, six-cylinder Star; Holman, 12 h.p. Star; Shaw, 10-h.p. Starling; Dr. Scott, 14-h.p. Star; William Evans, 11-24-h.p. Austin; F. Carr, 14-h.p. Sunbeam; Major Haden, 14-h.p. Sunbeam; A. S. Weaver, 16-20-h.p. Sunbeam; Brownhill, Mabley car; Lee, 20-h.p. Lanchester; Clark and Sons, 12-14-h.p. Adams and 10-h.p. Adams; Dr. Hunt, 14-16-h.p. Argyll; G. W. Hands, 16-20-h.p. Calthorpe. The Star Engineering Company were also represented by a 7-h.p. Star, 14-h.p. Star, two 12-h.p. Stars, 30-h.p. Star, 20-h.p. Star, 10-h.p. Royal Starling, and 9-h.p. Star landaulet, and the Sunbeam Motor Company had a 20-h.p. Sunbeam, two 16-20-h.p. Sunbeams, a 20 h.p. Sunbeam limousine, and a 20-h.p. Sunbeam landaulet.

NEWCASTLE MOTOR CLUB.

AN extraordinary meeting of the Newcastle Motor Club has been held at the Royal Oak Hotel, Newcastle, under the presidency of Mr. W. Dunn. Mr. J. E. Hodgkin (secretary of the North-Eastern A.A.), intimated that in a private interview with Mr. F. Straight (secretary of the A.C.U.), he advocated the formation of a northern centre of the A.C.U., and mentioned that, as the N.E.A.A. embraced the majority of northern motor-cyclists in their membership, they were in a strong position to take the initiative in the movement. It was decided to affiliate with the North-Eastern Automobile Association, and request that body to appeal to the A.C.U. to form a northern centre to govern all competitions and other matters on the lines suggested by Mr. Hodgkin.

YORKSHIRE.

THE speed trials of the Yorkshire A.C. will be held on the Sands between Saltburn and Marske, on June 27th, with Mr. C. P. Wilson, of Basinghall Buildings, Basinghall Street, Leeds, as secretary of the meeting. Entries will be received by him up to 12 noon on June 17th. The R.A.C. formula will be used in the classification and eleven events will be open only to members of the Yorkshire A.C. and its affiliated branches. The open contests will be for touring cars carrying four passengers, the chassis price of which does not exceed £800, for racing cars not exceeding in weight 1,000 kilograms, and for racing cars of any weight.

MANCHESTER.

THE Manchester A.C. held their second run of the season at Bamford, in Derbyshire. About thirty cars foregathered at the Marquis of Granby Hotel for afternoon tea, having made the journey either via the Snake or Chapel-en-le-Frith or Buxton and Tideswell.

An interesting competition was improvised at Bamford for the encouragement of chauffeurs. Without any previous notice the engines were inspected for general condition and cleanliness. Messrs. A. E. Jonas, A. E. Crowdy, and D. A. Parkyn officiated as judges, and unanimously awarded the first prize to Mrs. D. W. W. Parry's chauffeur.

whose Renault engine was excellently kept. The second prize was obtained by Mr. V. F. O'Neill's chauffeur, whose Berliet engine was also in fine condition.

BROOKLANDS.

At the next race meeting, to be held on the 9th prox., the events will include 26-h.p., 40-h.p., 60-h.p. and 90-h.p. races, a motor-cycle handicap, a touring race over an 8½ miles course, a handicap for private competitors, a limit sweepstakes for cars not to exceed 60 m.p.h. during the race, and a private competitors' sweepstakes. Entries will close on May 1st.

LINCOLNSHIRE MOTOR-CYCLE.

The Lincolnshire Motor Cycle Club are to be congratulated on the success of their hill climb at Waddington on Monday. There were sixty-seven entries and some splendid runs in each of the four classes.

Dr. Lowe won the 2½-h.p. class with his 2½-h.p. Ariel. Mr. A. E. Brunning, Lincoln, 3½-h.p. Fafair, won the 4-h.p. class. The twin cylinder class fell to Mr. W. G. Clark, Louth, 5-h.p. Rex, who made far the best time of the day. Mr. Eric Longden, 7-9-h.p. Minerva, won the passenger class.

SOCIETY OF MOTOR MANUFACTURERS AND TRADERS.

The sixth annual general meeting of the Society of Motor Manufacturers and Traders was held on the 15th inst. at Maxwell House, Arundel Street, London. Mr. E. Manville presided. The report and accounts were adopted, and a vote of thanks accorded to the secretary, Mr. T. Woodfine, the exhibition manager, Mr. H. A. Blackie, and to the other officers of the society.

The following were declared elected to the new council:—Ordinary members: Messrs. E. M. C. Instone, J. D. Siddeley, C. Jarrott, E. Powell, S. F. Edge, E. Gascoigne, F. Lanchester, H. G. Barford, C. Johnson, T. H. Woollen, A. Brown, H. Austin, Harry Smith, J. E. Hutton, R. Dennis, S. Straker, W. G. Williams, G. du Cros, P. Richardson, H. du Cros, jun., E. Lisle, H. Sturmev, T. Clarkson, W. M. Letts, H. Johnson, F. Coleman, H. J. Swindley, H. J. M. yses, and F. R. Simms. Associate members: Messrs. A. R. Atkey, G. Prosser, G. Mann, W. Parker Thomas, A. Farnell, A. C. Hills, H. Carver, Major F. Lindsay Lloyd, H. J. Lloyd, and H. G. Atkinson.

A vote of thanks to the president for his services to the society during his twelve months of office was accorded.

ROADS IMPROVEMENT ASSOCIATION.

The annual report of the Roads Improvement Association for 1907 has been issued. Its main features are well known to our readers. The expenditure in connection with the tar spreading competitions was £855 5s., and the receipts therefrom £851 14s. 2d.

SCOTTISH.

In connection with their sign-posting scheme the Scottish A.C. are having a post bearing the club badge and the word "Scotland" erected on the boundary between Scotland and England on each of the main roads leading from the south, thus intimating to the drivers from the south that they have passed into Scottish territory and giving the distances to various places further north.

WELSH.

PREPARATIONS are being made for this year's trials. The hill-climbing competition will probably take place on June 4th at Philadelphia Hill, between Carmarthen and Porthrhyd. There will be competitions for both cars and motor-cycles, and the club also intend having a two days' trial for cars over a route from Swansea to Haverfordwest, St. David's, up Fishguard Hill to Brecon and Aberystwith. At the last named place the competitors will stay the night, and the return journey next day will probably be via Llangerrig, Builth, and Brecon.

TRACK RECORDS.

ON the 15th inst. Mr. F. Newton, driving a 90-h.p. Napier, succeeded in lowering the 90-h.p. standard "short" record for the Brooklands track, lately created by Mr. D. Resta. Mr. Newton had intended to endeavour to create new speeds for the flying half-mile and the ten laps—the short and long standard distances. His first three laps were made at speeds of slightly over 71, 78, and 83 miles per hour. After the first three laps had been completed the Napier greatly quickened its speed, and lap after lap was completed at speeds varying from 92 to 97 miles an hour. After completing the ten laps Mr. E. de Kodakowski, the clerk of the course, pronounced that Mr. Newton had failed to lower the "long" ten-lap record of over 89 miles per hour made by Mr. Resta on his Mercedes the previous Friday, but that Mr. Newton had created a new one for the "short" half-mile sprint, with a flying start.

The official rate of speed for the half-mile was at the rate of 102.85 miles an hour, the time being 17½ seconds. The Napier accomplished an average speed of over 88 miles per hour for the ten laps. The Dunlop tyres stood up well and showed no signs of wear. They were pumped up only to 70 lb. pressure per square inch for the front tyres and 75 lb. pressure for the back driving wheels.

CASES UNDER THE MOTOR CAR ACT.

NO LIGHT.

At the Clontarf Police Court, several motor-cyclists as well as drivers of motor-cars have lately been fined for having no lights on their vehicles. There seems to have been quite an epidemic in such cases around Dublin lately.

EXCEEDING LEGAL LIMIT.

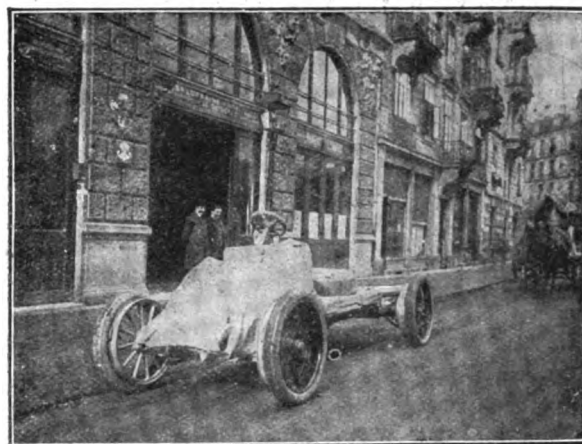
At the Grantham (Spittlegate), Police Court, four motorists have been fined amounts varying from £2 to £5 for driving motor-cars at an excessive speed on the Great North Road.

Eight motorists were fined sums ranging from £1 to £10 and costs at the Chichester County Bench on Saturday. Most of the alleged offences took place on the Chichester and Arundel road at Westhampnett.

On the 15th inst. four motorists were fined £3 each at Kingston for exceeding the legal limit; two others were similarly fined for identical offences at Barnet, and four convictions were recorded at the Wimbledon Petty Sessions.

AN APPEAL AND AN ARRANGEMENT.

At the Surrey Quarter Sessions Mr. Ernest Hargreaves, of Kensington, appealed against a conviction by the justices of the Kingston Division, who fined him £10 and suspended his licence for three months for driving to the danger of the public on February 2nd. Mr. R. O. B. Lane appeared for the justices and Mr. G. Elliott and Mr. Walter Pain represented the appellant. Mr. Lane opened the case and said it was a very bad one, and was exceptional in character from the fact that it was not a police prosecution, but was instituted on the information of independent gentlemen of good standing. Mr. Hans Hamilton, of Claygate was called to give evidence, and had just commenced when a



A New Use for the Stepnay Spare Wheel.

It has remained for Mr. E. E. C. Mathis, the leading motor-car agent of Strasbourg, Alsace, to discover a new use for the Stepnay spare wheel. When new chassis, minus tyres, arrive at the station, instead of mounting them on horse-drawn trolleys, Mr. Mathis fits Stepnay spare wheels to the road wheels and drives them to his depot.

consultation took place between counsel, as the result of which Mr. Lans said after a careful consideration of the facts he had come to the conclusion that the justice of the case would be met by a reduction of the fine to £5, and the removal of the suspension of the licence, the appellant to pay a fixed sum for costs which had been agreed upon. Mr. Elliott, on behalf of the appellant, agreed to this course. After a long consultation with his colleagues, the Chairman said it was unfortunate that the case could not be heard properly because of the absence of an important witness, and under the circumstances the court would allow the arrangement that had been come to.

THE USE OF THE TRADER'S MARK.

At the Woking Police Court Mr. A. Humphreys, of the Falcon Motor Garage, Falcon Road, Guildford, pleaded not guilty to having driven an unregistered car.—Mr. W. Triggs Turner defended.—Supt. Marks said that on March 21st defendant called at Woking Police Station to inquire the whereabouts of a stranded car. Witness obtained the information by telephone, and then noticed that defendant was driving a car which bore a manufacturer's identification mark, P 1 A G. Defendant said he was going to see the car at Ottershaw, with a view to having it removed to his works. Witness asked him whose car he was driving, and he said it had been sent down from London for repair. Witness pointed out that as the car was not on trial it should have been registered. Defendant said he had removed the owner's plates, and substituted his own mark. Mr. Turner said his client was a dealer, and paid an annual fee entitling him to use a general identification mark for any car on trial after completion, or being tried by an intending purchaser. He had arranged to take this car to another dealer, Mr. Smith, London Road, Camberley, to be tried by a prospective customer, and before starting out received instructions from a Mrs. Peters to remove her husband's stranded car from Ottershaw to Guildford. Instead, therefore

of going direct to Camberley, he went first to Ottershaw to arrange for the removal of the broken-down car, and from there to his destination, where he gave the trial. Mr. Turner contended that his client was not compelled to go to Camberley the shortest way, and that he was entitled to use the car as he did without its being registered. The Bench found defendant guilty of having used an unregistered car for the purposes of his business, and a fine of 10s. was imposed, defendant's licence being endorsed.

AUTOMOBILE ACCIDENTS.

A SERIOUS motor-car accident occurred at Shepperton-on-Thames on Saturday night, in which a motor-car belonging to Mr. C. E. Howard, of Twickenham, was much damaged, and the occupants, five gentlemen, were seriously injured, and narrowly escaped losing their lives. Mr. Howard had taken four friends on his 30-h.p. Renault to play golf at Sunningdale. They were returning to Twickenham in the early evening when, as they were passing through Shepperton, and nearing the cross roads there, Mr. Howard slowed down to four or five miles an hour, and constantly sounded his horn. Just as he was passing the cross roads the 40-h.p. Iris car which had taken part in the races at Brooklands was seen approaching at right angles. Mr. Howard applied his brakes, and brought his car to a stand in a few yards. The other car swerved to the side to avoid a collision, and the front of it passed the stationary car, but the rear part collided with it with great force, dragged it round, and then turned it completely over, throwing the five occupants into the road, inflicting severe injuries and rendering two of them unconscious. Save for the loss of a rear wheel the Iris car was not much damaged.

At the inquest at Reading on Saturday on Mr. R. C. Guille, who was killed in a motor-car collision in Reading while cycling, the jury



Mr. Elwood Haynes, of Kokomo, Ind., U.S.A., on the Car he built in 1893, preparing for the recent Carnival in New York.

This 15-year-old car has reposed in the Smithsonian Institute at Washington, U.S.A., for some years, and was loaned by the officials for the carnival, when, after a little tuning up, it ran to such effect that Mr. Haynes was stopped by the police for exceeding the legal limit and running a car without a number plate.

found a verdict of "Accidental death." They added a rider, however, stating that they considered that the motor-car was travelling at too great a speed, and recommended the Town Council to secure the limitation of the speed of motor-cars in the borough to six miles per hour.

SEVERAL motor mishaps occurred in Croydon on Monday, and during the day three persons injured by motor vehicles were conveyed to the hospital.

AN inquest has been held at Hammersmith concerning the death of a traveller's agent named Edward James, who was knocked down by a motor-car in Sheen Lane, Barnes. A man who witnessed the accident said the car was travelling at the rate of twenty miles an hour. Thomas Yapp, a cabman, said he saw James hesitate as he crossed the road. He went forward again, and was then struck by the front of the car. If he had gone straight across the road in the first instance the accident would not have occurred. A constable stated that after the accident he had to protect the chauffeur from the hostility of the crowd. The chauffeur said he was coming down Sheen Lane at not more than ten miles an hour. James walked off the kerb, right in the front of the car. The brakes were immediately applied, and the witness did all he could for the man afterwards. The jury returned a verdict of "Accidental death," exonerating the chauffeur from blame.

A SERIOUS motor accident, resulting in the death of one man and injuries to another two and a woman, occurred in Oxford Street, London, about two a.m. on the morning of Friday of last week. At that time a water van was watering the south side of Oxford Street when it was overtaken at the corner of North Audley Street by a motor-car, which skidded, with the result that the two vehicles came into violent collision. The chauffeur, named Grosvenor, was killed, the driver of the water-van was severely injured, and the passengers, a lady and gentleman, were taken to the Middlesex Hospital for medical treatment.

An inquest concerning the death of the chauffeur was held on Tuesday when J. Hostelle, an interpreter, and his wife, who were in the car, gave evidence as to the unexceptional pace of the vehicle. The driver of the water cart said that the car came upon him suddenly. The owner said the deceased had full authority to take the car out, and after summing up by the coroner, who referred to the growing number of motor-car accidents in London, the jury returned a verdict of "Accidental death." They asked the Coroner to frame a rider drawing the attention of the authorities to the excessive speed in general of motor-cars in London.

MOTOR-CYCLING.

FAVoured with fine weather, the motor-cycle race meeting on the Canning Town track on Good Friday attracted about 3,000 spectators. The most interesting event was the five miles race for touring machines with 26 in. wheels, engines not exceeding 90 by 90, or the equivalent, and geared at not more than 4 to 1. F. E. Barker, 2½-h.p. Rex, got off well, and, leading throughout, won very narrowly in 7 min. 4-5 sec. H. A. Collier, 3½-h.p. Matchless, was second, and H. V. Colver, 3½-h.p. Matchless, a good third. C. R. Collier and H. V. Colver were matched together in races over one and three miles, and they also engaged in a five miles pursuit race.

In the mile race, Collier won rather easily in 1 min. 27-4-5 sec. The three miles race was far more evenly contested. The two competitors kept well together for the whole distance, and Colver eventually finished 3 sec. ahead, in 3 min. 42-2-5 sec. There was very little difference between them in the pursuit race, Collier finishing only 1-1-5 sec. in front of Colver, in 6 min. 4-1-5 sec. The other events resulted as follows:—

Five Miles Handicap (engines not exceeding 76 by 76, or equivalent).—Heat 1: D. R. Clarke, New Century (10 sec. start), 1; C. R. Collier, Matchless (scratch), 2. Heat 2: H. V. Colver, Matchless (5 sec.), 1; C. E. Bennett, Mansfield (scratch), 2. Final: H. V. Colver (5 sec.), 1; C. R. Collier (scratch), 2; C. E. Bennett (scratch), 3. Time, 5 min. 52-2-5 sec.

Five Miles Scratch Race (engines not exceeding 76 by 76, or equivalent).—Heat 1: C. R. Collier, Matchless, 1; D. R. Clarke, New Century, 2. Heat 2: H. V. Colver, Matchless, 1; C. E. Bennett, Mansfield, 2. Final: C. E. Bennett, 1; C. R. Collier, 2; H. V. Colver, 3. Time, 5 min. 55-1-5 sec.

H. V. Colver made an attempt on the ten miles' world's record, but he was outside record time, and finished in 11 min. 55-3-5 sec., this being 31 sec. slower than the record for ten miles.

ROAD REPORTS.

EAST MOLESEY.—The Highway Committee of the East Molesey District Council have reported that they had been asked by the Hurst Park Syndicate, Limited, whether they would be prepared to cover the road from Hampton Court Bridge to the members' carriage entrance with some dust-preventing compound, providing the company paid half the cost of same, during the summer months. After going carefully into the matter they recommended the Council to experiment on the road in question with the preparation of the Hahnite (1907), Limited, for one season, providing the Hurst Park Club Syndicate will pay two-thirds of the estimated cost, viz., £80. This course has been approved.

WANDSWORTH AND PUTNEY.—The Wandsworth Borough Council has resolved to tar spray the carriageways of Kingston Road, Putney Embankment, Disraeli Road, part of Oxford Road, between Disraeli Road and Upper Richmond Road, Putney, and Huguenot Place, Wandsworth, at an estimated cost of £200.

HORSHAM.—At the annual meeting of the Horsham Rural Council just held the following resolution was adopted:—"That, in view of the great and increasing danger to the public, and the unbearable nuisance of the dust arising from motor-cars, this Council again urges the West Sussex County Council to take immediate steps to restrict the speed of all motor-cars to eight miles an hour when passing through the villages of Roffey, Broadbridge Heath, and Southwater."

WOKING.—All the roads in the vicinity of Woking are being carefully watched, and Superintendent Marks is directing the operations of the police. "Controls" have been established at Sandhurst Bridge, Ripley, and Burnt Common, all leading to the Woking Police Court.

INTERNATIONAL TOURING CAR TRIAL.

It has been decided that the routes for this trial shall not be published until just before the beginning of the event. The stopping places each night, however, will be issued shortly. Entries at double-fees will be received up to 12 o'clock noon on Tuesday, April 21st, and on that day the entry list will be finally closed.

The committee has asked for drawings of the competing cars to be submitted for inspection, and these are required by May 1st.

In the report presented at the annual meeting on Wednesday, the directors of Messrs. A. W. Gamage, Ltd. referred to the increased factory, workshop and garage accommodation that is being made in connection with the re-building of some of the premises adjoining their Holborn headquarters.

AN INSURANCE POINT.

IN the Court of Session (Scotland) Lord Guthrie has issued a judgment in an action concerning the insurance of motor-cars. The case was raised by A. Donaldson and Co., Ltd., Edinburgh, against the Horse Carriage and General Insurance Co., Ltd., with whom the pursuers were insured. Only one of five claims, amounting to £38 8s., was dealt with in the present judgment.

On October 21st, 1906, while a 16-h.p. Albion car belonging to the pursuers was being driven from Ayr to Edinburgh the driving chain broke and the car was upset. The cost of the repairs (£38 8s.) was not disputed, but it was maintained by the defenders, in the first place, that the claim was excluded on a sound construction of the policy of insurance. In the second place, they maintained they were not liable in the case of motors for any mishap to the motor (however accidental in the sense of being involuntary on the part of the driver and owner, and independent of the condition of the motor), unless the accident happened through collision, or being run into.

Lord Guthrie found that the accident was not due to any of the excepted clauses enumerated in the policy of insurance, and, consequently, that the defenders were liable to the pursuers in the cost of the necessary repairs to the car, which he assessed at £38 8s. With the finding the cause was put to the roll for further procedure, and the question of expenses was reserved. His Lordship pointed out that it was not without difficulty that he held the pursuers' claim to be within the contract. With regard to the defenders' second contention, he was of opinion that there was no presumption in favour of such limitation of liability as was contended.

THE PERFECT CHAUFFEUR.

WHO is the Perfect Chauffeur, who is he
That every motor man should wish to be?
Tis he whose law is reason, who depends
Upon that law as on the best of friends.
'Tis he who wisely regulates his speed,
"The road for all" the first words of his creed.
'Tis he who feels it is not sport or just
To smother others in a cloud of dust,
But when a straight, clear road before him lies,
Open his throttle and along he flies,
Through peopled places goes a sober pace
And drives with courtesy in every case.
This, his plain duty, yet when this is done
His serious work is just begun.
A chauffeur needs must be a man of parts,
Versed in bucolic and domestic arts;
Cows he must know to drive, and flocks of sheep,
Carters awaken from their slumbers deep,
Horses convince what folly 'tis to shy,
Chickens restrain from 'neath motor wheels to fly.
Be to each goose philosopher and guide,
Prevent dull dogs committing suicide;
Make yokels comprehend the rule of road—
That left is right—so runs our British code.
To daring schoolboys, babes that stray alone,
Needs give the care that he would give his own.
With him it rests to make the deaf man hear,
Albeit deafen not the churchman's ear!

Impress on all this truth profound and deep,
The public road is not the place to sleep!
So he drives alert throughout the day—
This is the Perfect Chauffeur, this is he,
That every motor man should strive to be!

CHAS. W. FURRER in "Automobile Topics."

CLAIM AGAINST MOTORIST.

BEFORE Sir William Selfe, at the Marylebone Court, Edward Newman sued Mr. Louis Sinclair, ex-M.P., to recover £10 in respect of damage done to a bicycle. Mr. Sinclair had paid £1 18s. into court as being an adequate sum to cover the damage done. The plaintiff's case was that he was cycling out of Maida Vale into Belsize Road when Mr. Sinclair in his motor-car turned the corner, and when on his wrong side of the road came into collision with the bicycle, which was practically ruined. Mr. Sinclair, on the other hand, stated in evidence that a number of cyclists were riding in front of him on their wrong side of the road, and the defendant seemed to "wobble" as if he were uncertain which way to go, and then his bicycle struck the motor-car, which, at the moment of the accident, was stationary. His Honour gave judgment for the plaintiff for £2 12s. 6d., less the £1 18s. paid into court.

ONE of the specialties marketed by Messrs. G. T. Riches and Co., of Store Street, London, W.C., is the "Rich" detachable air tube, for motor-cycles, tri-cars, &c. A great saving in time, trouble, and expense is effected by using these tubes in that a tube can be replaced without unscrewing a single nut on the machine in less than five minutes.

COMPANY NEWS.

HEAD NON-SKID TYRE COMPANY.—£5,000. Agreement with Mr P. H. Head. Cannon Street Buildings, 139, Cannon Street, E.C.

RESILIENT TYRES.—£60,000. Minimum subscription, 10,000 shares. First directors, Messrs. C. Roberts (chairman of London and South Coast Motor Service, Ltd.), L. Rolfe, E. T. Holloway, and F. W. Carpenter. 11, Ironmonger Lane, E.C.

MOTOR CAB COMPANY OF GREAT BRITAIN, LTD.—March 26th. £50,000 (£1). As title. Minimum subscription, 100 shares. First directors (not less than three nor more than seven) to be appointed by signatories. 100 shares. As fixed by company. Offices, 14, Regent Street, London, S.W.

DUNLOP PNEUMATIC TYRE.—For the six months ended March 31st the directors propose interim dividends at the rates of 8 per cent. per annum on the ordinary shares, and 5 per cent. per annum on the deferred shares.

MOTOR REPLACEMENTS AND REPAIRS.

IN Frederick's Row, 326A, Goswell Road, London, E.C., is the engineering works of the B.K. Manufacturing Company—the ground floor of which is well equipped with the latest machines. The company make a speciality of re-boring cylinders and fitting new pistons and rings, their set of piston patterns including all the well-known makes of engines. Gear work is another department by which they are able to be of service to motorists who wish to replace parts without delay. With the aid of modern plant and an efficient staff, the B.K. Manu-



F. EBLE. HENRY. HANRIOT.
The Drivers of the Benz Cars in the A.C.F. Grand Prix Race.

facturing Company is able to undertake the supply of every type of motor replacement parts, thus facilitating the work of repairers not so favourably situated.

MOTORING IN MALAY.

SHORTLY after the purchase of the Daimler 30-h.p. car, Mr. Tan Tat Yan, of Malacca, determined to undertake a run from Malacca to Penang, which, in view of various difficulties, few people thought could be accomplished. But so resolute was he that even when, on the eve of the undertaking, he received a wire from a European friend in Kuala Lumpur couched in the following discouraging terms:—"Road from Tanjong Malim to Slim under repair, impossible for car to go over," he coolly said, "Now or never," and a start was made on the morning of February 22nd last. The roads up to Palau Sebang greatly impeded the car, but eventually the motorists reached Kuala Lumpur, where the night was spent. A start was made early the next afternoon, and although the road here was certainly very good, it was so hilly that nothing beyond eighteen miles could be covered in an hour. Though still alive to the fact contained in the above-mentioned telegram, the foolhardy tourists dashed on, only to realise the fact, and to consequently trace their way back to the last halting place, where they were obliged to stay the night. The next day the tourists and their car were railed to Slim, whence they motored to Ipoh in four hours. Leaving this place early the next morning, they reached Perak River in one hour and twenty minutes, crossed over the long pontoon bridge, passed Kampar, ferried across the Krian River, and without further difficulty reached Penang, where they were met with a hearty welcome at the hands of the members of the Chinese Club.

FORTHCOMING EVENTS.

APRIL.

- 25th (Sat.).—Open Motor-Cycle Hill Climb of the Hertfordshire C.A.C. Opening meet of the Yorkshire A.C. at the Hotel Majestic, Harrogate.
 25th (Sat.) to May 25th.—Industrial Vehicle competition of A.C.F.
 26th (Sun.).—Southend M.C. run to Thatched House Hotel, Kpping.
 29th (Wed.).—Quarterly trial of the A.C.U.

MAY.

- 2nd (Sat.).—Impromptu pace judging competition of the Sheffield A.C. at Ollerton.
 9th (Sat.).—First provincial meet of the R.A.C.—to be held at Nottingham, by invitation of the Nottinghamshire A.C.
 10th (Sun.).—Targa Florio Race.
 14th (Th.).—Mr. G. H. Baillie at the R.A.C. on Petrol and Petrol Tests.
 16th (Sat.).—Fifty miles Consumption Trial of the Hertfordshire C.A.C. Liverpool A.C.'s opening meet of the season.
 21st (Th.).—Reliability Trial of the Irish A.C.
 23rd (Sat.).—Clipstone race meeting of the Notts A.C. Meeting of the Yorkshire A.C. at Helmsley. Meet of the Motor Union at Lincoln.
 25th (M.).—Industrial Vehicle Competition of the A.C. de France.
 26th (Tu.).—Motor Gymkhana on the links of the Ross Golf Club at Alton Court—Mr. T. H. Coombes, "Montrose," Ross, is the hon. secretary of the event.
 28th (Th.).—Visit of the Aero Club to Aldershot.
 30th (Sat.).—Meet of the Herts C.A.C. at Hatfield Park.
 31st (Sun.).—Southend M.C. run to Saracen's Head Hotel, Dunmow.

JUNE.

- International Aeronautical Federation conference in London.
 5th-6th.—London-Edinburgh twenty-four hours' run of the Motor Cycling Club.
 8th (M.).—Cars competing in the International Touring Car Trial will arrive at the depot.
 Start of the International Touring Car Trial of the R.A.C.
 9th (Tu.).—Touring competition for Prince Henry of Prussia's prize begins.
 17th.—Close of Prince Henry Touring Competition in Germany.
 13th (Sat.).—Hill climb of the Notts A.C. at Oakmoor.
 Speed Trials of the Lincs. A.C. at Grimsthorpe.
 15th-19th.—Scottish Reliability Trial.
 20th (Sat.).—Meet of the Hull Auto Cycle Club and the Lincolnshire Motor Cycle Club at Brigg.
 27th (Sat.).—Saltburn beach races.
 Buxton meet of the Manchester and Lincolnshire clubs.
 Members of the Cheshire A.C. will participate in the Gymkhana of the Manchester A.C.
 28th. (Sun.).—Southend M.C. run to Grand Hotel, Clacton.

JULY.

- The Land's End to John o' Groat's Trial of the Auto C.C. will be held.
 6th (M.).—Grand Prix A.C.F. (Voiturette section).
 7th (Tu.).—Grand Prix A.C.F. on the Dieppe Circuit.
 11th (S.).—Provincial meet of the R.A.C. at Hereford.
 16th (Th.).—Club meet of the Notts A.C. at the Hop Pole, Ollerton.
 18th (Sat.).—Annual Gymkhana of the Herts C.A.C. at The Grove, Watford, by permission of the president, the Earl of Clarendon.
 Meet of the Liverpool and Cheshire A.C.'s at Delamere.
 25th (Sat.).—Petrol Consumption Tests of the Motor Cycling Club. Annual Open Hill Climb of the Midland A.C. at Shelsley Walsh.
 26th (Sun.).—Southend M.C. run to Coach and Horses, Quendon.

AUGUST.

- 29th (Sat.).—Meet of the Lincolnshire Motor Club at Lincoln.
 30th (Sun.).—Southend M.C. run to Great White Horse Hotel, Ipswich.

SEPTEMBER.

- 5th (Sat.).—Aston Hill climb of the Herts C.A.A. Provincial meet of the R.A.C. at Norwich.
 27th (Sun.).—Southend M.C. run to White Hart Hotel, Braintree.

LIGHTING-UP TIMES—LONDON.

| | | | |
|----------------|-----------|-----------|--------------|
| April 25th—8.9 | 27th—8.13 | 29th—8.16 | May 1st—8.18 |
| " 26th—8.10 | 28th—8.14 | 30th—8.17 | " 2nd—8.19 |

Secretaries of automobile clubs are invited to forward their programme of fixtures as soon as arranged.

ENGLISH AS IT IS WRITTEN.

THE following is a copy of a letter lately received by a firm of motor-car builders from a provincial motor-car repairer:—"I was at your Place last Novemb about a mout wich I have of you mak. I have don what you told me but it will mot go the plug is all Right I think it dont make the gas it dont seem to go to the top do you think the Ring is Right. I got them out but thay look all Right I shaud be glad of a Book of the Moter it is aut of mote Boat I have fixed it in my Shop to drive a Lathe but it will not go I lost no end time trying to go I shoud be Gad to now the cause of it if you think it the Ring I should be Gad of New one if you send me book I may find something out. I have fitte white mettle in Bering but it Just the same P let me now by Return of Post."

BUSINESS NEWS.

THE Star cars of the Star Engineering Company are being introduced into Holland by the N.V. Auto-Rijtuig-Onderneming of Rotterdam.

MESSRS. ASHWORTH AND WILSON, of 265, Deansgate, Manchester, have altered their telegraphic address from Berliet to "Ignition," the former word no longer being suitable to their business.

THE Continental Tyre and Rubber Company of Great Britain, Ltd., announce a reduction in the prices of their Continental tyres.

MR. R. B. WHITEHEAD, the celebrated engineer who gave to the world the torpedo bearing his name, has now in use quite a fleet of Italia cars, the latest addition thereto being a six-cylinder model.

FROM the London and Paris Exchange, Ltd., Motor Agency we have received a copy of their fortnightly list of second-hand cars. In addition to the ordinary catalogue are some trade notes of current interest.

THE bodywork of the Daimler cars has always been admired and looked upon as the acme of perfection, and purchasers have always had a large number of designs to select from. Yet another type has been added to the already comprehensive list for the current season; this time it is an open touring body having ample accommodation for five passengers, which will be known as the "Bexhill." It will be fitted to the 30-h.p. and 38-h.p. live axle chassis.

FROM the Ariel Motors, Ltd., comes a copy of a new illustrated brochure they have just issued, giving full particulars of the 20-h.p. Ariel car they have lately introduced. A feature of the list is the numerous designs of open and covered bodies, which have been specially prepared to suit the chassis.

SO great has been the rush of applications for the oxydised copper ash trays offered to readers of the *M.C.J.* by the Swift Motor Company, Ltd., that the stock has been exhausted, notwithstanding that they had to order several hundred more trays.

THE Easter programme at Llandudno included the inauguration of the motor services through Snowdonia. These will continue daily throughout the season.

MESSRS. STANFIELD AND WHITE, LTD., have an extensive garage in Sidwell Street, Exeter. It is fitted with a turntable and every necessary plant for the repair of cars.

A 24-32-H.P. Vinot car, fitted with a limousine body by Messrs. Cole and Sons, Kensington, has lately been acquired by Mr. D. Stewart Dawson, of 12, Hyde Park Terrace, London, W.

TO CORRESPONDENTS.

All communications intended for insertion in this Journal or relating to Editorial matters should be addressed to THE EDITORIAL DEPARTMENT, MOTOR-CAR JOURNAL, 27-33, Charing Cross Road, London, W.C., and must be written on one side of the paper only. Letters must in all cases be accompanied by the name and address of the writer, as no notice will be taken of anonymous communications.

The Editors cannot undertake to return MSS. or drawings, although every effort will be made to do so in the case of rejected communications. Where such are regarded as of value, correspondents are requested to retain copies.

The Editors do not hold themselves responsible for the opinions expressed by their correspondents, or for statements and facts which do not appear in the editorial columns.

To insure insertion communications and contributions must be in the Editors' hands by Tuesday forenoon of the week in which the same are intended to appear. Disappointment may be caused by non-compliance with this rule, and to avoid this earlier receipt, if possible, is necessary.

Photographers, both professional and amateur, are invited to send photographs of current events or of motoring scenes and incidents. The fee, if any, required for reproduction should be stated in each case, otherwise no liability will be accepted.

The Editors and Publishers beg also to state that they will accept no responsibility for unsolicited contributions, even if used, unless payment for same is directly specified in forwarding, and the terms arranged before publication.

THE Motor-Car Journal.

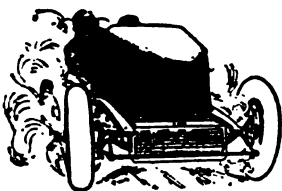
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COMMENTS.



A CASE of some importance to motorists in and about Glamorganshire is reported on another page. In this a driver was summoned for driving a car "without having the identification plate so fixed that every letter and figure was easily distinguishable." It appeared that this was the first instance of a car fitted with a swinging plate having been stopped by the police, although a large number have been sanctioned by the Glamorganshire County Council, and have never been objected to by the chief of the police of the county nor of the city of Cardiff. The Order issued by the Local Government Board under the authority of the Act leaves the fixing of the identification marks under the direction of the registering council, and in Glamorganshire the swinging plate has, apparently, been officially sanctioned. In dismissing the case the magistrates drew the attention of the Council to the fact that the plates should be "fixed," and suggested that they should obtain and issue a bye-law to that effect. The position is somewhat exceptional, and it would be well if, in future regulations, no room for doubt was left by the L.G.B.

Berkshire A.C.

A MOTOR club that merits distinction in the home counties is that of Berkshire, which has Earl Roberts, K.G., for president and Major E. R. Portal as chairman. But for the active and disinterested support of this club, the tar-spreading competition held last year would probably have been of meagre extent, the splendid help of Major Portal's committee being a substantial factor in the success. On Saturday the club held its annual meeting, when the snowstorm that was raging kept many who would have been of the company away. That the members are appreciative of the good work done by their officers was, however, demonstrated by the presentation to Captain Waring, whose constant efforts to promote the social pleasures and local influence of the organisation are well known. In our "Club News" on another page we make reference to other interesting matters relative to the Berkshire A.C.

In the Upper Alps.

THE report in the daily Press of a serious accident to a party of British motorists in the Hauts Alpes revives painful memories of an accident which happened to our own party in the same neighbourhood some four years ago. We had travelled from Monte Carlo to Gap—a long journey, in the mountains most of the time, and where the ground was at all level, numbers of caniveaux—the previous day. The following morning we started at five for Le Puy and Clermont-Ferrand—a terrific journey, still over the Alps—but had not gone a dozen kilometres before we met three teams, a man driving one, and the other two walking loose behind. The third one came right across the road; swerving, we ran into a tree, and our party of four was scattered all over the road. The car was wrecked, and the sight generally was one that will live in our memory. The car was a 60-h.p., and we were on top speed. Fortunately, a

regiment of mountain artillery came along in a few minutes, and with them was a surgeon-major and men with red cross appliances. The doctor spent five hours with us, and we were then conveyed into Gap to the Hotel de Negotiantes, where if we had been in our own homes we could not have had greater attention paid to us. The nurses were the Little Sisters of the Congregation de la Providence. The name of the English family injured in the recent accident was Krummer, and they were conveyed to the above hotel at Gap, where we trust they will make a speedy recovery.

Where are the Police?

A BATCH of motorists were recently summoned before the Guildford County bench for exceeding the speed limit at Godalming, the net financial result to the county being the addition of about £20 to the revenue. In the course of the defence of Mr. L. W. Pullman, of Guildford, his solicitor asked the sergeant what would happen if crimes were committed when the police were drawn off to superintend motor traps. His reason for putting the question was that an organised gang of roughs in the Godalming district were in the habit of stoning motorists as they passed. He submitted that while the police were tracking the drivers of cars there were no officers to protect the motorists from the hooligans. This is a point that has been raised before, and is one which those who instigate the police to devote so much attention to the alleged delinquencies of those who travel should bear in mind. Whilst those responsible for the safety of public and property are thus diverted from their legitimate duty, rogues and ruffians make congenial holiday.

The "Extended" Trap.

MAJOR LANG is extending his system of police supervision of motorists and instead of the "short trap" is now indulging in what we suppose he would call the "long pull." Recently, several daily papers have gravely announced this as an innovation in police methods, but we remember that it was adopted by Lieutenant-Colonel Daniel, in Hertfordshire, almost at the inauguration of the present Motor Car Act. He, as chief constable of the county, had motorists timed over stretches of road of four or five miles. Major Lang is now said to have extended this system, and by a method of timing motor-cars in various places on the main roads and taking their numbers as they pass has added to the excitement of motoring on southern highways, at the same time circumventing those who have hitherto warned motorists when they seemed to be proceeding at a too great speed on the highway. Doubtless this will lead to the discovery of many devious ways to the seaside, for there is more than one way to Brighton from town.

Honours Even.

IN the "Daily News" on Tuesday the figures of the Board of Trade returns with regard to automobiles were set forth by Mr. J. S. Critchley, with a view to showing that, although "there may be excessive competition, the trade is very large." According to this expert there are seventy-six foreign makers advertising their goods for sale to the British public, giving a choice of 238 different models of cars, ranging from 6.8-h.p., and costing complete £159, to models having a

h.p. of 62.5, and costing over £1,000 without body work. On the other hand, there are said to be eighty-five manufacturers of motor vehicles in Great Britain offering to the public 215 different models. Mr. Critchley goes on to say that the average price of British cars is less than the foreign price, and, further, the price per h.p. is less. It is somewhat remarkable that the mean h.p. of the British and foreign models should be nearly equal, and it is further found that 46.9 per cent. of the British cars listed and 47 per cent. of the foreign cars are rated at over 30-h.p. This, in the view of the "Daily News" contributor, therefore goes to prove that the British and imported cars are, generally speaking, on an equality.

Motor-cars and the Cinematograph.

THE motor-car plays quite a prominent part in many of the cinematograph displays which, nowadays, form a popular feature of the programmes of music halls and other places of entertainment. One of the most amusing is that of a runaway car, which, driverless, proceeds on its way regardless of all obstructions. A new cinematograph film, in which an automobile and a dog form the subject, is that known as "The Dog outwits the Kidnapper," lately brought out by the Hepworth Manufacturing Company, Ltd. Outside the gates of a large house a motor-car draws up, and the sole occupant gets down,



"The Dog that Drove the Car."—Mr. Cecil Hepworth's dog "Blair" at the wheel of a motor-car.

and stoops down so as not to show his head above the gates, and, creeping up, peeps into the garden. Anxiously he waits, keeping a sharp look-out, until he sees a small child walk from the house down the carriage drive. All unconscious of the watching eyes, the child pushes her wooden horse along, and a collie dog freely dashes round her. As she turns to walk into the house again, the dog rushes in before her, leaving his mistress momentarily unattended. At this moment the kidnapper silently opens the gates, and, seizing the child in his arms, he places one of his hands firmly over her mouth, and, in spite of her frightened struggles, places her in the car and drives off at a break-neck speed. The man in his success does not notice that the dog is following to watch over his mistress. Road after road is traversed, and the car is not pulled up until a considerable distance has been covered. The man ultimately pulls up at an inn, and, with strict injunctions to the child not to move, goes to have a refresher. The dog, capering round the car for a moment, jumps up beside the child, and, putting his paw on the wheel, takes charge of the car. The animal, with wonderful sagacity, copying the style of drivers he has observed, slowly turns the vehicle round and takes his little mistress and companion home quite safely. Dashing open the front gates, he returns in a few moments with the child's mother, who, with tears of joy in her eyes, fondly grasps the child in her arms.

Motor Ambulances.

IN the course of an inquiry by the Southwark coroner testimony as to the value of the electrical motor ambulance has again been made. During the inquiry it was mentioned that the deceased had been taken to Guy's Hospital on a hand ambulance, when Dr. Waldo, the coroner, remarked, "Surely it would be better to have an electric motor ambulance similar to that we have in the City." He added the information that the police had informed him that by its use an average of 11½ minutes was saved on a journey. That, it should be remembered, is in the City with its "one square mile." It is obvious that in the larger area of the county of London the saving in time would be materially greater. The house surgeon at Guy's Hospital added his testimony to that of the coroner with regard to the motor ambulance, and urged that it would be desirable to have a similar ambulance in Southwark and localities equally closely congested.

The Speed Limit.

WISDOM seems to have prevailed at the meeting of the Pembrokeshire Main Roads Committee when they considered an application from the Tenby Town Council inviting the County Council to apply to the Local Government Board for regulations fixing the speed of motor-cars within the borough to ten miles per hour. The chairman, Colonel Ivor Philipps, M.P., pointed out that such regulations, if made, would react upon the prosperity of Tenby in a way that the promoters of the suggestion had not fully realised. If it were known that a speed limit of such a restrictive character was in force in the district it would be regarded as a place for travellers to avoid. So far as the dangerous streets were concerned the police already had powers to deal with motor traffic therein, and he urged that the application should not be persisted in. Other speakers pointed out that such regulations would be suicidal to the interests of Tenby and it was decided not to go forward with the application. The matter is of special interest just now, when so many towns which depend upon visitors for their prosperity are considering means of attraction. Certainly, if they wish to keep motorists away, they cannot do better than invite the Local Government Board to impose irksome restrictions. Probably at the end of the season the Tenby Town Council will realise that the Main Roads Committee of the county has acted wisely in the interests of the place.]

A Question of Garaging.

A CASE throwing some light on the rights of garage proprietors has been heard at Bournemouth, when Captain Cheesewright sued Mr. Mark Briant for £5 15s., alleged damage for the wrongful use of plaintiff's motor-car, or in the alternative, damages for breach of agreement. In outlining the case, Mr. H. Harker said the plaintiff was bringing the action as a matter of principle. The principal part of the claim was damages for unlawfully moving the car from one set of stables to another. Owners did not like other people tampering with their cars, and it was for that reason, and to establish that garage owners had no right to move cars without the owner's sanction, that the case was being brought and supported by the Automobile Association in the interest of motorists generally. Captain Cheesewright said it was agreed to garage the car at the Priory stables at the rate of 10s. per week. Witness left the car and called on the following evening to find out how early he could have it on the next morning. To his surprise he found the car was not there, and was told it was at the Belle Vue stables. For the defence it was contended that there was no stipulation expressed or implied that the car should remain at this particular stable. In summing up his Honour said he did not think plaintiff would have made any demur if he had been spoken to about the removal, but people did not like an alteration of that kind being made without it being mentioned. He did not think defendant was entitled to any portion of the 10s. for

garaging. He thought that 3s. would be reasonable for cleaning the car, but he could not allow 2s. for moving the car. Defendant would, therefore, have to pay back 14s. of the bill, and there would be judgment in addition for the plaintiff for 40s. damages.

Snow-bound Motorists.

THOSE, especially the motorists who happened to be in the south-west of England, who were out motoring last week-end had a unique experience. At Southampton over two feet of snow fell, while at Bournemouth, where the writer was staying, it snowed continually for ten hours, and there was a depth of eight inches of snow. The previous day we had motored to Weymouth, where we met Mr. C. I. Thornton, who has recently purchased a six-cylinder Berliet, which he seemed to appreciate very much. With him also was Mr. Gwinneer, on a 40-h.p. Mercedes. Several slight falls of snow occurred that day, but nothing serious. On waking up on Saturday morning we found the ground was white and the snow was steadily falling. Just after two o'clock Mr. Thornton turned up at the Canford, Cliffs Hotel—a most charming and comfortable

coroner, who uses a motor-car when "on circuit," was snowed up in his car thirty miles from home and had to return to Bournemouth by train. At Yeovil, in Somerset, the motor mail was snowed up, other means having to be adopted to convey the mails to their destination. One motorist returning to Worksop from Llandudno encountered a blinding snowstorm in Derbyshire on Easter Tuesday and he was three hours getting over the Snake. The L. and S.W.R. motor-omnibus plying between Farnham and Haslemere was prevented by the snow from getting further than Churt, and had to return. The snow-drifts were four or five feet deep. From the railway the great track at Brooklands looked like an oval frame for a conventional Christmas landscape. On Saturday the snowstorm lasted all day in Hampshire, and Mr. F. G. Lucas, of London, who was motoring with friends through the country, had to have his car dug out of three feet of snow near Winchester. Motor-cars also got snowed up in the streets of the city itself. In one thoroughfare a car got fast in a drift, and was followed by a wagon. A carriage was just behind, and then other conveyances drove up. Great difficulty was experienced in getting the road clear. Curiously enough, while the snow has been so severe in the south, we learn from Braemar that they have had no



MOTORING IN THE SNOW.

The above illustration does not depict a Swiss scene, but is reproduced from a photograph taken on the Hindhead on Sunday last.

hostelry—and awaited the arrival of his friend. They were determined to make an effort to get through to London, although they were informed that several cars were already hopelessly stuck and abandoned in the New Forest. However, we heard afterwards they had to give up the journey and spend the night at Bournemouth. On the Sunday Mr. Ernest Owers, who was staying in the same hotel with us, essayed the journey to London on his six-cylindered Napier, but he also reappeared at the hotel, having had to abandon the journey. For ourselves, we were returning on the Monday, but, considering discretion the better part of valour, left our car behind and came to town by train.

In the Snow.

EXTRAORDINARY has been the weather of the last few days, and it is extraordinary as we go to press. Arctic and pitiless in its alternating unpleasantness it has rendered motoring anything but a joy. Curiously enough the south seems to have suffered even more severely than the more northerly parts of Britain. In many parts of Essex, on the night of the 23rd ult., the automobile traffic was entirely suspended and the East Essex

snow recently. The general snowstorm of last week amounted to less than half-an-inch of a fall there, and that disappeared very rapidly. As we went to press on Wednesday the sun re-appeared after many days' absence from town.

The Trader's Register.

WHEN the novelists write sequels to popular works they are invariably unsuccessful; similarly Superintendent Marks has failed in his Gilbertian effort to create an impression on the mind of a Guildford motor agent. Last week we reported how Mr. E. A. Humphreys was summoned for driving an unregistered motor-car under circumstances which were fully and adequately explained—from the common sense point of view. Since then Mr. Humphreys has been brought before the court again—this time for not keeping a record of the number of the car which was unregistered. Fortunately the magistrates were able to see the absurdity of the case urged by Superintendent Marks and his men and dismissed the matter. The police failure was rendered all the more mortifying by the refusal of the Bench to their application to state a case in view of an appeal.

MR. JOYNSON HICKS, M.P.

THIS year Mr. Joynson Hicks has had two elections—one to the chairmanship of the Motor Union, the other to the House of Commons as the representative of North-West Manchester. It is rather remarkable that both the great national motoring organisations should have their spokesmen in the Commons, where, from opposite sides, they should be able to watch any legislation that is introduced with regard to the movement of which, in a special sense, they may be said to be the titular chiefs. Mr. C. D. Rose, M.P., of the R.A.C., and Mr. Joynson Hicks, of the M.U., should constitute effective leadership of the Motorists' Parliamentary party, in which Sir Henry Norman, the Hon. Arthur Stanley, and Mr. T. D. Berridge and others have conspicuous places.

The new M.P., who took his seat in the House on Wednesday, is no academic motorist, but has long been the owner of cars, his latest acquisition being a 35-45-h.p. Maudslay. As to the types that were prominent during his election campaign, their number is legion, with those of British origin predominating.

Mr. Joynson Hicks has already "won his spurs"—if the phrase be not regarded as a paradox—in connection with motoring matters. As solicitor to the National Traction Engine Owners and Users' Association he has been engaged in most of



the big cases involving questions of "extraordinary traffic," and his knowledge of the Law of Heavy and Light Mechanical Traction on Highways in the United Kingdom has been demonstrated in the work with that title which he wrote in the early part of 1906 in conjunction with Mr. C. A. M. Barlow, LL.D., M.A. This was published in 1906 by Sir Isaac Pitman and Sons, Ltd., and has become recognised as the standard volume on the subject with which it deals. Quick to see the possibilities of the motor vehicle in relation to commerce, as well as to pleasure, Mr. Hicks was one of the first members of the legal profession to specialise on that part of the law.

The chairman of the Motor Union is a cheery fighter, and it is characteristic that when his party lost several seats in Manchester at the General Election, he almost alone of the defeated candidates bade them be of good cheer and quickly prepare to secure a reverse of the position. He certainly has set the example. Doubtless the same tenacity of purpose will be shown by Mr. Hicks in presiding over the deliberations and securing the development of the Motor Union.

THE Board of Trade is considering whether the utilisation of the Union Jack in advertisements of foreign goods in this country constitutes an offence under the Merchandise Marks Act.

MOTORING NOTES FROM BOURNEMOUTH.

BOURNEMOUTH does not appear to have been by any means a Mecca for motorists this Eastertide, and the activity at the garages has not resembled that which was witnessed at Easter last year, when the accommodation was so taxed that many cars were "boarded out." True, in the intervening twelve months several additional garages have sprung into being, thus causing a more general distribution of favours. One of these was opened just a day or two before Good Friday, and so happily is it situated on the main road at Boscombe that space there was speedily at a premium. The garages in "Beautiful Bournemouth" are mostly public, the proprietors of the numerous well-appointed hotels preferring to avoid whatever risk might attach to having petrol and other inflammable liquids in proximity to their premises. There can be no question, however, that motor visitors are well catered for in Bournemouth. A recent visit to the Imperial Motor Works, near the Lansdowne, afforded evidence of this. Here there have been extensive enlargements during the past few months. Mr. E. J. M. Morant, of Brockenhurst Park, is joint proprietor of these works with Mr. H. G. Alexander, and his numerous motoring friends will be pleased to know that Mr. Morant and Mrs. Morant are thoroughly enjoying their present motor tour through France, Italy and Austria. The most conspicuous visitor of late leaving his car at Mr. Morant's garage is Lord Hartington, while other notable automobile enthusiasts seeking this friendly shelter have included Lord Atkinson, Major Wynne, Sir Francis Coxey-Wright, Mr. J. P. Shrubbs (ex-Mayor of the neighbouring town of Lymington), and last, but by no means least, Lord Montagu. His lordship has exerted great influence in automobile matters in Hampshire, especially in uniting motorists, and many still cherish memories of the "meet" which took place a few months back at his charming New Forest seat at Beaulieu.

At the "Motor Mac's" garage, opposite the Imperial Works, mechanical activity is always manifest. Motor Mac, by the way, is Mr. McArdle, who, during the Emperor of Germany's stay in the district last November, had the honour to act as official guide to the royal party, and was afterwards presented by the Kaiser with the Order of the Red Eagle. He, more recently, had another royal favour, supplying a car to the Princess Christian during her visit to Bournemouth. To his garage, naturally, go most Daimlers, he being the authorised agent for the Daimler Company in Bournemouth.

THE "Evergreen Valley," as Bournemouth continues fittingly to be described, has hitherto enjoyed an extraordinary immunity from snowstorms. It did not, however, escape the blizzard of last week-end, and as a consequence the pleasures of motoring had either to be reduced to a minimum or had to be abandoned. It is many years since a storm of such terrific violence and persistency has swept over the southern counties, and its effects were sadly felt at the different garages, hotels, and large boarding houses so far as motor guests were concerned. Until the fall of snow the roads, particularly the main ones, had been in very good condition. Christchurch, renowned for its historic Priory Church, is situated on the main road from Bournemouth to Southampton, and its local governing body, it is pleasing to note, is attempting to grapple with the dust problem, by experimenting along about a mile of road with a composition which it is believed will materially minimise the nuisance.

THE few cars which ventured out amid blizzard conditions on Saturday last had exciting experiences, some of which their chauffeurs refrain from commenting upon; although the weather was materially changed on Sunday, motorists declined to travel over the still dangerous roads. Since then the snow has rapidly disappeared, but rain has fallen so heavily that the roads, fairly loosened by the thawed snow, have now become so terribly sodden that cars travel under considerable strain, and are almost unrecognisable through bespattered mud. WESSEX.

GOSSIP FROM PARIS.

MR. HENRI FARMAN has shown me some of the letters he has received from persons of both sexes and of all classes of society in pretty nearly every country of the world, including China and Japan, since his successful flight. Among those missives the begging letters are so numerous that to satisfy the demands he would have to gain at least a dozen Deutsch-Archdeacon prizes. Then there are the applications of inventors who have made marvellous discoveries in aviation. One of them, living at Cape Town, has fathomed all the mystery of the flight of birds. The principle of that flight is so simple and so easily applied to a mechanical apparatus, that the discoverer abstains from putting it on paper, because if anyone at all acquainted with flying machines were to read it he could in a few days make an aeroplane capable of remaining in the air an almost indefinite time. He therefore demands nothing more of Mr. Farman than the money to pay his passage from the Cape to France to enable him to explain the matter to him. Presuming that a cheque will be sent to him by the next mail, the writer expresses confident hope that Mr. Farman will advance him the capital necessary to build his marvellous flying machines, and in that case the inventor would give him a fourth part of the net-profits of their sale!

SIMILAR letters have arrived from Russia and Austria. Indeed, it is astonishing how many inventors want the money to come to Paris. In the number is a Hungarian of good family who has designed a motor which would be fifty per cent. lighter and a hundred times more reliable than the Antoinette with which Henri Farman "only succeeded in flying a mile or so." With the Hungarian gentleman's motor he could fly from Paris to London! If he would advance him the money for his journey to France he would submit to him the technical drawings of the motor which is "destined to revolutionise aviation." This gentleman is more generous, for he offers 50 per cent. of the profits for the capital necessary to work the invention. The Cape of Good Hope inventor has a competitor at Johannesburg who has discovered what he calls "the missing link" in aerial navigation. He found out "the active agent by which birds rise, soar, and in a measure are propelled," and at once began corresponding with the War Office, promising to reveal his secret to authorised officials on certain conditions. But it is to be supposed the reply he received was not satisfactory, for he is "sick of the War Office methods," and asks Mr. Farman to send him the names and addresses of "several well-to-do gentlemen" with whom he could deal. How the principle he has discovered "could have remained a mystery so long is the biggest mystery," says the writer.

APART from the cordial congratulations received in such flatteringly large numbers there are letters from several persons who claim to share in the success. Some inventors have written long letters to tell Mr. Farman that from the description of his machine published in the newspapers they perceive he has applied the principle discovered by them. One of these gentlemen goes so far as to forbid Mr. Farman to use his aeroplane again or to show it to anyone without his permission. This inventor, who claims to be the real author of Mr. Henri Farman's machine, is an Englishman, who announces his intention to prosecute for the infringement of his patent rights if his injunctions are not complied with. Nothing but the Vienna postmark on the envelope indicates the origin of one of the most curious communications received by the winner of the Deutsch-Archdeacon prize. It is not signed and contains no address. Perhaps that might be expected, as it is a message from the other side of the Styx. The writer says he has been ordered by a spirit, who formerly lived on this earth in the town of Dortmund, Westphalia, to tell Henri Farman that to secure further success, and to solve definitely the problem of aerial navigation, he must change the place of his propeller. He must take it from behind and put it in front. The indication is vague and not exactly new. The person who transmits it from the

shade of the former citizen of Dortmund seems almost to excuse himself for troubling Mr. Farman with it by saying "Rest assured that I am acting solely under the influence of a superior will in the interest of an invention of the utmost importance for the human race."

THREE sheriff's officers were last week occupied in a rather novel fashion. Instead of serving writs they were each of them given a four hours' outing in a motor-car placed at their disposal by the President of the Automobile Club of their respective departments. But they were not driven about simply to admire the scenery. Every time they met a cow roaming about the road they had to stop to take legal note of it, and when a wagon occupied the middle of the thoroughfare or kept to the left instead of to the right, as it should do by the rules of the road in France, they had to put the fact on record in due legal form. They were brought back to their respective homes at sunset, after which hour their legal capacity to record violations of the law ceases. Consequently they were unable to consign in their legal reports the number of carts and wagons driven on the road after dark without any lantern. This interesting experiment is destined to prove to M. Barthou that the dangers of the road are chiefly due to the peasantry, who still seem to imagine that the highways belong exclusively to them.

THE legal documents of which the Marquis de Dion will make use in the Chamber, when the Bill for the regulation of the automobile traffic comes on for discussion, are most eloquent. The three sheriff's officers operating respectively in the Sarthe, Brittany, and Lorraine took cognizance of the fact that they met 215 cows roaming about alone without anyone to look after them, 53 vehicles of various descriptions abandoned by their drivers, 22 horses running about free, 2 flocks of sheep without a shepherd, 24 stray sheep, 6 pigs without a keeper, 32 vehicles in the middle of the road preventing the motor-car from passing, 32 other vehicles which kept obstinately to the left, 7 strings of carts or wagons each in the care of only one driver, whereas the law requires a driver for each vehicle, and 20 savage dogs which attacked the pedestrians and flew at the automobile without the owners calling them off.

THIS is the beginning of a serious agitation for the observation of the highway laws and the rules of the road not only by motorists but also by the drivers of horse-drawn vehicles, and especially by the peasantry. Round Paris, to the distance of some fifty or seventy-five kilometres, the country people are beginning to understand that it is to their interest not to let their domestic animals wander about the roads. I remember some years ago one of the competitors in the Paris-Vienna race told me he in one day ran over no fewer than sixty cocks, hens, chickens, ducks, or geese. The same chauffeur, who intends to compete in the Grand Prix race this year, has already driven down from Paris to Dieppe four times and has not killed a single fowl. That marks a decided improvement, but motorists are determined that the laws and regulations shall be observed by every one, and not only in the vicinity of the large towns, but throughout the country. They refuse to admit it is just that laws should be made against them, and demand that they be made in the interest of the public safety and their observance enforced on every one using the roads. What is good for the goose is good for the gander. The present bill elaborated by M. Barthou against automobilists, but made something like acceptable by the Committee of the Chamber, will probably be adopted; it has, however, already created what is likely to become an irresistible movement for the general revision of the highway laws and the regulations affecting all sorts of traffic. MARNEY.

IN the procession that followed the remains of Sir Henry Campbell-Bannerman from Westminster to Euston via Charing Cross Road we noticed two motor-cars—one occupied by Mr. John Burns, and one (an electric brougham) by Mr. Winston Churchill and Mr. Reginald McKenna.

CONTINENTAL NOTES.

The Builder of the first Petrol Car.

A memorial tablet has been fixed on the house in Malohin, Mecklenburg, Germany, where was born Herr Siegfried Marcus, who on the Continent is credited with the honour of building the first petrol motor-car. The vehicle was constructed in 1875, and is now in the possession of the Austrian Automobile Club.

The A.C.F. Grand Prix Race.

An army of workmen are now busily engaged on different points of the Dieppe circuit, in preparing the course for the forthcoming races, and no pains will be spared to make this year's organisation as perfect as possible. The drivers of the different racing cars are also busy training; Jenatzy, the well-known Belgian driver, has been on the circuit with a Mors racer which he will drive in the big event, while Théry has also been trying his Brasier; others who have been over the course

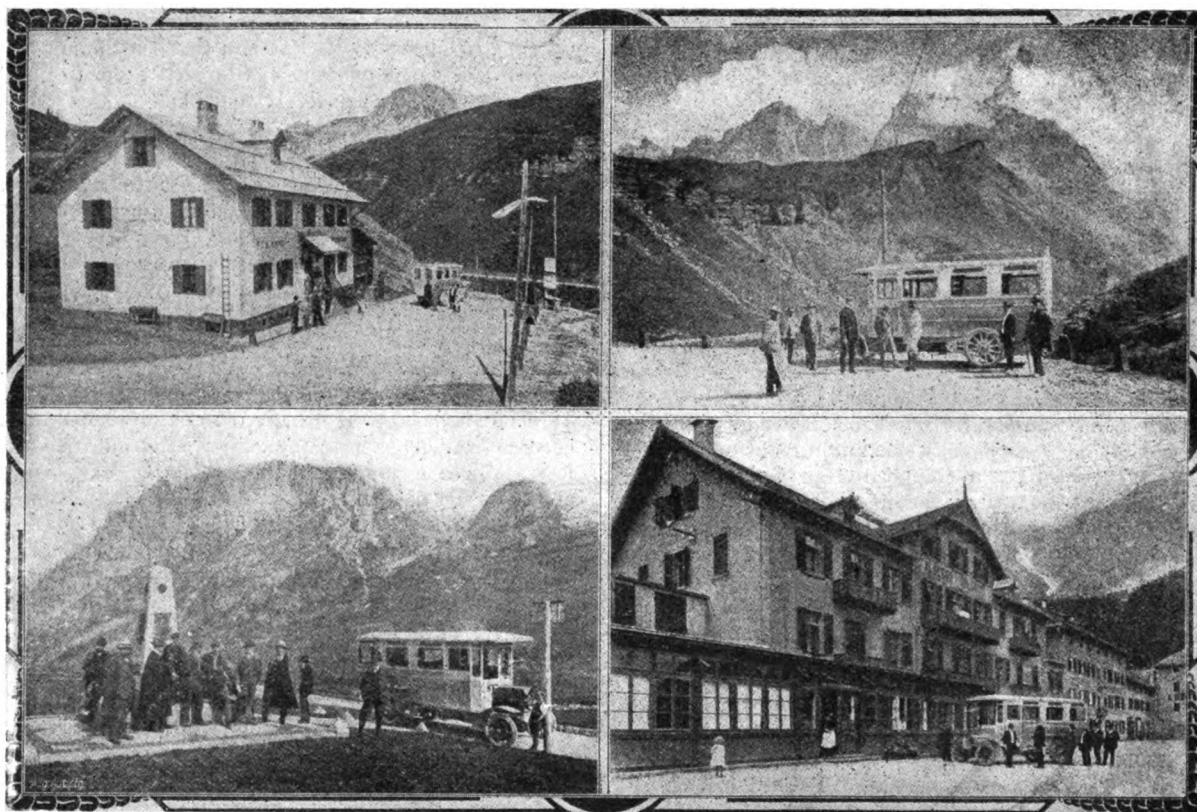
De la Buire cars were placed in service a few days ago, and by October next it is expected that no less than 120 petrol vans will be at work in connection with the collection of the mails in the French capital.

Belgian Motor-car Imports and Exports.

The value of the foreign motor-cars and parts imported into Belgium during the three months ending with March last amounted to £39,208, as compared with only £37,776 in the corresponding period of last year. There has also been a marked increase in the exports of Belgian motor-cars and parts—from £78,642 in the first quarter of 1907, to £115,695 in the first three months of the current year.

Steam Motor 'Buses in France.

Increasing attention is apparently being devoted to steam 'buses in France. Some trials have lately been made in Paris with one known as the S.A.G.E., built in Germany under the



A PUBLIC SERVICE IN THE TYROL.

On the Rolle Pass, 6,400 ft. above sea level.
On the Pordoljoch, 7,350 ft. above the sea.

Another point on the Rolle Pass.
At San Martino di Castrozza.

during the past few days include Maurice Farman and Heath, who are to drive Panhards, and the Itala team—Henri Fournier, Cagno and Piacenza (the latter replacing Fabry), and Minoia, who will be at the wheel of an Isotta-Fraschini. In order to allow the necessary repairs to be carried through without hindrance the A.C.F. has issued a notice closing the course for racing cars from May 1st until further notice.

Public Services in France.

Public services of motor vehicles are shortly to be inaugurated between Chantilly and Survilliers, and between Chantilly and Neuilly-en-Thelle (Oise). The vehicles to be employed will be of the De Districh type.

Motor Vehicles in the French Postal Service.

The twelve electric motor-vans which have for some time past been in use in Paris by the Post Office authorities are being withdrawn, their place being taken by petrol vehicles. Three

Stolz patents, while the Valentin Purrey Company, of Bordeaux, who have long made a speciality of steam wagons, have recently produced a new type of single-deck 'bus propelled by steam, which is being adopted for public service work in the Auvergne and Vendée districts, as well as between Cette and Frontignan on the Island of Corsica. The vehicles have accommodation for eighteen passengers, and can in addition carry from 8 to 10 cwt. of luggage; the road wheels are shod with steel tyres, but, on account of the special system of suspension adopted, it is claimed that the 'buses are as free, if not more so, from vibration than many fitted with rubber tyres. A speed of from 12½ to 19 miles per hour can be attained according to the condition of the roads and the gradients. Gas coke is used as fuel.

Motor Tourists in Baden.

Of the 419 motor-cars and cycles which passed the boundaries of the Duchy of Baden during the fiscal year October 1st, 1906—September 31st, 1907, seven came from Belgium, fifteen from

England, 118 from France, nineteen from Italy, eight from Holland, three from Austria, eight from Russia, 174 from Switzerland, sixty-three from the United States, two from Monaco and one each from Turkey and Spain.

Hill-Climbing near Lyons.

The annual hill-climbing competition organised by the "Lyon Sport" under the auspices of the Automobile Club du Rhone was held on Sunday last, over a 3.74 kilometre course, on the hill between Les Cheres and Limonest, when the best time of the day was made by a Berliet racer, 2 min. 50 sec. In the four-cylinder (from 91 to 100 mm. bore) touring car category the winning car was a Cottin-Desgouttes (4 min. 10 sec.), while in the 121 to 140 mm. bore section Lacharanay proved the winner, he covering the distance on his La Buire car in 3 min. 13.15 sec.

French Motor-car Imports and Exports.

A return just issued shows that the value of the foreign motor-cars and parts imported into France during the three months ending with March last only amounted to £54,600, as compared with £65,240 in the corresponding period of last year. As regards the exportation of French motor-cars and parts, the serious shrinkage which set in at the beginning of the year is still the predominant feature. The aggregate exports during the quarter just ended only totalled £1,192,400, as contrasted with £1,527,480 in the corresponding period of last year. With practically only one exception—the United States—there has been a falling off in the shipments to all the leading markets, the decline in the case of England being from £640,000 to £520,000.

A Motor Race-Track in Belgium.

The municipal authorities of Spa have decided to accede to the application of a French syndicate to establish a motor racing track near that resort. The plans that have been prepared provide for a track which will comprise several long straights as well as turns, and a slight gradient seven kilometres long.

Motor Buses in St. Petersburg.

A new motor-omnibus company has just been formed in St. Petersburg, and an order for ten vehicles has been placed with the Suddutsche Automobilfabrik, Gaggenau, Germany.

British Motorists in France.

Among the British motorists at present touring in France are Mrs. Wynn Sewell and Mrs. Roscol Washburn, 20-h.p. Renault; Mr. Miller and family, 40-h.p. Albion; Mr., Mrs. and Miss Stephens, London, 14-20-h.p. Renault; Mr. and Mrs. Bruce Ingram, London, 32-h.p. Mercedes; Mr. Alfred Belaieff, London, 45-50-h.p. Leon Bollee; Mr. Watson Low, 80-h.p. Gobron-Brillie; Mr. Chalton and Mr. Bell Pettigrew, 40-h.p. Argyll; Mr. Johnson, Leicester, 20-h.p. Delaunay-Belleville; Sir Robert and Lady Finlay, 50-h.p. Panhard; and Lord and Lady Cheylesmore, 40-h.p. Renault.

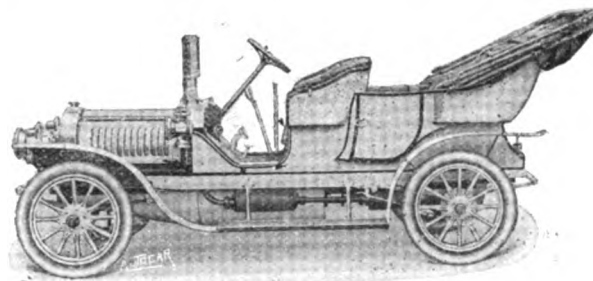
Miscellaneous Items.

The first motor taxi-cab in Liege has just made its appearance.—A public motor-car service for the transport of both passengers and goods has just been opened between Regensburg and Pfatter, Bavaria, a distance of twenty-three kilometres.—The date of the race meeting in Sicily has been altered. The Coupe des Voiturettes will now be held on the 10th, and the Targa Florio on the 18th May.—Twelve entries have now been received for the St. Petersburg-Moscow race, the additions to the list already given being a Darracq, a Sizaire, two Berliets, a Nagant and a N.A.G.—The Automobile Club de St. Omer (France) is organising a series of flying kilometre trials and a hill-climbing competition for the 7th June.—Some joint trials are to be made during the present month by the Austrian and German Motor Volunteer Corps.—Messrs. Stoewer, of Stettin, are building a 6-12-h.p. fire service wagon for the Stettin Fire Brigade.—The French Post and Telegraph Authorities are inviting tenders for the carriage of the mails between Bourges and Argent-sur-Sauldre (Cher) by motor vehicles.

THE REMO 18-H.P. CAR.

THE Rex Motor Manufacturing Company, Ltd., Coventry, who have been building motor-cars for about eleven years, are now devoting attention to the Remo 18-h.p. car, which comprises a number of interesting features. The motor consists of four separate cylinders with the valves disposed on opposite sides. The bore is 86 mm. and the stroke 110 mm., giving, according to the R.A.C. rating, 18-24-h.p. The distribution gear is entirely enclosed, and the shafts driving the high-tension magneto and water circulating pump are provided with universal joints to ensure perfect alignment. The valve tappets are of ingenious design, being kept up to their work by springs, fibre under-buffers being provided to prevent noise. The Trier and Martin triple-jet carburettor is fitted. The crank case is divided horizontally, the main bearings being attached to the top half, so that they are not disturbed when the bottom half is removed, enabling the big ends of the connecting rods to be adjusted with ease. The engine is lubricated by pressure feed from the dashboard. The crank case is partitioned off for each respective cylinder to ensure the proper distribution of the lubricating oil.

The power from the engine is transmitted to the gear-box through a large diameter leather-faced cone clutch. Three forward speeds are provided, the top, of course, being a direct drive through a cardan-shaft to the live axle. Ball bearings are fitted to both shafts of the gear-box. The back axle is of an interesting design. The brake and spring brackets are attached to the bevel gear-box by means of substantial steel sleeve tubes screwed into the latter. The spur pinion differential gear is con-



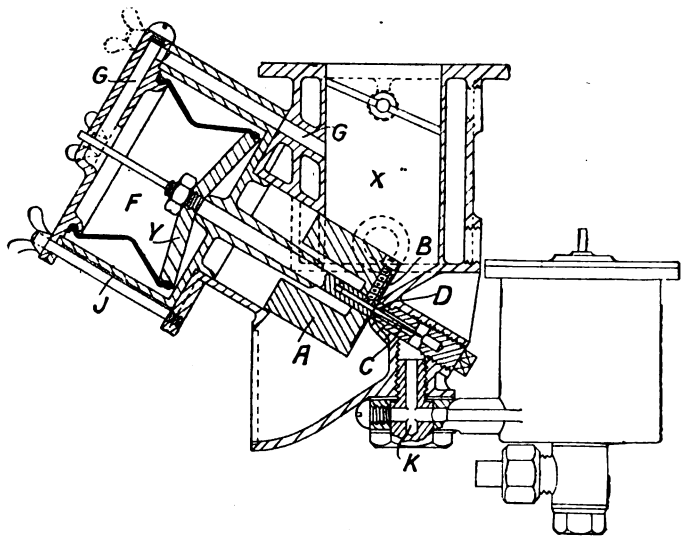
tained in a cage bolted to the bevel wheel, which forms part of the cage, the whole revolving on large ball bearings having $\frac{3}{4}$ in. diameter balls; these bearings are adjustable from the outside by means of locking rings which work on plungers behind the ball races. The rings are held in position by set pins placed conveniently for adjustment. The bevel pinion is supported by ball bearings at both back and front, in addition to the ordinary ball thrust bearing. Thus, by means of the double set of bearings above and below the teeth of the pinion, the driving pressure is resisted in a way that is impossible with a single bearing, and the cardan joint is also relieved of strain. The locking rings to both bearings permit of the most intimate adjustment, and are readily accessible. The floating axles are fitted with ball-bearings, which are likewise adjustable by external rings, and the weight of the car is removed from these shafts by an effective external casting, which is also an oil retainer for the lubrication. The axle is fitted with tension rods as well as with a double torque rod working on a universal joint.

Our Midland representative has driven one of the new Remo cars about 1,000 miles, and reports that not only is it extremely quiet in operation, but is both speedy on the level and an excellent hill climber, a recent trip from Coventry to Newcastle-under-Lyme being made without changing speed. One great feature of the car is its freedom from skidding, owing to the careful manner in which it has been designed so as to not only bring the weight as low as possible to the ground, but also to evenly balance it between the wheels. The vehicle is given a striking appearance by an artistic form of petrol tank and dashboard. As a whole, the new car, which is fitted with a five-seated side-entrance body, is a noteworthy production, especially in view of its relatively low price.

THE "UNION" CARBURETTOR.

WE illustrate herewith a new carburettor known as the "Union," devised by Mr. C. Skinner, and lately put on the market by Messrs. George Wailes and Co., Euston Road, London, N.W. In designing the apparatus the principal object was to make a carburettor that will supply an engine with mixture correct in its proportions of petrol and air, no matter at what speed the motor is running, also to allow the engine to be run and fire regularly at a dead slow speed without waste of fuel, while obviating any back pressure at high speeds. It was also sought to eliminate all springs and auxiliary air valves. In order to get a motor to run fairly slow many present-day carburettors have to depend on an auxiliary air valve to weaken a mixture that would otherwise be too rich when the engine runs at a high speed. It was considered that this was not a satisfactory or scientific manner of supplying a motor with its fuel, and that even if it were, springs and valves cannot be depended on to always act alike.

To obtain a sufficiently rich mixture to keep the engine running dead slow but to prevent waste of spirit, it is necessary that the petrol should be most minutely broken up, and in a carburettor of the spray type, depending on the suction of engine for the necessary draught air, an extremely small aperture is necessary



Sectional View of "Union" Carburettor.

in order that the pressure of air past the jet shall be sufficiently fast, an air space surrounding the jet of 1.20 in. being sufficient to keep the engine going—running free and very slowly. On the other hand, at a high speed, fully loaded, the air space surrounding the jet should be of considerable area and proportioned to the size of the induction pipe if back pressure and the use of an auxiliary air valve is to be avoided. In the opinion of the designer it therefore seemed necessary, to make a carburettor satisfactorily fulfilling these very different conditions, that the space surrounding the jet must vary with the requirements of the engine, and, secondly, that the supply of fuel must vary in proportion to the space through which air flows, the result being a more or less constant speed of air travelling past the jet, the carburettor measuring the petrol in correct proportion to the amount of air.

The "Union" carburettor in its present form is the result of several years' experiment and almost every-day road use. It is quite automatic, depending entirely on the suction of the engine to fulfil the above conditions. Before starting up when fixed on an engine, the piston A is closed down on the part of carburettor B, the petrol supply being almost entirely cut off by the needle valve C, working in the jet D. The suction of the engine, on being turned, sets up a slight vacuum in the chamber of the carburettor X, also in the flexible chamber F, which is in communication with X by means of the port G. This is sufficient to act on the disc Y, causing this to slightly lift, at the time raising the

piston A, allowing the air to pass by the jet D and suck out the required quantity of petrol. The very small space between the piston A and the seat B causes an intense draught at this point which minutely breaks up the petrol. As the engine increases in speed the greater vacuum in the chamber X relieves itself by further sucking up the piston A, at the same time withdrawing the needle C further out of the jet. The needle being tapered allows a greater space for petrol to flow between itself and the sides of the jet. Therefore the faster the engine runs the higher the piston A lifts, the greater the space through which the air flows, keeping its speed more or less constant, but with the proper proportion of petrol allowed to mix with it. The whole of the part J, including the piston A and needle C, can be easily removed to make any adjustment in the supply of petrol by an alteration of the needle C.

Petrol is supplied from the float chamber through the centre of the set screw K, which also holds the float chamber to the main portion of the carburettor in such a way that it can revolve almost around it, and be finally tightened up when it has assumed the most convenient position for the engine to which the carburettor is being fixed. In use it is found that the suction of an engine is so constant that so long as it runs at a certain speed with the same load the piston A maintains the same position without any perceptible up and down movement, but assumes an altered position immediately the slightest variation of the engine's requirement occurs. The shape of the needle, of course, has a great influence on the supply of petrol, therefore in tuning up an engine to get the best results it is possible to give a greater or less amount of petrol at a certain speed by a slight alteration of the shape at a particular point without upsetting the running of engine at other speeds. Messrs. Wailes claim that it is possible to drive a 35-h.p. or 40-h.p. car fitted with their carburettor all over London in traffic on top gear without dropping to the lower gears unless the car is brought practically to a standstill; at the same time the engine will pick up rapidly on opening the throttle. Out of traffic the largeness of the aperture for the passage of air at a high engine speed gives the motor its full power, and the fitting of one of these carburettors in some instances has, we understand, effected an increase of h.p. on the brake test of as much as 12½ to 15 per cent.

THE London Electrobuses Company have decided to extend their Metropolitan service by the addition of 150 vehicles.

THE Duke of Grafton, K.C., has placed an order with Messrs. W. and F. Thorn, of Great Portland Street, W., for a 35-45-h.p. Maudslay car to be fitted with a limousine landaulet body.

TIMES have changed since the early days when an M.P., attempting to reach the House of Commons by motor-car, was frustrated by the inspector on duty, who would not allow entry into the Palace Yard until the Speaker of the House had been consulted. Official sanction has now been given the presence of automobiles within the precincts of Westminster, a badge having been issued to the chauffeurs of members of Parliament which secures their entry into Palace Yard and also their passage through police cordons when the traffic is held up in the vicinity of the Houses of Parliament.

MR. H. J. SPOONER, whose work in connection with automobile instruction at the Polytechnic School of Engineering, Regent Street, London, W., is well known, has brought out a new book on "Machine Design Construction and Drawing." It has been published by Messrs. Longmans, Green and Co., and is a textbook for the use of young engineers. The first five chapters are devoted to the drawing part of the subject, the remaining section dealing more particularly with matters relating to design and construction. Various pages deal with shafting, keys, riveted joints, cotters, bearings, gearing, &c., while the materials used in the construction of the machines and tools are fully considered. The work is fully illustrated with over 1,400 figures and eighty-six tables, and bears evidence of the careful preparation which should make it become a standard work for all engaged in the teaching or study of machine design.

MOTOR-CARS AND MOTORING IN SPAIN.

A LENGTHY report on the trade and commerce of Spain in 1906, prepared by Mr. S. P. Cockerell, Commercial Attaché to H.M. Embassy at Madrid, has lately been issued. Among the subjects dealt with is that of the development of the automobile movement in the country, from which we take the following extracts:—

Bad roads, dear petrol, and loss of wealth in the Cuban War have all contributed to the slow development of the motor business in Spain, where motors are still essentially an *article de luxe* and for commercial purposes are practically unknown. Moreover, as regards Madrid itself, which is the best market of Spain, the city covers but a small area and is surrounded by somewhat desolate country and doubtful roads, and the streets of the town itself are, as a rule, peculiarly unsuited to rapid locomotion. There is wealth also in Barcelona and Bilbao, but Madrid is the spendthrift city of Spain, and this is its most striking characteristic. Probably in no city is the proportion of private carriages to wealth so great as here, and in this direction there is a considerable field for a cheap motor which will put this fashionable method of getting about within reach of the persons of very moderate income who now drive about in a carriage.

Motoring in Spain is under the protection of the Real Automovil Club de Espana, which does for the industry in general what is done by similar societies in other European countries. There is no club certificate for chauffeurs, such as is given in the United Kingdom, and the only regular certificate of confidence which a chauffeur can obtain is the municipal one, which is given upon a declaration by a responsible person that the candidate has shown aptitude and has practised the handling of motor-cars during the previous six months. Chauffeurs' wages vary from £6 to £10 per month.

The representatives in Madrid of motor-car manufacturers have formed a society, presided over by Senor Crespo, for the protection of their interests—a matter of some importance in a country which revises its Custom tariff every five years—and they are, among other things, endeavouring to obtain a reduction in the price of petrol, and intend to establish an examination and certificate for chauffeurs, such as that of the Royal Automobile Club in England.

The Sociedad Hispano-Suiza of Barcelona exploits the Barcelona and Valencia markets, where the proximity of their works and the clannish character of the people are of great advantage. The capital of the company is £40,000, and they are enlarging their works, so there is presumably an increasing demand. There was a so-called *Fabrica* at Puerto Sta. Maria (Cadiz), but this has now been transferred to Cordoba. There is also a newly-established factory at Bilbao. A company for the construction of automobiles has recently been formed in Vitoria under the title of "Sociedad Constructora de Automoviles," and has acquired buildings and part of the machinery of a factory in Alava.

A contract has been made for ten years by the Madrid postal authorities for the carriage of the mails in the city by motor vehicles. For this purpose there are in use eight 16-h.p. electric motor-vans by Messrs. Milde, and two 24-30-h.p. four-cylinder petrol cars by Messrs. Filtz. The only car to be seen in use for industrial purposes is a 24-h.p. Aries furniture van, but there are three other lorries registered.

There appears to be some difficulty in Madrid in getting repairs done, and complaint is made of the delay necessary to replace broken parts from Paris, and this would be still more the case from the United Kingdom. Steps are being taken to remedy these difficulties. The most important workshops which are being installed are probably those of the Madrid-Automobil and Senor Cervera; the former, which is agent for the Renault and Mercedes cars, is a company formed of influential persons in Madrid, and has a large motor house in the Castellana (a most convenient situation). They are enlarging their premises

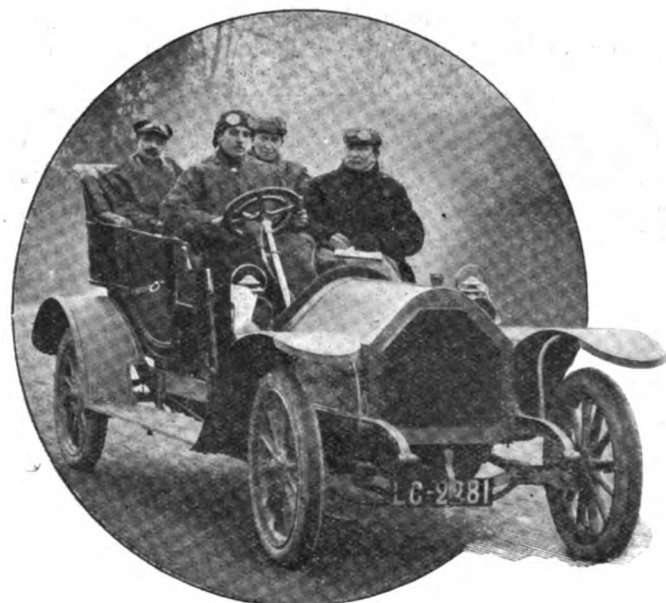
and have engaged an experienced carriage builder with a view to building the carriage work for chassis. They also intend to store spare parts. Bodies are being built in Madrid with satisfactory results, and many purchasers prefer to have the body built on the spot, although the difference in price is not inconsiderable.

There is a local tax in Madrid of 10 pesetas per horse power per annum, and owners have to register their cars. There are 304 cars and 4 lorries on the register for 1906. This might afford a fair guide to the business were it possible to rely on such statistics. All that can be said for them is that they show there are not less than 304 cars in Madrid, of which 51 are Renaults, 50 Panhards, 29 Kriegers, 23 Gobron-Brillies, 16 De Dions, and 14 Mercedes. Persons in the business estimate the true figure at somewhere near 1,000.

Since July 1st, 1906, the Customs duties on motor vehicles have been as follows:—

Class 564.—Frames of iron or steel, weighing up to 1,000 kilos each, for ordinary road carriages, with or without motor, 80 pesetas per 100 kilos. gross weight.

Class 565.—Frames of iron and steel, weighing more than 1,000 kilos., 100 pesetas per 100 kilos. gross weight.



Mr. Gordon Umar at the wheel of a Vinot 16-24-h.p. Car.
The Open Country Road. [Omnia.]

Class 571.—Motor carriages, open, with or without motor, pay duty corresponding to frames, according to weight, plus 200 pesetas.

Class 572.—Motor carriages, closed, with or without motor, pay duty on frame according to weight, plus 320 pesetas.

Note.—To determine the weight of the frame deduct from the total weight of the carriage 200 kilos. in the case of Class 571 and 400 kilos. in the case of Class 572.

Prior to July 1st, 1906, there was no special class for motors in the tariff, and the Customs statistics do not, therefore, show any figures for importation.

MESSRS. DENNIS BROTHERS have sent us a photograph of a 35-h.p. traveller's brougham they have lately completed for Messrs. J. and I. Watts and Co., Manchester. The front seats of the vehicle are entirely enclosed, while the back portion is fitted with detachable shelves to carry travellers' samples. The car is geared to a maximum speed of 20 miles an hour, ample power having been provided in the engine to enable any gradient to be ascended on the top gear. The road wheels are fitted with De Nevers solid rubber tyres, twins being employed at the rear.

The Causes of Motor-Car Accidents.



NOTWITHSTANDING the cold, wintry weather experienced, Easter saw the opening of the 1908 season, all the main roads being literally alive with cars big and little. Unfortunately the holiday was also marked by a large number of accidents, some of a minor character, but a few of a serious and, indeed, a fatal nature. The accidents have resulted from various causes; many have occurred at cross-roads, which form one of the greatest dangers of modern traffic; others have been due to collisions with cyclists and pedestrians; while a few, it must be admitted, have resulted from excessive speed on the part of the drivers. As a motor-car accident generally ends in a forced visit of the vehicle to the workshop of the manufacturer or a repairer, the latter are particularly well situated to give an idea of the principal causes of motor-car accidents, and the following views of several well-known members of the trade will therefore be read with interest. It will be seen that cross-roads are given a leading position in the list of causes. As most roads intersect each other at right angles or near so, and as hedges and fences are rarely low enough to enable the motor-

others were damaged at cross roads, and another one was injured at a sharp S turn—one of the cars being on the wrong side. Our repairs are generally overhauls, and we consider the low percentage of accidents remarkable taking into consideration the large number of cars which are on the road to-day."

Mr. T. C. Pullinger's Views.

Mr. T. C. Pullinger, of Messrs. Humber, Ltd., Beeston, writes:—"As far as I can see the greater number of accidents are caused by reckless and incompetent driving; a large proportion of the repairs which come into our works are cars which have run into tramway standards, telegraph posts, walls, or failed to clear bridges, &c. Taking corners too quickly is another great cause of accident, and one that I have in my mind at the present time was caused by attempting to enter a garage at about twenty miles an hour, and misjudging one of the door posts, to the detriment of the door and the car."

Messrs. Mann and Overtons' Experience.

The opinion of Messrs. Mann and Overtons with regard to the most fruitful cause of motor-car accidents is to the effect that a very large proportion of them are due to side-slip, and a large number owing to collision with horse-drawn vehicles. "The cause of most of these collisions has been due to the drivers of the horse vehicles pulling sharp across the motor-car without giving notice of their intention to do so. We have had no accidents at all brought to our notice that have been due to collision at cross roads, and it is our opinion that drivers are now very much more careful in taking corners and passing cross roads than they used to be.

Mr. C. Jarrott's Opinion.

Mr. C. Jarrott remarks that, "I would like to put it on record that from our experience in the repair works with regard to the cause of the majority of breakdowns in connection with motor-cars, the general cause is through neglect. Ignorance is, of course, responsible for a number of troubles, but the great cause of trouble is carelessness and neglect in regard to:—1, lubrication; 2, adjustments; 3, rectifying trivial troubles before they become worse. Many people are inclined, when some small thing goes wrong with the car, to go on running it instead of having it attended to. For instance, it very often happens that the engine develops a knock, and instead of having it rectified the user goes on running the car until it becomes serious, and grave damage is caused to the motor. So far as actual accidents on the road are concerned, I should certainly say the majority are due to sideslips."

The Napier Cars.

Mr. S. F. Edge writes that he has gone into the matter with regard to repairs to Napier cars, and, "so far as one can trace, about 75 per cent. or 80 per cent. of the accidents are attributable to bad judgment or carelessness on the part of the drivers. Most of these accidents happen at the junction of cross or adjoining roads, and generally through the car skidding, the cause really being excessive speed at unsuitable places. The remaining 20 per cent. seem to be unavoidable accidents where the driver has been in the right—careless pedestrians rushing suddenly across the road or coming out behind some other vehicle. In some cases it has been caused through other cars coming out backwards from a side road, but excessive speed at unsuitable places is really the key to the bulk of the accidents."

MESSRS. WILLIAM ELDER AND SONS, LTD., have opened a garage and repair shop at Castlegate, Berwick-on-Tweed, where they will always have on hand a large stock of tyres, spares, and accessories; vulcanizing will be undertaken and accumulators charged on the premises, which will have accommodation for 100 cars.



A Group of well-known People in a Six-cylinder 30-h.p. Napier.
The names of the passengers, reading from left to right, are:—Miss Violet Brooke-Hunt, the celebrated authoress and Organising Secretary of the Women's Union and Tariff Reform Association; Earl Stanhope, and Mr. Mackenzie King, C.M.G., Deputy Labour Minister for Canada, at present visiting this country in order to consult with the Foreign Secretary concerning the Japanese immigration question.

ist to see an approaching automobilist, the two often become aware of each other's presence when it is too late to avoid a collision. An unwritten law that is generally recognised is that he who travels along a main road has precedence of anything he may meet emerging from a byroad, but the distinction between one and the other is not always very clear, even where the district is familiar, and, consequently, the constantly-repeated advice that the horn should always be sounded and the speed reduced when reaching cross roads, so that the car can be quickly pulled up in case of necessity, should be seriously taken to heart. The chances of accidents on country roads would, of course, be much less were the corners rounded, and no obstacles to vision, such as high hedges, fences, &c., allowed to exist at such points. In time, when the exigencies of modern road travel are better understood, improvements of this kind will no doubt be effected, and then cross roads will lose much of their danger for motorists.

The Clement-Talbot Co.'s Experience.

Mr. T. H. Woollen, the general manager of Clement-Talbot, Ltd., informs us they have had very few damaged cars brought into their repair shop. "One was the result of a railway crossing being closed which was immediately round a sharp corner. Two

THE St. Bride's Press, Ltd., announce for early publication a book by Mr. Reginald Ryves, under the title of "The King's Highway."

To prevent puncture a German inventor has devised a protective band composed of layers of thin sheets of mica enclosed in a casing between the outer cover and the air-tube, or embedded in the cover.

THE Medical Department of the United States Navy at Washington has lately acquired an electric motor ambulance. The vehicle has a speed of twelve miles per hour and a radius of forty miles on one charge of the battery.

THE CRAIG VENTILATING AND OZONE COMPANY, of 427A, Strand, W.C., have brought out a special electrical ventilating fan, which is so arranged that it can be also used to rapidly and economically re-charge ignition accumulators.

AT Cadzow Bridge, Hamilton, the Lanarkshire Motor Company have opened a garage with Mr. Edmund Tainsh as manager. In addition to the usual stock of accessories, &c., the firm have the agency for Argyll cars and will also undertake repair work.

MESSRS. DAN LEAVY have a well-equipped motor garage at Dundalk, to which Mr. T. J. Leavy has just returned after qualifying for vulcanising tyres by a course of instruction at Messrs. Harvey Frost and Co.'s tyre repair school in London.

MR. S. F. RANFORD, who has a motor garage at Barnet's Green, Great Malvern, has been very busy with repair work during and since the Easter holidays. Several well-known motorists visited the town, and obtained supplies of petrol, &c., from his well-arranged stocks.

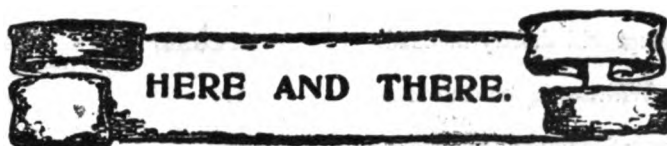
THE total number of motor vehicles and cycles in use in Germany increased from 27,026 at the beginning of 1907 to 36,022 at the commencement of the present year, or about 33 per cent. Of the total, 34,244 serve mainly for carrying passenger transportation, and 1,778 for goods transportation.

AT a meeting of the Roads and Bridges Committee of the Holland County Council, held at Spalding, a discussion took place with regard to exempting vehicles during harvest operations from carrying lights at night. It was decided to recommend the County Council to make an order exempting vehicles engaged in harvest operations from carrying lights from June 20th to October 20th.

MAYFAIR is not nowadays the rural district of London that it was when the Maypole was erected somewhere near the site of the existing Curzon Street, but there is some evidence that the reputation which the neighbourhood once enjoyed is likely to be revived. Hidden away behind what is now Hertford Street the "Daily News" has discovered that there has been constructed on the roof of a garage a magnificent tennis court, which is literally among the local chimney-pots.

WE mentioned a month or so ago that a special plant had been installed in the club-house of the New York Automobile Club of America for testing the horse-power of motor-cars as developed at the road wheels of the vehicles. The dynamometer is now in regular operation and we append the results of some recent tests:—

| Car. | H. P. Rating. | | Maximum H. P. at Wheels. | Miles Per Hour. | Gear in Use. |
|---------------------|------------------|-----|--------------------------------|--------------------|-----------------|
| Pope-Hartford ... | 30 | ... | 25½ | 36 | 3rd. |
| Westinghouse ... | 35-40 | ... | 30 | 25½ | 2nd. |
| Stoddard-Dayton ... | 40 | ... | 30 | 43 | 3rd. |
| Packard ... | 30 | ... | 33 | 12 | 1st. |
| Pierce Arrow ... | 40 | ... | 30 | 43 | 3rd. |
| Pierce Arrow ... | 28-32 | ... | 21½ | 11 | 1st. |
| Simplex ... | 50 | ... | 44 | 46 | 3rd. |
| Packard ... | 24 | ... | 20½ | 13 | 1st. |
| Stoddard-Dayton ... | 40 | ... | 24 | 44½ | 3rd. |
| Oldsmobile ... | 35 | ... | 15 | 34½ | 3rd. |
| Stevens-Duryea ... | 30 | ... | 26 | 40 | 3rd. |
| Locomobile ... | 15-20 | ... | 13½ | 7 | 1st. |
| Thomas ... | 40 | ... | 23 | 40 | 3rd. |
| Peerless ... | 30 | ... | 33 | 14 | 1st. |
| Packard ... | 30 | ... | 35 | 28 | 2nd. |

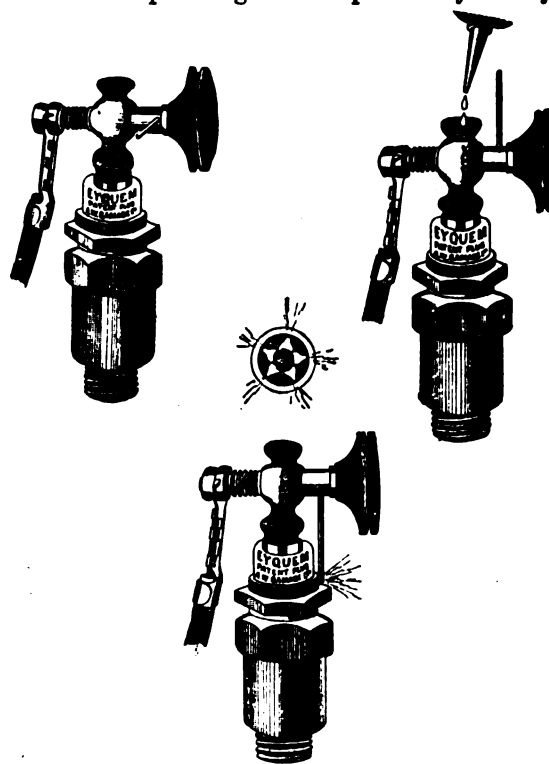


THE Duke of Westminster has lately been for a motor tour along the Riviera and the Italian coast of the Mediterranean.

THE Mexican Railroad Company is carrying out some comparative trials of the delivery of parcels by motor-van as compared with horse delivery. The test is being made with an Argyll vehicle.

MESSRS. CASTLE AND SONS, of Victoria Square, Worksop, have a garage where they are able to execute all descriptions of repairs, supply spare parts of every kind, charge accumulators, and, generally, send the motorist on his way rejoicing. A special department for motor bodies has also been organised by the firm.

IN the new "Eyquem" sparking plug which is being marketed by Messrs. A. W. Gamage, Ltd., are a number of points which should facilitate its introduction to practical motorists. It is a well-made device, and its various good points will be understood from the accompanying illustrations. It combines a plug, compression tap, spring terminal and short circuiting device. There is a tubular central lead, the top of which forms the tap through which petrol may be injected to



facilitate starting up, the petrol thus getting well to the sparking points. It can be used as a compression tap where necessary. The spring terminal is simplicity itself, the wire being held quite secure. It can, however, be slipped off in a second. The short-circuiting device obviates the annoying process of unloosening wires, unscrewing plug, &c., to test the spark. By turning the insulated button the motorist can tell at a glance if all the cylinders are being fired. Furthermore, if the button be turned to the spark-testing position it is impossible for interfering hands to start the engine.

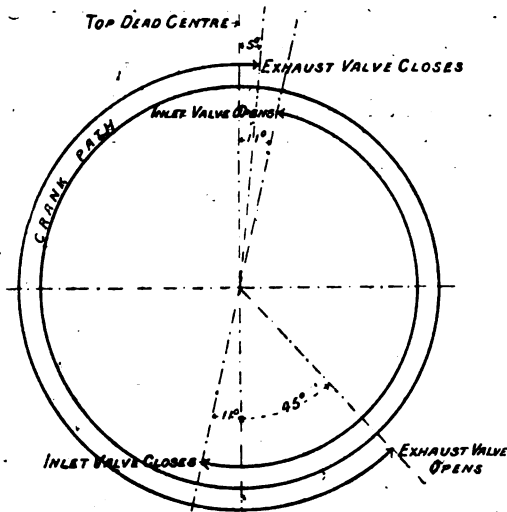
MESSRS. SIMPSON, STRICKLAND AND CO., LTD., the well-known yacht builders of Dartmouth, have been successful in obtaining an order for a high-speed steam yacht. The boat is to be built of steel, 130 ft. in length, and is to be fitted with two sets of triple expansion machinery and two water tube boilers. The conditions of the contract call for a speed of forty kilometres, that is 24.85 miles in the hour, on a four hours' trial, so that the boat will be one of the fastest yachts in the world. It is interesting to note that the owner is M. Jellinek Mercedes. The boat is required for short trips in the Mediterranean to ports lying about 100 miles from Nice, where he resides.

RUMOUR has it that another attempt will shortly be made to climb Snowdon by motor-car.

THE toll levied on motor-cars at Whittlesea, on the main road to Wisbech, is 2s. per vehicle.

THE first motor-cycle race at the new Stadium at Shepherd's Bush will be held on May 11th. The Finchley Harriers are holding a meeting there, and included in the programme will be a five miles motor-cycle handicap, open to genuine touring machines not exceeding 90 by 90 with a 4 to 1 gear.

IN connection with our recent article on the setting of the valves of petrol motors, Mr. L. Delphin, the managing director of the British Motobloc Syndicate, Ltd., has sent us the accom-



panying diagram of the setting adopted on the engines of the Motobloc cars. As will be seen, the exhaust valve is timed to open early—45 deg. before the end of the explosion stroke of the piston, and to close late—5 deg. down on the suction stroke. As for the inlet valve, this opens late—11 deg. down on the suction stroke, and closes late—11 deg. up on the compression stroke.

IN our report of the Brooklands Easter meet we referred to the celerity with which the tyres of the two Ford cars in the Tyre Change Plate were changed. We are informed that the vehicles were fitted with the standard tyres ordinarily supplied with these cars, and that they were changed in almost exactly the same time, viz., 1 min. 30 sec.

DESPITE the unseasonable weather that we have lately had, many motorists have found their way into Derbyshire, where a large number have been entertained at the Crescent Hotel, Buxton, which has a couple of garages. Among the visitors were Mr. J. Whittaker, on a Horbick, and Messrs. R. L. Johnson, Noble and Ratcliffe, the latter each journeying on Siddeley cars.

MESSRS. J. B. FERGUSON, LTD., of Belfast, have decided to establish a motor service in the district known as the Ards Peninsula, co. Down, Ireland. Owing to lack of direct railway communication this important centre has been almost entirely isolated. The Argyll motor vehicle which they placed on the road between Belfast and Portaferry on February 1st for a month's trial has given the Post Office authorities such satisfaction that they have just entered into a contract with Messrs. Ferguson, Ltd., for the conveyance of the mails. The car at present running is of the private station brougham type, and does not accommodate a great number of passengers; but we understand that Argyll vehicles to carry a large number of passengers are at present under construction, and will be on the road in a few weeks. In addition to the present service, which leaves Belfast at 6 a.m., and arrives at Portaferry at 8.45, it is also proposed to run a morning service between Portaferry and Newtownards, and an evening service between Newtownards and Portaferry; also mid-day services between Newtownards and Bangor, and *vice versa*, and in the summer season between Bangor and Donaghadee, and probably to Ballywalter.

VISCOUNT AND VISCOUNTESS INGESTRE have gone abroad on a motor tour, and expect to be away until the end of June.

THE magistrates at the Steyning Petty Sessions have refused to allow time for the payment of fines in recent motor-car cases.

DURING the month of March the Ford Motor Company received *bona fide* orders with actual cash deposits for no less than 1,321 Ford cars.

NEW premises have been acquired by the West End Motor Company in the vicinity of their present garage at 72, Great Western Road, Glasgow.

AT Cupar, in Fifeshire, Messrs. Walton have opened a motor garage, which is capable of accommodating a score of motor-cars. Facilities for repair work are also provided.

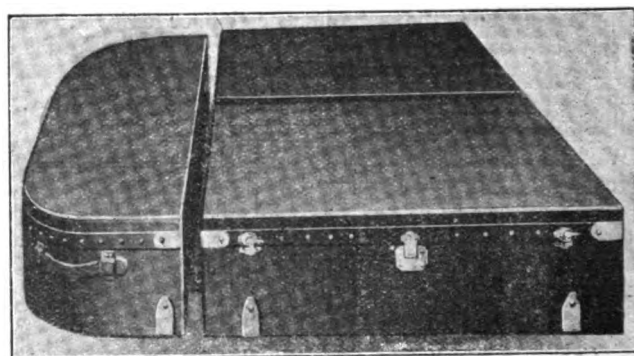
AT Stranalar, the dispensary medical officer, who uses a motor-car in his practice, has secured the conviction of a farmer who obstructed his free passage on the public road by backing a cart across the highway.

THE East Grinstead Motor Garage, situated opposite the Station Road in the London Road, East Grinstead, has cars to let on hire, and every appliance for dealing expeditiously with all classes of motor repair work.

THE second edition is to hand of the Autocar Handbook, published by Messrs. Iliffe and Sons, Ltd. This has been entirely revised and nearly 100 illustrations materially assist in explaining the text of this useful guide to the modern motor-car.

MESSRS. WOOTTEN, LOW AND Co. have opened premises in Smithford Street, Coventry, as a garage and repair depot. Mr. James Low, who will personally superintend the repair department, will be remembered as driving a Swift car in last year's Scottish reliability trials. It is the intention of the firm to thoroughly equip their establishment in all its branches, and a vulcanizing plant has been installed.

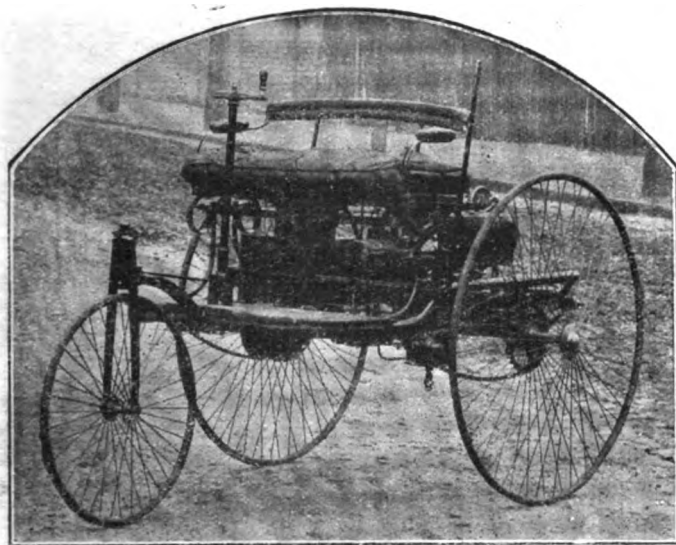
ONE of the perplexing problems that motorists on tour have to solve is that of the transportation of luggage. Every available corner is utilised, and where trunks are made for exterior accommodation care must be exercised in their colouring as well as contour. Messrs. Alfred Dunhill, Ltd., are making ingenious and well-directed efforts to assist motorists in this direction, and at their headquarters, 359-361, Euston Road, N.W., they have several good types of trunks for the back of the car as well as for other positions thereon. These are made of compressed fibre, covered in waterproof canvas, and painted and varnished to match the colour of the car. They are impervious to both dust and rain, and can be manufactured to fit in any other part



of the vehicle where desired—under the seat, on the step, &c. We illustrate a novel idea for the utilisation of the roof of the car in such a way as not to detract from the general appearance. These roof trunks are made in sets of two or three as desired, their lightness being an important point in their favour. The measurements required for such trunks are the height of each box, the size of the grid at the back of the automobile, and an exact template showing the curve of the rear of the vehicle. In addition to these excellent trunks, mention may also be made of the circular valise, the Kennard valise, the folding tool box, and other good types of accessories of real convenience and pleasing appearance.

A PIONEER MOTOR-CAR BUILDER.

FOR many years thousands of engineers had been aiming at the invention and construction of a car capable of travelling on ordinary roads by its own means, but most of the attempts to reach this end proved failures, on account of the engines propelling these vehicles being too heavy and cumbersome. It was, therefore, indispensable to find a motor which, with the smallest size and lightest weight, would give the highest obtainable horse power. Herr Carl Benz, of Mannheim, the inventor of a light petrol stationary engine with which he



The First Benz Car, 1885.

had been doing business since 1878, considered this type of motor as the most suitable for the purpose, and thanks to his long experience with these stationary motors, which were, however, too heavy for locomotive purposes, he succeeded in 1885, after many years' experiments, in building a comparatively light motor, and, in connection with it, a light vehicle, in the form of a three-wheeler. This was, in fact, the very first motor-car driven by a petrol engine, and afforded accommodation for two persons. The car was of light construction and the engine developed $\frac{3}{4}$ -h.p. Electric ignition was furnished by means of a small dynamo.

The reason Herr Benz had for considering a $\frac{3}{4}$ -h.p. engine powerful enough is of interest. His previous trials and calculations of road resistance with three-wheelers had given a required energy of about 40 kilogramme-metres for a tricycle for two people. Acting on this, he built his motor to give $\frac{3}{4}$ -h.p., but, as very often is the case, he discovered that difficulties other than those generally taken into account in theory had to be dealt with.

The vehicle attained a speed of 12 kilometres ($7\frac{1}{2}$ miles) per hour on flat roads and could overcome gradients of about 2 per cent. with two passengers. The water jacket round the cylinder and water provision were small, the distance covered at a stretch never exceeding $7\frac{1}{2}$ miles, when a stop was required for replenishing fuel, &c. These beginner's results were, nevertheless, considered satisfactory, and spurred Herr Benz on to other improvements.

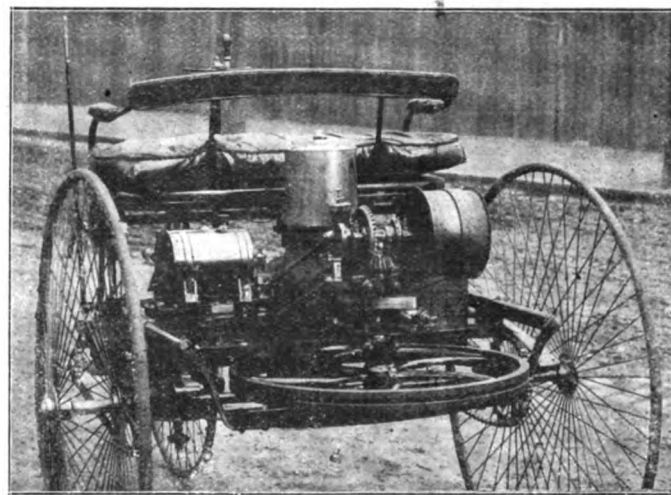
The disposition of the car is interesting. It was feared that the live force of the fly-wheel, if mounted vertically, would interfere with easy steering, and it was therefore arranged to run horizontally. Later experience showed, however, that in proportion to the weight of the car, the live force of the fly-wheel did not materially interfere with the steering. The motor rested on iron cross-members to which it was bolted. On these cross-members was also fastened on one side a carburettor, and on the other side the cooling tank; the dynamo for ignition purposes being hung below the frame on the front part. The steering

arrangements then used were similar to those of the present day but, of course, much cruder.

Herr Benz took out his first patent in January, 1888. The differential was only fitted with a one-speed gear, but it was soon obvious that if the car was to be used on other than the flat roads around Mannheim, a second and lower speed was necessary to enable the car to ascend gradients, and even then only slowly. The power of the engine was insufficient as soon as badly kept roads were met, and the speed of the car at its best did not give entire satisfaction. A long period of experiment then followed, until at last a type of car was built which seemed to warrant its use for practical purposes, and these vehicles were then put on the market. Some of the first three-wheeler cars, as described, built by Messrs. Benz and Company, were imported into France in 1887 by Mr. Emile Roger, of Paris. At that time the firm of Messrs. Panhard and Levassor, of Paris, took up the exploitation of the French patents of the Benz two-cycle stationary gas engine, and the presence of Herr Benz was found necessary at their works.

He, therefore, left for Paris in March, 1888, and while there was shown one of his motor-cars at Messrs. Panhard and Levassor's works, and drove it in the presence of M. Levassor in the streets around the works. Doubtless M. Levassor was then unaware of the great future of the motor-car, as he had never previously occupied himself with this type of vehicle, and it was probably this incident that induced the firm to take up the manufacture of motor-cars.

A patented three-wheeler, built by Messrs. Benz and Company, was shown at the Paris Exhibition of 1889, under the name of M. Roger, and was the unique three-wheeled motor-carriage exhibited, but did not attract much attention, as it was not shown running. A greater sensation was made in 1888, when Herr Benz exhibited a motor-car at the Exhibition of Mechanical Industry in Munich. This vehicle could be seen running about the streets of Munich daily, the performances always provoking great curiosity and interest. It was only when the demand for motor-cars increased considerably, that the firm of Messrs. Benz and Company started constructing and turning out large quantities of these new vehicles, but the fact remains that they can justly claim



Rear View of First Benz Car.

to have been among the first, if not the first firm to put a reliable working motor-car on the world's market.

At Kensington Mr. C. L. Drew has held an inquest concerning the death of a man run down by a motor-car. The Coroner said that drivers, cabmen, and others thought that they had done all that was necessary to avoid an accident when they had shouted, but the road was public property, and it was the duty of drivers to pull up as well as shout.

ACCESSORIES FOR TOURING.

The Jones Speedometer.

Factory organisation and a greatly increased output have enabled substantial reductions to be made on two of the Jones speedometers, Models 20 and 21. We illustrate the former model in Fig. 1. It will be noticed that, besides indicating speeds up to a maximum of fifty miles per hour, this instrument also gives a mileage reading up to 10,000 miles, and repeats. There is also a trip mileage indication by means of the Veeder odometer, this trip section, of course, being

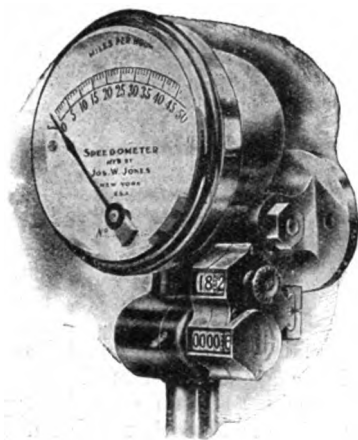


Fig. 1.

capable of resetting at any time. Several important innovations in the way of bevel drive at the gear-end in place of the bent shafting are introduced in these new instruments, and, in fact, such improvements as eight years' experience in the manufacture of speedometers for motor-cars advised are embodied in all these devices, for which Messrs. Markt and Co. are agents.

The "Durandal" Non-Skid.

The "Durandal" non-skid which Messrs. STUART, MORRISON AND Co., of 199, Piccadilly, London, brought to the notice of motorists, have won much favour amongst practical motorists. In our issue of April 20th last year we illustrated this type of band, which can be fitted to worn covers as well as to new ones. The feature of the device is the presence of metal clips on the edge of the band. These are inserted in the rim at equal distances from each other, and the tyre is then inflated in the ordinary way. Lately we heard of the owner of a car who had been dissuaded from adopting the "Durandal" non-skid for some time, it being alleged that there was a difficulty in getting the covers on. But when, at length, he adopted this type he found that the whole secret of the effective use was in keeping up pressure in the tyres, so that the clips could be maintained in position. Bearing that necessity in mind, he had worn out two treads on a cover which was apparently as good as ever after such a lengthened experience. The excellent construction of the "Durandal" device secures effective service where care is taken to maintain the pressure of the tyre, as should always be done.

"O. S." Speedometer.

The neat style of speedometer shown in Fig. 2 is the "O. S.," which, having attained distinction in the trials of the Automobile Club of France, is now winning popularity in this country under the ægis of Messrs. W. SEARLE AND Co., 33, Glasshouse Street, London, W. The reduction of the wear of the few working parts to a minimum is a distinctive feature of the device, while the fact that for fast vehicles the transmission does not revolve any faster than in the case of slow cars is a point worth consideration. The main factor in the "O. S." speedometer is the permanent magnetic system, which obviates the use of gear wheels or friction drive. The speed of the car is instantaneously indicated, the needle always coming to a dead stop. The "O. S." speedometer can be fitted correctly to cars of any height or type, and is supplied at a price which should materially assist to its use on motor-cars generally. Messrs. W. Searle and Co. are also the agents for the "Fulmen" Accumulators and other well-known specialties.



Fig. 2.

Brooks' Specialities.

In connection with spring touring, Messrs. J. B. Brooks' cases for Thermos flasks, sandwich boxes, luncheon and tea equipment, and

the like are of interest, these having a most compact disposition of fittings. Mention may also be made of their puncture-proof non-skid tyres and bands. The non-skid tread is a combination of the suppleness of rubber with the durability of leather; the studs are rigidly secured in a way that should be appreciated by those who have had trouble with such devices coming apart in other makes. They consist of a cupped rivet carrying an inset head of dead-hard steel of a uniform hardness throughout, and giving a notable wearing surface. In connection with these the firm issue a series of suggestions for the treatment of non-skid tyres which will be of general interest.

Useful Novelties.

Their showroom at 20, Store Street, Tottenham Court Road, London, W.C., gives a good idea of the ability of Messrs. G. T. RICHES AND Co. to supply motorists with whatever they may require in the way of accessories. Apart from leading specialities such as the C.A.V. accumulators, for which they are special agents, the firm deal in a variety of sundries—the absence of any one of which may have an important bearing on the enjoyment, or otherwise, of the motorist. Thus in springs they have a great assortment of various sizes, and those who own cars of somewhat early date will be able to find all they require in that way. Just now a speciality is being made of copper wire put up

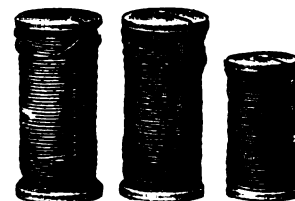


Fig. 3.

in rolls of 16, 22, and 24 gauge, such as are shown in Fig. 3. In the accessories that make for the convenience of the covered car are a full range of novelties, while horns, lamps, &c., form an important section of a business that comprehends all the departments of automobile equipments.

"Ragosoil" Lubricants.

Having had many years' experience with lubricating problems, Messrs. Ragosine and Co., Ltd., of 7, Idol Lane, Eastcheap, London, E.C., bring their motor-car lubricants before the notice of motorists with much confidence. The "Ragosoil" specialities cannot corrode or gum, and give a minimum of carbonisation even at high temperatures. They are prepared in several grades for forced lubrication, gear cases, &c., while a graphite lubricating grease has special merits. The same firm have brought out lubricating oil storage cabinets. These are self-contained and can be kept locked, thus helping to keep the garage clean and tidy. A pump is kept within the cabinet for filling small cans, and all the overflow is automatically returned through a strainer. If necessary, the pump can be taken out and used to fill the cabinet from the barrel or drum.

The "Popular" Speed Indicator.

Recently we referred to the accuracy of the instruments brought out by Messrs. S. SMITH AND SONS, LTD., of 9, The Strand, London, W.C., for the registration of the speed of motor vehicles. Hitherto such devices have been somewhat expensive, but the present season has witnessed the reduction in cost of several notable makes, and the introduction of the "Popular" type shown in Fig. 4. This is made with all the good qualities associated with the firm's well-known devices, and is supplied in brass or nickel. As is apparent, it records the speed of the car up to 50 miles per hour, and has a mileage recorder working up to five figures—altogether a suitable instrument for the modern motorist.

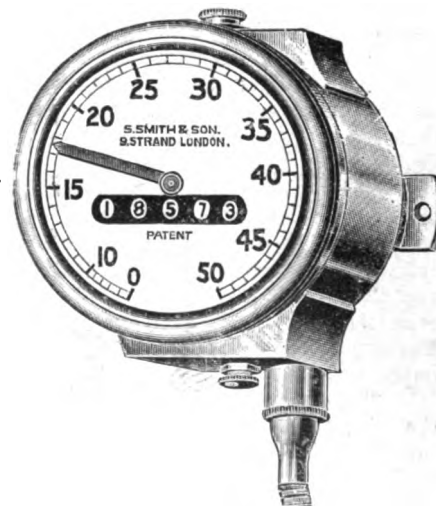


Fig. 4.

The CAR AND GENERAL INSURANCE CORPORATION, LTD., whose head office is at 1, Queen Victoria Street, London, E.C., have many varieties of policy for motorists, the premium varying not only according to the claims they cover, but also as to the horse-power of the cars owned. This arrangement secures equity to the small car owner.

Correspondence.

[Letters to the Editor should be addressed to the offices, 27-33, Charing Cross Road, London, W.C.]

DISTINGUISHING CARS AT BROOKLANDS.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—At Brooklands last season I found great difficulty in distinguishing the cars as they raced round the track. Interest and pleasure are lost to a certain extent unless the position of all the competitors can be appreciated at a glance, and with this difficulty in view we have decided to have all our Metallurgique cars painted white when competing at Brooklands during the coming year.

... When an antique motorist like myself finds difficulty in recognising the cars, surely the ordinary public must find it more perplexing still. I suggest, therefore, that the Brooklands rule compelling drivers to wear "colours" (which, by-the-bye, often cannot be seen, and are quite useless at a distance), be carried a stage further and members of the trade be asked to register colours for their cars. The management doubtless appreciated the difficulty when they instituted the carrying of discs with numbers, but these are not of much use at a distance, and to be really easily distinguishable nothing short of colouring the whole car is satisfactory. I am writing Mr. Rodakowski to similar effect asking him to register the Metallurgique colours, as I believe it is just one of those little points that make for success, and anything even remotely

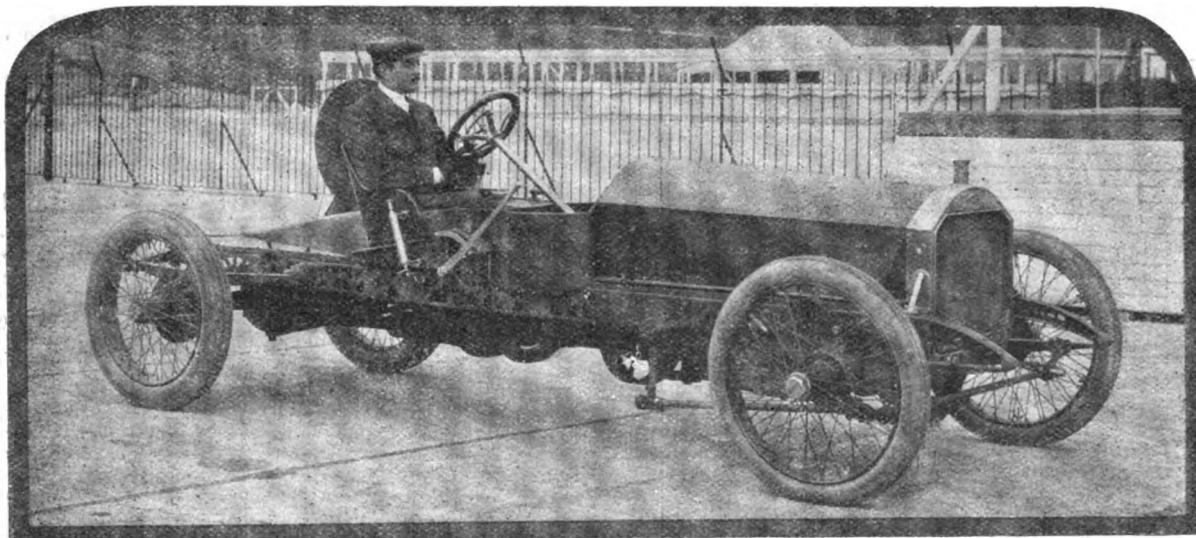
I must put in a word or two for the doctors. Most of our doctors have the telephone and a motor, and I know from personal experience, having called up for neighbours several doctors in urgent cases lately the messengers always say ask him to come in his motor-car and quickly. So if our doctors do as requested, and come quickly to an urgent case to save perhaps a valuable life, and get treated badly by the police, theirs is a poor reward for laying out capital and bringing themselves up to date. I do hope something will be done to stop these little mishaps which are unpleasant to all concerned.—Yours truly,

H. PEWTRESS.

TWO SPEED GEARS FOR STEAM CARS.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—I would esteem it a favour if any of your correspondents who drive Serpollet steam cars could tell me if they have tried fitting a two-speed gear to their excellent machines. I have been recently driving a small 6 h.p. car of that make, and while in the country where one can "keep a swing on her" it is surprising how hills can be climbed, no matter what the load, but once lose your superheat and in a hilly



The Marquis de Mousilly St. Mars at the wheel of his new 40-h.p. Six-Cylinder Napier with which he intends to compete at Brooklands in both the open and private competitors' classes.

likely to assist the track is surely worth trying for the sake of the sport.
—Yours truly,

WARWICK J. WRIGHT.

MOTOR TRAFFIC AND ACCIDENTS.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—Having read charges against chauffeurs and the accidents leading up to the same, I think it is time that something should be done in the interest of all concerned.

Motor-vehicles are getting more numerous every week, and are likely to increase. Having watched the different traffic on the main roads of Herefordshire for some time I feel certain that if farmers and others sending heavy wagons, carts, and vans (that is, slow traffic) would instruct their drivers to keep along their proper side all the time there would not be these accidents. A farm wagon and two or three horses could start from a place ten or twelve miles from Hereford and keep on their proper side, and fast traffic could pass them as often as possible and make no difference to the wagon and horses. In many cases it is the sudden and excited action of the driver as well as the motor that startles the horses. 2HCA

If, on the other hand, the slow traffic is kept on its way on the proper side, it would not have to pull out of anyone else's way once in several miles. The horses could go on quietly and comfortably, and drivers would be more secure. Motor-cars, bicycles, and traps could pass without interference.

Of course, on the narrow bye-roads we cannot do this. But if all the different people who use the roads would try to use a little common sense there should be no objection to motorists or others going along smartly, so long as the road is clear, as the faster a motor goes by a horse in reason the less danger there is of it being startled.

country it is almost impossible to recover it without stopping, particularly when it occurs, as is most frequent, on a long hill. It appears to me that by the addition of a simple two-speed gear giving a high speed, say 30 deg. in excess of the normal, and a low, say 40 deg., below 'normal, not only would much wear and tear be saved, but by slipping in the low gear on a hill sufficient speed could be given the pumps to maintain both superheat and pressure, and I would be glad of any actual user's experience on this point.

I may add that I have driven petrol cars of all makes and powers for the past seven years, but for general utility, cheapness of upkeep, long life and reliability have never met the equal of a well-made steam car, while the tyre bill alone I should imagine would, power for power, show a saving of quite 25 per cent. Referring once again to the proposed addition of a change-speed gear, it has occurred to me that two sets of chains and sprockets would amply suffice, both sprockets running free and a simple dog clutch locking either to the driving or driven shaft, as the case might be, at will. Of course when one was locked the other would be freed and *vice versa*.—Yours truly,

S. P. CHRISTIE.

AN IGNITION DIFFICULTY.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—Of late I have been troubled with a very mysterious case of "missing." I have a four-cylinder car fitted with a well-known make of carburettor and accumulator ignition system, in which a separate coil is provided for each cylinder. The contact-maker is of the roller and internal ring type. At times the motor will run perfectly, but just as I am beginning to think my cause of worry has disappeared, a very irregular sort of missing begins, which does not seem to be confined to any one cylinder, but instead affects all of them alike, with the result that the

power of the engine is completely cut off momentarily, and then as suddenly applied, with a most uncomfortable jerk. This temporary cutting off of the power occurs usually three or four times during each spell, after which the motor settles down to its work again, and pulls as well as ever. The missing never seems to occur when the car is standing. I suspected the carburettor for a time, on the theory that some small particle of dirt had in some way got into the float chamber and been drawn up periodically into the jet, but repeated cleaning of the part did not remove the cause of the trouble.—Yours truly,

R. JOHNSTON.

[This trouble might be caused by a fault in the accumulator, as, for example, if the lug that is burned on to the grids is loose it may cause it to make contact badly occasionally, especially when the car is being jolted. Otherwise we should suspect the carburettor or the petrol supply to it. It is possible that the bottom of the tank is foul and that pieces of dirt occasionally choke the supply pipe without reaching the carburettor itself. We suggest a thorough examination of the inside of the petrol tank and the disconnecting and cleaning out of the petrol supply pipe. Another thing that the trouble reads like to us is the presence of water in the fuel. There may be a small quantity of water in the reservoir, which, when the car is standing and the engine running, remains at the bottom, but which when the car is on the road mingles with the spirit by agitation and so finds its way in small doses, but sufficient to cause trouble, to the carburettor.]

METROPOLITAN GARAGES.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—With the opening of the Franco-British and Earl's Court Exhibitions at hand might I suggest that in your interesting journal



Mr. T. E. Danville, the well-known Comedian, at the wheel of his 35-h.p. Talbot Car.

Mr. Danville uses his car very extensively both for business and pleasure, and states that it has given him the utmost satisfaction.

you should publish a list of garages and stables in these localities where cars could be left during motorists' visits to the shows in question.

To the owner who is able to employ a driver the matter is of little importance, but I feel sure there must be many motorists like myself who always drive their own cars and have experienced the difficulty, when in the City or West End, of finding garages when one wants to have dinner, visit a theatre, or see exhibitions like those I have already mentioned; and I always consider that to use one's car as a means of reaching home is so much more preferable as compared with the general rush for the underground railways, and the subsequent straphanging journey which usually follows.—Yours truly,

GEORGE E. DICKER.

[There are many excellent establishments in and about the West End of London where motor-cars can be garaged; some of these are included in the list of garages in our advertisement pages, where many others might usefully add their announcements.]

A MOTOR-CYCLE QUERY.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—Would you kindly oblige me by stating what gradient my machine would take without pedalling over a distance of about two miles? Particulars are: engine, twin Minerva, 70 by 75; combined weight 390 lb.; gear, 5 to 1; ignition, trembler coil. My reason is that I have increased in weight, and am soon taxed if any pedalling has to be done, yet I do not wish for a two-speed gear; speed is of no moment, but I wish to get out on the hills. As I do not stable my car close at hand, the

motor-cycle would be much handier for casual pleasure trips in leisure time.—Yours truly,

MOOR.

[It is difficult to state with any degree of accuracy what gradient our particular correspondent's machine should climb without pedalling, as so much depends on the state of the roads, wind, &c., but we should say that it should take all ordinary gradients likely to be met on the road, say up to 1 in 8. The simplest method of finding out appears to be to take the machine up the two miles our correspondent speaks of and try it. If it will not complete the distance without pedalling, and since he says speed is no object, he might then try a lower gear by fitting a smaller engine pulley, and if even this is insufficient then we should suggest a twin cylinder 7-8-h.p. Unless there is an ample reserve of power the bicycle might climb the hill on some occasions and not on others, a slight difference in the mixture or the timing of the firing being sufficient.]

HIRING OUT CARS.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—It is with much interest that I read the letters which appear in this column weekly, and I would like to ask a few questions if you can spare me the space, and hope some of your readers can give me a little advice and so help me.

I am obliged through ill health to give up my trade (which is an indoor one) and live in the open air by the seaside, and of course I want to make a living, as I am not rich enough to live without work. I would like to know:

1. Is it possible to buy a car and do private hiring to make it pay?
2. What is a good make of car, and how much one ought to cost, second-hand?
3. What would be the most important points to observe when buying?
4. What licences are necessary, and what taxes would have to be paid?

I may add I have learnt to drive a petrol car.—Yours truly,

G. G.

USING THE ENGINE AS A BRAKE.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—I shall feel obliged if you or any readers of the *M.C.J.* will give me expert opinion on the following point:—In the descent of steep hills does the use of the engine as a brake—by putting the gear into the first, second, or third speeds, and switching-off—do any harm to the engine? My car is a 12-16-h.p. Peugeot.—Yours truly,

J. B. KEITH.

[There is no objection to using the engine as a brake if it is done judiciously; in fact, some of the best cars are now expressly so arranged. In order that the engine shall not be damaged by "racing" it, however, it is not advisable to descend hills with the low gear in action, it is best to use the top speed, although, of course, there is thus less braking effect than when a lower gear is put in. As regards switching off, it is better to shut the throttle than merely to switch off, for in the latter case the engine still draws petrol vapour into the cylinders all the time. This is not only a waste of petrol, but is also a detriment to the cylinders and pistons, as the vapour washes the oil off the surfaces of these parts, and, besides this, a number of unexploded charges are sent into the exhaust box, with the possibility of an explosion blowing it to pieces. As well as throttling the supply of explosive mixture it is advisable to admit pure air in its place, and those interested in the use of engines as brakes should study the methods employed by such firms as Rover, Panhard, and Deasy, in which cases the system adopted enables the motor to be used with much more effect as a brake than in engines that are not specially designed to be utilised in this manner.]

PRIVATE MOTOR HOUSES.—"Hampshire," who enquires for particulars and dimensions of motor houses, is referred to an article on the subject in the *M.C.J.* of February 15th last.

If anyone has found a Smith's milometer or mile-registering instrument in Hampshire, Dorsetshire or Berkshire, Mr. F. W. Shorland, 41, Holborn Viaduct, London, E.C., will be pleased to hear from him.

"MIRACULUM" PUNCTURE STOPPING.—"Sparking Plug" writes:—"If any of your readers have had practical experience with 'Miraculum' I should be very glad to hear if it is a success, and how long they have had it in use. Has it any effect on the rubber or canvas and how long will one charge last? I have a car fitted with single tube Diamond tyres that I thought of putting it in; if it is all that it is claimed it should be just the thing for them."

THE KEMPSTALL TYRE COMPANY OF EUROPE, LTD., write:—"May we solicit your assistance in dispelling the 'suction' theory credited to the Kempshall non-skid tyre? Your readers will not be particularly interested, at the moment, in discussing the 'why and the wherefore,' since in practice the tyre has already established itself a non-skid in the truest sense, but suction necessarily implies decreased speed. For this reason we may be allowed to point out that the Kempshall has proved itself to be particularly speedy, and this fact should, we think, satisfactorily confirm our assertion that suction is not an attribute to its non-skidding qualities."

COMPARATIVE TESTS OF ALCOHOL AND PETROL.

—♦—

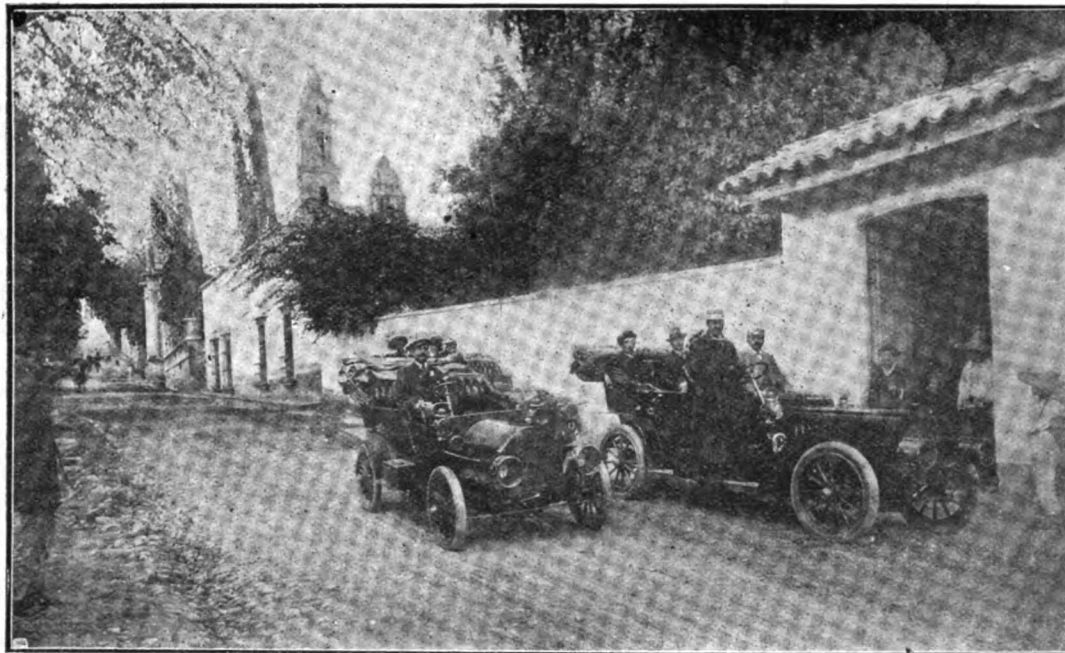
THE Technological Branch of the United States Geological Survey, under the direction of Mr. J. A. Helmes, has recently completed an elaborate series of tests on the relative value of petrol and alcohol as producers of power. The tests, over two thousand in number, probably represent the most complete and exact investigation of the kind that has been made and include much original research. Professor R. H. Fernald, engineer in charge of the Gas Producer Section and Professor of Mechanical Engineering in the Case School of Applied Science, Cleveland, O., was in general charge of the tests. Mr. R. M. Strong, formerly connected with the engineering department of Columbia University, had personal supervision of the work and was assisted by a corps of specially trained men. The tests were conducted at the Fuel Testing Plant of the Geological Survey at Norfolk, Va., U.S.A., and show the following results in regard to the comparative fuel consumption of 73 deg. specific gravity petrol and commercial completely-denatured alcohol, per unit of power.

Correspondingly well-designed alcohol and petrol engines, when running under the most advantageous conditions for each, will consume equal volumes of the fuel for which they are designed. This statement is based on the results of many tests made under the most favourable practical conditions that could be obtained for the size and type of engines and fuel used. An average of the minimum fuel consumption values thus obtained gives a like figure of .8 pint per brake horse-power hour for petrol and alcohol. Considering that the heat value of a gallon of the denatured alcohol is only a little over .6 that of a gallon of petrol, this

Eighty per cent. alcohol (alcohol and water), for use in engines of the present types, would have to sell for at least $7\frac{1}{2}$ per cent. less per gallon than the denatured alcohol, in order to compete with it. The minimum consumption values in gallons per brake horse-power hour, for 80 per cent. alcohol, is approximately 17.5 per cent. greater than for the denatured alcohol used, or for petrol. A series of tests made with alcohol of various percentages by volume, ranging from 94 per cent. to 50 per cent., showed that the minimum consumption values, in gallons per brake horse-power hour, increased a little more rapidly than the alcohol decreased in percentage of pure alcohol. That is, the thermal efficiency decreased with the decrease in percentage of pure alcohol. This decrease in thermal efficiency, or increase in consumption referred to for pure alcohol, is, however, comparatively slight from 100 per cent. alcohol down to about 80 per cent. alcohol. Within these limits, it may be neglected in making the calculations necessary to compare the minimum consumption values for tests with different alcohol percentages.

The purer the alcohol is, the greater maximum horse-power of the engine. The reduction in maximum horse-power for 80 per cent. alcohol as compared with that for denatured alcohol used was less than 1 per cent., but the starting and regulating difficulties are appreciably increased.

With suitable compression, mixtures of petrol and alcohol vapours (double carburettors) gave thermal efficiencies ranging between that for petrol (maximum 22.2 per cent.) and that for alcohol (maximum 34.6 per cent.), but in no case were they higher than that for alcohol. The above thermal efficiencies are calculated from the brake horse-power and the low calorific value of the fuel, which for the petrol was 19,100 B.t.u. per lb., and for the denatured alcohol, 10,500 B.t.u. per lb.



Motoring in Mexico.—A View near Mexico City.

(El Automovil en Mexico.)

result of equal fuel consumption by volume for petrol and alcohol engines probably represents the best comparative value that can be obtained for alcohol at the present time, as is also indicated by Continental practice. Though the possibility of obtaining this condition in practice has been thoroughly demonstrated at the U.S. Government fuel-testing plant, it yet remains for the engine manufacturers to make the "equal fuel consumption by volume" a commercial basis of comparison.

The petrol engines that were used in the tests were representative of the standard American stationary engine types rating at 10 to 15-h.p. at speeds of from 250 to 300 revolutions per minute, while the alcohol engines were of similar construction and identical in size with the petrol motors. The air was not pre-heated for the tests, and the engines were equipped with the ordinary types of constant-level suction lift and constant-level pressure spray carburettors. Many special tests with air pre-heated to various temperatures up to 250 deg. Fahr., and tests with special carburettors were made, but no beneficial effects traceable to better carburation were found when the engines were handled under the special test conditions, including constant speed and heat load.

The commercial completely-denatured alcohol referred to is 100 parts ethyl alcohol, plus 10 parts methyl alcohol, plus .5 part benzol, and corresponds very closely to 94 per cent. by volume, or 91 per cent. by weight, grain alcohol. No detrimental effects on the cylinder walls and valves of the engines were found from the use of the denatured alcohol. The lowest consumption values were obtained with the highest compression that it was found practical to use; for the denatured alcohol this ranged from 150 to 180 lbs. per square inch above atmosphere.

As has been previously published, alcohol can be used with more or less satisfaction in stationary and marine petrol engines, and these motors will use from one and one-half to twice as much alcohol as petrol, when operating under the same conditions. The possibilities, however, of altering the ordinary petrol engine as required to obtain the best economies with alcohol are very limited. The amount that the compression can be raised without entirely redesigning the cylinder and valve arrangement is ordinarily not sufficient, nor are the petrol motors usually built heavy enough to stand the maximum explosive pressures, which often reach six and seven hundred lbs. per square inch. With the increase in weight for the same size engine designed to use alcohol instead of petrol, comes an increase in maximum horse-power of a little over 35 per cent., so that its weight per horse-power need not be greater than that of the petrol engine, and probably will be less.

The work was taken up to investigate the characteristic action of fuels used in internal combustion engines with a detailed study of the action of each fuel as governed by the many variable conditions of engine manipulation, design and equipment. These variables were isolated, as far as possible; their separate and combined effects were determined, worked out under practical operating conditions, and led up to the conditions required for minimum fuel consumption. The results show the saving that can be obtained over conditions for maximum consumption, and also establish a definite basis of comparison under conditions most favourable to each fuel. This latter is a point of much commercial interest, and a study of the comparative action of petrol and alcohol may be of great service in solving some of the general internal combustion engine problems where other than liquid fuels are used.

CLUBS AND ASSOCIATIONS.

ROYAL A.C.

THE first meeting of the legal committee which has recently been established as part of the Club's scheme of association was held on Thursday. The committee is composed of ten members, among whom are Col. H. C. L. Holden, R.A., F.R.S., and Messrs. E. Russell Clarke Granville M. Kenyon, W. E. Rowcliffe, G. C. Tjou and Robert Todd.

BROOKLANDS.

WITH the view of securing a large field for the opening race at the next meeting, the Brooklands A.R.C. are instituting a handicap sweepstakes of all cars which were run at the Easter meeting. As the form of all these cars is known to the handicappers a fine race should ensue. Cars will be placed upon their marks before the opening of the meeting, and the tedious wait of a handicap start will thus be avoided.

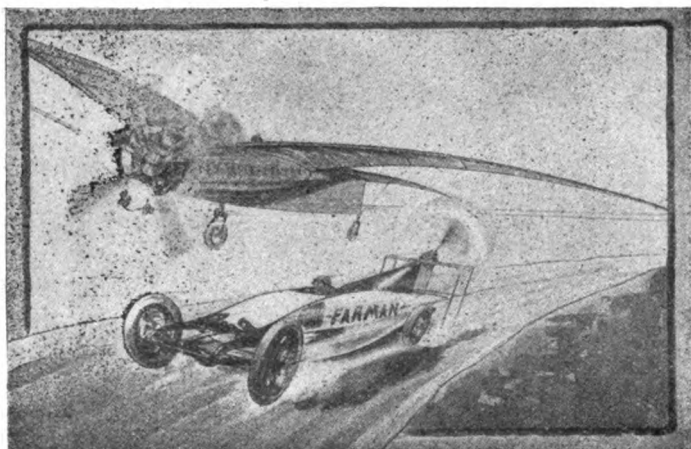
LANCASHIRE.

THE Lancashire A.C. opens the season to-day (Saturday), when members meet at the Prince of Wales Hotel, Southport, in time for afternoon tea. It has been arranged that some official of the club shall be present at the club-house on a fixed evening each week. Either the assistant secretary or Mr. Birtwistle will be present at the club-rooms every Tuesday evening from 7.45 o'clock, when any information regarding club runs, competitions, &c., will be given.

SOUTHERN.

SUNDAY and Thursday evening runs are a feature of the season's arrangements of the Southern M.C.

The opening run was held on Saturday in Arctic weather, and on Sunday there was a large muster at the Hut, Wisley.



A Contest of the Future.

(Allgemeine Automobil Zeitung.)

YORKSHIRE.

ON Saturday a large company of members of the Yorkshire A.C. travelled through the snow to the Hotel Majestic at Harrogate, where they were entertained to tea by the chairman of the club, Mr. E. H. Hepper, and Mrs. Hepper. The attendance included Messrs. J. T. Hemingway, of Ilkley (20-h.p. Daimler); R. Winn, of Leeds (50-h.p. Ford); A. Kirk, of Pannal (20-h.p. Renault); C. E. Carter, of Batley (16-20-h.p. Humber), and Dr. Crossley, President of the Halifax Automobile Club, on his 16-h.p. Peugeot.

BERKSHIRE.

THE extraordinary weather on Saturday afternoon prevented a large attendance at the annual meeting of the Berkshire A.C., which was held at the Great Western Hotel, Reading. Major E. R. Portal, chairman of the club, presided. Sir Gilbert A. Clayton East, Bart., Major E. E. Hanbury, Mr. Walter Bourke, Mr. S. à Court, Mr. J. F. Hawkins, Dr. W. H. Jessop, Mr. P. B. Burgoyne, Mr. H. Blatch, Mr. C. H. Dodd, Dr. J. Hopkins Walters, Mr. E. Shrapnell Smith (hon. treasurer), and Capt. W. Waring (hon. secretary) were all who mustered.

A difficulty arose at the outset of the meeting as to the completion of a quorum—twelve. Eleven members only being present, Mr. Burgoyne's landaulet was dispatched to bring in Dr. J. Hopkins Walters from his residence in the Bath Road, he having intimated, by telephone, his preparedness to come to complete the quorum, notwithstanding his temporary confinement to the house through indisposition. Before he arrived, however, another member (Mr. Blatch) had entered the room, but, Capt. Waring having gone with the car, the quorum was still

incomplete until thirty-five minutes after the time for which the meeting was called. When Dr. Walters arrived, he was greeted with loud applause. The report and accounts were unanimously adopted. Dr. D. J. Mason (Maidenhead), Mr. E. A. Potter (Wallingford) and Mr. A. D. Selkirk (Windsor) were elected to the general committee.

No notice of motion having been given, a member, by consent, informally drew attention to Rule 25, under which any such notice has to be signed by at least two members. He thought this an inconvenient regulation, as some members might know no others in their district. He also thought that the time had come when a paid secretary should be appointed, in order to relieve Captain Waring of the routine work of the club and in order to develop its programme.

The invitation of Mr. Burgoyne for a meet to be held at his residence, Broadlands, Ascot, on Saturday, July 11th, was accepted, and Capt. Waring offered a private road near Beenham for a hill-climb. The matters of holding a club luncheon or dinner, of arranging a hill-climb, of providing a stand at Henley Regatta, and of the organisation of a 100 mile non-stop run (this to end at a central point, the vehicles taking separate and distinct routes thereto), were referred to the Sports Committee, it being left to the Club Committee to re-constitute that Committee as it chose.

The Chairman said that everybody present must know and appreciate the services that Capt. Waring had rendered to the club, and it was felt that some token of the esteem in which Capt. Waring was held should be conveyed to him as a memento. No more happy occasion could have presented itself than the silver wedding of Capt. and Mrs. Waring. He had great pleasure, in the name of the members, in asking Capt. Waring's acceptance of the small presentation that had been selected. This, by choice of Mrs. Waring, had taken the form of six handsome silver candlesticks, by the Goldsmiths' and Silver-Smiths' Company. Capt. Waring, in acknowledging the presentation, said that he did not know how to put into words all that he felt. He highly appreciated the kindly spirit that had prompted the presentation of this handsome souvenir and memento, and nothing would give him greater pleasure than its being found possible for him to continue as hon. secretary for many years. He would convey to Mrs. Waring and Miss Waring the thoughtful references that had been made to their connection with, and interest in, the club.

ROYAL NORTH OF IRELAND YACHT CLUB.

THIS club, instead of having their usual hill-climbing competition at Cultra for motor-cars, decided to make a change this year and hold reliability trials at Easter. Although some seventy cars are owned by members of the club only eleven started, but nevertheless the trials were most enjoyable and successful. The first day's run was via Antrim to Lough Swilly Hotel, Buncrana, a distance of eighty-seven miles, and all the cars got through safely, although the steep climb of about 1,000 feet over the Sperrin Mountains severely tried the cooling capacity of the radiators. On Saturday evening a most enjoyable smoking concert was held. A curious accident happened during this run. A rooster trying to fly across the road in front of one of the cars miscalculated the speed of the car, struck the glass screen and went right through it, landing on the footboard. Fortunately none of the passengers were hurt. At 10.30 on the Monday morning the cars started for Enniskillen or Rosslare Hotel, near Enniskillen, whichever the owners elected to stay at, the route being via Stranorlar, Barnmore Gap and Ballyshannon. Distance ninety-eight miles. The run home, ninety miles, on Tuesday was via Clones, and was the best of all as regards weather and roads, the latter, especially in county Armagh, in beautiful order, are a great credit to the surveyor. At the start each car received 300 marks and one mark was deducted for each minute lost unless the stop was for tyre troubles, filling up with petrol, oil, &c., or for the convenience of passengers. Five cars made non-stop runs, and the others had only minor troubles. The marks gained are as follows:—

| H.p. | Make of Car. | Owner. | Marks. |
|-------|--------------|--------------------------|----------|
| 20 | Talbot | W. J. Pratten (non-stop) | 300 |
| 18-20 | Clement | John Lepper (non-stop) | 300 |
| 16-20 | Calthorpe | W. Hume (non-stop) | 300 |
| 14-22 | Germain | R. E. Workman (non-stop) | 300 |
| 10-12 | Humber | J. W. Lemon (non-stop) | 300 |
| 10 | Chambers | W. C. F. Redmond | 299 |
| 20-32 | Darraeq | F. Workman | 296 |
| 14-16 | Minerva | A. Inglis | 295 |
| 14-16 | Argyll | J. C. Nixon | 290 |
| 24-30 | Nordenfelt | J. Carson | 224 |
| 12-16 | Chambers | J. S. Davidson | retired. |

Mr. John Carson presented two prizes for a guessing competition as to how the cars would be placed in order of merit at the finish. The ladies' prize was won by Miss Workman and the gentlemen's by Mr. W. J. Pratten.

MAJOR C. G. BRODIE, Fernhill, Wootton, is the secretary of the Isle of Wight Motorists' Association.

THE British Motor Boat Club has presented a cup to the Essex Motor Boat Club. In accordance with the club's policy of encouraging

International racing, they have given a cup to the Motor Yacht Club of Belgium.

THE Surrey Motor-cycle Club has held a very successful first annual dinner.

SEVENTEEN members took part in the opening run of the season of the Ayr and District Motor Club to Largs, via Kilwinning and Ardrossan, a distance of thirty-three miles. The party set out from Burns Statue Square headed by the captain, Mr. John Hourston.

THE opening meet of the Kent A.C. took place on Saturday at the Queen's Hotel, Hawkhurst. Owing to the wintry weather the attendance was not large; the following, however, were present:—Mr. and Mrs. Gardner, Mr. and Mrs. Teichman, Mr. Martingell, Mr. Owen Firth, the hon. secretary and Mrs. Kenyon, and Mr. J. Darwen.

CASES UNDER THE MOTOR CAR ACT.

EXCEEDING THE LEGAL LIMIT.

Danny Maher, the jockey, and Francis More, chauffeur, Nottingham, have been fined at Newark for driving motor-cars at excessive speeds—estimated by a police-constable at thirty-five miles an hour. Mr. Lucas, solicitor, represented both defendants, and on their behalf pleaded guilty. He said it was a most difficult thing for a driver to estimate the speed at which he was driving. The Chairman (Mr. W. E. Denison): Mr. Maher ought to be a good judge of speed. In each case a penalty of 10s. and costs was imposed.

In three hours the Woking magistrates have just imposed fines amounting to £78 10s. on twenty-three motorists. Of these cases five were for driving to the common danger; fourteen for exceeding the 20-mile limit, or for exceeding the 12-mile limit; two for driving without a licence; and one for driving an unregistered car.

Three motorists were fined £5, £3, and £2 at the Epsom Petty Sessions on Monday for exceeding the speed limit.

On Saturday ten motorists were fined by the Chichester county magistrates for exceeding the legal limit at Westhampnett; four others were similarly convicted at the Horsham Petty Sessions.

DANGEROUS DRIVING.

Rudolf Henkel appeared at Cardiff to answer a summons, issued at the instance of Mr. R. W. Hunter, for having unlawfully driven a motor-car in Queen Street, to the danger of the public. In opening the case, Mr. Shackel said Mr. Hunter was an engineer at Cardiff, and had taken up the case on behalf of motorists (as a member of the South Wales and Monmouthshire A.C. On the evening of March 21st Mr. Hunter was crossing from Queen Street in Duke Street, which thoroughfares were crowded on the occasion. Defendant drove along North Road, and when he was ten yards off Mr. Hunter stopped. There was a crowd at the corner, and the car swerving into Queen Street, and without any attempt to pull up, hit Mrs. Hunter, who was with witness. The Bench inflicted a fine of 10s. and costs.

Robert Budgen, of Brighton, has, at Lewes, been fined £2 and 6s. costs for failing to produce his motor licence for the purposes of endorsement.

At the Kingston-on-Thames County Police Court, on the 23rd ult., £104 in fines was imposed on motorists for having exceeded the 20 miles an hour speed limit on the main road between Kingston and Cobham.

Two motorists have been fined at Eastbourne for driving to the public danger. Fines of £10 and £5 were inflicted.

LICENCE SUSPENDED.

Lord Vernon, of Poynton Towers, Cheshire, was fined £20 and costs at Leicester, on Saturday, for driving a motor-car through Oadby at the rate of twenty-five miles an hour. He had been previously convicted, and his licence was suspended for twelve months.

"IMMACULATE ROBERT."

Mr. Plowden was engaged practically the whole afternoon, at Marylebone, on the 23rd ult., hearing summonses against motor-car drivers for exceeding the speed limit. At the end of the time he said he waited day by day, hoping, out of mere curiosity, to hear some defence which could be accepted as substantial, and as breaking down the evidence of the police, but, in the whole of his experience, he only remembered one instance in which he was able to say, without hesitation, that the police had made a mistake.

FIXED OR SWINGING NUMBER PLATE?

Much time was taken up at the Raglan Police Court on Saturday in hearing a summons against Sidney Howells, a chauffeur, in the employ of Mrs. Philip Morel, Penarth House, Penarth, for driving a motor-car without having the identification plate so fixed that every letter or figure was easily distinguishable. P.S. Jones, an officer who is getting much public notice because of the large number of motor cases in which he is instrumental in bringing about prosecutions, said that on the afternoon of March 31st he was near Raglan village, and saw a motor-car coming from the direction of Monmouth. As the number plate, L 836, could not be made out, he stopped the car, and found the number plate was hanging quite loosely. Mr. F. C. Shackel, solicitor, Cardiff, who defended, asked witness if he had seen a number of cars with swinging plates. The reply was in the affirmative, and that this was the first time he had stopped them. The defendant was sworn, and said he had driven a motor-car for nine years all over England and Wales, and had never been "pulled up" before. The sergeant had to kick the plate in order to move it. He added, "I have

a reputation for being a careful driver." The Chairman (Mr. Raglan T. H. Somerset) said they could not convict in such a case. At the same time the magistrates thought the County Council should issue a bye-law to the effect that the plates should be properly fixed. The case was dismissed, but the defendant was ordered to pay costs.

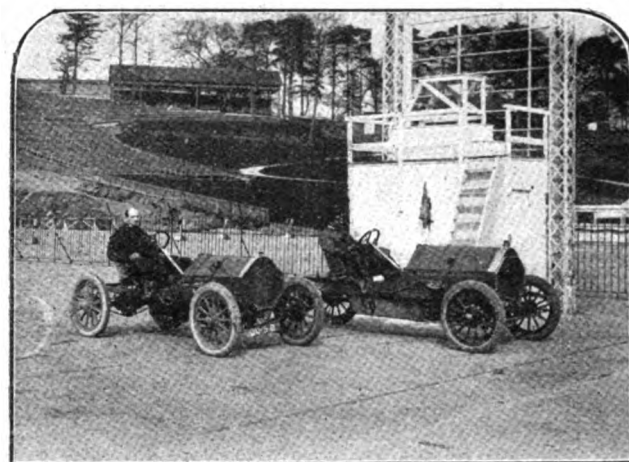
THE TRADERS' REGISTER.

A curious case has occupied the attention of the Guildford borough magistrates, when Mr. E. A. Humphreys, of the Falcon Motor Works, Guildford, appeared to a summons which alleged that he being a manufacturer or dealer in motor-cars failed to keep a record of the distinguishing number placed on a motor-car to which a general identification mark had been assigned, and the name and address of the person driving such car on March 21st, contrary to the regulations of the Local Government Board. Superintendent Marks stated that on the morning of the day in question he saw the defendant driving a motor-car at Woking. It bore a manufacturer's mark, Pt AG. He asked a constable at the Guildford County Police Station by telephone to inspect the register. Cross-examined by Mr. Triggs Turner: He was present at the Woking Court on the previous Saturday and gave evidence against defendant to the effect that he used a motor-car which was not registered.

After hearing counsel for Mr. Humphreys the Bench dismissed the case and refused to state a case in view of an appeal.

MOTOR-CAR RACING IN THE UNITED STATES.

AN important international motor-car race for what is known as the Briarcliffe Trophy was held on a thirty mile circuit in the neighbourhood of New York on Friday, the 24th ult. Twenty-two entries were received, these including two 60-h.p. Fiats, a 50-h.p. Bianchi, a 30-h.p. Maja, three 50-h.p. Isotta Fraschini, two 50-h.p. Renaults, a 50-h.p. Panhard, a 50-h.p. Benz, and eleven cars of American construction,



The 36-h.p. and 38-h.p. Humber Cars which Competed at Brooklands at Easter. [Campbell-Gray.]

including Stearns, Thomas, Lozier, Hol-Tap, Allen-Kingston, Simplex and Apperson. The course, which was an extremely dangerous one abounding in sharp narrow turns, had to be covered eight times, giving a total distance of roundly 240 miles. In spite of the early hour at which the race commenced (5 a.m.) a large crowd, estimated at over 150,000, gathered along the course. Although the spectators eventually got on the track, hindering the racers, there were fewer accidents, however, than might have been expected under the circumstances. During the first round one of the American cars, a Simplex, at one of the turnings struck a stone post and turned a complete somersault. Watson, the driver, was severely injured. Two cars collided with each other and were put out of the race through the damage done to them. The occupants were, however, only slightly hurt. The Allen-Kingston car ran into a ditch, while the Maja retired owing to a broken road wheel.

At the end of the fourth round Strang (Isotta-Fraschini) was leading, with Poole, on a sister car, running second. The latter, however, lost several minutes in the seventh round, and Strang, closely followed by Cedrino on a Fiat, maintained his lead and proved the winner.

The result was as follows:

1. Strang (Isotta-Fraschini), 5 h. 14 m. 13 s.
2. Cedrino (Fiat), 5 h. 21 m. 5 s.
3. Vaughan (Stearns), 5 h. 28 m. 29 s.
4. Lytle (Apperson), 5 h. 39 m. 15 s.
4. Sartori (Bianchi), 5 h. 53 m. 45 s.

The winner's average speed works out at just over forty-six miles per hour. The fastest lap, 37 min. 16 sec., was made by Cedrino.

It is reported that Strang has been engaged to drive the Thomas car—the sole American competitor—in the A.C.F. Grand Prix race.

ROAD REPORTS.

ILFORD.—The measured furlong in the High Road, Ilford, is being frequently worked by the police.

READING.—A trap has been established on the Bath road, Reading. Several motorists from the London district have already been caught therein.

HORSHAM.—At the last meeting of the Horsham Rural Parish Council it was decided "That in view of the great and increasing danger to the public and the unbearable nuisance of the dust arising from motor-cars, this Council again urges the West Sussex County Council to take immediate steps to restrict the speed of all motor-cars to eight miles an hour when passing through the villages of Roffey, Broadbridge Heath, and Southwater."

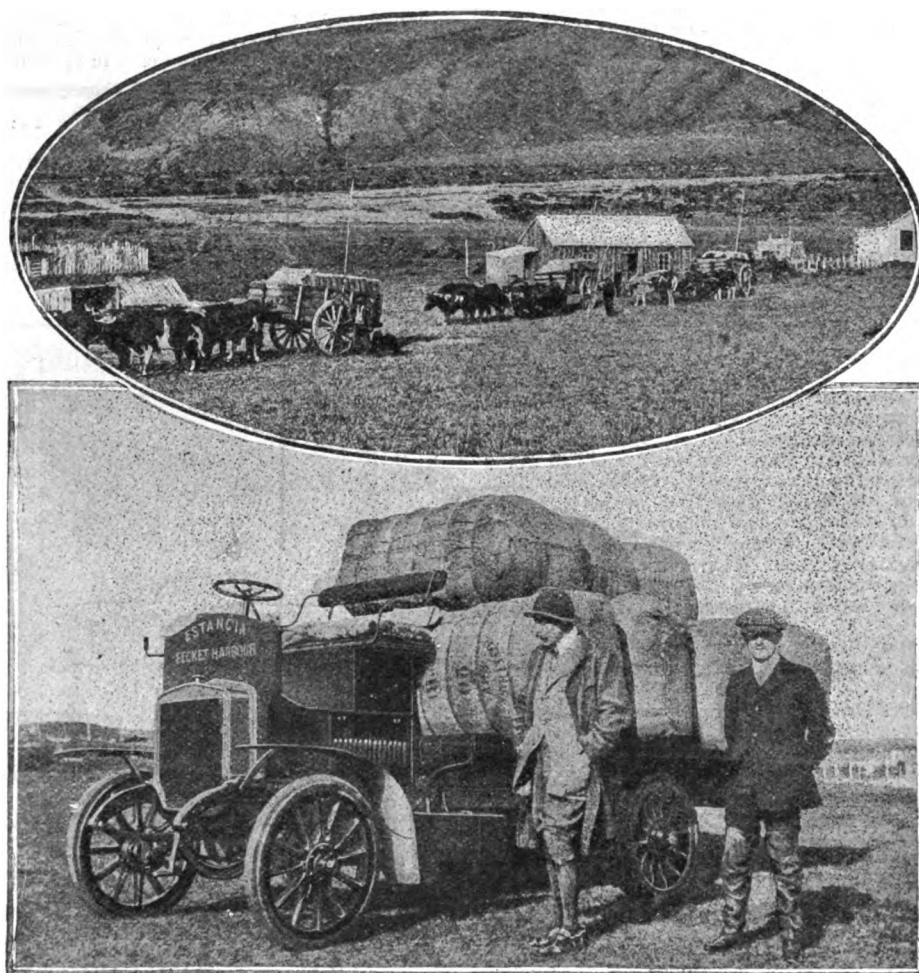
LUTON.—The Hitchin Road is at present under repair between Guildford Street and Midland Road. An alternative route for through traffic is High Town Road, Midland Road, Guildford Street, Cheapside, and John Street, and for local traffic Midland Road, Guildford Street, Cheapside, and John Street. Special caution should be exercised on the

ELTHAM.—The motor trap in the Eltham Road, Eltham, is in frequent operation, the police having secured several hauls on recent occasions.

GLOSSOP.—The Council of the borough of Glossop have made application to the Local Government Board for a ten mile speed limit, objections to which should be sent to Whitehall before the 12th inst.

THE "FOUR-INCH" RACE.

THE supplementary regulations in connection with the International "four-inch" race for the Tourist Trophy have settled the distance as about 350 miles. The minimum weight will be 1,600 lbs., and the use of auxiliaries to combustion such as oxygen is prohibited. On the course there will be two depots under the official supervision of the club from which competing vehicles may be replenished with fuel, oil and water, and from which spare parts, &c., may be obtained. Entries are now being received at a fee of £35 per car. On July 1st the fee will be increased to £45 and the list finally close on August 1st. In the event of the race being held in the Isle of Man, as is most probable, practis-



The Old and New Methods of Transport in Patagonia.

In far-away Patagonia an Argyll motor-lorry is being used to expedite the transport of wool from the Estancia, or ranch, to the coast. The upper one of the accompanying illustrations shows the customary method of transporting merchandise by oxen trains in the country. As an example of the superiority of motor traction, it may be noted that the automobile can do in twelve hours what it takes three teams of oxen four days to accomplish.

downward journey in London Road, and at the junction of Midland Road and Old Bedford Road; also at the junction of Castle Street and Windsor Street. It is the intention of the Corporation during the summer to cover the more important roads in the centre of the town with tarred slag.

OXFORD.—With the view of minimizing the dust nuisance occasioned by increased motor traffic the experiment of treating the principal roads of Oxford with tar is to be extended.

THE SCOTTISH BORDERS.—For the past few days the police have been busy in trapping a number of motorists for alleged excessive speed while travelling between England and Scotland. Near to Gretna a measured mile has been frequently watched.

SIDCUP.—Much interest is being taken in the district in the trial of Hahnite as a dust preventive that is now taking place on the main road at Sidcup.

LANARK.—The Lower Ward Committee of the Lanark County Council has decided to approach the authorities for the purpose of securing the limitation of the speed of motor vehicles to ten miles per hour when passing through populous places.

ing over the course will only be allowed on the fourteen days prior to the week of the race, and then only from daylight until 7.30 a.m.

Mr. S. F. Edge has made the first entry for the speed race of next October, to be held in the Isle of Man. The car is a Napier of 25.6-h.p. Mr. E. A. Rosenheim has entered two New Arrol-Johnston cars.

WE learn from Messrs. Martins, Bow Bridge, E., that at the recent Cordingley Show they sold two motor-lorries, one being to the Duke of Manchester, and have, since the exhibition, received a large number of inquiries "which we otherwise would not have obtained had we not exhibited."

It is only a short time ago since Mr. E. M. C. Instone ascended the Guadarrama Pass on his 45-h.p. Daimler, establishing a record, which caused great excitement in motoring circles in Spain. Shortly after the Daimler Company opened depots at Madrid and San Sebastian, and their enterprises are meeting with well-deserved success. Amongst recent purchasers are Exmo El Marques de Villamarta, Reyes Catolicos, Seville, who has ordered a 42-h.p. Kenilworth phaeton car.

PRACTICAL POINTS FOR MOTORISTS.

THE following "practical points" extracted from the useful instruction book lately issued by the Star Engineering Company will be found worthy of observation not only by users of Star cars but by motorists generally:—

Never neglect to thoroughly oil a bearing immediately after it has been cleaned with petrol or paraffin. Neglecting to do this will probably result in a seizure.

Because you do not want your side brakes often, do not neglect them. When you do want them, it may be badly.

When starting the engine, never push handle down, but always pull up, because the hand is then more easily released in the event of a back-fire.

Never run your tyres after baring the canvas; it is economy to have them retreaded at once.

Do not ride a deflated tyre, because it will cut between the rim and the ground.

Do not leave your car for months in your coachhouse with your tyres taking the weight of the car, but jack up all wheels and partially deflate.

Do not allow water to get at the canvas of your tyre covers, it will cause rot. Remember, all oils and fatty substances are detrimental to tyres, as they act as a solvent.

Bear in mind, driving round sharp corners causes lateral rubbing friction to tyres. Always disconnect clutch, leaving the car to turn by its own impetus.

Occasionally, and especially when in a flinty district, it will pay to go over each tyre and extract small stones. The cuts, if at all deep, should be filled in with stopping.

In the event of a stoppage in the petrol pipe from the tank to float-chamber of the carburettor, the union may be unscrewed and the rubber end of the tyre pump connection pushed over the end. A few sharp strokes of the pump will usually remove any grit or debris in the pipe.

To locate the hole in a punctured carburettor float, place in warm water and note whence the bubbles proceed. The float should then be warmed till all the petrol and moisture is driven out, and a touch of solder applied. The solder should not be used sparingly, but cleaned off after with emery cloth.

Popping in the carburettor indicates a weak mixture; that is, not enough petrol for the amount of air introduced into the vaporising chamber. Explosions in the silencer indicate that the cylinders are firing irregularly and the unfired charges pass through the exhaust pipe into the silencer, being ignited there by the heat of the next explosion. A weak battery is sometimes also the cause of this.

Always include some copper wire in the kit, as it comes in handy for many purposes.

Grinding of the carburettor needle valve should be done sparingly, or flooding will result.

Always keep a good supply of sand near your petrol store, so that it can be readily used in case of fire; nothing is so quick in smothering flames. Water only helps to spread them when caused by petrol. Always securely replace screw tops of petrol tins after removing petrol, because of the complete explosive mixture left in the tin. Petrol vapour is heavier than air and its tendency is to sink low on the floor, therefore beware especially of any naked light in the pit of the motor house.

MOTOR-CAR v. DOG.

JUDGE SCULLY has had before him at the Brighton County Court a case in which Dora Glennie, of Western Road, Brighton, sued the Steam Motor-Car Syndicate, Ltd., of Hythe Road, Willeaden Junction, for £50, for damages for injuries to a Great Dane dog on December 30th, 1907, caused by alleged negligent driving of a motor-car. Miss Glennie said the dog won a prize at a show. On the evening of December 30th, shortly after eight o'clock, she was with the dog on the King's Road. The animal was trotting across the road when a motor-car came along and dashed straight into the dog, knocking it down. The animal was seriously injured and had to be placed on a truck and taken to Mr. Charles, the veterinary surgeon, and was afterwards sent to the dogs' hospital at Shooter's Hill, where it stayed until April 15th. For the defence Alfred Westcott, the driver of the car, said on the night in question he was travelling at about sixteen miles an hour, and when opposite the cab-stand opposite the Grand Hotel the dog ran out into the road and bounded in front of the car. Before he had time to do anything the off-side front lamp of the car struck it and knocked it over. It was too sudden for him to do anything to avoid a collision. Clement Ricks, M.R.C.V.S., said he had recently examined the animal and found it in poor condition but nothing radically wrong about it. He thought a month would suffice to put it in as good condition as it was before the accident. He would have valued it at from £30 to £35 before the accident, and he did not think there would be any depreciation in its value in about a month's time. The jury were then addressed by the respective counsel, and retired to consider their verdict, which they gave in favour of plaintiff for £20. His Honour accordingly gave judgment to that effect with costs.

WE are informed that ten winners of races at the Brooklands Easter meeting used Shell motor spirit.

COMPANY NEWS.

BRITISH DIVISIBLE RIM COMPANY.—£100. To acquire and turn to account any inventions connected with detachable or divisible rims or other tyre attachments.

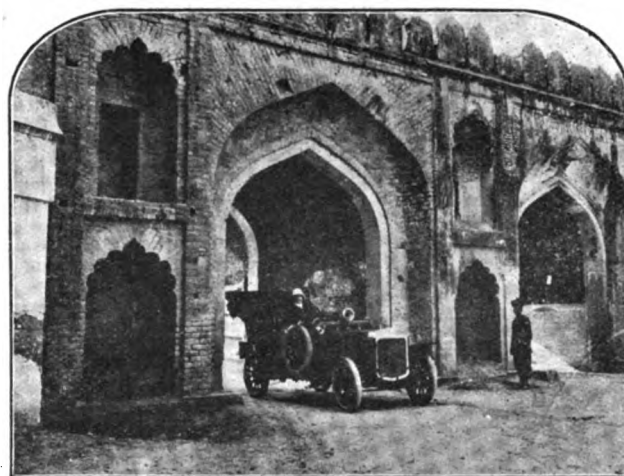
BRITISH TYRE COMPANY.—£30,000. Agreements (1) with J. O'Brien and Annie G. O'Brien for acquisition of certain inventions, and (2) with Kempshall Tyre Company of Europe, Ltd. None. First directors: Messrs. E. Kempshall, J. J. Bowen, and C. Wilson (all directors of Kempshall Tyre Company of Europe, Ltd.)

A. PELLANT, LTD.—This company has been registered with a capital of £12,000 to adopt an agreement with A. Pellant, to acquire the business carried on at 74, Shaftesbury Avenue, 4-5, Dansey Yard, Shaftesbury Avenue, and 28-30, Little Orford Street, Chelsea, as "A. Pellant," and to carry on the business of automobile agents, &c. Registered office: 74, Shaftesbury Avenue, W.C.

THE LONDON ELECTROBUS COMPANY, LTD., have invited subscriptions to an issue of 240,000 ordinary shares of £1 each and 12,000 deferred shares of 5s. each. The capital of the company is £305,000, divided into 300,000 ordinary shares of £1 each and 20,000 deferred shares of 5s. each. The company was formed to run electric omnibuses in the Metropolis, and after exhaustive experiments and nine months' actual service with a small fleet of electrobuses, the directors call attention to the results as proving the public and commercial value and success of the enterprise. The subscription list closed on Thursday.

ATLAS RESILIENT ROAD WHEELS.—£100. As title. 37, Cross Street, Manchester.

ALBERT MOTOR COMPANY.—£3,000. To take over business carried on by F. K. E. Hussey, as Albert Motor Works, at South Street, Gloucester.



Mr. Arthur Hoare, of the Bombay Motor-Car Company, passing through the Kashmir Gate of Delhi on his 30-h.p. Daimler.

The Kashmir Gate of Delhi is one of the most famous in India. In the year 1857, when all the Europeans in Delhi had been massacred, it was through this gate that the relief party determined to make an entrance, and, after many hardships and privations, they succeeded in blowing up the obstruction and getting through.

ARGYLLS, HULL.—£5,000. To adopt an agreement with Argyll Motors, Ltd., for appointment of this company as selling agents for said company in and near Hull. Jameson Chambers, Jameson Street, Hull.

LIVERPOOL AND MANCHESTER DISTRICT MOTOR CAB COMPANY.—£100,000. Agreement with J. A. Lawton and W. Lawton Goodman (trading as J. A. Lawton and Co.), Liverpool Motor Cab Company, Ltd., and Manchester Motor Cab Company, Ltd. First directors: Messrs. A. McGowan, W. Nicholls, P. Jones, C. Ellam, R. R. Gwynne, J. McWilliam, and W. Bailey.

LYNTON WHEEL AND TYRE SYNDICATE.—£8,000 (£100). To acquire business carried on by R. T. Smith, at Warrington and Earlestown, as Lynton Wheel and Tyre Company. 5, Egypt Street, Warrington.

TYREHOOD.—£2,000. To acquire business carried on by H. F. Willis, C. C. Hurford, and F. C. R. Parry at King's Cross as Tyrehood, Ltd., and to carry on business of manufacturers of and dealers in tyres, &c. 1-2, Argyle Street, King's Cross, N.

THE latest embodiment of the enterprise and ingenuity of the executive at the Panhard-Levassor Works, Acton Vale, W., takes the form of a particularly neat little silverite lighting-up table, readily attachable to the dashboard of any car. Its material and the colouring of the lettering are such that its figures are clearly legible up to the last peep of daylight, while the dimensions are only 3½ in. by 2 in. We understand that while the tablet will be fitted gratis to cars of whatever make passing through their works for treatment, it will also be sent post free to any motorist sending a shilling and mentioning the M.C.J.

FORTHCOMING EVENTS.

MAY.

- 2nd (Sat.).—Impromptu pace judging competition of the Sheffield A.C. at Ollerton.
Lancashire A.C.'s opening run to Kirkby Lonsdale.
Motor Cycling Club's hill climb.
- 6th (W.).—Dorset A.C. Gymkhana at Sherborne.
- 9th (Sat.).—First provincial meet of the R.A.C.—to be held at Nottingham, by invitation of the Nottinghamshire A.C.
Penalty speed judging contest of the Southern M.C. at the "Chequers," Horley.
Brooklands A.R.C. meet.
Cheshire A.C. meet at Pentrevoelas.
Manchester A.C. reliability run.
- 13th. (W.).—Incorporated Institution of Automobile Engineers—Discussion on the effect of motors on roads.
- 14th (Th.).—Mr. G. H. Baillie at the R.A.C. on Petrol and Petrol Tests.
- 16th (Sat.).—Fifty miles Consumption Trial of the Hertfordshire C.A.C.
Liverpool A.C.'s opening meet of the season.
Auto Cycle Union hill climb.
Liverpool A.C. first meet of the season.
New Forest A.C. club run to Brockenhurst.
- 21st (Th.)—25th.—Reliability Trial of the Irish A.C.
- 18th (Sun.).—Targa Florio Race.
- 23rd (Sat.).—Clipstone race meeting of the Notts A.C.
Meeting of the Yorkshire A.C. at Helmsley.
Meet of the Motor Union at Lincoln.
Motor Cycling Club—Albert Brown Challenge Cup for cars.
- 25th (M.).—Industrial Vehicle Competition of the A.C. de France.
- 26th (Tu.).—Motor Gymkhana on the links of the Ross Golf Club at Alton Court—Mr. T. H. Coombes, "Montrose," Ross, is the hon. secretary of the event.
- 28th (Th.).—Visit of the Aero Club to Aldershot.
- 30th (Sat.).—Meet of the Herts C.A.C. at Hatfield Park.
Devon and Cornwall A.C. hill climb at Moorshop, Tavistock.
Lancashire A.C. speed judging contest.
- 31st (Sun.).—Southend M.C. run to Saracen's Head Hotel, Dunmow.
Penalty run of the Southern M.C. to Goring.

JUNE.

- International Aeronautical Federation conference in London.
- 5th—6th.—London—Edinburgh twenty-four hours' run of the Motor Cycling Club.
- 6th (Sat.).—Brooklands A.R.C.
- 8th (M.).—Cars competing in the International Touring Car Trial will arrive at the depot.
Start of the International Touring Car Trial of the R.A.C. Brooklands A.R.C.
- 9th (Tu.).—Touring competition for Prince Henry of Prussia's prize begins.
- 11th (Th.).—Start of the International Touring Car Trial of the R.A.C.
- 13th (Sat.).—Hill climb of the Notts A.C. at Oakmoor.
Speed Trials of the Lincs. A.C. at Grimsthorpe.
N. Middlesex A.C. speed judging competition for the Gamage Cup.
- 14th (Sun.).—Mont Cenis hill climb for voiturettes.
- 15th—19th.—Scottish Reliability Trial.
- 17th.—Close of Prince Henry Touring Competition in Germany.
- 20th (Sat.).—Meet of the Hull Auto Cycle Club and the Lincolnshire Motor Cycle Club at Brigg.
- 27th (Sat.).—Saltburn beach races.
Buxton meet of the Manchester and Lincolnshire clubs.
Members of the Cheshire A.C. will participate in the Gymkhana of the Manchester A.C.
- 28th. (Sun.).—Southend M.C. run to Grand Hotel, Clacton.

JULY.

- The Land's End to John o' Groat's Trial of the Auto C.C. will be held.
- 6th (M.).—Grand Prix A.C.F. (Voiturette section).
- 7th (Tu.).—Grand Prix A.C.F. on the Dieppe Circuit.
- 11th (S.).—Provincial meet of the R.A.C. at Hereford.
- 16th (Th.).—Club meet of the Notts A.C. at the Hop Pole, Ollerton.
- 18th (Sat.).—Annual Gymkhana of the Herts C.A.C. at The Grove, Watford, by permission of the president, the Earl of Clarendon.
Meet of the Liverpool and Cheshire A.C.'s at Delamere.
New Forest and Dorset A.C.'s joint hill climb.
- 20th—30th.—A.C. of Belgium—Circuit des Ardennes and the Liederkerke Cup race.
- 25th (Sat.).—Petrol Consumption Tests of the Motor Cycling Club.
Annual Open Hill Climb of the Midland A.C. at Shelsley Walsh.
- 26th (Sun.).—Southend M.C. run to Coach and Horses, Quendon.

LIGHTING-UP TIMES—LONDON.

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|--------------|-----|----------|-----|----------|-----|----------|
| May 2nd—8.19 | ... | 4th—8.24 | ... | 6th—8.28 | ... | 8th—8.30 |
| " 3rd—8.22 | ... | 5th—8.27 | ... | 7th—8.29 | ... | 9th—8.31 |

THE HUMOUR OF JUSTICE DARLING.

IN the King's Bench Division of the High Court of Justice, on Tuesday, Justice Darling heard a case which had reference to a collision between two automobiles. The learned judge questioned one of the drivers very closely about his licence. He asked if the man got a licence before he drove or after, and the witness replied that one did not drive before one got a licence, or at least one was not supposed to.—(Laughter.)

The Judge.—Did you get a licence before you drove?—Yes. I had only had inside experience as a motor-car mechanic.

Do you mean that you can get a licence not knowing how to drive, and then career all round the streets as you like?—(Laughter.)—Yes.

I only want to know, because I sometimes walk in the streets.—(Laughter.)

Mr. McCall, K.C.—The wisdom of Parliament appears to have agreed that even the celebrated Ben Battle could have taken out a licence to drive a motor-car.—(Laughter.)

The Judge.—Apparently that is so.—(Renewed laughter.)

INTERNATIONAL RELIABILITY TRIAL.

THE following entries at double fees have been received for the Scottish reliability section of the above:—Class I., 10-h.p. Adam; Class IV., 24-h.p. Junior.

AUTOMOBILE ACCIDENTS.

EARLY on Saturday morning, John Bryan, an ex-soldier, fifty-seven years of age, living at Aldershot, was knocked down by a motor-car on a part of the road between Guildford and Ripley, near the latter place. At 5.15 a.m. he was found by the driver of one of Messrs. Maple's motor-vans lying by the side of the road and was conveyed to the Guildford hospital, where he died the same afternoon without recovering consciousness. At the spot where the man was found the police discovered marks on the bank near by as if a motor-car had run into it, and close at hand were portions of a broken motor-lamp.

THE Surrey police on Tuesday arrested Arthur Metson, chauffeur, of Camera Square, Beaufort Street, Chelsea, on suspicion of being concerned in the death of John Bryan. He was charged at Woking, on Tuesday morning, with manslaughter and remanded.

BUSINESS NEWS.

IN connection with the Sizaire-Naudin race at Brooklands on the 18th ult., it is interesting to learn the cars which finished first and second were those which had done the most running, and were, in fact, the oldest vehicles in the ten competing. Mr. Scantlebury's car—which won the event—has travelled over 12,000 miles, and Mr. Millard's—which finished second—has covered over 10,000 miles. Considering the conditions under which the race was run—namely, against a strong head wind on one side of the track—the average speed of the winner from the standing start of over thirty-nine miles an hour was remarkably good.

"MOTOR TOURING IN FOUR SPASMS" is the title of an illustrated brochure issued to depict the delights of motor touring on a "Standard" car. Messrs. Friswell, of Albany Street, London, N.W., will be pleased to send a copy to applicants.

SIR GEORGE ABERCROMBIE has had the body of his Fiat 60-h.p. six-cylinder car made detachable by the Windham Detachable Body Company.

FOR the convenience of their clients in the west and south-west districts, Messrs. Markham and France, consulting motor engineers, have now opened consulting rooms at 39, Westbourne Gardens, W., and at 50, Ritherdon Road, S.W., in addition to their central office at 143, Strand, W.C., and appointments can be made at either of these new addresses.

SECTION 27 of the Patents and Design Act, 1907, gives power to the Comptroller, on the application of any person within the time therein specified, to revoke any patent on the ground that the patented article or process is manufactured or carried on exclusively or mainly outside the United Kingdom. In this connection Turner's Motor Manufacturing Company, Ltd., Wolverhampton, inform us that they are prepared to undertake the manufacture of any patented article now made abroad, within the radius of their business, which includes the manufacture of workmen's time registers, ticket punches, time stamps, automatic machines, clockwork motors, duplicators, registering machines, &c.

MESSRS. STERNBERG AND EASON inform us that they have relinquished the British agency for the Buick car, and have consequently decided to dissolve partnership.

WE hear from the Victoria Carriage Works, Long Acre, W., agents for the Léon Bollée car, that one of their clients, Mr. E. F. Millar, has just accomplished the feat of piloting his car—a 24-30-h.p.—to the summit of Mount Koociusko, the highest peak of the Australian Alps. This is the first time this peak has been ascended by a car, and it speaks well of the climbing powers of the Léon Bollée.

THE Motor-Car Journal.

VOL. X.]

LONDON, SATURDAY, MAY 9, 1908.

[No. 479.]

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COMMENTS.



MANY suggestions have been made with a view of popularising the motor track at Brooklands, and various proposals to facilitate the identification of particular cars when running at a high speed, as well as to interest the outside public, have been before the committee. Recently the suggestion was advocated that the vehicles should be coloured with some distinctive hue, and now, in order to attract public attention to the events, a well-known motorist has suggested the registration of names for the cars taking part in races, much in the same way that Sir J. H. A. Macdonald proposed christening vehicles with distinctive names instead of numbering them when the present Act was yet a Bill. This "naming of cars" suggestion has been adopted by the Brooklands Club, as will be seen from information published in our Club News on another page.

Unjustified Danger Signs.

ENTERING Dorchester from the Bournemouth road, we recently came upon two red triangle signs, one at each end of a circular drive to the house of some local magnate. The road on which they stand is a straight one, and there are no cross roads or lanes in the vicinity. Their only use is apparently to enable the resident of this favoured spot to drive out whenever he wishes regardless of any other traffic that may be about. The location is certainly absurd, and such as was never contemplated by the Motor Car Act. Both in Scotland and England there has been an unauthorised use of these triangle signs in several places, and we would suggest that in the instance mentioned the Motor Union should take steps to have the same removed on the ground that there is no justification for their erection. There is a similar case between Hursley and Winchester, and doubtless some of our readers may know of others.

Our City Streets.

AMONG the familiar features of the road that seem to be departing from London streets is the "decent respectable mud" with which we were wont to be bespattered in the Victoria Era. On such a day as Tuesday in London the dirty roadways were covered with a thick mud, in which shiny slimy patches revealed the presence of an oily constituent. To fall in such an instance means something more than personal inconvenience. That these patches are not isolated matters is evident from a statement to the Lord Mayor, at the Mansion House, by Mr. T. G. Vickery, the Assistant City Solicitor. In consequence of the numerous complaints received by the City Police respecting the dropping of oil and grease from motor vehicles in the streets, the Chief Commissioner caused special observations to be made, with the result that during the week ending April 19th 172 cases of this offence were reported, while for the week ending April 26 there were 382 cases, all of which were bad ones. The dropping of this thick black grease on the roadways was a danger to horse and pedestrian traffic, and was

disagreeable in other ways, while it also rendered the streets more difficult to cleanse. The chief offenders were the omnibus companies, and it was simply carelessness on the part of the drivers, or a case of bad construction of the tray which received the leakings of the grease and oil. In inflicting fines on the drivers, the Lord Mayor held that the companies were responsible, and should indemnify the drivers against fines for such an offence.

Good Club Work.

MANY of the provincial clubs are now opening their season, and although the weather has been treacherous enough to dispel many hopes of an early return to the road, several are now in full swing. The advantages of united action in connection with automobile matters are obvious, and those unattached motorists who have not yet become associated with their fellow owners of cars should seriously consider whether their duty is not to link themselves in the great chain of organisation that is now comprehending the whole of the kingdom. Useful work, apart from the social aspect of club life, is being done throughout the country, as we propose to show in a series of notes from our local correspondents which we shall publish during the next few weeks.

In East Anglia.

IN East Anglia the clubs have certainly made their influence felt. The Bury and West Suffolk Club has kept in touch with the local road authorities and done much to secure necessary improvements in the state of the roads, while at the time of the Bury St. Edmunds pageant it secured accommodation for upwards of 500 motor-cars during the week. The relations between the local police and the club have been of the most friendly character, the former always bringing cases of reckless driving to the notice of the club in order to prevent a repetition of the offence before taking action. Equally good work has been done by the Essex County A.C., which elected the county surveyor, Mr. P. J. Sheldon, as an hon. member in recognition of assistance rendered on all matters affecting the improvement of roads. Attention is also being given to the subject of delays at level crossings, and arrangements have been made to secure free garage for the cars of members at the appointed repairers for a period not exceeding four hours during business hours.

Good Work in the North.

IN the north the North-Eastern Automobile Association has done good work. Its comprehensive system of local secretaries reaching from Berwick to Darlington has contributed to an efficient organisation which has been able to serve the movement well in that wide area. Legal assistance has been afforded to some members of the association, and warning triangles have been erected by the County Councils of Durham and the North Riding of Yorkshire at the instance of the association. An interesting advantage has been to secure from the North-Eastern Railway Company books of tickets for motor-cars available in connection with the High Level Bridge tolls at

Newcastle, and we feel it would be to the mutual interests of the railway company and the motorists in that district if the period of availability of the tickets could be extended, in which case the facilities would be shared by motorists other than those living in the immediate neighbourhood. We understand that during the present year a hill climb will be organised, and it is probable that suggestions will be made as to the appointment of a road agent at Morpeth and Gateshead during the coming season. In connection with the success of the North-Eastern A.A. the services of Mr. J. E. Hodgkin, the hon. secretary, have been invaluable, whilst the part he took in the endeavour of the provincial clubs to promote a better feeling between the organisations in London is favourably remembered.

Not Stopping after Accidents.

THE number of accidents which have occurred in which motorists are alleged to have been concerned has naturally attracted the attention of Mr. Cathcart Wason, the representative of the Orkney Islands in Parliament, who has constituted himself a kind of watch dog on behalf of anti-motorists. Unfortunately the two or three recent cases where accidents have occurred, and the drivers have not stopped to afford needed



Touring in Holland.—The Dam, Amsterdam.

help, have given him an opportunity of again raising questions in the House of Commons. But the President of the Local Government Board has evidently made up his mind not to be cajoled into immediate repressive legislation on account of the delinquencies of one or two persons. So that Mr. Wason is somewhat disappointed. Mr. John Burns has, however, promised to consider whether some amendment should not be made in the law with regard to running away without stopping after accidents. Again he is handicapped by the knowledge that those who attempt to escape the consequences of their acts are not likely to go any slower if the probable penalty in the event of escape is increased.

Drivers and Traps.

DIRECT evidence of the injury which inconsiderate drivers do to the motor industry comes from Wiltshire, where many protests have been made from time to time against the practice of non-resident motorists rushing too speedily through certain villages. On several occasions the police have issued warning notices, but at length they have decided to take action, and the honorary secretary of the Wiltshire A.C., in sending information of a timing arrangement now in frequent operation, two miles west from Melksbam, on the road from Devizes to Bath, points out that this is a direct result of reckless driving in

the adjoining village of Atworth. We hope it is not too much to ask motorists who are unattached to any organisation, and who apparently at present lack a spirit of camaraderie which should lead them to have regard to public opinion, to moderate their speed when going through populous places.

£1 per Mile.

AFTER the Motor Car Act has been in operation for four years the magistrates at the Brentford Petty Sessions have adopted a course which at least has the charm, as well as the expense, of novelty. The other day, in a case in which a motorist was charged with exceeding the legal limit, the magistrates allowed two seconds beyond the time stated by the police as that occupied in passing through their trap, and then imposed a fine at the rate of £1 per mile for every mile in excess of the legal limit. This new formula is decidedly original, but we sincerely hope, in the interests of offending motorists, that it will not become universal.

Lakeland in the South.

ONE week snow; then rain; followed by a couple of days of sunshine and more cloudy days, has been the climatic succession of late. Travel in some districts was anything but enjoyable last week, and those who participated in the quarterly trials of the Auto Cycle Union discovered Lakeland in Aylesbury. The conditions may have been favourable for the ducks, for which the locality is famed, but they were not conducive to the comfort of the motorists whom duty called that way. The roads on the way to Banbury were swamped, and the landscape about Islip was a series of miniature lakes, little of the land being seen on either side of the road. On the return journey the twenty-nine competitors found they had to ride through a lake a quarter of a mile long just a few miles outside Aylesbury, and a second one of some 200 yards a few miles further on. Some of the most venturesome motor-cyclists actually rode through the water, though it was over their boots and 2 ft. deep, but the majority waded past this unlooked-for obstruction.

Americans in Europe.

"SEEING LONDON" by motor char-a-banc daily emphasises that the American invasion has begun. But not all the visitors from the other side of the Atlantic are content thus to journey around town on a motor vehicle to which other members of the public have access—for a consideration. There are cases not a few of American millionaires who keep a car on this side ready for service when they come to Europe. The other day we were told of an interesting order, now in course of execution, received by a well-known London motor firm. They received a letter from a gentleman in Philadelphia asking them to send a driver to receive a car at Liverpool. He was then to drive the vehicle to Plymouth to meet the owner, and after acting as chauffeur during a two months' stay in this country to see to the vehicle being packed and despatched again to the States. Such orders are by no means infrequent; they come to the people whose names are made familiar to motorists throughout the world by the publicity of the motor Press.

The Motor-Cab.

LONDON is becoming filled with taxicabs, propelled by mechanical means. The growler is being lost to sight; the bansom is silently going to its doom. Those responsible for the introduction of the motor-cab must take heed lest the business is overdone; although that time would appear a long way off if all days were such as Tuesday in town, when the "three-whistle" call was often made in vain—so great was the demand. When London is satisfied with its new means of locomotion the provinces will have to be exploited. Already the movement has spread to some of the seaside resorts, and there strange antipathies and local prejudices have already been aroused.

The Sandgate Urban District Council has refused to grant licences for taximeter motor-cabs, on the ground that the applicants are not *bona fide* residents. The Folkestone Town Council has adopted a similar course, but the proprietors of the new vehicles have overcome the objection by taking up stands on private grounds. There is considerable feeling amongst local cab proprietors over the matter, but the residents recognise that such action cannot stop the ultimate advance of the motor-car.

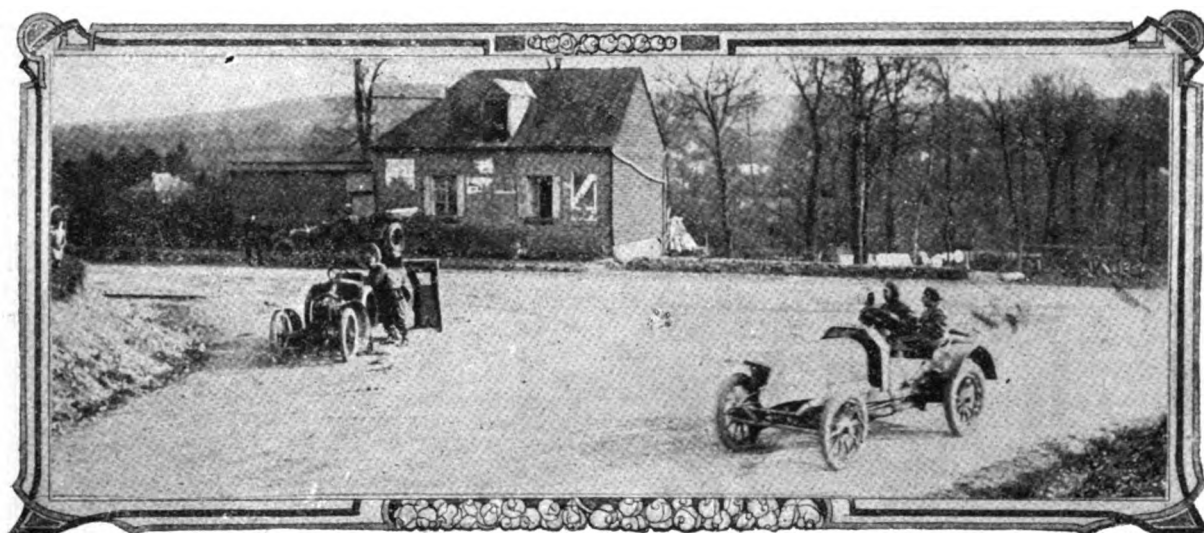
Garage Accommodation.

So many business men living on the outskirts of the large towns are now using motor-cars to get to and from their offices that there has grown up a need for the provision of adequate public garages for storing their cars during the day in many places. At Glasgow provision has lately been opened not only for business men of the type we have mentioned but also those who reside in the suburbs and who require storage by night as well as day. In London garage provision is being steadily extended with, we trust, good results to those whose enterprise has met the need. There are many suburbs, too, where such provision could be made with hope of financial success.

region beyond. The surveyor to the Council of the county just named has been drawing attention to the damage done by the heavy touring cars keeping to the centre of the road and running in a track, their steel-studded tyres and the high rate combining to give the surface a pitted appearance. This, according to his experience, is more apparent where the road is shaded and enclosed with high walls, hedges and plantations; consequently, he has recommended the Council to insist on all roadside trees being properly pruned, and to allow no new plantation to be made within twenty-five feet of the centre of the road on each side as provided by statute. His suggestion has been adopted by the Perthshire County Council, and it will be interesting to observe its effect in assisting a fine, clean and smooth appearance to be retained on the road surfaces.

National Roads.

ONE of the most important provisions in the Public Health Act which came into operation recently seems to have been overlooked by those who are taking part in the present agitation in connection with improved public highways. We refer to that clause which gives local authorities power to buy land outside their own area for highway purposes. Thus local



The A.C.F. Grand Prix Race.—A Snapshot of two of the Competitors practising on the Course.

Financial Value of Motorists to London County Council.

THAT motor-cars have a financial value to the London County Council is apparent from a return just issued, which shows that there have been licensed by the authorities at Spring Gardens 18,952 motor-cars, 1,882 heavy motor vehicles, and 8,141 motor-cycles. 71,943 licences to drive automobiles of various kinds have been issued, and practically 8,000 changes of ownership in respect to cars and motor-cycles have been registered. These figures suggest a great development in the trade in second-hand vehicles, as well as progress in the business in new cars. Altogether, the Council has netted about £40,000 in fees of one kind and another in connection with the Motor Car Act—a substantial contribution that motorists have made towards the cost of the Local Government.

Maintaining the Road Surface.

MANY of the local authorities in Scotland are discussing motor problems in view of the advent of the touring season along their highways. The opening of the railway system in the Highlands ruined the places on main roads for a number of years, but during the past two or three seasons prosperity has revived on many of these, thanks to the motor-car now so generally employed for touring in Perthshire and the

authorities anxious to improve any main road running through their respective areas are now able to combine for the purpose of joint local improvement in this direction. The importance of such provision is obvious, for while no one authority was likely to make a large expenditure on a great main road, the majority of the traffic along which came from other districts, it may be possible to so arouse the public spirit of four or five adjoining localities as to secure an associative advantage. The point has also interest in its tendency towards a recognition of the national roadway authority which motorists have in public conference advocated on many occasions.

THE promoters of the London Motor Roadways Bill have notified the Chairman of Committees of the House of Lords, the Earl of Onslow, that they do not intend to proceed further with their Bill.

IN our last issue we made mention of the comfortable Canford Cliffe Hotel, near Bournemouth, and, as showing how widely the *M.C.J.* is read, on Saturday we learnt that the Right Hon. A. J. Balfour, M.P., was intending going to the hotel on the Monday with a view of making a stay. This is the right hon. gentleman's first visit, and we are sure he will be delighted with the pine woods and other picturesque surroundings.

RUNS AROUND DROITWICH.

IN Droitwich itself the salt works are interesting—both from the contemporary and historical point of view. The work is not a noisome process, while the vapour given off from the boiling brine is a factor in the health-giving properties of the air. In connection with the works mention may be made of the delightful Salters' Hall, at Droitwich, the illustration of which we are able to reproduce by the courtesy of the proprietor of the Worcestershire Brine Baths Hotel, from his guide to the district.

A charming centre for the motorist is the healthy district of Droitwich, from which easy runs can be made to Worcester and Gloucester and Hereford, with their cathedrals; Malvern and its hills to delight the lover of beauty and test the powers of the car; Tewkesbury and its historical associations; Stratford-on-Avon and its literary claims; Kenilworth, Warwick, and Cheltenham are equally accessible to the visitor. The highways in the vicinity are good for motoring, the hills being easily negotiable, and, where necessary, provided with caution boards. One such hill is at Stoke Prior, where large salt works stand, its great chimney dominating twenty-seven smaller shafts, and taking the name of the Hen and Chickens.



Not far distant, amidst lovely grounds, stands the high-pitched roofed mansion of Impney, a specimen of the French chateau style, built by the late Mr. John Corbett. Another hill that has a double turn, and rapidly falls 100 feet or more, is on the road from Ombersley to Holt Fleet. But on most roads the change in the elevations is not too rapid or dangerous.

On leaving Droitwich by the Hanbury road, with Hadzor House on the right, a pleasant run may be made to Hanbury Hall, the seat of Sir Harry Foley Vernon; but cars are not of much use to climb the deep set lane, overhung with yews, to the noble church that crowns a lofty hill. Everyone should, however, visit this church, with its interesting memorials of the dead and its terraced approach—great trees forming an avenue that springs from one grassy platform to the other—and its incomparable views. For the eye takes in a wide prospect, extending from the mountainous outlines of the Cotswolds, the Brecon Hills, and Malvern Hills, 1,400 feet high, to the almost equally rugged chain of the Abberley Hills, beyond the Severn, and on the opposite horizon the softer mouldings of the Lickey Hills, from which Droitwich gets its drinking water. After visiting the church, whose situation is delightfully reminiscent of Harrow, a wander through the meadows may be taken to Dodderhill Common, for here the beeches might be those of Burnham itself, the brambles borrowed from a Surrey copse, the oaks taken from some Sussex primeval wood, and the cottages bodily transported from the New Forest—landscape that, each in his way, a De Wint, a Collier, a Constable, a Linnell, a Wimperis, or a Vicat-Cole would have limned—and mayhap did.

MOTORING NOTES FROM BRIGHTON.

THE most interesting circumstance of recent date, not merely to motoring, but to every class of visitor to Brighton, has been the extension by the local Corporation of its official benediction to the Kursaal scheme. Those interested in the railway no doubt hope that the erection of such a patent attraction in Brighton will win back much of the first-class passenger traffic of which modern motor-car rivalry is supposed to have robbed it. On the other hand, many people calculate that it will bring more motorists into Brighton than ever, for it will assuredly add a charm to, by providing a specific object for, a day's road-jant down to London's seaside suburb, that does not at present exist. In any case, the Kursaal, if it eventually becomes *un fait accompli*—and there's good reason to believe that it will—is bound to do much towards restoring Brighton's old-time prestige as the smartest and most fashionable holiday resort in England.

THE original plans for the Kursaal, by the bye, which is to be built right on the seashore, between the West Pier and the Hove Lawns, embrace spacious garage accommodation "on the spot," with toilette rooms, of course, and a wonderful restaurant, in addition to the winter garden, concert hall and ball room. So there will be every inducement to the motorist to make it the objective of many a flying visit—both in and out of season. Altogether, Brighton ought to be revelling in a dash of that social *sauce piquante* of Continental cosmopolitanism—in two or three years' time!

THE sudden burst of summer with which May inaugurated her reign did not exert that stimulating influence on the week-end traffic one might have expected. Basking in radiant sunshine, and even gasping with heat, down here on Sunday morning we came to the conclusion that probably the river had greater attractions than the road under such glorious conditions. Then, later, we heard it was raining hard down the London road as far as Crawley. In any case, the motoring arrivals were very few—but the miraculous transformation of Nature they found awaiting them when they got here was voted to be well worth the coming for.

AMONG some of the principal visitors were: Major Jackson, with a fine six-cylinder Brooke car, Mr. Benson (Renault), Major Fortescue (Fiat), Mr. Bullock (Sidleley), Mr. Houldsworth, Mr. Shipley (Horch), Mr. Forman (Minerva), Mr. T. Manning (De Dion), Mr. Friedlander, Mr. Gott, Mr. Nicholson (Britannia), and Mr. E. Wormald, who "stabled" two cars, a Daimler and a James and Browne. In the spacious garage of the Brighton and Sussex Motor Works, Ltd., too, I spent several minutes admiring Mr. Oliver's new Mercedes, a magnificent 75-h.p. six-cylinder car painted and upholstered in bright crimson, with elaborate fittings that shone like burnished gold. Its huge 6-inch Palmer tyres were one noticeable feature—the biggest the Palmer people have made till this year, I was told, although they are now eclipsing that embodiment of tyre-strength and speed with an 8-inch affair, which has, however, not yet been seen. This Mercedes is indeed a beauty—the pride of the garage, of course.

BRIGHTON rejoices in the possession of the only motor-boat club "whose current balance-sheet reveals a satisfactory financial position." At least, so said Mr. H. J. Mann, the secretary of the Sussex Motor-boat Club, at its first annual meeting at the Grand Hotel last week. For a young enterprise, only a year old, the club may be regarded as a very healthy and promising youngster. It has about a hundred members at present, with a fleet of twenty-five boats, but several other craft are building, and will be added early this ensuing season. Viscount Curzon has accepted the commodoreship, in succession to Admiral T. S. Brand, who is leaving Sussex, but Lieut. Sir Theodore Angier, R.N.V.R., and Lieut. O. Sumner continue as vice-commodore and rear-commodore respectively.

SAXONIAN.

GOSSIP FROM PARIS.

THE French drivers who will compete in the Grand Prix race are not content. They think that the Sporting Committee of the French Automobile Club might have given them at least another three weeks' practice on the Dieppe circuit instead of closing it against them from May 1st. The weather previous to that date had been so detestable that they had not profited much by their study of the road, especially as scarcely one of them had the car which he will pilot in the race. The time they spent in "trying the circuit" will not, therefore, give them any appreciable advantage over their foreign competitors who may not have come to examine it. As a matter of fact, however, most of the foreign drivers did come, but, realising the truth, they did not stay long.

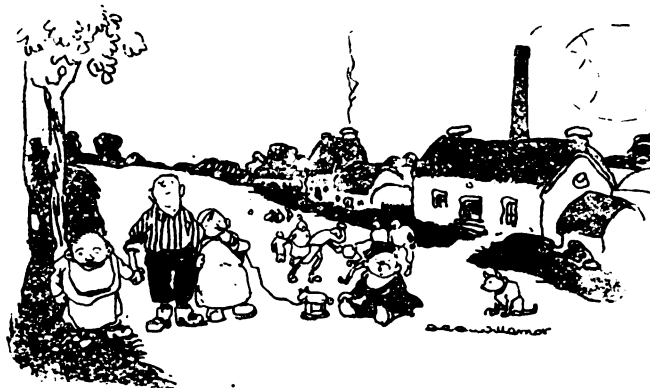
NEVER before has sport been talked about so much on electoral rostrums in France as it was in Paris last week. No candidate for a seat in the Municipal Council dared neglect the subject any more than he could disregard the burning question of M. Barthou's Bill for the regulation of automobile traffic. I do not know exactly how many sporting societies there are in the French capital, but the president and secretary of most of them paid a visit to each candidate to impress on him the advisability of securing their members' votes by supporting their demands. They are certainly legitimate, though not modest. Everyone knows that the fortifications and military zone encircling the city are destined to disappear very shortly, and that negotiations are pending for their purchase by the Municipality. The State demands a countless amount of money for the property, but an arrangement of some sort must soon be concluded. Now, there are no fewer than 200 sporting societies which possess no other place than the moat of the fortifications and the military zone for their games or athletic exercises. What is to become of them if that land is sold for building purposes?

THEN there is the question of the health of the population. To insure a satisfactory solution of the question great posters signed by the Touring Club of France, the Alliance of Social Hygiene, the Commission of Urban and Rural Hygiene, the French Association of City Gardens, and the Society for the Protection of the Beauty of French Landscapes were placarded all over the city. These influential institutions espousing the cause of the sporting societies called on the Parisian electors to refuse their votes to every candidate, irrespective of all political considerations, who would not undertake to require of the State the gratuitous abandonment of the fortifications and military zone to the population of the capital, who could not consent "to live in stone prisons." And to insure their election the candidates had to promise that when returned as members of the Municipal Council they would insist on the creation of no fewer than nine parks and open spaces reserved for sports of all sorts. La Ville Lumière must have at least as much light and air as London, Berlin and Vienna, whose inhabitants are at the present moment better off in that respect than the Parisians. Almost every candidate accepted this programme, and the majority of them pronounced in favour of a complete revision of the laws regulating the traffic in the streets and highways. That revision would not, like the obnoxious Barthou Bill, deal with motor-car traffic alone, but with that of horse, ox and hand drawn vehicles. If only the candidates of yesterday keep their promises now they have secured their seats in the Hotel de Ville, the sporting and automobile worlds in France will have no reason to complain. But (especially electoral) promises are, as we used to say in the nursery, "pie crust made to be broken."

MOTORISTS in France are wondering whether the judgment just given by the Appeal Court of Aix, in the department of the Bouches du Rhone, will serve as a precedent to establish the jurisprudence in the matter of excess of speed. Every one hopes so but scarcely dares expect it. Nevertheless, if it is not taken to the Court of Cassation and quashed, no motorist on the

territory of the Republic, be he French or foreign, should for the future be condemned for excess of speed unless the infringement of the regulations be legally noted by two representatives of authority each provided with a chronometer. M. Simon Méry, of Marseilles, had been condemned for furious driving on three separate occasions. His professions of innocence on the two last occasions and the evidence of witnesses had gone for nothing against the gendarme's word, which was taken for gospel in the police court. The Appeal Court, however, only maintained the condemnation for the first offence and acquitted M. Méry on the two other counts. The first sentence of 6 fr. fine was ratified because the excess of speed was sworn to by two gendarmes who, placed at a certain distance from each other, had noted the infringement of the speed regulation with chronometers in their hands. In the other two cases the excess of speed was simply sworn to by one single gendarme, who, moreover, was not provided with a chronometer. This important judgment says, "While admitting the good faith of the official it would be very dangerous to accept in a question of this nature the opinion of one man based on no material certainty, and as the gendarme was quite alone it was very difficult for him to estimate the speed of the motor-car."

THE news of the performance of the Brothers Wright on their aeroplane at Naghead, North Carolina, burst like a bomb amidst all the French aeronauts and flying men assembled last



The Open Country Road.

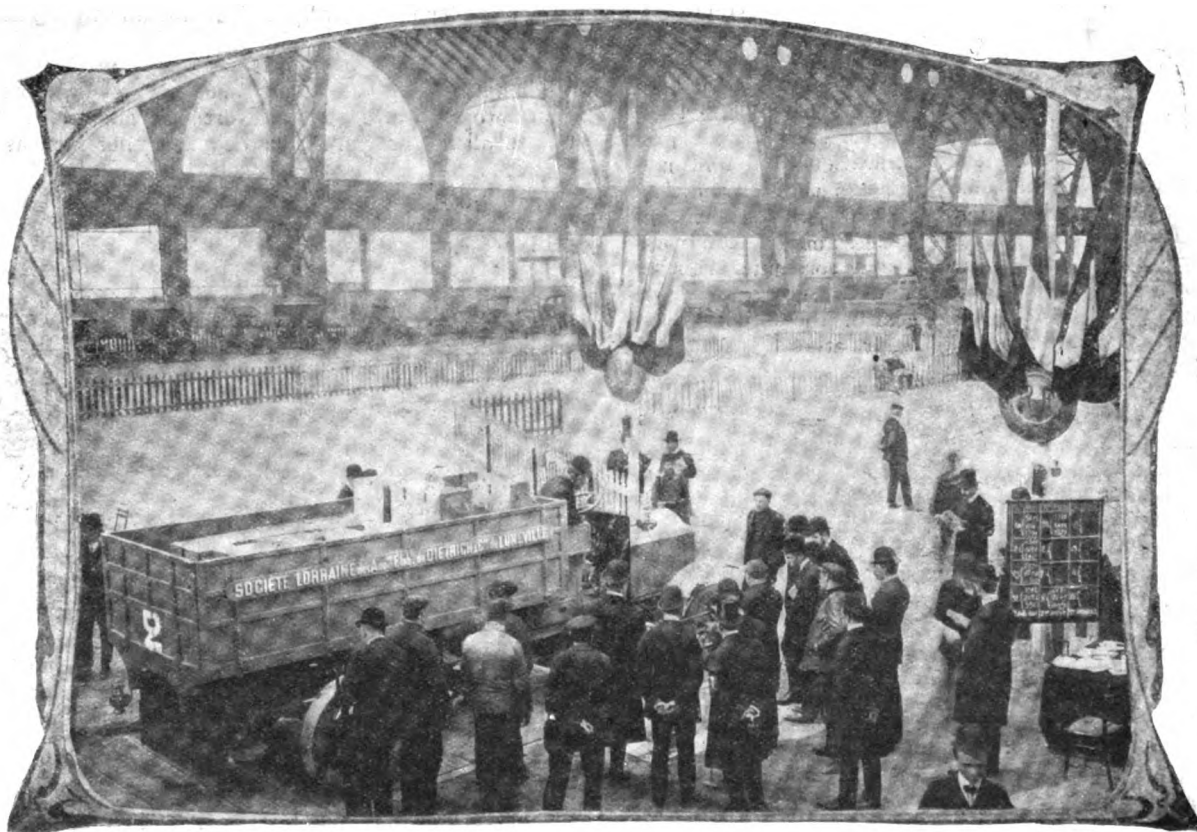
[Omnia.

Saturday at Issy les Moulineaux to witness the unsuccessful attempts of M. Delagrangé and M. Henri Farman to gain the Armengaud prize of £400 by remaining a quarter of an hour in the air. The great majority of them had been most sceptical concerning the Wrights' previous exploits. But this time there was no sort of doubt. They together on their new aeroplane, or at least one of them—the telegram did not say which—flew two miles "under Government control." M. Archdeacon was perhaps one of the most excited, but he tried to conceal it under the hurry and bustle created by the Delagrangé-Henri Farman match. When anyone spoke to him about it he said, "Voyez-vous ça" (Only think!) and then rushed off in his automobile to the other extremity of the manoeuvring ground to see that all was ready, or called a police officer to beg him to order his men to drive back the crowd which was invading the field. Another very prominent member of the French Aero Club, whose name I am not at liberty to mention, was very outspoken. The telegram received in the morning had not convinced him that the Brothers Wright had ever flown before. If they had formerly effected a circular flight of 24½ miles, remaining in the air 38 minutes, why had they on the present occasion come down of "their own free will" after travelling only two miles? "No, no!" he said, "it looks very much as if they had profited well by their last autumn's visit to Europe, and especially to France. Being intelligent men they learned a lot." Nevertheless, he confessed "the Wrights are fine fellows. They are a little behind our own men, but they are seeking, like us, to solve the problem which is of such paramount interest to all civilised nations." MARNEY.

THE FRENCH INDUSTRIAL VEHICLE AND MOTOR-CAB TRIALS.

THE attention of the French motor world is just now centred on the reliability trial of industrial motor vehicles and motor-cabs organised by the French Automobile Club, which commenced on Friday last week, and will continue until the end of the month. The industrial vehicles are divided into the following nine classes:—1, For loads from 50 to 200 kilogs.; 2, ditto from 200 to 900 kilogs.; 3, ditto from 900 to 1,500 kilogs.; 4, ditto from 1,500 to 2,000 kilogs.; 5, ditto from 2,000 to 3,000 kilogs.; 6, ditto over 3,000 kilogs.; 7, road trains; 8, public service vehicles, carrying from six to ten passengers; and 9, ditto for more than ten passengers. As regards repairs, the components of the chassis are divided into three groups—1, those which may be changed at will; 2, those which will be marked, which can only be replaced by marked spare parts, of which but a limited number are permitted by the regulations; and 3, all parts not comprised in the two previous sections may not under

20th, Nancy; 22nd, Epinal; 24th, Chaumont; 25th, 26th, 27th, Dijon; 28th, Auxerre; 29th, Fontainebleau; 31st, Paris. Exhibitions are to be held at Rouen on May 7th, at Lille on May 13th, at Rheims on May 18th, at Nancy on May 21st and 23rd, and at Auxerre on May 29th, at Fontainebleau on May 30th. Paris being reached on May 31st. Thirty-nine entries were received for the event, and of these the following thirty-six duly weighed in at the Galerie des Machines, Paris, on Friday and Saturday last week, Sunday being devoted to an exhibition. Class 1, two Contal tri-cars; Class 2, a Panhard and a Peugeot; Class 3, a Lorraine Dietrich, a Panhard, and a Brouhot; Class 4, two Peugeots, a De Dion, a Vinot-Deguingand, and two Berliets; Class 5, a De Dion, a Panhard, a Saurer, and two Berliets. Class 6, a Lorraine-Dietrich, two Latils, a De Dion, two Bretin-Cohendets, a Saurer, and two Berliets; Class 7, a De Dion tractor and trailer; Class 8, a Lorraine-Dietrich, a De Dion, two Peugeots, and two Berliets; Class 9, a Lorraine-Dietrich and a Saurer. In view of the fact that the French War Office has announced its intention to purchase some of the competing vehicles a com-



Weighing-in the Competing Cars at the Galerie des Machines, Paris.

any pretext be changed. Pneumatic tyres are not allowed; while no change of tyres, nor of parts of spring wheels, will be permitted. The classification will be made according to categories, and the consumption awards will be based on the formula $\frac{TC}{PD}$, where T = the length of the trial in hours, C the value of the fuel consumed in francs, D the distance covered in kilometres, and P the useful load carried, plus the tare weight of the vehicle. Any form of liquid or solid fuel may be employed, but all cars fitted with internal combustion engines will be required to run on alcohol during a certain number of days. The total distance to be covered during the trial ranges from 3,035 kiloms. to 4,006 kiloms. according to the class. Exhibitions are to be held at various important towns, and on the other days runs will be made from these leading centres, over different routes, about three or four days being thus apportioned to most of the principal towns. The following are the centres from which the various runs are being made:—May 4th, 5th, 6th, Rouen; May 8th, 9th, 10th, Amiens; 11th, 12th, Lille; 14th, St. Quentin; 15th, 16th, 17th, Rheims; 19th, Verdun;

mittes of military officers has been delegated to follow the trials. Concurrently with the industrial vehicle trials a test of motor-cabs is being held, categories being provided for vehicles having single-cylinder engines of 100 mm. bore, and four-cylinder motors of 80 mm. bore. In this class thirteen entries were received, of which eleven weighed in, viz., a Vinot-Deguingand, a Bayard-Clement, three Brouhots, a Dorriot-Flandrin, a Gladiator, two Brasiers, a Prod'homme de Poorter, and a Sultan-Lethemonnier.

AN interesting motor wedding took place at Pulham St. Mary, Norfolk, on Wednesday of last week, between Mr. F. W. Doggett, the works manager of Messrs. Mann, Egerton and Co., Ltd., of Norwich, and Miss Ida Bennett. After the wedding there was a reception at the house of the bride's parents, after which the happy couple drove by motor-car to Forncett Station (being escorted by about a dozen motor-cars belonging to friends), en route for London and the West of England, where the honeymoon will be spent.

SOME CURRENT TOPICS.

The Weigel Grand Prix Racers.

The work of constructing the three Weigel racing cars for the forthcoming A.C.F. Grand Prix contest is well in hand. I had an opportunity the other day of seeing the vehicles in course of erection at the new works of Weigel Motors, Ltd., at Olaf Street, Latimer Road, London, W. Drawings and particulars of the engine and chassis of the cars have already been given in the *M.C.J.* (see issues February 29th and March 14th last), so it need only be mentioned that the engine, which, it will be remembered, has the valves set in the cylinder heads at an angle of 45 deg., and operated off a central overhead cam shaft, is a very workmanlike job. No pains are being spared to turn out a trio of vehicles which shall do credit to British industry in the great International contest. The first car will be ready to be put through its paces on the road about the end of the present week, so that, as the race itself does not take place until the first week in July, there will be ample time to get it thoroughly *au point*, and to incorporate any little modifications found necessary in the two sister vehicles.

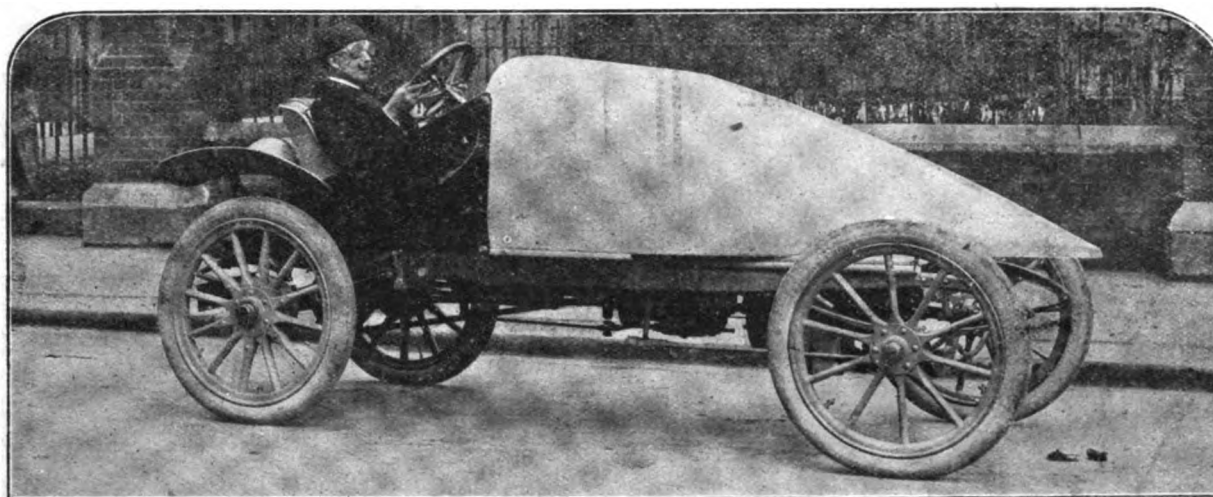
Acetylene Lamps.

An interesting point has been raised in France as to which

The dog in the manger is a brute for which none of us has any sympathy, but there are extremes in good nature, and the lending of an expensive motor-car, even to a friend, is one of them."

Water-splashes. A Suggestion for the Automobile Association and the Motor Union.

The competition among the various motoring associations with regard to the sign posting of the dangerous points on the main roads of the country has done much to increase the safety of traffic of all kinds, not merely that of automobiles. There is still another useful piece of work for one of the more enterprising bodies to undertake. Although they are now relatively few and far between, there still exist in different parts water-splashes across the road, through which one has to plough or make a long *detour* to avoid. Being a southerner I can for the moment only call to mind three of these water-splashes, but there are doubtless many others. Those I refer to are respectively one near Shepperton, another in the neighbourhood of Thames Ditton, and the third on a by-road leading towards Chessington, in the Epsom district. Although I am now accustomed to all three, I well remember the nervous feeling which came over me when, early in my motoring career, I found the way interrupted by these strips of water. The object of this note is to suggest that not only might a list of these water-splashes be compiled,



Mr. R. Reynold Jackson at the wheel of his Jackson 8-h.p. Single-Cylinder Racer, on which he will next week attempt to set up a new class record on Brooklands Track.

Mr. Jackson brought the vehicle round to the offices of the *M.C.J.* a few days ago, where its novel appearance quickly made it the centre of an interested crowd.

is the better form of acetylene head light—those of the self-contained type, or those with separate generators. There is, of course, much to be said for both patterns. On the one hand, the steps of the car are left unencumbered, while in case of a *panne* at night time the combined generator and lamp prove very handy. On the other hand, headlights with separate generator are much lighter in weight, while the fact that there is for the two lamps only one generator to look after and keep clean is a point which appeals to many motorists. There are other *pros* and *cons* on the subject, and the views of the readers of the *M.C.J.* on the matter will be welcomed.

Should a Motorist Lend his Car?

A motorist at Hove has, I notice, raised the question in one of the daily papers as to whether a motorist should lend his car. He answers it in the negative, and I imagine that there will be few automobilists inclined to disagree with him. "I wonder," he writes, "how many motorists have suffered a loss of friendship, as I have recently, through refusing to lend their cars, even when they themselves have no intention of using them on the particular day. Is it unreasonable to say, 'I would rather not,' when a friend asks, point blank, for the loan of your car, for which you have given, perhaps, £1,000 or more, and which may be returned to you a hopeless wreck? Of course, the friend will 'have it fixed up,' but—every motorist knows what that means.

but that warning boards might be erected on both sides, giving an indication as to whether the splash can be safely crossed, and whether this should be done at the right, left, or in the centre. As many of the splashes are running streams, it would, perhaps, hardly be possible to give the depth of the water, as this most probably varies considerably in wet and dry weather. Anyway, I commend the suggestion to the notice of the Automobile Association and the Motor Union.

A Remedy for Wet Driving Seats Wanted.

Among the large circle of readers of the *M.C.J.* there must be many who have when out driving been caught in the rain, and experienced the annoyance, not to say danger, of a wet seat. Front glass screens have, of course, done much in the way of protecting the driver, but still the rain has a nasty habit of trickling down the upholstery on to the cushion, where, if the bad weather be of long duration, a pool gradually collects, which may have very detrimental effects on one's health. The old *parapluie* formed an excellent protector against the attack both front and rear of Father Pluvius, and it seems somewhat a pity that the "umbrella" through which one wriggled should have apparently gone out of fashion during the past year or so. If any motorist can suggest a remedy for the trouble mentioned, many fellow automobilists will, I am sure, feel grateful.


ARCANUM.

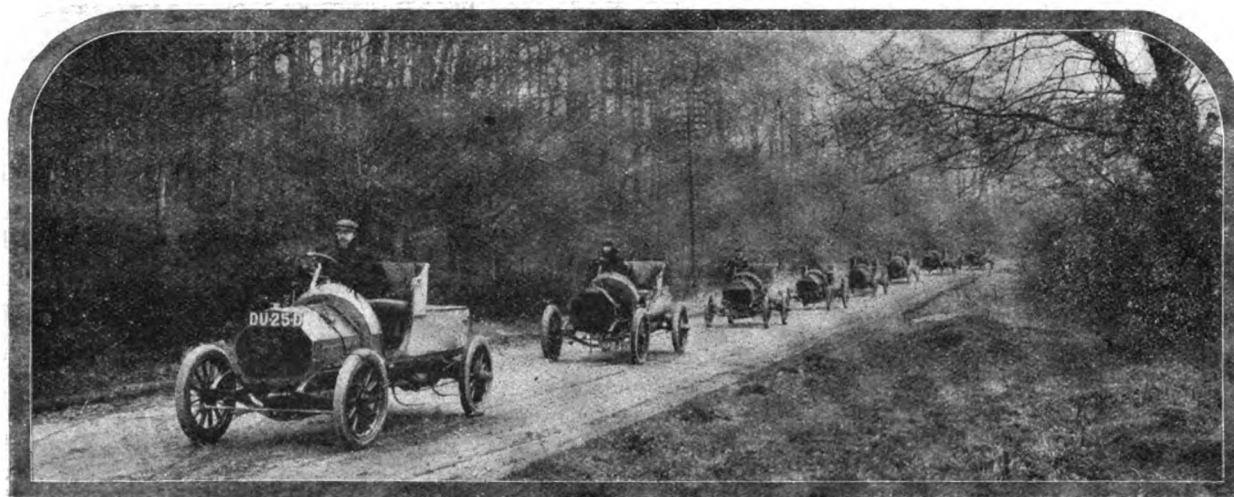
SOME NOTES ON MOTOR-CAR SPRINGS.

SO soon as man and beast ceased to be the only means of transporting one's self or goods from one place to another, the problem of how to make the new mode of conveyance as comfortable and little fatiguing as possible to those who were being conveyed has always been a matter of supreme importance. One might, in confirmation of this, go back to the various methods adopted by the Romans in their racing chariots, and so on, by different stages, through the evolution of all carriages up to the present time, but space will not permit, neither would any useful purpose be served by going into the dim and distant past.

Now that self-moving vehicles, with their greater speeds, extreme lightness of construction, with consequent increased vibrations, both in number and volume, have come more into evidence, the question of the best medium to intercept such vibrations on their passage to the occupants is a most important one. The motor-car labours under many disadvantages that do not apply to the rolling stock of a railway company, which has a perfectly smooth road, no steep gradients or many other trying conditions that are ever present in one form or another with the vehicle now under review. It is not within the province of this

cease the "easy rolling motion" and take a bumping or bounding movement, and, though the time that they are clear of the ground or not getting a sufficient grip to assist its propulsion forward may be far too short to be detected by the eye, the forward movement of the car is being impeded. In some cars the springs have to take on, in addition to their ordinary duties, the "rear action" of the drive, which is that part which tends to elevate or lift the car off the ground, when the engine exerts its force, so it will be seen what an important part the springs of a car play in relation to its general wear and tear, tyres included.

The most common form of spring on motor-cars, and one which has been found universally satisfactory under almost every condition, is the laminated type. It may be divided into two sections—the "grasshopper" and the elliptic. These consist of a number of plates held together by clip bolts; the mode of security varies according to circumstances, some being attached or slung on pins at either end, while others are hinged at one end and connected by shackles at the other. The grasshopper pattern, which is really half an elliptic, is often made without eyes or finished ends, but with a hole in the centre of the plates, the latter being made extra wide to give the necessary margin of strength. The spring ends of the bottom plate simply rest on the axle; these springs then take a bearing down and end rocking motion, such as on the front axles of tractors. 



A Batch of 16-20-h.p. Beeston Humber Cars being Tested on the Road.

The vehicles are fitted with a rough two-seated body, while the back contains weights equivalent to people. After a 200-mile trip they are taken back to the works and carefully looked over for the slightest sign of anything wrong.

article to attempt to embrace the many ideas and designs that have been tried as antivibrators, as they would include everything from the air tube of the tyre to the latest thing in spring seats, but to confine matters to springs and their immediate surroundings, with a passing reference to shock absorbers.

The difficulty with those who have given much time to the subject has been to find a spring that is flexible and effective and at the same time will stand the strains and weights. Some estimates have recently been given as to the number of vibrations per minute that steel springs take; that the rapidity of action is very great is beyond doubt, but, owing to the varied conditions under which they work, to attempt to calculate such a quantity seems to the writer unwise, as it can only apply to individual cases, and so may be misleading to adopt any standard as a whole.

Springs to a very large extent in all self-moving vehicles not only regulate the ease and comfort of the conveyance, but, when properly balanced, considerably reduce the wear on the tyres, engine, and carriage work; they economise power, make driving easier and ensure greater accuracy in steering. The proper action of a wheel is to roll along over the surface on which it is travelling—a spring's greatest movement is just after the car has overcome any sudden variation. If a spring does not take and give off its load at the right moment the wheels

Both the foregoing patterns need careful attention at least once a year. One oftentimes hears it said that a car is not so comfortable to ride in as it used to be, and the fault is laid to the tyres or uneven road, when it is really the springs that have become clogged or rusted up through moisture getting in between the plates, either from rain or car washing and cleaning, and the springs are not acting properly. In time the plates become set, and for a spring to correctly carry out its functions each piece should work freely and clear of its neighbours. When it is found that such is not the case, the whole should be disassembled, scraped, oiled, and any possible fractures looked for; if there are any, of no matter how small a nature, a new plate is necessary. The plates should then be reassembled, when they should move freely on depression.

Doubtless shock absorbers will come into much larger use in time, but their cost and additional weight prevents them coming into more general practice. Mr. O'Gorman, in a recent paper read at the R.A.C., stated that it might be found possible to use spiral springs in conjunction with shock absorbers, thus reducing the car weight; if this proves to be the case, they could without doubt be used with advantage. The spiral spring has been tried on travelling wheels in various forms, both on motor-cars, tractors, and other self-driving vehicles, but without any great measure of success.

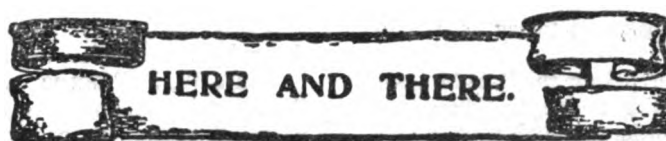
E. T. H.

THE Montreal Light, Heat and Power Company, of Montreal, Canada, has lately acquired an Argyll three-ton 26-30-h.p. motor-lorry.

A VETERINARY surgeon in Coventry is now using a 15-h.p. Humber car on his daily rounds. One result of the innovation has been the enlarging of his practice owing to his now being able to cover longer distances in a short space of time.

SIR JOHN and Lady Lister-Kaye have just returned to London from a motor tour in France and Italy.

WE gave some particulars and a general view of the new 10-h.p. two-seater steam car recently introduced by Turner's Motor Manufacturing Company, Ltd., in the *M.C.J.* of April 4th

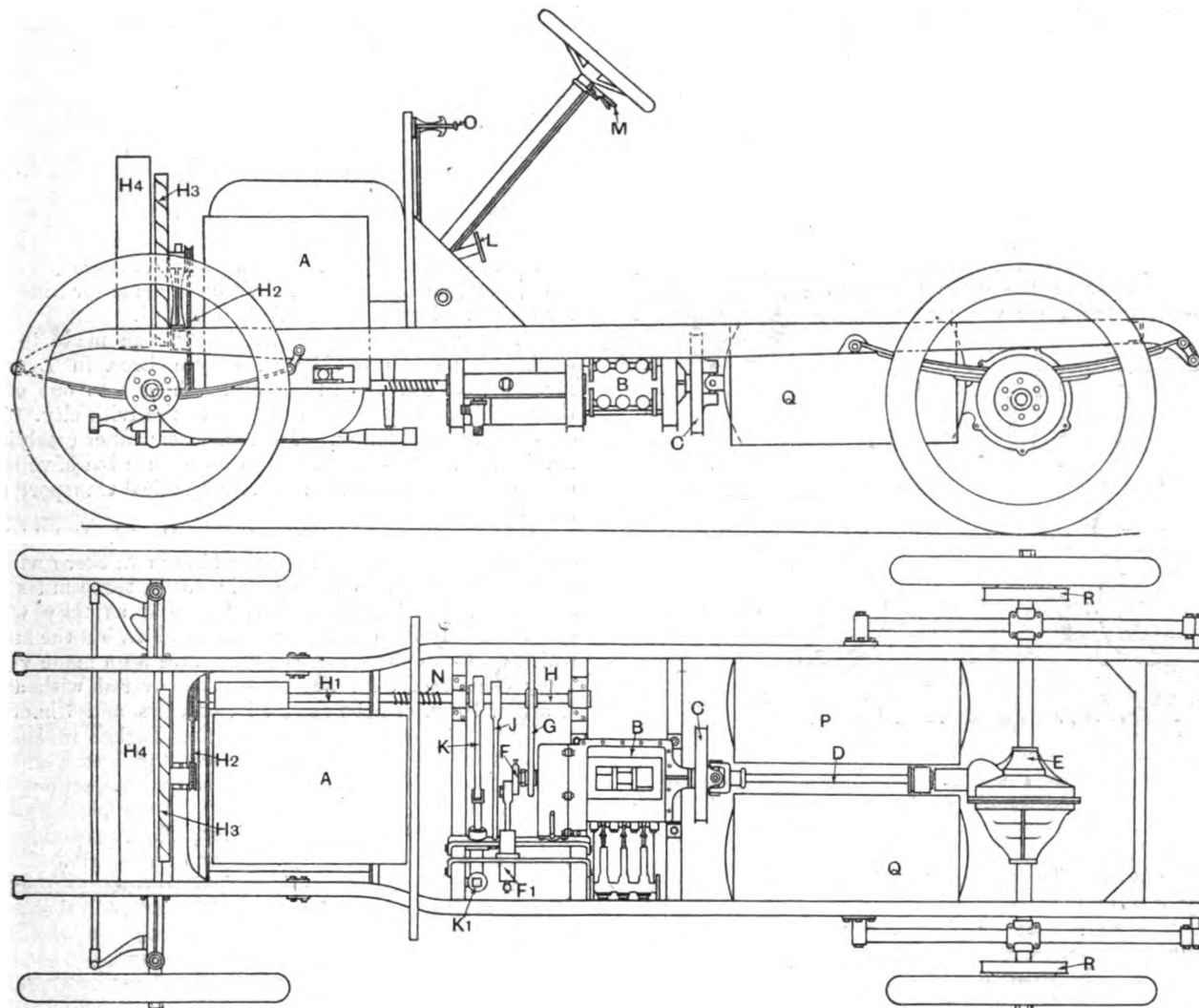


THE Belfast Co-operative Society, Agnes Street, Belfast, have lately acquired an 18-h.p. Siddeley motor-van for bread delivery purposes.

"WELL, Pat, after a year at the motor school, I suppose you understand everything?" "All but one thing, sir." "What's that?" "What makes the thing go without horses?"

MR. C. B. HILL, hon. secretary of the Dorset Automobile Club, has lately acquired a Hotchkiss 16-20-h.p. car.

ON the day that the cars engaged in the International Touring Car trial set forth from Glasgow on their journey south, General Booth will start from Dundee on another motor mission, finishing, not at Brookland, but at the Crystal Palace.



Elevation and Plan of Chassis of the Turner-Miesse Two-Seater 10-h.p. Steam Car.

- A. Generator.
- B. Engine.
- C. Flywheel and brake drum.
- D. Cardan shaft.
- E. Rear axle casing.
- F. Extension of crankshaft to operate air pump supplying fuel tank.
- F'. Air pump supplying compressed air to fuel tank.

- G. Chain drive from crankshaft to countershaft.
- H. Countershaft.
- H'. Shaft driven through spring drive from H.
- H². Fan.
- H³. Condenser.
- K. Water pump eccentric.
- K'. Mechanically operated water pump.

- L. Throttle and brake pedal.
- M. Lever for forward, neutral or reverse positioning of valve camshafts.
- N. Spring drive to counter-shaft.
- O. Steam release lever.
- P. Paraffin tank.
- Q. Water tank.

last. We are now able to publish an elevation and plan of the chassis, which clearly shows the disposition of the various parts of the mechanism. To the information already published we may add that the complete car only weighs about 15 cwt., so that the tyre bill should be extremely low. So also should the cost of fuel, seeing that ordinary American paraffin, which can be bought at under sixpence per gallon, is used, and that the consumption is only about one gallon per hour. We understand that the new model has already met with a favourable reception on the part of motorists.

IN order to meet the increasing requirements of West-end patrons, Messrs. Harvey Frost and Co., Ltd., have considerably extended their premises at 27, Charing Cross Road, London, W.C., where a large stock of H. F. vulcanising materials and tools, and also H. F. vulcanisers, is now installed. Every requirement, therefore, can now be promptly met at the firm's West-end address. Any reader desiring a free demonstration on an H. F. appliance can obtain same by calling, or through the medium of an introduction card, obtainable at most of the motor depots in London and the provinces.

KING EDWARD has this week taken delivery of a new 58-h.p. Daimler car with Hooper body.

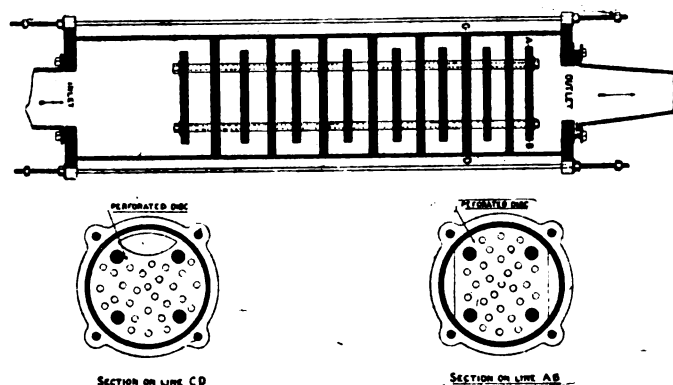
THE Hon. Lord Masham has ordered from the Daimler Company a 38-h.p. live axle chassis fitted with a "Birdlip" limousine body. Sir George Bullough has also ordered a 38-h.p. chassis.

THE order for the 9-h.p. motor delivery van lately placed by Messrs. Lever Brothers, of Port Sunlight, with the Star Engineering Company, Wolverhampton, has, we learn, just been increased to eighteen.

THE Berkshire County Council having refused to erect notices limiting motorists to certain speed through the village, Streatley Parish Council has agreed to send application direct to the Local Government Board, pointing out the great danger to children and others.

A FIRE occurred shortly after midnight on Sunday on the premises of Messrs. Rice Bros. at Horsham, whereon were stored 700 gallons of petrol. The firemen made strenuous efforts to protect the neighbouring property, and loads of sand and ashes were obtained from the gasworks. Fortunately the floor of the store was two feet below the level of the ground, so that the spirit was not carried away, as would have been the case had it been on level ground. It was not till 6 a.m. that the fire brigade left the scene.

WE give herewith a sectional view of a new silencer for petrol engines which has lately been put on the market by Mr. John Bousfield, of the Bar Iron and Motor Works, Micklegate, York. As will be seen, the gases pass into a large expansion chamber and then find their way through a series of alternately-



arranged perforated baffle plates. Mr. Bousfield claims that not only does his new silencer render an engine extremely quiet, but by reducing the back pressure more power is developed. Furthermore, there is no danger of it becoming choked. The exhaust box is being made in various sizes suitable for motors of from 6 to 80 h.p.

THE three Weigel cars for the A.C.F. Grand Prix race will be driven by men under the control of Weigel Motors, Ltd., but as there is a large section of the motoring public who are desirous of driving in races, the makers would be pleased to hear from any amateurs who care to consider driving the cars in the Ardennes races and the Vanderbilt Cup contest.

THE 1908 catalogue of Metallurgique cars just issued by Messrs. Warwick Wright, Ltd., of 110, High Street, Marylebone, W., gives explicit descriptions of the points of all five models, lucidly illustrates such outstanding features as the clutch, spring-drive, rear-axle, carburettor and gears, and gives all conceivably desirable information. It is not an abnormally large catalogue, but contains more useful matter than is generally found in such compilations. A copy can be had on application.

FROM Messrs. Ward and Goldstone, of Springfield Lane, Salford, Manchester, comes a copy of their latest catalogue of electrical accessories for motor vehicles. The list is very complete, giving full particulars of the firm's specialities in the way of accumulators, sparking plugs, coils, electric head lights, recharging batteries, inspection lamps, voltmeters, &c. A speciality is the "Hydranamo," a small combined water motor and dynamo, by means of which ignition accumulators can, to use the firm's phrase, "be charged from the cellar tap."

FOR lending his motor driver's licence to his father an Axbridge motorist has been fined 10s. and costs.

MR. W. F. PARKER, whose Oxford Cycle and Motor Car Company is well-known to visitors to the University town, has placed a motor taxi-cab on the streets and has several other automobiles to let on hire to visitors.

RECENTLY we have recorded the presentation of motor-cars to the Bishops of Southwell, Liverpool, Newcastle and Stepney. Now we learn that the new Dean of Carlisle has been presented with an automobile by his late parishioners in Marylebone.

AMONGST recent purchasers of Daimler cars are the Right Hon. Lord Clanmorris, Bangor Castle, co. Down, Ireland, who has acquired a 30-h.p. live axle "Blackdown" landaulet, and Lieut.-Colonel Britton, Winford Manor, Winford, Somerset, whose choice is a 36-h.p. chassis.

AMONGST the latest orders received by Messrs. Jarrott and Letts for the new model 12-h.p. Sizaire-Naudin car are those from Mr. James McKelvie, of Edinburgh, the Brooklands Racing Club, Mr. Robert Bird, of Birmingham; Captain Kershaw, Harbour Master at Gravesend, and Captain Hawkins, of New Zealand.

THE luxury of motor travel can now be enjoyed by Londoners between Queen's Gate, by way of Brompton Road, Piccadilly, and Brompton, by the 20-h.p. single-deck Charron motor-bus just put in service by the company with which Mr. D. Dalziel is associated. The fare is sixpence for any distance along the line of route. Provision is made for nine passengers, for each of whom an armchair is provided.

THE extensions which have lately been made to the motor engineering shops of Messrs. Wayte Bros. in Lemon Street, Dublin, have converted their establishment to one of the most thoroughly equipped motor depots in the Irish city. They have developed the hiring out of cars at their other establishment in Ann's Lane. Recent orders in this connection have included an urgent contract for six cars for mechanical transport service for the Government.

IN the grounds of the Franco-British Exhibition, which opens at Shepherd's Bush on the 11th inst., there will be thirty miles of roads. Two of the main roads, three miles in length, are now prepared for heavy traffic; and as they will have to stand not only the carting of heavy exhibits, but the motor-cars in which visitors will be carried, they have been made very solidly. They consist of 5-in. timber baulks, covered with a sprinkling of ashes, 10 in. of hard core, 4 in. of ashes, and 6 in. of gravel.

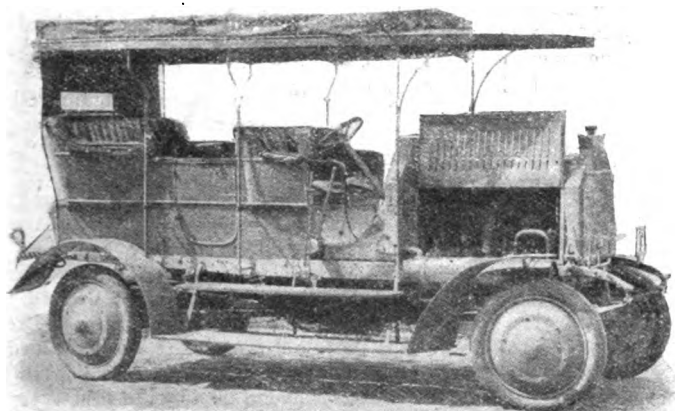
ON Tuesday, before Mr. Justice Parker in the Chancery Division of the High Court, the case of Dams and Meares v. Locke-King was commenced. This was an action brought to restrain an alleged nuisance caused by the racing on the motor track at Brooklands. Mr. Upjohn, K.C., explained that the plaintiffs were local residents, who also alleged breach of covenant entitling them to the quiet enjoyment of their premises. Their complaints were of the noise of the cars in the private road, in the garages and on the track, noise from the crowds of people who congregate, and the fumes, smell and dust associated with the vehicles on race days. The case had not concluded when we went to press.

IN connection with the article on "The Causes of Motor-Car Accidents" in our last issue Messrs. Dennis Bros., Ltd., write that "there are multitudinous causes for breakdowns which we get into our repair department, and we do not think that any particular one predominates. We certainly should not think that the majority of work in the repair shop is rendered necessary by accidents at cross roads. We have had a rough calculation made from our repairs during the past twelve months. Altogether we had in 1,693 ordinary repair and overhauling jobs, and of these only 64 were due to accidents. From this you will see that the majority of the work was due to ordinary wear and tear rather than to accidents. This we find is less than was the case several years ago, when accidents were far more frequent than they are at present, due, we assume, firstly to the greater reliability of all makes of cars, and secondly to an increasing scarcity of inexperienced drivers."

CONTINENTAL NOTES.

A Special Car for German South-West Africa.

The German-Daimler Company has lately completed at its works at Marienfelde a special six-seated car for the German Colonial Office, for service in German South-West Africa. Fitted with a 45-h.p. four-cylinder engine, one of the most novel features is found in the fact that not only are the four road wheels driven but act as steerers. In view of the conditions under which the vehicle is to be used special attention has been devoted to rendering all the parts not merely dust but sand proof, while, in order that the engine shall not overheat when working under full load at a low speed, the ordinary radiator is not only larger than usual



but is supplemented by one formed round the edge of the dashboard and by two cylindrical water tanks at the side of the bonnet. The road wheels, which are of the disc type, are shod with 930 by 125 mm. pneumatic tyres.

The Motor-car Industry in Italy.

Signor Dr. Bonardi has recently made a study of the motor-car industry in Italy for the Italian Minister of Agriculture, and has presented a report, in which statistics are given of the various motor-car works in the country, the number of which now amounts to eighty. In 1907, 725 cars were imported into Italy, of a total value of £330,650, and 1,283 were exported, valued at £807,410. From a review of the trade it is seen that the exports were mainly large touring cars, while the number of small vehicles imported was on the increase, this being due to the fact that the Italian firms made a speciality of large and luxurious cars, for which there is not a large market, on account of the high prices demanded. The number of cars running in Italy is relatively small, and the trade has to depend to a great extent on the export business. In 1905 there were only 2,124 in use in Italy, increasing in 1906 to 3,366. He furthermore states that, as the number of motor-car works in Italy is far in excess of the demands of the market, it will be necessary for the makers to combine or to transform their works into other fields of construction; and he expresses regret that there is no movement to develop the construction of motor-omnibuses and wagons. He suggests that makers should study the question of applying the internal combustion engine to agricultural machinery, as this branch has hitherto been largely unexploited.

A Deflated Tyre Indicator.

An ingenious device to give warning to the driver of a motor-car of the presence of a deflated tyre has recently been brought out in France by Messrs. Loitard Freres, of Paris. Briefly, it is nothing more nor less than a tiny alarm gun affixed to the rim of the wheel, and arranged to be fired automatically when the tyre pressure falls below a certain predetermined amount. A little tube is mounted in the rim, and carries at its outer end a small metallic cartridge held in place by means of a screw cap. A small chamber just behind this contains a spring-actuated firing pin. The latter is held in the "cocked" position by an extension in the form of a slotted tube, which engages a

groove in the edge of the rim, where it is clamped in place by a small plug mounted on a butterfly nut, similar to those carried by the ordinary security bolts. As soon as the tyre pressure falls to the danger point, the force holding the plug in place is relaxed sufficiently to release the firing pin and explode the powder charge contained in the cartridge, so giving an effective warning of the deflation.

British Motorists in France.

Among the British motorists recently visiting France with their cars are Lord Dunedin (40-h.p. Pilain), Lord Newborough (30-h.p. Hotchkiss), Mr. and Mrs. Truby Williams and Miss Parker, of London (24-h.p. La Buire), Sir Neil and Lady Menzies (35-h.p. Panhard), Captain Balfour, London (40-h.p. Daimler), Mr. P. S. Douglas Hamilton, London (40-h.p. Weigel), Sir John and Lady Campbell (45-h.p. Mercedes), and Mr. Alex. Labin, London (50-h.p. De Dietrich).

A Motor Race at Marseilles.

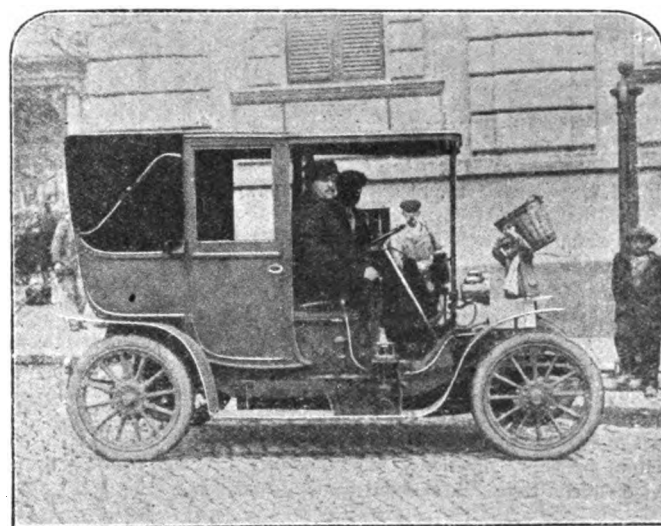
The Automobile Club of Marseilles is organising a 150 mile race for single-cylinder cars up to 110 mm. bore and four-cylinder cars up to 95 mm. for the 28th inst. The event, which is known as the Circuit Provençal des Petites Voitures, will be held on a 30 kilometre course, which will have to be covered eight times.

The St. Petersburg-Moscow Race.

Interest in the St. Petersburg-Moscow race, to be held on the 31st inst., has been increased by the fact that Mr. Chas. Jarrott will be taking part in the contest at the wheel of a De Dietrich. Other well-known drivers who will participate in the event include Duray, Wagner (Fiat) and Demogeot (Darracq). To date seventeen cars have been entered for the race, which is being organised by the Moscow section of the Russian Automobile Club.

Miscellaneous Items.

A steam motor fire engine is being added to the equipment of the brigade of Biebrich-am-Rhine, Germany.—The



One of the Brixia-Zust Motor-cabs lately put in service in Rome.

Munchener Elektromobil Betriebs Gesellschaft is the name of a company which has just been formed in Munich to introduce a service of electrical motor-cabs and carriages in that city.—The French Post and Telegraph Authorities are inviting tenders for the transport of the mails between Peronne and Moislans (Somme), by motor vehicles.—A public motor-car service is about to be established between Gien and Autry, France. Steam 'buses of the Purrey type are to be employed.—It is reported that the Russian War Authorities are carefully watching the industrial vehicle trials in France, with a view to placing an order for thirty military motor wagons.

ACCESSORIES FOR TOURING.

A New Filing Tool.

In the show-rooms of Messrs. Peto and Radford, Ltd., at Hatton Garden, London, E.C., we have seen a new filing tool for use on the platinum contacts of induction coils. The device consists of a large and small circular file working in a metal tube which has side handles. The plan of operation is as follows:—The platinum contacts on the trembler blades are trimmed by removing the screw contacts from the bridge, inserting the small end of the file through the hole in the bridge, and filling up the contact. This is supported by a piece of wood or card placed beneath it. The contact on the blade can also be trimmed by removing it from the coil and holding it firmly against the large end of the file, which is then revolved by the handle. The screw contact can either be filed by inserting it into the small hole at the top, holding it firmly with the thumb, the two fingers grasping the handles, or, if the screw is too large to pass through the hole at the top, it can be filed at the larger end, using the lock-nut as a means of keeping it perfectly true and steady.

Electric Lamps for Cars.

Motorists who have electric lamps on their cars have frequently been worried and annoyed by the breakage of the carbon filaments of the lamps. Such disasters have been regarded as unavoidable in presence of the vibration to which the car is subjected. Several attempts have been made to overcome this vexatious condition of things, but it has remained for one of the pioneers in the adaptation of electric lamps for automobiles to provide an effectual remedy. Messrs. R. and J. Old-

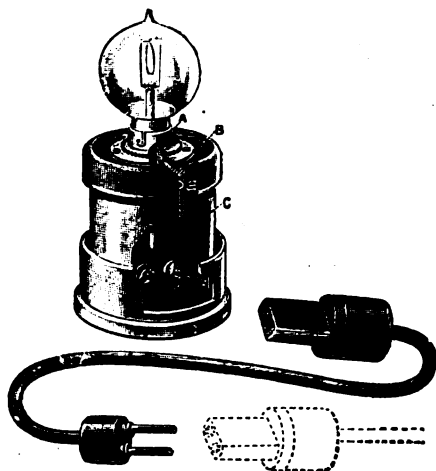


Fig. 1.

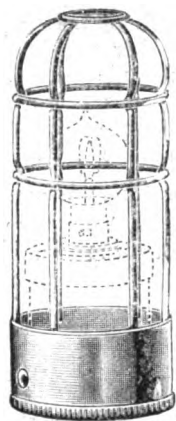


Fig. 2.

field, of Warwick Street, Birmingham, the firm in question, secure this desirable end by interposing a thick rubber disc around the rigid connection which secures the lamp socket. This absorbs all the vibration, and experience has shown that it does this most effectively. In Fig. 1 the lamp is shown with the interposed rubber disc. It will be seen that the wiring is carried down to a double pole plug. There is also a three-yard length of flexible wire with a double pole socket at one end to engage with the plug in the lamp-holder. At the other extremity is a double pole plug which connects up with the wiring of the car and gives the required freedom of movement for an inspection lamp. In Fig. 2 is the brass or wire guard to enable the lamp base to be detached and used for such a purpose. Economy and efficiency are well combined in the device which Messrs. R. and J. Oldfield are now introducing.

An Ingenious Wind-screen.

Recent rainy weather has revealed to many motorists the defects of those wind-screens that allow the rain to completely obstruct the vision. The wet remains on the glass and the difficulties of the driver are by no means relieved by such devices. Recognising this, Mr. A. W. Hemmings set to work to remedy the obvious drawback, and, with the Earl's Court Motor and Garage Company, has brought out a screen which greatly obviates the disadvantages hitherto associated with such accessories. This screen is in the usual top and bottom portions and can be operated from the seat with ample security, while it can be set at any convenient angle. In the upper half of the glass screen is an aperture 10 in. or 11 in. long by about 5 in. deep—although this can be varied as desired—through which the driver can see while the rain is beating pitilessly on the device. Thus the vision of the chauffeur is in no way

impeded, while the passengers are well protected from the weather conditions. When this aperture is not required the glass can be swung over and the distinctive feature of the screen closed by a glass or celluloid shutter, thus restoring the device to the usual appearance. Mr. Hemmings has brought the screen out at an opportune time, and inquiries with regard to other necessary details should be made to him at the Earl's Court Garage, adjoining Earl's Court Station, London, S.W.

Motor-car Wheels.

A divisible rim has been patented by the Coventry Motor Wheel Company, of Fleet Street, Coventry, whose patent detachable wire, artillery and staggered spoke wheels are well known. In the latter case all that is necessary to detach the wheel is to slack out the nuts, give the nave-plate a slight turn till the holes are opposite the nuts, when the wheel and nave-plate will pull off.

Repairs to Cars.

A recent visit to the extensive and extending works of Panhard and Levassor, at Acton Vale, London, W., has revealed the capacity of the firm for dealing with cars that have suffered mishap. We saw half-a-dozen that had been in the wars, one that had encountered a tram; others that had been cornered by other cars at cross roads, steering deranged, members of the frame bent and other signs of damage present, all being put right by the efficient staff of mechanics under charge of Mr. W. A. Turpin. The repair department is not confined to the renovation of chassis, for there are departments specialising on carriage work, lamps, upholstery and tyres—all adequately equipped for promptly executing any special work entrusted to their care. During recent months many ordinary tonneau bodies have been converted into fashionable side entrance ones at these works, which occupy a site of about two acres in extent. The stock of spare parts, &c., is valued at several thousand pounds, and a full range of accessories is kept in the showrooms. The range of enterprises undertaken by the firm is exceptionally wide, including wind screens, canopies, wheels, &c. Not only are these supplied, but repairs to all such accessories are carried out. Whenever a motorist meets with a mishap to his car he can have it sent to this well-known Acton Vale establishment, from whence it will be returned with necessary replacements, &c., in the minimum time.

Pullman's Non-skids, &c.

The non-skid devices of Messrs. R. and J. Pullman, Ltd., of the Westbrook Mills, Godalming, are well known to motorists as reliable and durable means to a very desirable end. For the coming season they are making a feature of the "Steelbur" type and also the "1908 detachable," the latter being fitted with the registered clip of the firm. This device is to meet the demand for detachable bands, and the clip will materially assist the operation of fitting and removing, while, owing to the special construction of this band, the studded portion when worn out can be renewed at a cost of about half the original expense of the band. The "Leather" — a combination of leather and rubber — continues to maintain its reputation, while the "Steelbur" offers a combination which should become equally popular. This is a rubber and steel-studded band in which the studs, being embedded in the rubber tread, require no intermediate lining to protect the cover. In addition to providing the motorist with non-skid bands of an excellent type, Messrs. R. and J. Pullman, Ltd., also undertake the re-rubbing of tyres and repair work of every variety. All the leather used in their productions is actually prepared by them, and their chamois leathers, &c., should always be ready to hand when on motoring expeditions.

MESSRS. OLDFIELD, Warwick Street, Birmingham, the manufacturers of the well-known "Dependence" lamps, have opened a London depot and showrooms at 215, Shaftesbury Avenue, W.C., under the management of Mr. P. J. Oldfield, one of the directors of the company.

ON Tuesday last we had an opportunity of going over the works of the Motor Radiator Manufacturing Company in Tanner Street, Bermondsey, S.E., and of inspecting the manufacture of radiators under the Zimmermann patents, the principal advantages claimed for which are strength, tightness and efficiency. Round tubes of drawn brass are employed; the composition by which they are welded together is a secret preparation, but it may be mentioned that it possesses the same expansive properties as the tubes themselves, and under the influence of heat gives a solid surface which ensures an absolutely watertight wall combined with a perfectly even filling between the tubes. The works are equipped with up-to-date plant, the various shops comprising carpenter's, plating, galvanizing, testing, tin-smithing, drilling and cutting departments, which are all under the personal supervision of Mr. P. O. Serck, the manager director of the company in this country.

Correspondence.

[Letters to the Editor should be addressed to the offices, 27-33, Charing Cross Road, London, W.C.]

ROADS IN FRANCE.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—During my recent trip in France I noticed a very large number of workmen employed on the road throughout the whole of France from the north to the south, digging trenches at intervals of every 200 metres, over half the width of the road, alternately to the right and left. The manner in which this was being done, whereby the trench was dug and the earth out of it piled up in the middle of the road, without any warning of any sort, nearly caused me on several occasions to have an accident. The regularity with which the work was performed and the tremendous distance over which the operations seemed to extend eventually led me to inquire from some of the workmen as to the object of the trenches in question, and I then found that the Administration of Control of the Routes Nationales was proceeding throughout the whole of France with the testing of the metalled highways, so as to take note of the thickness and composition of the roads.

It appears that every sixty years a test is made as to the increase or decrease of the capital which these roads represent, as shown by the thickness of the road surface, and to enable the Administration to see whether the maintenance of the road in question has been expensive or otherwise. The complete testing is taking over two months, and is estimated

In a sucker, the middle of the leather is lifted while the edges remain with a firm grip on the ground due to partial vacuum. In a motor-tyre it is just the reverse, the edges of the tyre lifting before the middle of the tread so that not much suction is formed.—Yours truly,

H. LOMAS.

DRIVERS' LICENCES.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—With reference to the case of the chauffeur who forgot the expiry of his licence, and whose employer was summoned, would it not be possible for motorists to unite to persuade the Government to abolish the section of the Act requiring driving licences when the Expiring Laws Continuance Bill is read at the end of the present session?

Any tendency towards furious driving which the abolition of licences might create could easily be counteracted by heavier fines or even by imprisonment in flagrant cases. Driving licences lead to too many technical offences, such as learning to drive without a licence, or driving if the driver was taken ill, &c. Can anyone be convicted of driving without a licence who merely steers a car to set the driver's hands free a moment? Has this doubtful point ever been definitely decided?



Motoring in Sumatra.—Crossing the Betimeos River.

[De Auto.]

at a cost of about one million francs. I cannot say that I appreciated the surface of the roads after these trenches had been dug, as, even when they were filled in, the damage done to one's tyres was very considerable; but I thought the whole idea was educational, as showing the enormous difference in the manner in which the highways are looked after in France, as compared to the half-hearted manner in which road-making and up-keep is attended to in England.

The operation in question may, from a practical point of view, be entirely unnecessary, but the fact remains that the French as a nation realise that in their highways they have a national asset, and, this being the case, their welfare and up-keep is attended to by a special committee, working on businesslike lines.—Yours truly,

CHARLES JARROTT.

THE EFFECT OF STUDDED TYRES ON ROADS.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—Whilst looking through the *M.C.J.* I came across a reply to Capt. Windham in regard to studded tyres. "Studions," in the issue for March 28th, 1908, states that he is surprised that "Capt. Windham should make such a dead set against such a useful and reliable invention as the studded tyre." Personally I agree with Capt. Windham. That the studded tyre is a useful article on greasy roads there is no doubt, but at the same time I cannot agree that the plain, soft rubber tread does more damage than hardened steel studs. I do not see how his illustration of the boy's sucker comes in with a plain tyre.

Motorists would be wise, in my opinion, to accept quietly the speed limit until the dust nuisance has been abated by more general tarring of the roads.

As high-powered cars are going rather out of favour, it will not much matter whether there is a speed limit or not. There are very few roads here where I should care to drive 20 m.p.h. on my 6-h.p. car. Low-powered cars seem to be rather in favour in my district of Buckinghamshire.

With regard to the present minimum age of seventeen at which anyone may drive a motor-car, some means would have to be found of enforcing the observance of this rule if driving licences are abolished—probably the best means would be to require every car-driver to produce proof to the police-sergeant in his district that he was over seventeen, say a declaration from parents or guardians to that effect.—Yours truly,

CECIL JACKSON.

THE CAUSES OF ACCIDENTS.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—I was very much interested in the article on the above subject in the last issue of the *M.C.J.* The many bad points of the professional driver are always being referred to in the motor press, but, as a chauffeur of some years' standing, I venture to submit that there is another side to the picture. Very few owners of motor-cars realise that there is a limitation of the powers of a driver. The latter often finds that the duties devolving upon him are in part to make an early morn-

ing trip to the owner's office, then to return to take madame on a shopping tour, followed by a drive in the afternoon, the theatre at night, and then, perhaps, a ball, which keeps him from his bed until the early morning hours, allowing only a brief time for sleep, and then to repeat with slight variation the same thing the next day. Obviously human nature can stand this strain only for a very short time. Then, when mentally unstrung and physically tired, an emergency arises, the driver is not capable of the clear, quick thought and action necessary to avoid an accident, he is blamed for carelessness when in truth the condemnation should be visited upon the head of the employer who, considering only his own desires, demands of another that which no man is capable of giving. The point I have endeavoured to bring out is, I am sure, a contributing cause of accident too often unsuspected and rarely, if ever, remarked.—Yours truly,

A. DRIVER.

AN IGNITION DIFFICULTY.

To THE EDITOR OF *The Motor-Car Journal*.

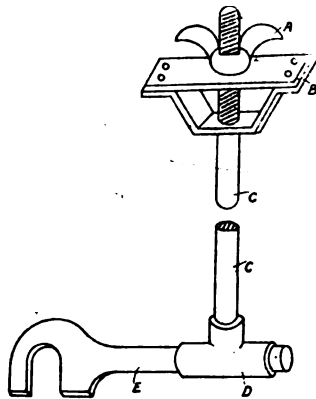
SIR,—Referring to the letter from R. Johnston in the last issue of the *M.C.J.* regarding a mysterious case of "missing," I have recently experienced a similar trouble. In my case I found it to be due to a greasy and poorly connected earth wire. Perhaps Mr. Johnston's trouble may be due to a similar cause.—Yours truly,

PUTNEYITE.

A NOVEL VALVE-REMOVING TOOL.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—I have just received a copy of the *Motor-Car Journal* of January 3rd last, in which I note a very good reproduction of a photo of my 8-10-h.p. Talbot car, for which accept my best thanks. I notice that you have spelt my name wrong, "Beere" instead of "Beebe," but that is only a small matter, we being so many miles apart.



- A.—Wing nut.
B.—Cross head to rest upon heads of cylinders when cylinders are cast separately.
C.— $\frac{1}{2}$ in. solid rod screwed at each end for wing nut and to fit into T piece to be required length.
D.—Ordinary $\frac{3}{4}$ in. T piece used by gas fitters.
E.—Forged to fit under washer of valve stem and to work freely in T piece D.

I noticed in the issue received a very simple valve-lifter; I had one made to my own idea for my car, which has cast separately cylinders, a rough drawing of which I enclose. This idea may be of interest to some of your readers. To place the valve-lifter in position slip E out of the T piece D, drop the rod down between cylinders, replace E in T piece D, put fork under washer of valve spring and screw up wing nut A.—Yours truly,

W. BEEBE.

Bendigo, Australia.

HIRING OUT CARS.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—We note that one of your correspondents who is compelled to give up his trade through ill-health, asks for advice upon the above subject, and if it will be of assistance to "G. G." we have pleasure in giving you information for him based upon the experience of those of our clients who have carried out this business on a small scale. Taking your correspondent's questions in the order set forth, we may inform him that it is possible to buy a car and hire it out profitably. Exactly what "G. G." implies by "private" hiring we do not know, but to be thoroughly successful hiring of every sort should be undertaken and advertising in the local papers, hotels, &c., must be carried out if enough work is to be obtained. A great deal depends upon the locality and upon existing hiring facilities; if at a mere sea-side pleasure resort the business will chiefly be a summer one, which, of itself, cannot be made to pay, as it must be borne in mind that depreciation of a car takes place throughout the whole year. Our client's experience has been that regular hiring is necessary if the busi-

ness is to be profitable, and in certain districts this can be obtained from commercial travellers, &c., providing the car is a small one.

As regards a good make of car for this purpose any of the well-known makes would be satisfactory, and it would not do to specify any particular car in this letter. A hood and wind-screen are indispensable for hire work; as regards cost, it is impossible to state definite figures from the information given, but a carefully fitted out car of some 12-14-h.p., not more than twelve months old, could be obtained for about £220. Such a car would be quite satisfactory if due precautions were taken in its selection and purchase. A car of medium power, of not too great a weight, would be most suitable, and for the kind of work which "G. G." contemplates a fairly small car—which could be profitably hired out at a low sum, would be best. These points, and the general condition of the mechanism would be the important ones to observe when buying.

The licence it would be necessary to obtain is the usual driver's licence, and the tax the usual Inland Revenue for a four-wheeled motor-propelled carriage, together with motor-car registration fee; if the car were to "ply for hire" in the same way as a cab or wagonette, a licence as a public vehicle would also have to be obtained. This service, by the way, can be made to pay in certain instances in seaside towns, where a sixpenny trip can be made to and from the local "attractions," such as ruins, cricket grounds, racecourse, &c. Trusting these brief remarks may be of use to "G. G."—Yours truly,

MARKHAM AND PRANCE.

Consulting Motor Engineers.

THE POSITION OF PEDALS.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—I was much interested in the subject of "Position of Pedals" in your recent issue. It is without doubt a topic worth discussion, as it is responsible not only for the safety of the public, but also the occupants of the car. Even a careful driver is apt to neglect his duty until it is too late, when proceeding through a busy thoroughfare; and when, in the excitement of a tight corner, he jams down his right foot! But, alas! he has caught the accelerator pedal, with obvious results.

In most makes of cars there are three foot pedals, two to be worked by the right foot and the other by the left foot. Now the two that are worked by the right foot are as follows:—One for increasing the speed and the other for decreasing the speed. Why not have the pedals placed thus—have the two pedals that have practically the same action, viz., the clutch and the brake pedals, fixed to be worked either by the left or the right foot, so that in a tight corner it matters not which of the two is depressed in a hurry? Hoping this will have further discussion.—Yours truly,

L. HULL.

LOSS OF POWER.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—My car—a single-cylinder 8-h.p. with chain drive—which for a long time has given me great satisfaction, has lately caused me a little worry. Everything about the engine—compression, valves, ignition, &c., appears in good order, but whenever I try to get the car on the top third speed, the power of the motor seems to die away, and were I not to quickly drop to the second gear it would stop. On the second speed the engine pulls splendidly without any sign of trouble, but the moment I change up the difficulty begins. The result is that I have to drive on the second even on the level, and although the engine is running fast, progression is slow. If you can give me any hints as to the cause of the trouble and its remedy I should be greatly obliged.—Yours truly,

EASTBOURNE.

[If "Eastbourne" is quite assured that there is no appreciable loss of power in the engine we suggest that the loss of power may be due to the chains and sprockets. Chains exposed to the dirt (as nearly all motor chains unfortunately are) soon lose their efficiency of transmission by wearing, and so stretching. The teeth of the sprockets also wear to an incorrect form. When the chain has stretched and its pitch is thus altered it no longer leaves the teeth of the sprockets sweetly, and this causes an appreciable loss of power. A lot, of course, depends on whether the chains are kept clean, and the joints well lubricated. Boiling them in a mixture of tallow and graphite powder, and subsequently wiping off superfluous grease, is a good practice. In large cars, where there is a surplus of power to spare, the loss of efficiency in transmission through worn chains is more difficult to notice, but in a little eight horse power car like the one we are dealing with there is no power to waste, and it is therefore quite possible that our correspondent will find that new chains may enable him to get along on the top speed again. There are, of course, other things that may be causing the trouble, such, for instance, as want of alignment in the sprockets, worn bearings, &c.]

A READER asks for the best route from Sudbury (Suffolk) to Ramsgate, avoiding London.

"FLORENT" writes:—"I should like to hear the experiences of readers who have used flake graphite in the oil in the crank case of their engines."

THE ROVER CARS.—"Marathon" writes asking users of the popular little 8-h.p. Rover cars to give their experiences of the same, especially as to the cost of running, the tyre bill, &c.

THE IRISH RELIABILITY TRIAL.

The following details of the cars that will compete in the Irish Reliability Trials towards the end of the present month will be of general interest.

SECTION I.—OPEN.

| Name of Entrant. | Name of Vehicle. | Seating Capacity | H.P. | Engine. | | | Price of Chassis. | Price Complete. | Team No. | Ignition. | Supplementary Ignition. |
|--------------------------------------|-----------------------|------------------|-------|-----------|-------------|-------------|-------------------|-----------------|----------|----------------------|-------------------------|
| | | | | Bore. mm. | Stroke. mm. | No. of Cyl. | | | | | |
| CLASS A. | | | | | | | | | | | |
| The Rover Co., Ltd. ... | Rover ... | 2 | 6 | 114 | 130 | 1 | £ 140 | £ 148 | 7 | Accumulator and coil | Magneto. |
| Phoenix Motors, Ltd. ... | Phoenix ... | 2 | 8 | 80 | 80 | 2 | 138 | 148 | — | H.T. magneto | — |
| E. Lisle, Jun. ... | Imperial Starling ... | 2 | 8 | 114 | 120 | 1 | 130 | 160 | 2 | Accumulator and coil | — |
| E. Lisle, Jun. ... | Royal Starling ... | 2 | 10 | 96 | 109 | 2 | 150 | 175 | 2 | Accumulator and coil | — |
| Herbert S. Huet ... | Royal Starling ... | 2 | 10 | 96 | 109 | 2 | 150 | 175 | 2 | Accumulator and coil | — |
| Pownall D. Perry ... | Ford ... | 2 | 15-18 | 95 | 86 | 4 | 150 | 165 | 5 | Accumulator and coil | — |
| Pownall D. Perry ... | Ford ... | 2 | 15-18 | 95 | 86 | 4 | 150 | 165 | 5 | Accumulator and coil | — |
| CLASS B. | | | | | | | | | | | |
| The Rover Co., Ltd. ... | Rover ... | 2 | 8 | 114 | 130 | 1 | 200 | 222 | 7 | Accumulator | Magneto. |
| T. W. Murphy ... | Rover ... | 2 | 8-10 | 114 | 130 | 1 | 200 | 222 | — | Accumulator | Magneto. |
| Smeddle Kennedy Motors | "S. K." Simplex ... | 2 | 8-10 | 89 | 114 | 2 | 170 | 195 | — | L.T. magneto | — |
| F. S. Bennett ... | Cadillac ... | 2 | 9-10 | 127 | 127 | 1 | 198 | 210 | 8 | Coil and batteries | — |
| Morgan & Co., Ltd. ... | Adler ... | 2 | 5-9 | 85 | 100 | 2 | 200 | 210 | — | Accumulator and coil | H.T. magneto. |
| Chambers Motors, Ltd. | Chambers ... | 2 | 10-12 | 101 | 114 | 2 | 200 | 225 | 6 | Accumulator and coil | — |
| Robert Burns ... | Swift ... | 2 | 10-12 | 102 | 111 | 2 | 200 | 225 | 12 | Accumulator and coil | H.T. magneto. |
| F. E. Carter ... | Swift ... | 2 | 10-12 | 102 | 111 | 2 | 200 | 225 | 12 | Accumulator and coil | — |
| Pownall D. Perry ... | Ford ... | 2 | 15-18 | 95 | 86 | 4 | 175 | 190 | 5 | Accumulator and coil | — |
| Pownall D. Perry ... | Ford ... | 3 | 15-18 | 95 | 86 | 4 | 185 | 200 | — | Accumulator and coil | — |
| Frank Eason ... | Buick ... | 2 or 3 | 15-20 | 95 | 95 | 4 | 200 | 235 | — | Accumulator and coil | — |
| CLASS C. | | | | | | | | | | | |
| J. W. Buchanan ... | Humber ... | 4 | 10-12 | 89 | 95 | 4 | 235 | 250 | — | Accumulator and coil | — |
| Walter Phillips ... | Humber ... | 4 | 10-12 | 89 | 95 | 4 | 250 | 265 | 10 | Accumulator and coil | H.T. magneto. |
| The Riley Cycle Co., Ltd. | Riley ... | 4 | 12 | 101.6 | 127 | 2 | 235 | 246 | — | Accumulator and coil | S.-Bosch magneto. |
| Chambers Motors, Ltd. | Chambers ... | 4 | 10-12 | 101 | 114 | 2 | 216 | 271 | 6 | Accumulator and coil | H.T. magneto. |
| Chambers Motors, Ltd. | Chambers ... | 4 | 10-12 | 101 | 114 | 2 | 216 | 271 | 6 | Accumulator and coil | H.T. magneto. |
| Messrs. Turner Bros. ... | Cadillac ... | 4 | 9-10 | 127 | 127 | 1 | 210 | 231 | 8 | Accumulator and coil | — |
| M. T. Woods ... | Belsize ... | 4 | 14-16 | 89 | 102 | 4 | 280 | 285 | — | H.T. magneto | Accumulator & coil. |
| CLASS D. | | | | | | | | | | | |
| W. F. Peare ... | Gladiator ... | 4 | 12-14 | 80 | 110 | 4 | 325 | 375 | 9 | H.T. magneto | — |
| Walter Phillips ... | Humber ... | 4 | 15 | 98 | 114 | 4 | 325 | 350 | 10 | Accumulator and coil | Magneto. |
| J. B. Ferguson, Ltd. | Argyll ... | 4 | 14-16 | 90 | 120 | 4 | 350 | 375 | — | Accumulator and coil | S.-Bosch magneto. |
| A. Rawlinson ... | Darracq ... | 4 | 14-16 | 85 | 100 | 4 | 320 | 355 | — | H.T. magneto | Accumulator & coil. |
| P. A. G. Bell ... | Bell ... | 4 | 16 | 90.5 | 117 | 4 | 318 | 388 | — | H.T. coil | H.T. magneto. |
| G. W. Hands ... | Calthorpe ... | 4 | 16-20 | 93 | 105 | 4 | 319 | 369 | 1 | Accumulator and coil | H.T. magneto. |
| T. R. Fletcher ... | Calthorpe ... | 4 | 16-20 | 93 | 105 | 4 | 324 | 374 | 1 | Accumulator and coil | H.T. magneto. |
| Leslie Porter ... | Calthorpe ... | 5 | 16-20 | 93 | 105 | 4 | 304 | 354 | 1 | Accumulator and coil | Magneto. |
| The British Motobloc Syndicate, Ltd. | Motobloc ... | 4 | 18 | 90 | 110 | 4 | 325 | 365 | — | H.T. magneto | — |
| Robert Burns ... | Swift ... | 4 | 18-24 | 102 | 111 | 4 | 350 | 400 | — | Accumulator and coil | — |
| CLASS E. | | | | | | | | | | | |
| A. A. Armitage ... | C.C.C. ... | 4 | 18-22 | 95 | 120 | 4 | 395 | 450 | — | H.T. magneto | Accumulator & coil. |
| S. T. Robinson ... | Clement-Talbot ... | 5 | 15 | 90 | 117 | 4 | 450 | 495 | — | H.T. magneto | Accumulator & coil. |
| A. G. Power ... | Berliet ... | 4 | 14-16 | 80 | 120 | 4 | 415 | 485 | 11 | L.T. magneto | — |
| Hugh MacConnell | Stella ... | 4 | 16-20 | 90 | 120 | 4 | 395 | 450 | — | L.T. magneto | Accumulator & coil. |
| J. Percy Dean ... | Scout ... | 4 | 20 | 102 | 115 | 4 | 440 | 500 | — | Coil and accumulator | Magneto. |
| D. H. McDowell ... | Beeston-Humber | 5 | 20 | 105 | 130 | 4 | 375 | 435 | 10 | Magneto | Accumulator & coil. |
| W. G. Wilkinson ... | Rover ... | 4 | 20 | 97 | 110 | 4 | 384 | 434 | 7 | Accumulator and coil | Magneto. |
| W. S. Forster-Conll | Cadillac ... | 4 | 20 | 102 | 114 | 4 | 425 | 445 | 8 | Accumulator and coil | — |
| Clement-Talbot, Ltd. | Clement-Talbot | 5 | 15 | 90 | 117 | 4 | 450 | 495 | 3 | Accumulator and coil | Magneto. |
| Messrs. Booth Bros. ... | Siddeley ... | 4 | 18 | 102 | 114 | 4 | 445 | 445 | — | Accumulator and coil | H.T. magneto. |
| CLASS F. | | | | | | | | | | | |
| Frederic Eastmead ... | Sunbeam ... | 4 | 20 | 105 | 136 | 4 | 508 | 563 | — | H.T. magneto | Coil & accumulator. |
| Clement-Talbot, Ltd. | Clement-Talbot | 5 | 25 | 105 | 120 | 4 | 530 | 590 | 3 | Accumulator and coil | Magneto. |
| Clement-Talbot, Ltd. | Clement-Talbot | 5 | 25 | 105 | 120 | 4 | 530 | 590 | 3 | Accumulator and coil | Magneto. |
| A. Rawlinson ... | Darracq ... | 4 | 25-35 | 120 | 120 | 4 | 495 | 525 | — | Accumulator and coil | Magneto. |
| S. T. Robinson ... | Weigel ... | 5 | 25 | 110 | 120 | 4 | 500 | 575 | — | H.T. magneto | — |
| S. T. Robinson ... | Minerva ... | 5 | 28 | 120 | 130 | 4 | 525 | 585 | — | H.T. magneto | Coil & accumulator. |
| A. G. Power ... | Berliet ... | 4 | 22 | 100 | 120 | 4 | 548 | 625 | 11 | L.T. magneto | — |
| R. W. Morris ... | Gladiator ... | 4 | 18-24 | 104.8 | 127 | 4 | 475 | 570 | 9 | L.T. magneto | Accumulator & coil. |
| CLASS G. | | | | | | | | | | | |
| Thos. Henshaw ... | Daimler ... | 5 | 35 | 140 | 150 | 4 | 625 | 725 | — | Accumulator and coil | H.T. magneto. |
| W. F. Peare ... | Gladiator ... | — | 35-45 | 115 | 140 | 4 | 600 | — | — | H.T. magneto | — |
| A. G. Power ... | Berliet ... | 5 | 40 | 120 | 140 | 4 | 690 | 775 | 11 | L.T. magneto | — |
| Thos. Watson ... | Austin ... | 5 | 25-30 | 115 | 127 | 4 | 600 | 700 | — | L.T. magneto | Accumulator & coil. |
| CLASS H. | | | | | | | | | | | |
| S. F. Edge ... | Napier ... | 4 | 60 | 127 | 127 | 6 | 1,081 | 1,191 | — | Accumulator and coil | — |

THE IRISH RELIABILITY TRIAL (continued).

SECTION II.—LIMITED.

| Name of Entrant. | Name of Vehicle. | Seating Capacity | H.P. | Engine. | | | Price of Chassis. | Price Complete. | Team No. | Ignition. | Supplementary Ignition. |
|--------------------------|---------------------|------------------|-------|-----------|-------------|-------------|-------------------|-----------------|----------|----------------------|-------------------------|
| | | | | Bore. mm. | Stroke. mm. | No. of Cyl. | | | | | |
| CLASS B. | | | | | | | | | | | |
| T. W. Murphy | Rover | 2 | 8-10 | 114 | 130 | 1 | £ 200 | £ 222 | 4 | Accumulator and coil | Magneto. |
| Capt. J. S. Hamilton ... | Darracq | 2 | 8-10 | 90 | 120 | 2 | 175 | 199 | — | H.T. magneto ... | Coil & accumulator. |
| J. G. Drury | Rover | 2 | 8-10 | 114 | 130 | 1 | 188 | 210 | 4 | Accumulator and coil | — |
| F. E. Carter | Swift | 2 | 10-12 | 102 | 111 | 2 | 200 | 225 | — | Accumulator and coil | — |
| CLASS C. | | | | | | | | | | | |
| P. Hallinan | Riley | 5 | 12-18 | 102 | 127 | 2 | 250 | 283 | — | Accumulator and coil | — |
| CLASS D. | | | | | | | | | | | |
| H. Kenny | Argyll | 4 | 14-16 | 90 | 120 | 4 | 310 | 355 | — | Accumulator and coil | — |
| John Browne | Coventry-Humber ... | 4 | 15 | 98.5 | 111.5 | 4 | 290 | 340 | — | Accumulator and coil | Magneto. |
| CLASS E. | | | | | | | | | | | |
| Major R.A.F. Kingscote | Germain | 4 | 14-22 | 92 | 110 | 4 | 413 | 538 | — | H.T. magneto ... | Accumulator & coil. |
| H. B. Browning... | Rover | 5 | 20 | 97 | 110 | 4 | 400 | 450 | 4 | Coil and accumulator | H.T. magneto. |
| T. G. Studdert | De Dion | 4 | 12-14 | 75 | 100 | 4 | 358 | 425 | — | Accumulator and coil | Magneto. |
| W. D. Forster Coull ... | Cadillac | 5 | 20 | 100 | 114 | 4 | 425 | 445 | — | Accumulator and coil | H.T. magneto. |
| M. A. Robinson... | Argyll | 5 | 16-20 | 95 | 130 | 4 | 430 | 450 | — | Accumulator and coil | H.T. magneto. |
| CLASS F. | | | | | | | | | | | |
| T. Macgregor Greer ... | Minerva | 5 | 24 | 106 | 115 | 4 | 460 | 520 | — | Accumulator and coil | Magneto. |
| R. W. Morris | Gladiator | 5 | 18-24 | 104.8 | 127 | 4 | 480 | 575 | — | H.T. magneto ... | — |
| J. G. O'Brien | Clement-Talbot ... | 5 | 20-24 | 100 | 120 | 4 | 530 | 590 | — | H.T. magneto ... | Accumulator & coil. |
| CLASS G. | | | | | | | | | | | |
| A. N. Johnstone | De Dietrich | 5 | 24-30 | 120 | 120 | 4 | 680 | 780 | — | L.T. magneto ... | — |
| T. L. Plunkett | Daimler | 5 or 6 | 48 | 140 | 150 | 4 | 679 | 725 | — | Accumulator and coil | Magneto. |
| T. Henshaw | Daimler | 5 | 48 | 140 | 150 | 4 | 625 | 725 | — | Accumulator and coil | Simms-Bosch mag. |

[In cases where there are blanks in the details the particulars have not yet been supplied to the club.

ROAD REPORTS.

MARGATE.—The Council have decided to paint with tar portions of the main roadways. Hitherto the County Council have paid part of the cost incurred in watering these roads. They have now notified their intention to discontinue doing so, but have promised to pay half the cost of tar painting.

NECESSITY OF SOUND CONSTRUCTION.—In the course of a paper on "Roads and Road Making," before the department of Civil Engineering of the Birmingham University, Mr. H. E. Stilgoe, the city engineer and surveyor, detailed the methods of modern road making and urged the necessity of securing a sound and well-drained foundation as a means of securing that a minimum of dust only should be raised by traffic using the same.

EAST STIRLINGSHIRE.—The surveyor to the Eastern District Committee of the Stirlingshire County Council on speed of motor-cars notices "that where motorists observe the ten mile per hour restriction on roads they do little damage and raise very little dust when the roads are dry." The work of widening and filling out the drooping sides of some of the roads is being continued, so that the drivers of vehicles will ultimately be able to obtain the free use of the full width of the road when approaching motor or any other traffic. Mr. W. Ballantyne, the surveyor, refers to the increase of through going motor traffic, and deplors the excessive strain on the surface of the road caused by steel-studded tyres.

PUTNEY.—A local correspondent writes:—"If there is a thoroughfare more unfortunate than Piccadilly in the attacks made upon it by people whose mission in life it is to tear up roads, then surely that thoroughfare is Putney High Street. It is very rarely that the stretch of road from the top of the High Street to the other end of Putney Bridge is quite free from excavations. Take the last six months, for instance. For many weary weeks the road across the river bridge and its vicinity was more or less in a state of chaos. Now that disadvantage to traffic is removed, the road over the railway bridge is "up"! Unwieldy motor-buses, cars, drays, &c., all have to ascend or descend the incline in the space of a few yards. A better opening for a numerous set of accidents has seldom been offered—even in Putney High Street."

HERTFORDSHIRE.—The Herts County Council has decided to tar fifty miles of main roads in the county at a cost not exceeding £40 a mile. They are also applying to the Local Government Board for an order limiting to a rate not exceeding ten miles an hour the speed of motor-cars passing along Pinnocks Lane and the High Street in Baldock Urban District.

MIDDLESEX.—The Middlesex County Council has decided to ask the Local Government Board to make regulations under the Motor Car Act, 1903, prohibiting the driving of motor-cars along certain roads in Teddington urban district and Shepperton parish at a speed exceeding ten miles an hour. The roads affected are Waldegrave Road, Twicken-

ham Road and Manor Road, in Teddington, and the main road through Shepperton from Halliford Green to Ferry Lane. With regard to the application made some time ago for the reduction of the speed limit of motor-cars in the portion of Hillingdon East, from the eastern boundary to Lees Road and from Harlington Road to the top of Hillingdon Hill, the L.G.B. has reported that they think it desirable to issue a regulation under the Act restricting the speed of motor-cars along so much of the road as extends from Harlington Road to the top of Hillingdon Hill. With regard to the remaining length of road included in the application, the Board do not consider that sufficient reason has been shown to justify them in prescribing a reduced speed limit and they have therefore decided not to include it in their order.

LANCASTER.—The well-known trap at Scotforth is again in frequent operation and several motorists have lately been caught therein. It leads to the Lancaster County Police Court.

WANSTEAD.—The police in this part of Essex have lately been watchful of motorists, and two or three "controls" have been constituted on the roads leading to Woodford and Epping Forest.

COMPANY NEWS:

ROADITE.—April 14th. £2,500 (2,000 preference). Agreement with F. S. Ingle and S. Howard. Manufacturers, vendors, or factors of material known as Roadite, for making, repairing, or improving roads &c. 22, Milsom Street, Bath.

MOTOR RACING TRACK.—April 13th. £5,000. To acquire certain inventions and patents relating to the construction of motor vehicles, tracks, and railways for amusement and like purposes; to adopt an agreement between P. Marshall, C. C. Metcalfe, W. Knowles, and H. H. Martyn of the first part, the said H. H. Martyn of the second part, and the company of the third part, &c. 25, Brazennose Street, Manchester.

HEATH GARAGE.—£12,000. To acquire business of automobile engineers and factors carried on at Birmingham as G. F. Heath and Co. Agreement with G. F. Heath and H. P. Barker. 49, John Bright Street, Birmingham.

SOUTH OF ENGLAND AUTOMOBILE COMPANY.—£5,000. 38, Dover Street, W.

ECONOMIC AUTOMOBILE COMPANY.—£1,000. Makers of automobile carriages under licence from M. J. Journaux, of Paris.

ANTI-SKIDDING MOTOR SYNDICATE FOR EUROPE.—£1,000. 26, Wormwood Street, E.C.

BRITISH SIMPLEX MOTORS.—£12,500. Agreement with P. Piellat and O. C. Selbach. 110, High Street, Marylebone.

THE Daimler Company have received an order from Lady Brynmor-Jones, through Messrs. Wm. Whiteley, Ltd., of Westbourne Grove, London, for a 30-h.p. Blackdown landaulet.

CLUBS AND ASSOCIATIONS.

ROYAL.

THE Coventry Motor Club and the Society of Road Traction Engineers have decided to be associated with the R.A.C. Upwards of 100 associates are down for election at the meeting of the R.A.C. General Committee to be held to-day (Saturday) at Nottingham.

THE MOTOR UNION.

AN enthusiastic scene was witnessed at the monthly meeting of the Motor Union, held at the Hotel Cecil, when Mr. Joynson Hicks, M.P., the chairman, presided. Delegates gave the chairman a musical greeting, and a vote of congratulation was proposed by Mr. C. H. Dodd (Reading), seconded by Mr. R. H. Oldfield and supported by the Rev. Altamas Ward, chairman of the Bristol and Gloucester A.C. Responding, Mr. Joynson Hicks, M.P., said he received great assistance from motorists in his contest, and now that he was in the House the interests of the motor world should not be lost sight of.

Col. H. J. W. Jerome, C.B., of Bilton Hall, York, was elected an additional representative of individual members.

A discussion took place on inconsiderate driving, in connection with complaints received by the Highways Protection Committee, and in regard to one person complained of mention was made that he had since been prosecuted and had had his licence suspended for twelve months. The Union is prepared to prosecute in cases in which the persons complaining are prepared to give evidence and the committee consider that the circumstances warrant prosecution.

Delegates were appointed to a conference of various road organisations to take place after the second reading of the Licensing Bill, to

Siddeley, Sims, Swindley, Williams, and Woollen. Mr. E. M. C. Instone was voted to the chair.

Mr. E. Manville was unanimously re-elected president of the society, and Messrs. S. F. Edge and C. Jarrott were elected vice-presidents.

The Committee of Management was elected as follows:—Messrs Powell, Instone, Atkey, Gascoine, Siddeley, Burford, Scraker, C. Johnson, Coleman, Mann, Letts, and Lanchester.

Two new local sections were formed, namely, one to cover the counties of Huntingdon, Cambridge, Bedford, and Hertford; and the other to cover the counties of Cardigan, Pembroke, Brecon, Carmarthen, Glamorgan, and Monmouth.

At a meeting of the Tyre and Accessories Committee on the 27th ult., replies from members to the circular on the standardisation of rims were considered, and the secretary was directed as to further inquiries to be made on the subject.

A meeting of the committee of the British Manufacturers' Section was held on the 30th ult., when the position in connection with the organisation of the Brussels 1910 Exhibition generally and of the Motor section in particular was reported, and a recommendation was made to the Management Committee that the society should be represented on the Commission with a view to a collective exhibit.

MOTOR CYCLING CLUB.

THERE were no fewer than forty-four entries for the hill climb of the Motor Cycling Club at Sharpenhoe Hill, near Luton, on Saturday. Fortunately the weather was different to that which had been experienced in the early part of the week. The following were the officials:—



The Sharpenhoe Hill Climb.—Mr. S. F. Edge on his 40-h.p. Six-Cylinder Napier and Mr. Charles Jarrott on his 12-h.p. Sizaire-Naudin.

consider what steps should be taken in order to deal with the need for travellers' facilities to procure solid food in addition to liquids.

It was reported that over 520 local authorities had so far passed the resolution for the proceeds of motor and other vehicle taxation to be paid into a central fund, from which grants should be made to local authorities toward expenditure on the roads.

Report was made that the Union had entered upon the task of signposting in a model manner the London-Folkestone-Dover road.

AUTOMOBILE ASSOCIATION.

AMONG the 282 new members elected to the Automobile Association at the committee meeting on Tuesday were the Marquis of Linlithgow, Dowager Marchioness of Linlithgow, Sir Geo. Mackenzie, Major Hon. Alg. Hanbury-Tracy, Capt. Lord Herbert Scott, Major Sir. Leger Jervis, Baron Gunther Diergardt, Sir C. Harding, G.C.M.G., General Hon. E. S. Wortley, Hon. Dudley Carleton, Major-General Vesey Dawson, Hon. F. S. Grimwade, Hon. Miss Mills, Hon. Mrs. Howard, Hon. J. Woodroffe, and Hon. Lady Harvey.

SOCIETY OF MOTOR MANUFACTURERS AND TRADERS.

THE meeting of the new Council of the Society of Motor Manufacturers and Traders was held on Thursday week. There were present:—Messrs. Atkey, Atkinson, A. Brown, Burford, Carver, Clarkson, Coleman, Dennis, Edge, Farnell, Gascoine, Hutton, Instone, Jarrott, H. Johnson, Lanchester, Lisle, H. J. Lloyd, Mann, Moyes, Mulliner, Powell

Judges: Messrs. R. H. Head and E. C. Davis; timekeepers: Mr. F. Bidlake and assistant; marshal: Mr. Victor Abraham; stewards: Messrs. Frank Russell, C. Hunt, J. Godfrey, W. O. Scales, B. Richardson-Billings, and F. S. Biggs. The results were as follows:—Class I. (for motor-bicycles): R. M. Brice, 3½-h.p. Brown, 50½ sec., 1; W. A. Sale, 3½-h.p. Rex, 52 sec., 2; W. A. Jacobs, 3½-h.p. Rex, 60½ sec., 3. Class II. (twin-cylinder motor-cycles): W. H. Wells, 5-h.p. Vindec Special, 49½ sec., 1; E. Pond, 5-h.p. Vindec Special, 51½ sec., 2; F. White, 5-h.p. Rex, 52½ sec., 3. Class III. (passenger motor-cycles): E. Brewerton, 10-h.p. Lagonda, 1 min. 58 sec., 1; A. F. Hsley, 8-h.p. Phoenix, 2 min. 57½ sec., 2. Class IV. (cars): S. F. Edge, 40-h.p. Napier, 1 min. 2½ sec., 1; J. W. Stocks, 24-h.p. De Dion, 1 min. 24½ sec., 2; E. A. Anthony, 15-18-h.p. Ford, 1 min. 25½ sec., 3.

ROADS IMPROVEMENT ASSOCIATION (INCORPORATED).

THE annual general meeting of the Roads Improvement Association was held at 1, Albemarle Street, Piccadilly, W., on the 30th ult. Earl Cadogan, K.G., occupied the chair, and in moving the adoption of the annual report the hon. secretary mentioned that the past year had been one of the most important during the life of the association. The International Road Congress which is to be held in Paris in October, 1908, will doubtless have the effect of practically demonstrating the need for the various reforms in our existing system of highway administration which has been so long advocated by the association.

At the council meeting held subsequently, Earl Cadogan, K.G., was re-elected president; the Hon. Arthur Stanley, M.P., vice-

president; Mr. Robert Todd, chairman; Col. R. E. Crompton, C.B., M.Inst.C.E., M.I.A.E., vice-chairman; and Mr. W. Rees Jeffreys, hon. secretary and acting treasurer.

BROOKLANDS.

THERE are ninety-five entries in the races to be held to-day (Saturday) as follows:—

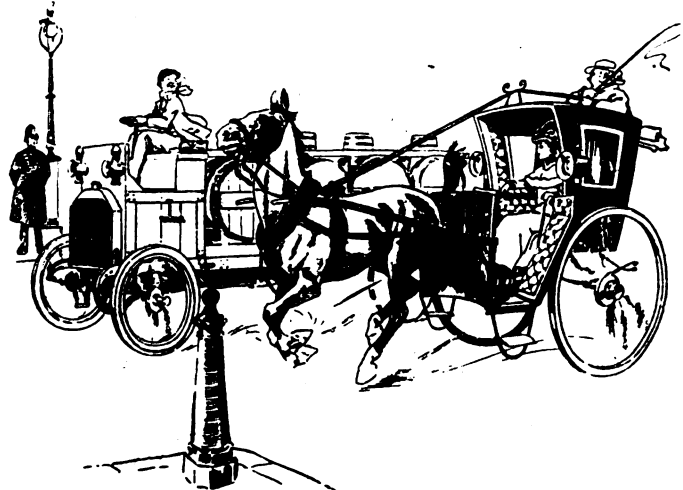
LIMIT SWEEPSTAKES (between six and eight miles).—G. C. G. Moss, 27.2-h.p. Arrol-Johnston; D. Pigot, 35.7-h.p. Berliet; H. G. Nalder, 35.7-h.p. Berliet; J. W. Stocks, 25.6-h.p. De Dion; P. D. Stirling, 35.7-h.p. Berliet; T. A. Scully, 44.5-h.p. Delaunay-Belleville; A. van Hoboken, 71.7-h.p. Mercedes.

MAY CUP HANDICAP (about five miles).—G. C. G. Moss, 27.2-h.p. Arrol-Johnston; P. D. Stirling, 35.7-h.p. Berliet; F. N. Lloyd, 20.1-h.p. Clement-Talbot; H. G. Nalder, 35.7-h.p. Berliet; A. H. Moreing, 38.1-h.p. Daimler; G. Russell-Miller, 22.4-h.p. De la Buire; C. Hobson, 48.6-h.p. Brasier; C. Hobson, 27.9-h.p. Nagant-Hobson; G. Dhveen, 34.6-h.p. Mercedes; the Marquis St. Mars, 39.6-h.p. Napier; J. H. Bell, 59.6-h.p. Bianchi; J. Bullough, 41.9-h.p. Junior; H. C. Halahan, 17.5-h.p. Dennis; C. A. Bird, 34.5-h.p. Mercedes; J. L. Farmiloe, 24.8-h.p. Mercedes; A. van Hoboken, 71.7-h.p. Mercedes; O. S. Thompson, 40-h.p. Austin.

FOURTH 26-H.P. RACE (about three miles).—S. F. Edge, 25.6-h.p. Napier; J. W. Stocks, 25.6-h.p. De Dion; O. Cupper, 25.6-h.p. Metallurgique.

FOURTH 40-H.P. RACE (about 18½ miles).—S. F. Edge, 38.4-h.p. Napier; S. F. Edge, 39.6-h.p. Napier; the Marquis St. Mars, 39.6-h.p. Napier; A. Huntley-Walker, 40-h.p. Darracq; Walter Phillips, 38.4-h.p. Humber.

FOURTH 90-H.P. RACE (about 5½ miles).—F. R. Fry, 76-h.p. Mercedes; E. De Wilton, 76-h.p. Mercedes; S. F. Edge, 90-h.p. Napier; Warwick J. Wright, 100-h.p. Darracq.



From a Sketch

(Issued by the Berliet Company.)

ALL-COMERS' HANDICAP (about 7½ miles).—C. Hobson, 48.6-h.p. Brasier; O. Cupper, 48.2-h.p. Metallurgique; P. D. Stirling, 35.7-h.p. Berliet; H. F. W. Farquharson, 35.7-h.p. Berliet; E. de Wilton, 76-h.p. Mercedes; G. C. G. Moss, 27.2-h.p. Arrol-Johnston; F. R. Fry, 76-h.p. Mercedes; B. S. Millard, 8.9-h.p. Sizaire; D. Pigot, 35.7-h.p. Berliet; F. N. Lloyd, 20.1-h.p. Clement-Talbot; H. G. Nalder, 35.7-h.p. Berliet; S. F. Edge, 38.4-h.p. Napier; S. F. Edge, 25.6-h.p. Napier; J. W. Stocks, 25.6-h.p. De Dion; the Marquis St. Mars, 39.6-h.p. Napier; C. A. Bird, 34.5-h.p. Mercedes; R. G. Empson, 8.9-h.p. Sizaire; P. L. D. Perry, 22.5-h.p. Ford; P. L. D. Perry, 22.5-h.p. Ford; Walter Phillips, 38.4-h.p. Humber; A. van Hoboken, 35.7-h.p. Mercedes.

TOURING RACE, HANDICAP (about 8½ miles).—T. A. Scully, 44.5-h.p. Delaunay-Belleville; O. S. Thompson, 6-h.p. Wolseley; C. Hobson, 27.9-h.p. Nagant-Hobson; J. H. Bell, 59.6-h.p. Bianchi; T. Faulkner, 41.9-h.p. Weigel; R. C. Empson, 8.9-h.p. Sizaire.

To provide covered accommodation for spectators in the half-a-crown enclosure, it has been decided to do away with the former five shilling enclosure, and to include all that ground in the portion allotted to the half-a-crown patrons. The charge for admission to the reserved lawn is being reduced to ten shillings.

A request having been addressed to the club by Mr. Colin Defries that he should register the name "Behemoth" for a Porthos car, the committee has decided that the registration of names can be accepted on the following terms:—The cylinders of the car for which a name is registered to be measured, sealed, and stamped by the Officer-Measurer of the Club, at a fee of one guinea. The name of the car thus sealed will remain registered as long as the seals on the cylinders are unbroken; if the cylinder seals are broken it shall become void, unless the cylinders are re-measured officially and found to be of the same size, a renewed charge of one guinea being made. When entered for races cars with registered names will be given by the name of the maker,

without mention of h.p., with the registered name in inverted commas; thus, Mr. Colin Defries' car will be mentioned in the race card as:—

Mr. Colin Defries ... Porthos ... "Behemoth"

The committee hope that the registration of names will be adopted, as it seems desirable that individual cars should be readily recognised by the public when appearing on a race card.

AUTO-CYCLE UNION.

THE conditions for the next International Auto-Cycle Tourist Trophy Race can be obtained on application to the secretary. The following entries have already been received for this race:—

SINGLE-CYLINDER CLASS.

| | | | |
|------------------------|-----|-----|--------------|
| C. R. Collier (holder) | ... | ... | 1 Matchless. |
| M. J. Schulte | ... | ... | 3 Triumphs. |

MULTI-CYLINDER CLASS.

| | | | |
|------------------------|-----|-----|------------|
| H. Rem Fowler (holder) | ... | ... | 1 Machine. |
| T. Teasier | ... | ... | 1 Bat. |

Mr. M. J. Schulte has offered a silver cup to the first, and a gold medal to the second and third private owners in the single-cylinder Class.

The preliminary regulations and route for the Land's End to John o' Groat's Trial, which will take place from July 13th to 18th, are now ready, and will be sent to intending entrants on application.

The last quarterly trial of the A.C.U. was held on Wednesday of last week. Thirty-one entries were received, and of this number the large proportion of twenty-nine actually started. Despite the road conditions good times were made up Dashwood and Gore Hills, Amersham. Fourteen non-stops were recorded, and first and second class certificates will be awarded at the discretion of the judges to the machines which successfully completed the trial.

LINCOLNSHIRE.

THIS club continues to maintain the best of relations between the local authorities and motorists: it provides a centre of information and advice in connection with the automobile movement. It organises hill-climbs, speed trials and social meets for its members. In conjunction with the Motor Union it takes an active part in matters such as speed limits, and, recently, has required a bridge to be built where a level crossing was intended by the promoters of a light railway. It is essentially an amateur club and is composed of Lincolnshire people only.

HUDDERSFIELD.

THE Huddersfield branch of the Y.A.C. had great influence in preventing a speed limit in the town some years since, and since then have succeeded in getting signs put up in the district directing motorists to other towns. They have also arranged for the Local Council to put up a danger board at a dangerous crossing. The club holds an annual hill climbing competition, and in July each year takes about 100 patients from the Huddersfield Infirmary on to the moors. In addition to these things they, of course, consider all matters dealt with by the Motor Union and give their assistance where possible, so that they are well deserving of the support of all motorists in the locality.

MOTOR.

ALTERATIONS are in full swing at the Motor Club, and in another month the committee hope to open the new smoking and billiard rooms. A bridge and billiard handicap are both in progress and a golf handicap is about to be commenced; forty members have entered. Several cricket matches have been arranged to take place.

The British Motor Boat Club are holding a regatta at Lowestoft on Whit Saturday, June 6th, and it is proposed to have a club run down there on the 5th, watch the regatta, hold a dinner on the 6th and return to town on the Sunday, so that members may be able to attend the meeting at Brooklands on Whit Monday.

SOUTHERN.

THE Southern Motor Club is to-day (Saturday) holding a members speed-judging contest. The members will meet at the Chequers, Horley, at 4 p.m.

ESSEX.

THE annual meeting of the Essex County Automobile Club was held at the G.E.R. Hotel, London, on Wednesday of last week, Mr. Burnett Tabrum, J.P., presiding.

The report having been adopted, the following were re-elected:—President, the Earl of Warwick; vice-presidents, Col. Lockwood, M.P., C.V.O., and Col. W. Nevill Tufnell; chairman, Mr. Burnett Tabrum; hon. treasurer, Mr. Wilfred Arkwright; hon. auditors, Messrs. A. W. Wyon and L. E. Halsey.

HEREFORD.

THE trials which were to have been held upon the Cockshut Hill next week have been postponed in consequence of experimental runs made by members of the Herefordshire Automobile Club. It was found

upon testing the hill that although its gradients were suitable for the purpose, the meandering course was one which could not be negotiated without chances of mishap. There is now a possibility that at the eleventh hour the trials will be held at the Frome's Hill. Negotiations are in progress between the club and the Bromyard authorities with this object in view.

HERTFORDSHIRE.

THE opening meet of the Hertfordshire County A.C. for the present season took place on Saturday, Mr. and Mrs. R. A. Cooper inviting the members to Ashlyns Hall, where genial hospitality and pleasant weather combined to make the gathering a good success.

Mr. F. STANLEY BRIGHTMORE, of the Lord's, Barnley Dun, has been appointed district hon. sec. of the Sheffield A.C. for Doncaster.

A MOTOR-CYCLE club has been formed for Waterford and district. Mr. W. J. Corder has been elected president; Mr. W. E. Bowers, Ferrybank, hon. sec.; and Mr. M. J. Murphy, hon. treasurer.

THE first motor-car meet in East London (South Africa) was recently carried out by the local automobile club, when a number of motor vehicles journeyed out in company to Summer Pride, returning at the end of the day.

THE first annual meeting of the Sussex Motor Boat Club has been held at the Grand Hotel, Brighton, with Alderman Ross Morrison in the chair. The club's membership numbers about 100, with a fleet of about twenty-five boats, and the secretary, Mr. H. J. Mann, mentioned that theirs was the only motor-boat club showing a favourable position in their current balance-sheet.

CASES UNDER THE MOTOR CAR ACT.

EXCEEDING LEGAL LIMIT.

At the Shoreham Petty Sessions, Alfred Tye, of Sevenoaks, was summoned for exceeding the speed limit along the upper road P.C. Brett put his speed at thirty miles an hour, and said that when stopped defendant remarked, "My speedometer was eighteen miles an hour." Defendant said that just before entering the measured distance he was warned, and therefore went very carefully, at the rate of eighteen miles an hour, according to his speed indicator. The chairman advised him not to rely on the speedometer in future, and a penalty of £4 and 12s. 6d. costs, or fourteen days, was imposed.

Five motorists have been fined sums of £3 each for driving beyond the speed in Bath Road, Reading. Similar cases have been heard during the last few days at Woolwich, Shoreham, Midhurst—where seven cases of exceeding the legal speed at Rake were heard—Croydon, Wimbledon and Chertsey.

Over £50 was taken in fines inflicted on motorists at the Guildford County Petty Sessions on Saturday. One of the defendants, Frederick Johnson, of Putney, ran into two traps on the Portsmouth road, at Whitley and Thursley, within the space of ten minutes. In each case the police stated that the speed exceeded thirty miles an hour. As he had been previously convicted, a fine of £10 was imposed.

On Monday nineteen motorists were fined over £100 by the Arundel county magistrates for exceeding the legal limit on the Worthing Road, in the parish of Poling; in Angmering; on the Chichester road, in the parish of Binstead, and the Chichester road at Walberton.

Several summonses against drivers of cars for exceeding the legal limit at Ashington, Common and Rock Washington were disposed of at the Steyning Petty Sessions on Tuesday. Penalties of £4 10s., £4 18s., £5 11s., £5 10s., and £5 14s. inclusive were inflicted. In the case of a London chauffeur who did not answer personally to the summons, it was decided to issue a warrant, to be suspended for a fortnight, in order to enable defendant to attend.

At Epsom, on Tuesday, eight motorists were fined 40s. each for exceeding a speed of twenty miles per hour.

A man summoned at Feltham on Monday for driving a motor-car in Bushey Park at over nineteen miles an hour, called a witness, who said one of the occupants was a man who had a split heart which had been sewed up again. With a man like that in the car, he explained, they dare not go fast. But defendant had to pay £3.

On Saturday seven motorists were fined £34 10s. and costs for exceeding the legal limit at Codmore Hill, Pullborough, on Good Friday.

CARELESSNESS IN PROSECUTION.

Singular laxity was proved against the prosecution during the hearing of a summons at the Reading Police Court, against the Marquis of Downshire, of Easthampstead Park, Wokingham, for exceeding the speed limit and driving his motor-car to the common danger, on April 4th. The Marquis, on the advice of his solicitor, Mr. C. H. Dodd, pleaded not guilty. Mr. Dodd said the offence was alleged to have been committed on May 4th. The Bench dismissed the first count. Mr. Oldfield said that in regard to the second charge undoubtedly the driver was the Marquis of Downshire, as, when written to and requested to say who was driving the car, he replied that he was. Mr. Dodd produced the letter which the Marquis received from the police, in which his lordship was asked to say who was driving his car on the 3rd inst., whereas he was summoned for an offence said to have been committed on the 4th. The Marquis was driving his car on the 3rd. The Bench could not possibly convict under the circumstances. The chairman,

addressing Mr. Dodd, said, "We have to decide in your favour. Mr. Dodd: I think so; you can't help it. I think we ought to ask for costs, but we won't trouble about that. The Chairman: The Bench wish to express their opinion regarding the carelessness with which the case was prepared. It was entirely through carelessness that the summons had failed."

DANGEROUS DRIVING.

Great interest was taken in the re-appearance at Woking Police Court on the 1st inst. of the chauffeur in the Ripley Road tragedy, Arthur Meston, aged 20, of 15, Camera Square, Beaufort Street, Chelsea, who is charged with having on April 25th, recklessly driven a motor-car thereby causing the death of John Bryan, formerly of the 2nd Queen's, Regiment. No further evidence was taken, Superintendent Marks intimating that he was instructed by the Treasury to ask for another remand until after the adjourned inquest had been held. Prisoner was accordingly remanded until the 15th inst., when in all probability some sixteen witnesses will be examined. Upon the application of his counsel, prisoner's bail was extended until committal.

RECKLESS DRIVING.

Mr. C. B. Lockwood, 19, Upper Berkeley Street, London, W., was summoned at Marylebone Police Court for driving a motor-car recklessly along Finchley Road and failing to stop when requested by a constable. Giving evidence he said that a section of constables, eleven in number, were marching in single file across the Finchley Road and he thought they had an intention of obstructing him. The magistrate thought the incident was due to a misunderstanding, dismissed the first summons, and fined the defendant 10s. and costs on the second.



The Siddeley 18-h.p. 30 cwt. Lorry recently supplied by the Wolseley Company to the Oxford Co-operative Society, Ltd., through Mr. T. C. Warland, for delivering goods in and around Oxford.

THE LONG DISTANCE TRAP.

The chauffeur of Lieutenant A. de Portal Kingsmill was summoned at Reading, on Tuesday, for (1) driving a motor-car to the common danger; (2) exceeding the speed limit. Mr. Rowland Harker (instructed by Messrs. Amery Parkes, Macklin and Co., solicitors to the Automobile Association) represented the defendant. Mr. Oldfield, for the chief constable, elected to proceed only on the charge of exceeding the speed limit. Four constables were called, all of whom swore to the number of the car. Their evidence disclosed the fact that the chief constable of Berkshire had adopted the long-distance motor-trap, and that they had not reported to the chief constable that the defendant was guilty of driving to the common danger.

Mr. Harker declared that the police knew that there was no case of driving to the common danger. The bringing of such a charge was, he contended, a trick to extract from the owner of the motor-car the name of the driver, which could not have been obtained from him on the mere charge of exceeding the speed-limit. Lieutenant Kingsmill gave evidence to the effect that at the time of the alleged offence the car was seventeen miles away from the spot alleged by the police. The chairman, after consulting with the other justices, said the case would be dismissed.

We learn that the sole agency for the sale of the Delage light cars in Great Britain and Ireland has been secured by Messrs. Drake and Gorman, of 65, Victoria Street, London, S.W.

OUR contemporary "System" has an excellent article by Mr. W. A. Rogers on a systematic automobile selling organisation, selecting the firm of Messrs. Jarrott and Letts, Ltd., as having "a system of thorough departmentalisation that reflects its influence on every individual employed."

FORTHCOMING EVENTS.

—●—
MAY.

- 9th (Sat.).—First provincial meet of the R.A.C.—to be held at Nottingham, by invitation of the Nottinghamshire A.C.
Penalty speed judging contest of the Southern M.C. at the "Chequers," Horley.
Brooklands A.R.C. meet.
Cheshire A.C. meet at Pentrevoelas.
Manchester A.C. reliability run.
- 13th. (W.).—Incorporated Institution of Automobile Engineers—Discussion on the effect of motors on roads.
- 14th (Th.).—Mr. G. H. Baillie at the R.A.C. on Petrol and Petrol Tests.
- 16th (Sat.).—Fifty miles Consumption Trial of the Hertfordshire C.A.C.
Liverpool A.C.'s opening meet of the season.
Auto Cycle Union hill climb.
Liverpool A.C. first meet of the season.
New Forest A.C. club run to Brockenhurst.
Sheffield A.C. meet at Langsett 3.15 p.m., for run over Woodhead and via Glossop to Snake Inn.
- 21st (Th.).—25th.—Reliability Trial of the Irish A.C.
- 18th (Sun.).—Targa Florio Race.
- 23rd (Sat.).—Clipstone race meeting of the Notts A.C.
Meeting of the Yorkshire A.C. at Helmsley.
Meet of the Motor Union at Bournemouth.
Motor Cycling Club—Albert Brown Challenge Cup for cars.
Meet of the Sheffield A.C. at the Royal Oak at Edwinstone 2.30 p.m.
Sir C. B. Locock, Bt., will entertain the Essex C.A.C. at Braintree.
- 25th (M.).—Industrial Vehicle Competition of the A.C. de France.
- 26th (Tu.).—Motor Gymkhana on the links of the Ross Golf Club at Alton Court—Mr. T. H. Coombes, "Montrose," Ross, is the hon. secretary of the event.
- 28th (Th.).—Visit of the Aero Club to Aldershot.
- 30th (Sat.).—Meet of the Herts C.A.C. at Hatfield Park.
Devon and Cornwall A.C. hill climb at Moorshop, Tavistock.
Lancashire A.C. speed judging contest.
- 31st (Sun.).—Southend M.C. run to Saracen's Head Hotel, Dunmow.
Penalty run of the Southern M.C. to Goring.

JUNE.

- International Aeronautical Federation conference in London.
- 5th—6th.—London—Edinburgh twenty-four hours' run of the Motor Cycling Club.
- 6th (Sat.).—Brooklands A.R.C.
- 8th (M.).—Cars competing in the International Touring Car Trial will arrive at the depot.
Start of the International Touring Car Trial of the R.A.C. Brooklands A.R.C.
- 9th (Tu.).—Touring competition for Prince Henry of Prussia's prize begins.
- 11th (Th.).—Start of the International Touring Car Trial of the R.A.C.
- 13th (Sat.).—Hill climb of the Notts A.C. at Oakmoor.
Speed Trials of the Lincs. A.C. at Grimsthorpe.
N. Middlesex A.C. speed judging competition for the Gamage Cup.
Essex C.A.C. hill climb at Bottledown Hill, Billericay.
- 14th (Sun.).—Mont Cenis hill climb for voiturettes.
- 15th—19th.—Scottish Reliability Trial.
- 17th.—Close of Prince Henry Touring Competition in Germany.
- 20th (Sat.).—Meet of the Hull Auto Cycle Club and the Lincolnshire Motor Cycle Club at Brigg.
Annual Hill Climb of the Bristol and Gloucestershire A.C.
- 27th (Sat.).—Saltburn beach races.
Buxton meet of the Manchester, Sheffield, and Lincolnshire clubs.
Members of the Cheshire A.C. will participate in the Gymkhana of the Manchester A.C.
Visit of the Essex C.A.C. to Audley End.
- 28th. (Sun.).—Southend M.C. run to Grand Hotel, Clacton.

JULY.

- The Land's End to John o' Groat's Trial of the Auto C.C. will be held.
- 6th (M.).—Grand Prix A.C.F. (Voiturette section).
- 7th (Tu.).—Grand Prix A.C.F. on the Dieppe Circuit.
- 11th (S.).—Provincial meet of the R.A.C. at Hereford.
Essex C.A.C. gymkhana at Brentwood.
- 16th (Th.).—Club meet of the Notts A.C. at the Hop Pole, Ollerton.
- 18th (Sat.).—Annual Gymkhana of the Herts C.A.C. at The Grove, Watford, by permission of the president, the Earl of Clarendon.
Meet of the Liverpool and Cheshire A.C.'s at Delamere.
New Forest and Dorset A.C.'s joint hill climb.
Hill Climb of the Essex C.A.C.

LIGHTING-UP TIMES—LONDON.

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|--------------|-----|-----------|-----|-----------|-----|-----------|
| May 9th—8.32 | ... | 11th—8.36 | ... | 13th—8.39 | ... | 15th—8.42 |
| " 10th—8.34 | ... | 12th—8.38 | ... | 14th—8.41 | ... | 16th—8.43 |

ALLEGED POLICE OBSTRUCTION.

At the hearing, at Barnet, on the 29th ult., of the case of Joseph Hewens, a motor scout, summoned for obstructing the police in their duty, Mr. Muskett, on behalf of the Police Commissioner, suggested to Mr. Kemp, K.C., who represented the Automobile Association, that the practice of the Association in working in direct opposition to the police should cease, and that some kind of co-operation should exist between the Association and the police.

Mr. Kemp said that the instructions of the Association to the men were to render the police all reasonable assistance. And they had even gone further than that; there was actually an instruction given to the men that they were not to obstruct within the measured parts of the road. When the incident with the defendant at Pricklers Hill occurred, the Association felt they were bound to deal with the matter promptly. So an inquiry was held by the Chairman of the Association and the solicitor and they found that the defendant had deliberately broken the rules. Under these circumstances they felt that they had only one duty, and that was to dismiss the man. The matter was brought before the Association, and dealt with by them, long before the police summons was taken out, and they acted only on the information given by the defendant himself. There should be no friction, no antagonism, between the Association and the public; they should work together for the benefit of the public. The defendant was fined 10s. and costs.

BUSINESS NEWS.

It will be remembered that a fleet of five Mercedes cars were placed at the disposal of the German Emperor during his visit to Corfu. We learn that His Majesty has decided to purchase the five vehicles, thus conferring on the Mercedes yet another mark of his appreciation of its merit.

MR. ROWLAND WINN has now got his new garage in full swing. It includes ladies' and gentlemen's retiring rooms, chauffeurs' room, &c. This is in addition to the showrooms in Albion Street, Leeds.

A FIRE has occurred on the premises of the Motor and Tyre Manufacturing Company, in Cleveland Road, Wolverhampton, by which considerable damage was done. Fortunately, however, the flames only reached part of the store rooms, cutting rooms, office and laboratory, and were prevented from reaching that part of the premises where inflammable material was stored. The fire has not interfered with the output in any way, and the firm, whose damage is covered with insurance, can continue to execute all repairs in the same time as previously, namely, within three or five days.

THE Countess Alberti recently took delivery of a very handsome 40-h.p. Itala limousine from Itala Automobiles, Limited. Her ladyship reports that the car has already done some very hard work and is marvellous in taking hills.

THE R.A.C. has just issued its certificates in connection with the standardisation test of three Cadillac cars. The certificate confirms the average speed of thirty-four miles over a 500 miles run after dismantling and re-erection, and states that the parts were found to be a proper fit, without undue slackness.

THE joining up of cut lengths of the outer wire of the Bowden mechanism becomes a very simple and quickly performed operation if the special double-ended adjustable "stop" supplied by the Bowden Syndicate is used for the purpose. The mechanism is now so extensively used by motor manufacturers and repairers that this little hint will no doubt be acceptable, more especially as the cost of the "stop" is but trifling and ensures a neatly finished job.

No less than eighteen motor-cars, draped in sombre black, and carrying friends and mourners, followed the hearse which carried the remains of Mr. Joseph C. Kennedy to the cemetery at Butte, Mont., U.S.A. The deceased had been a prominent member of the Butte Automobile Club.

THE large supplies of rubber that have come forward during the last few months have enabled a reduction in the price of tyres. Messrs. David Moseley and Sons, of Ardwick, Manchester, whose special motor tyres have long demonstrated their excellence, are giving the purchaser the advantage of reduced prices—a piece of pleasant reading, especially as we are able to assure readers that the quality of the production is maintained at the previous standard.

WE learn that Mr. F. Eason, of the late firm of Messrs. Sternberg and Eason, is making arrangements to continue the British agency for the Buick car. For the present year he will make a speciality of the new 15–20-h.p. four-cylinder model, which is built on European lines, and, fitted with a three-seated body, forms a speedy, racy-looking vehicle. Arrangements are also being made to carry a stock of spare parts for the Buick cars already in use in Great Britain.

THE Motor-Car Journal.

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COMMENTS.



THE Surrey County Council, which has had applications for the reduction of the speed limit of motor-cars from no fewer than sixty districts within its area, has decided to apply to the Local Government Board for orders limiting the speed of motor-cars to ten miles an hour in specified parts of each of the following nine places, viz., Walton-on-Thames, Hersham, Woking, Farnham, Hambledon, Godalming, Leatherhead, Croydon, and Merton. Evidently the popularity of police traps has waned, and many of the local authorities are now seeking to harass motorists by securing the imposition of a speed limit. This, if adopted, will be the cause of leading many motorists into the local police courts. Of course, in the places scheduled there are undoubtedly highways included where a speed of even five or six miles an hour is as much as can be safely done. But the whole question merits the serious consideration of the motoring authorities in conjunction with the local automobile clubs, and it might be well to come to some agreement as to the streets and roads where the limit might not be opposed if the authorities could be induced to give concessions where local zeal in the application has not been tempered with discretion.

Motorists No Worse Than Other Men.

A NORTHERN correspondent has some straight words to his fellow-motorists in our columns this week. We publish them because we believe the greatest good can result to the motor movement as a whole by the frank facing of unpleasant matters rather than by the policy of ignoring, or seeking to ignore, whatever tells against the case for the motorist. At the same time we are inclined to regard the experience related as somewhat exceptional. A lengthened experience of travel on all the roads of the country, and at various seasons of the year, leads to the conclusion that motorists as a body are no better or worse than any other section of bipedal persons mounted on wheels.

Footpaths on the Highway.

IN view of the many accidents that have occurred in both East and West Sussex during the present year in which motorists and pedestrians have come into conflict, Mr. A. Burtenshaw gave notice to move at Tuesday's meeting of the East Sussex County Council "That in view of the increase in the motor traffic on the main roads in East Sussex, and the consequent danger to foot passengers on these roads, it be an instruction to the Roads and Bridges Committee to provide suitable footpaths adjoining the main roads in populous places where danger exists, without requiring any contribution from the locality." There is no doubt that the proper demarcation of the footpaths and the highway is a practical point that the councils and authorities should seriously consider, otherwise these accidents are likely to increase in number. Very often additional safety could be given the public by merely preventing the overgrowth of hedges that seriously encroach upon the width of the highway. The councillors, however, scarcely took the matter seriously, and it was also opposed on the ground that

it would involve the Council in very heavy expenditure. Mr. Gwynne, who is chairman of the Eastbourne Rural Council, suggested that shelters might be provided on the telegraph poles for people to take refuge in when motors were passing, and, after that, the motion was lost by a large majority.

No Motor Roads this Session.

WE have never been enamoured of the proposals made from time to time to establish motor roads leading from London to places of popular motoring resort. It seems wholly undesirable to seek a differentiation between motor and other traffic, whether in Budget proposals or the ordinary rights of the road. The conveyance of persons and parcels and the delivery of goods of all kinds are absolutely necessary, and if there is more wear and tear associated with one class of locomotion than another, the community gain in the saving of time. Last week we were able to briefly record the intention of the promoters of the London Motor Roadways Bill not to proceed further with their proposals for legislation. Following the Bill introduced in 1906 to construct a motor road between London and Brighton, which was promptly withdrawn, two projects were embodied in private Bills lodged before the beginning of the present Session. Of these the London and Windsor Motor Roads, Tramroads, and Tramways Bill was the more important, but memorials alleging non-compliance with the Standing Orders were numerous, and as they were upheld, the project was dropped at an early stage. The other measure, although to some extent a competing enterprise, was much less ambitious. It proposed the construction of a motor road from Hammersmith to a junction with the Bath Road, near Eton, at a cost of fully half a million sterling. The promoters have apparently met with some difficulties, and, as we have said, nothing more will be heard of it this Session.

Club Challenge at Brooklands.

A CHALLENGE has been issued by the Nottinghamshire A.C. to all British automobile clubs, which is open until the 27th and is to be run off under the racing rules of the Brooklands A.R.C., to which body acceptances are to be sent. Should the challenge be taken up the event will be contested on some Saturday in July. The conditions laid down by the Nottinghamshire A.C. are that each competing club shall nominate a team of five cars, respectively suiting the following five standards of the R.A.C. touring standards, viz., Standard Three, equal to 16-h.p.; Four, equal to 20.8-h.p.; Five, equal to 25.6-h.p.; Six, equal to 32.4-h.p., and Seven, equal to 40-h.p., all R.A.C. rating. The cars must be owned and driven by members of the challenging and accepting clubs, but the owner of the car need not necessarily be the driver. The competing clubs will be responsible for their teams containing no car that is owned, driven, or entered by a person having a direct interest in the motor or accessory industries. Five races will be run between the clubs for the five classes already mentioned. The first car past the post in each race will constitute a win for the club to whose team it belongs, and will score twenty points to such club; the second car past the post in each race will score ten points to the club to which it belongs. The club scoring the larger number of points in the five races will be declared the winner. The distances of

the above-mentioned five races will be for Standard No. 3, about 5 miles; No. 4, about $7\frac{1}{2}$ miles; No. 5, about $10\frac{1}{2}$ miles; No. 6, about $14\frac{1}{2}$ miles; No. 7, about $18\frac{1}{2}$ miles.

The Force of Habit.

A GOOD story was told us at Nottingham that when the King was recently visiting one of the great homes in the Dukeries, the Chief Constable of the County ordered the police to disappear behind hedges, or anywhere else, as soon as the Royal motor-car appeared in sight—owing to His Majesty's known objection to being conspicuously guarded. After waiting some time the constables saw an automobile approaching which one and all mistook as the Royal vehicle. They fled helter skelter, like awkward and overgrown rabbits, "to cover," to the consternation of a passing motorist, who stopped the next car to inform the King that he was in a trap. Familiar with our southern roads, he had come to regard the presence of a blue line in a green hedge as sure sign of danger to those who drive cars. As a matter of fact, Nottinghamshire has never yet possessed a police trap, the authorities relying on the section of the Act which deals with reckless and furious driving to secure the safety of the public.



A Suggested Up-to-Date Method of Visiting the Royal Academy.

Motor Taxation and the Budget.

A MONTH ago we referred to a speech by Sir John Bell, Lord Mayor of London, in which, touching on the question of motor-car taxation, he trusted that the Government would not penalise the rising automobile industry, for assuredly it would be undesirable for legislation to check its progress in any way. On the same occasion, Mr. E. Manville, as president of the Society of Motor Manufacturers and Traders, declared it was the opinion of that organisation that to tax methods of locomotion, particularly when one class was singled out from the others, was against all traditions of public policy. This view was to the effect on the industry of any further taxation was one that motorists quickly saw should be kept well to the front. To take it for granted that Mr. Asquith really intended to carry out the hint that he gave when introducing last year's Budget, and to suggest that the increased revenue should be ear-marked for a specific purpose, did not commend itself to many who have followed the course of legislation on this matter. This is more especially the case in view of such statements as that made with much authority at the last meeting of the Warwickshire County Council, when it was pointed out that the income from motor-car licences, fees, &c., did not come to one twentieth of the increased cost of roads as compared with a few years ago. There was just the danger that if the Chancellor of the Exchequer accepted the proposition that increased taxation was to be devoted to the maintenance of roadways, he might be tempted to raise it to such a point that it should cover the

entire cost—a course which would have been almost inimical to the existence of the industry. Fortunately those who attended the House of Commons on Budget day expecting to hear the Premier propound a new scheme of motor taxation came away with the knowledge that motor-cars had not been mentioned in any of the financial proposals put before the House of Commons. Although we have thus escaped the imposition which in some quarters was supposed to be threatened, motorists must maintain the position that the majority have taken up, viz., that no further taxation on motor-cars, as distinct from other classes of traffic, should be permitted to endanger the future of the industry. This is the logical, and, as events have proved, the safe course to pursue. We trust the future will be kept clear of any hints to Mr. Lloyd-George as to how to allocate further taxation.

Manchester and Motor Vehicles.

FOR some time past there has been a good deal of agitation concerning the refusal of the Manchester Watch Committee to grant licences to any motor-buses. That was a couple of years ago; and great improvements have taken place in these vehicles since then. On the Manchester City Council agenda for May appeared the following notice of motion:—"That the Chairman of the Watch Committee having stated, at the meeting held on April 16th, 1908, that 'the policy of the Committee is not to licence any motor-omnibus whatsoever,' this Council considers such policy narrow, unprogressive, and altogether unworthy of the traditions of a great city, whose province it should be to stimulate inventive genius and to foster industry; and hereby instructs the Watch Committee no longer to ignore applicants for licences, nor to refuse to even look at what may be presented to them as the latest types of such class of vehicle." A sub-committee of the Watch Committee has been appointed to go into the whole matter, and hopes are entertained that reasonable counsels will prevail. In the matter of motor taxicabs Manchester, too, has scarcely been to the fore, only a very few so far running in the streets. However, this condition of affairs is to be changed, for on Monday the first of forty motor "taxis" was licensed. The "taxi's" up to now have been allowed to charge only the ordinary horse-cab fares, but for the new "taxis" the charge will be 1s. per mile (no matter whether the number of passengers be one or four), and *pro rata* for a third of mile. Other cabs may charge double fares between 12 midnight and 7 a.m., but the Provincial Company agree to charge the same fare as above by night as well as by day.

A Sixpenny Fine.

APPARENTLY the warm welcome that Ireland extended to motorists in the Gordon Bennett year has not spent itself. At the Omagh petty sessions a local motorist has just been summoned for driving a motor-car on the public highway without a licence on April 18th, and also on May 2nd. The complainant said the defendant had no licence since December, 1906, but he knew he should have one. The Bench imposed a nominal fine of 6d. in each case with costs. Such moderation does credit to the magisterial Bench.

Towing Dangers.

A FEW weeks ago we wrote of the danger that was being experienced in many towns, notably Sheffield, owing to the lack of adequate means of signifying the fact that one car is towing another, and invited readers to secure discussion of the matter. We are glad to know that it received close attention from the general committee of the R.A.C. at their meeting on Saturday. After discussion they came to the agreement that it was impracticable to adopt any particular signal to indicate the fact that towing was in progress, but it was felt that if the length of rope between the two cars was limited to ten feet, and both side lights were carried on the second car the

danger would be obviated. We commend the notion to those of our readers who may have occasion to use the tow rope.

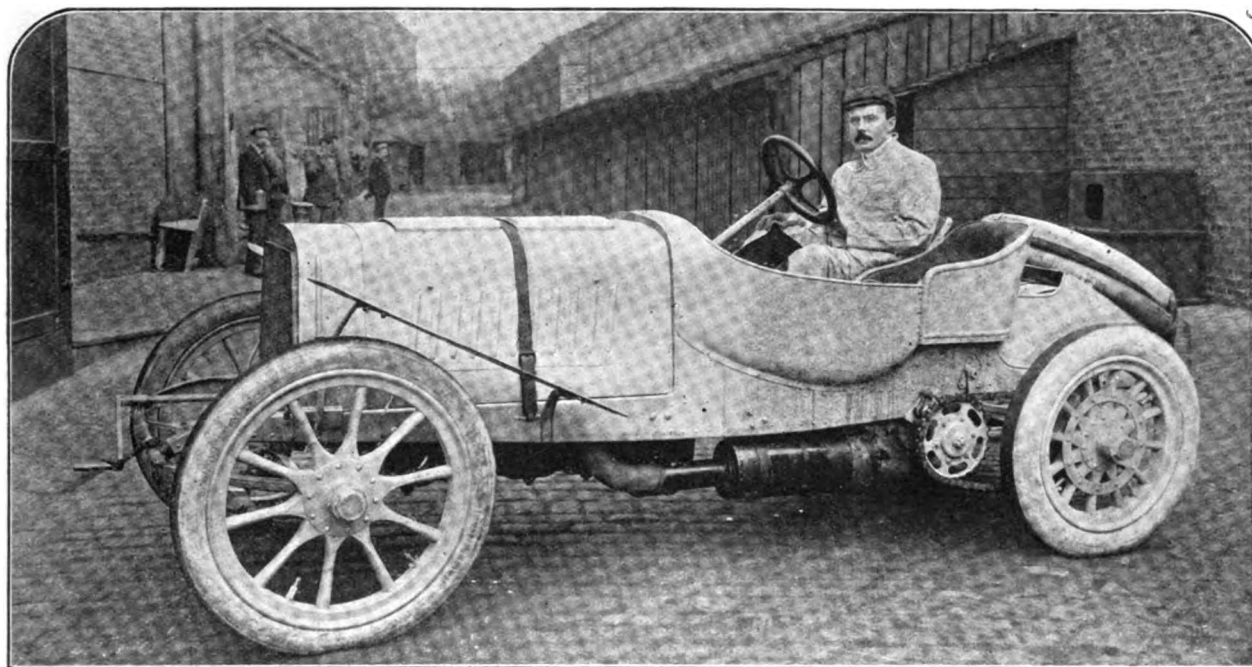
Motor-car Imports and Exports.

APRIL proved an extremely quiet month as far as imports of foreign motor-cars and parts into this country are concerned, a decrease, as compared with April, 1907, of no less than £143,345 being recorded. Of complete cars only 480 were imported during the month, of the value of £186,817. The number of chassis imported was 228, valued at £75,200, while parts were responsible for £122,136, giving a combined total for April of only £384,153, as against £527,498 in the corresponding month of last year, and £403,229 in 1906. The gross imports of cars (1,591 in number), chassis (973), and parts during the first four months of the current year amounted to only £1,382,216, as contrasted with £1,692,265 in the corresponding period a year ago. Turning now to the section relating to the exports of British automobile productions, these show a slight increase—from, in the aggregate, £92,483 in April, 1907, to £98,371 last month. Altogether 168 complete cars

Horace Plunkett represent Ireland. The Hon. Arthur Stanley Sir Henry Norman, Major Leslie Renton, Mr. A. E. Mason (the member for Coventry), Mr. T. D. Berridge and Mr. C. E. Shaw are the remaining six members—all M.P.'s—of the committee, which is thus representative and influential. This committee can exercise a great influence on the future of the movement, and all will feel that it will be both watchful and wise in the general interest.

Horns V. Whistles.

WHAT shall be the distinctive sound to distinguish the approach of a motor-car? In the early days the horn had a monopoly so far as the automobile was concerned, but latterly there has been a growth in the number of ordinary cyclists employing the same device to acquaint the world of their coming. The committee of the Sheffield and District A.C. are calling the attention of local people to the matter as one of some importance, "as they are of opinion that the element of danger to the pedestrians on the road would be greatly reduced



The First of the Panhard Racers for the A.C.F. Grand Prix Contest.

(£58,246) and 18 chassis (£7,473) were despatched from this country in April, as well as parts to the extent of £32,652. The gross shipments during the four months ending with April are returned at £409,499, which contrasts with £408,085 in the first period of last year.

A New Legislation Committee.

DESPITE the attractions of last Saturday's meet at Nottingham, some really sound work was done by the General Committee of the R.A.C., and the appointment of a strong and influential Legislation Committee charged with the important duty of organising and conducting the campaign in regard to future legislation and to deal with all matters in connection with the administration of the law at present in force will have the approval not only of the members of the Club but of the 12,000 associates. From every point of view the selection is admirable, and, although the name of Mr. C. D. Rose, M.P., does not appear in the list, we opine he is an *ex officio* member by reason of the high office he holds in motoring circles. Lord Montagu represents the Lords; Sir John Macdonald will voice the views of Scotland, and Sir William Goff, Bart., and Sir

if the bell only was used to denote the approach of a pedalled cycle." It is interesting, too, to note that motorists are not so universally favorable to the motor horn as was formerly the case, and the penetrating sound of the whistle now awakens sleepy carters, and calls to drowsy carmen to get to their own side of the road. Is the utility of the whistle partially due to the novelty of the note?

Sunday Motoring.

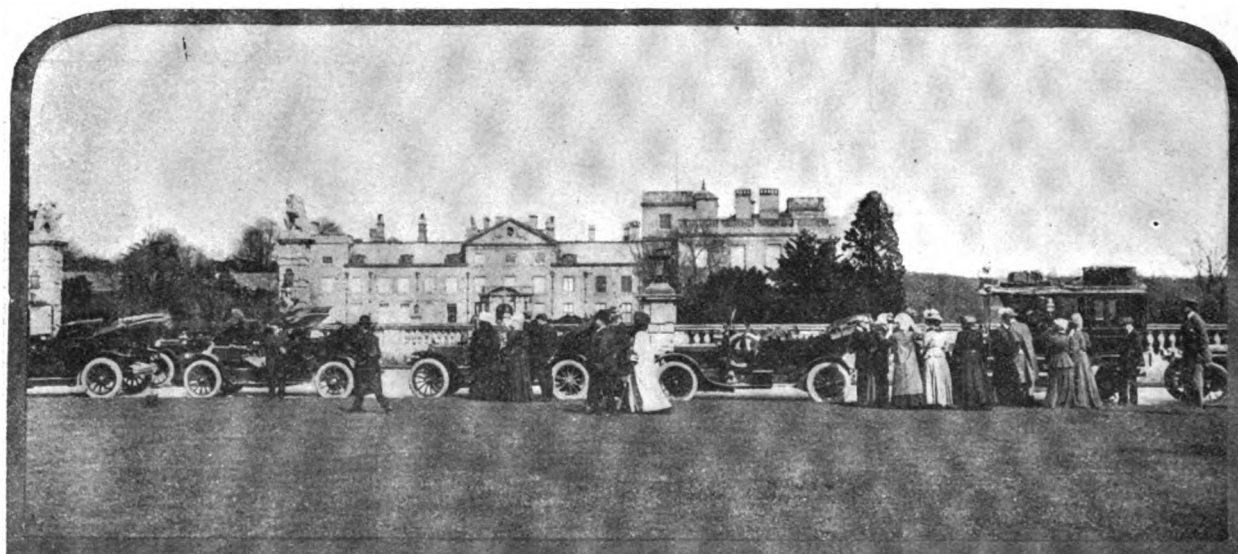
THE Rev. Prebendary Eardley Wilmot, who presided at the annual meeting of the Lord's Day Observance Society, in the Westminster Palace Hotel, on Tuesday, said that he looked with great anxiety at the present ways of spending the Sabbath, and he attributed them largely to three causes—the bicycle, the motor-car, and the week-end. The coachmen, who had now become chauffeurs, had more arduous duties than in the old days, when horses were used, and, as the machinery of their cars required the closest watching, they were quite unable to attend public worship when they took their masters and mistresses out. It would be interesting to have the view of the motoring bishops on the subject.

Motor Meet at Nottingham.

NOTTINGHAM, both county and city, has always shown motorists an open road—a road with a good surface unobstructed by blue stops, and not hedged by watchers and other instruments of policescraft. When the motor movement had to organise for its own protection in the early days the motorists of Nottingham were the first to associate together and to affiliate with the A.C.G.B.I.—as the R.A.C. was known until Royal patronage gave it a premier place among the societies of encouragement in this country. The Nottinghamshire A.C. has always taken its objects seriously. It is a combination of good sportsmen who have sought to influence public opinion, not by organising processions through the streets and throwing dust in the eyes of the public, but by means of lectures in the winter and well-timed demonstrations in the summer. It has 250 members, including the leading gentry of the county and the chief men of the city. At the present moment an effort is being made to gain fair conditions for the motor-cabs which are about to ply along the tram-lined streets. There are few towns in the

meets this year it was fitting that the first of the series should be held in the county of Robin Hood. This took place on Saturday with regal weather, ducal invitation and civic welcome to give distinction to the proceedings and pleasure to the participants.

The day's proceedings began with a reception of the General Committee of the R.A.C. by the Mayor (Mr. J. T. Spalding, J.P.) and the Sheriff (Councillor W. H. Carey), who testified to the friendliness of the authorities towards all who motor. Suitable response was made by Mr. Robert Todd, and then Capt. H. H. P. Deasy acted as chairman of the committee which quickly got to business. A Legislation Committee was appointed to deal with all matters in connection with the administration of the law as well as with any possible amendments. The Legal Committee also reported action in connection with several matters affecting the interests of members of the R.A.C., one of the most interesting being concerned with an arbitration in regard to the liability arising out of a collision between the cars of two members. Several other subjects were



The R.A.C. Provincial Meet at Nottingham.—Some of the cars drawn up in front of Welbeck Abbey.

provinces so difficult to negotiate as Nottingham, for the people seem to regard the space between the tram-lines and kerb as especially their own, and the standards in the centre of the roadway have constituted a menace to the safety of strangers who motor through the place. On this subject urgent representations were made by the club some time ago to the Corporation, and the work of removing the standards is now proceeding. Already the authorities have taken them from about one mile's length of the streets, and they are shortly to be shifted from the road that leads to Mansfield and Welbeck. In a couple of years the city will be free of such road obstructions. These examples of good work done by the Nottinghamshire A.C. show that motoring organisations can be of use to local authorities, who would often gain by taking similar organisations into their confidence when dealing with matters of road improvement and traffic regulations. Certainly by the careful development of this policy the Automobile Club of Nottingham has become recognised as a local institution of much importance. City magnates delight to take part in the festive proceedings, and the Chief Constable would be grieved were he to have to bring a charge against a member of the club, even if it were so simple an offence as the absence of a rear light.

Just as the club was the first to affiliate with the central organisation, so when the R.A.C. determined on a trio of provincial

discussed, and votes of thanks to all who were concerned with the welcome to the club were adopted, Mr. Charles Hardy responding.

The main feature of the day was the run to Welbeck, and early in the afternoon a number of cars left the city of Nottingham for the twenty-five miles drive to the Duke of Portland's place. For some distance the road was tram-lined, and the presence of considerable heavy traffic necessitated careful driving on the part of those who made the journey through Mansfield to Welbeck. The cars entered Birklands from the Mansfield Woodhouse and Edwinstowe roads, after passing Warsop Windmill. The drive was through the Long Avenue, where great oaks and birches were springing into their new beauty. We passed the famous log hut now used as a shooting lodge, and disturbed the game which frequently rose above the bracken on either side of the drive. Welbeck was reached by Norton on the Tile Kiln Wood road, beyond the Winnings—a group of delightful almshouses erected by the present Duke of Portland in remembrance of his winnings on the racecourse in 1889. Thus we arrived near the Wood Yard entrance to the grounds, passing on the way the well-built engine house, where were the steam-rollers employed for dealing with the roads on the estate.

In the courtyard many motorists from elsewhere were seen,

and more than 200 cars lined either side of the drive leading to the house. From Sheffield a goodly contingent of the local club arrived, having travelled through Mosbro' and Barbro' and *via* Cuckney. Amongst them were Messrs. Percy Richardson, G. D. Flather, R. Slack, and F. B. Cawood, the hon. secretary. Others participating in the event included:—The Mayor of Nottingham, the Sheriff, Mr. Chas. Hardy (president of the Notts. A.C.), Mr. J. W. Orde (secretary of the R.A.C.), Major T. H. Cochrane, Captain H. H. P. Deasy, Captain Bagnall-Wild, Major Robertson, Captain Longfield, Dr. E. Solly (Harrogate), Messrs. R. S. Clifford, jun., A. McAlpin (hon. secretary of the Leicester A.C.), Granville Kenyon (hon. secretary Kent A.C.), R. Todd (chairman of the Auto-Cycle Union), R. B. Bagnall-Wild, E. Powell, E. P. Hooley, F. Lindus Forge, C. Wicksteed, H. Bircumshaw, R. M. Wright, H. Belcher, A. R. Atkey, P. L. Huskinson, P. S. Clay, E. Manville, F. Coleman, and Booth Granger (hon. secretary of the Notts A.C.).

In little groups we wandered through the chapel and the library, where the old fireplace attracted the attention of Mr. J. W. Orde, apparently thoughtful of the comfort of his clubmen when they get to Pall Mall. Thence a few steps led the way to the underground picture galleries and corridors—the walls of the latter covered with great pictures of horses fearfully and wonderfully limned—to the whilom ballroom, now a spacious picture gallery, 160 feet long, 64 feet wide and 22 feet high. This is lighted by octagonal skylights, and its walls recall the ancient heroes of the great families of England. Ascending, the orangeries and gardens were inspected and a visit paid to the Riding School and stables, the latter covering an acre of ground and the former of a size and capacity for a motor garage when there is no longer any use for the tan floor that now gives opportunity for horse exercise in wet weather. In fact, it has already served such a purpose, and on the occasion of the Welbeck ball 300 cars were housed within its spacious walls—and still there was room.

The return to Nottingham and other destinations was made in no ordered manner, and when the motorists had entirely depleted the local Post Office of its stock of picture postcards, they set their engines going and made good running on one of the most charming afternoons of the spring.

And then, in the evening, there was a dinner at the Victoria Station Hotel by invitation of the Nottinghamshire A.C., when speeches were commendably brief and congratulatory. Mr. Charles Hardy was in the chair, and there were about a hundred guests. After the loyal toasts and that of the Duke of Portland had been greeted with acclamation, Mr. E. Manville proposed the "City and County Authorities," paying well deserved tribute to all concerned. Responses were made by the Mayor, Mr. R. B. Bagnall-Wild, and Mr. P. S. Clay, the Chief Constable of the city, and then, in proposing the health of the chairman, Mr. J. W. Orde referred to the fact that no additional tax had been put on motors by the Chancellor of the Exchequer. He said that Mr. Asquith invited the Royal A.C. with others to send a deputation to him in a private capacity. As a consequence, resolutions were submitted to the club and unanimously passed. The results of that conference and these resolutions were seen in the Budget, and he believed that in future, before any Chancellor proposed to put a tax on motor-cars, the club would have an opportunity of making its voice heard.

NEAR the Earl's Court Railway Station, London, S.W., the Earl's Court Motor and Garage Company have a well-designed establishment for the storage of the motor-cars of visitors to the great London exhibitions this year, and also a well-equipped repair shop for carrying out repairs to cars, &c. Their stock-rooms of spare parts are replete with everything that is likely to be required by motorists seeking assistance, and they have large stores of petrol, oil, &c. In addition to their garage business the company, of which Mr. A. Powell is the managing director, with Mr. A. W. Hemmings as manager, hold the agency for the New Pick car, which was described in our report of the new vehicles at the Cordingley Motor Show

A NEW TYRE MANIPULATOR.

MOST motorists have at one time or another experienced difficulty in getting the valve into place when replacing the inner tube of a motor tyre, or of fixing the security bolts after changing a cover. Various tools have from time to time been introduced to facilitate the operation, one of the latest to come under our notice being the manipulator which has lately been put on the market by Messrs. Evan Jones and Sons, motor engineers, Bangor Street, Carnarvon. As will be seen from the accompanying illustration (Fig. 1), it consists of a stout steel tube, bent to a special form, and having a slot in its

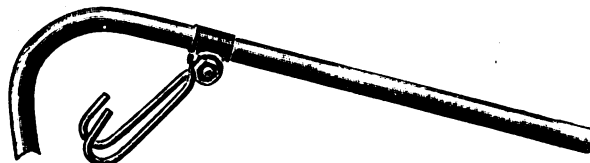


Fig. 1.—The Jones Tyre Manipulator.

working end by means of which a secure hold is obtained on the bead on one side of the rim. Pivoted to a slide on the tube are two steel hooks, by means of which one side of the tyre cover is gripped. The method of using the manipulator is clearly shown in the second illustration; the operator stands on the inside of the wheel, and, owing to the great leverage, is able to pull the cover right over without undue strain, to enable the valve stem and the security bolts to be readily withdrawn and reinserted. Before putting the device on the market Messrs. Jones have submitted it to extended trial in their garage, where they find it a very useful adjunct. By its use not only is the work greatly facilitated, but there is no risk of damaging the beading or

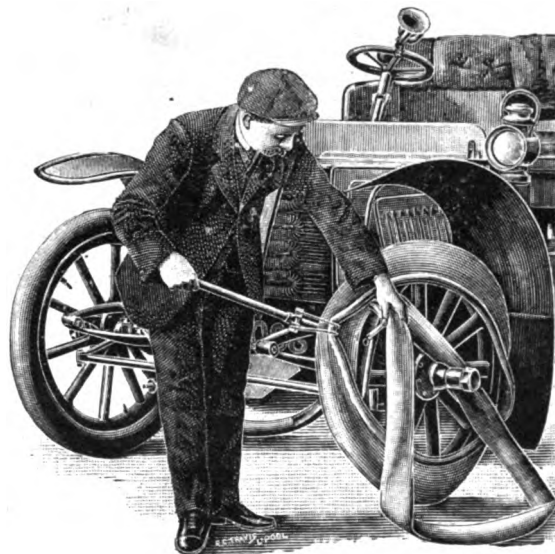


Fig. 2.—The Method of Using the Manipulator.

nipping the tubes. The position of the slide to which the hooks are attached can be varied as desired, rendering the tool adjustable to suit different sizes of tyres.

MR. JOHN BURNS intends, in the absence of motor-car legislation this session, to renew the Motor Car Act for another year by including it in the Expiring Laws Continuation Act.

WE are glad to find that the L.C.C. has improved the arrangements for the issuing of registration numbers and driving licences at its offices at Spring Gardens, S.W. Formerly the inquiry office was on the third floor, necessitating two journeys up and down the lift each way. The office is now situated practically on the ground floor close to the cashier's department, so that much valuable time is saved.

GOSSIP FROM PARIS.

MADemoiselle Gaby POHLEN is a happy woman. She has obtained her driver's licence to drive a motor taxicab from the Prefecture of Police. She has, however, a yet higher ambition. She wants to drive a car in a big automobile speed race. Mademoiselle Gaby Pohlen is no ordinary woman. In addition to being good-looking and under thirty, she can boast of having vied with men in their sports ever since her girlhood. She mounted a bicycle as soon as they were invented, is a good horsewoman, can beat most people in walking, has ridden camels in Algeria, in the Biskra region, and loves deep-sea fishing. I learned all this and much more the other day when I was her fare. We became good friends almost immediately. As soon as I had taken my seat in her taxi-auto she turned round—while at the same time keeping a sharp look-out and driving with skill—to say she knew me very well from having seen me riding a bicycle constantly during the last ten years. She had given up that exercise long ago, and wondered I had not done the same. Opening her heart to me, she said she was very happy now, but what trouble she had had! Not to get her driver's licence—that had been easy enough, for she had taken the steering-wheel as early as 1902. Her tribu-



Mdlle. Gaby Pohlen at the wheel of the Motor Taxi-Cab she has lately been licensed to drive in Paris.

lations began when she had the coveted document in her pocket. She presented herself to almost all the people who had motor-cabs in the Paris streets, but one after the other they rejected her application. When, after so many rebuffs, she was at last accepted she was almost astonished. That is only a couple of weeks ago, but her example has already been followed by Madame Decourcelle. The Paris women cannot complain that the Prefect of Police does not put them on an equality with men. He encourages them to mount the box of ordinary cabs, and is now allowing them to take the steering wheel of motor-cabs. If they all drive as well as Mademoiselle Gaby Pohlen and Madame Decourcelle the public will have no reason to complain.

WHO will win the Grand Prix of 1908? This question is greatly exercising the minds of all sorts of persons—the makers of the racing cars, the drivers, the sporting journalists, and everyone who in one way or another is interested in automobilism, to say nothing of the betting public. One of the Paris daily sheets devoted to sport has already opened a competition with money prizes, varying between £10 and £1, to be awarded to the persons who may before the race indicate most correctly the name of the driver that will establish the record of the shortest time occupied during the race in covering the circuit, measuring seventy-five miles minus only a few yards. The record last year was 36 min. 16 sec. The person spotting the driver and giving the exact time of his record, or the nearest to

it, will have the first prize. There are twenty French and twenty-five foreign cars duly inscribed for the race, and it is almost certain three Mors vehicles will be added to the French list. I know many Frenchmen who would willingly back the French cars against their foreign rivals, but I think their confidence must be inspired by patriotic sentiments, as they cannot know much about them. As usual, the French makers are particularly behindhand, and their drivers who tried the circuit before it was closed against the racing cars on May 1st did so almost without exception on last year's cars. They will not have his new Brasier car till the end of this month, the Renault car is not yet finished, nor the Lorraine-Dietrich, nor the Motobloc. One of the three Panhard cars was brought out and photographed a few days ago, but the other two are still unfinished. The Bayard-Clement was the only new French racing car which was ready in time to be tried on the circuit. On the other hand, most of the new foreign cars, especially the Fiat, the Benz, and the Mercedes, have been in the hands of their drivers several weeks. That should give them an advantage in the race. At any rate, they constitute a formidable trio of foreign competitors, to say nothing of the Austin, the Weigel, the Opel, the Thomas, and the other foreign racers, each of which may well aspire to win the day.

THERE is no immediate prospect of the disturbance of European peace, which seems to be doubly guaranteed by the Anglo-French *entente cordiale* and the triple alliance. But French automobilists do not much like the Bill just presented to the Chamber by the Government for the requisitioning of their motor-cars in time of war. They know it is natural and right that the State should be empowered to seize as many self-propelled vehicles as may be required by the army in case of national peril, but it can be easily understood that the owners of cars which cost £1,000, or, perhaps, £1,500, would prefer not to have to make the sacrifice. It is true the Government would compensate them for it by a price stipulated beforehand, according "to the type of car and the date of its manufacture," but everyone one in France knows what such a valuation is. However, as every deputy who should oppose it would be taxed with want of patriotism, the measure will most surely be adopted. In the case of the owner of a car failing to make the required declaration of his car between the 1st and the 16th January each year, he will be fined half the estimated value of the vehicle.

THE Paris police have not yet at their disposal armoured automobiles carrying machine guns, like their *confrères* of Chicago, but on the parade ground of Issy les Moulineaux motor-cars were used by them to drive back the crowd on the occasion of the Delagrangé-Henri Farman aeroplane match. The extraordinary part of the business was that no one seemed to find it extraordinary. If the prophecy of Marquis d'Argenson, Louis the Fifteenth's Lieutenant of Police, is to be realised, and there appears to be a good prospect that it will be before long, his successor, M. Lepine, who has already created brigades of cycling police, automobile police, dog police, swimming police to rescue drowning persons, &c., will have to organise yet another brigade—that of aerial police. In his memoirs, edited by one of his descendants and published in 1858, Marquis d'Argenson said he believed the art of flying would be discovered in his century. He miscalculated by about a couple of hundred years, but it is quite possible, if not certain, there will be, as he predicted, "aerial armies." Writing in 1720, he foresaw "Our present fortifications will be useless. The safety of our property and the honour of our wives and daughters will be in jeopardy till the police of the air has been organised to cut the wings of the aerial ravishers and bandits. It will be necessary to add another department to the Government by creating the Ministry of the Aerial Forces." Marquis d'Argenson seems to have imagined the flying business would be done principally by Don Juans and robbers. He may, however, be pardoned that error, for he was not the inventor of the aeroplane but of the "lettre le cachet."

MARNEY.

NOTES FROM BUXTON.

BUXTON is suffering just now from the calm which usually succeeds the storm. The spurt of activity brought into being by the Easter holidays was all too brief, and has long since subsided, giving place to a period of dulness little better than that experienced in mid-winter. The hotel proprietors and others dependent upon the patronage of the pleasure-seeking public are, however, looking forward hopefully to the arrival of the Whitsuntide holidays to effectually dispel the quietness for the remainder of what is usually referred to as "the season," which means practically from Whitsuntide to the beginning of October. True, the "toot-toot" of the motor-horn is more frequently heard in the land than was the case during the winter months, and, although the owners are for the most part birds of passage, as it were, their presence helps to relieve the monotony of existence at a time when hotel staffs frequently outnumber the guests.

◆ ◆ ◆
To the Buxtonian pure and simple,

Derbyshire born and Derbyshire bred,
Strong 'ith arm and weak 'ith head,

there is no other place on earth which offers so many varied attractions to the tourist, whether he be geologist, botanist, artist, antiquarian, or even the ordinary business man seeking rest from the cares and worries of the office, as does the Spa of the Peak, with its verdure-covered crags, rippling streams, and well-wooded slopes, the theme of many a poet's pen and of many an artist's brush, to say nothing of the tumuli, relics of the Roman invasion, which abound in the immediate vicinity.

◆ ◆ ◆
BUXTON, in what one often hears referred to as the "good old times," was a stopping-place for stage coaches plying between London and the north, and now that the old order has changed and yielded place to the new, it appears to be equally popular with the motorist, as during last week-end at the Crescent Hotel alone there were garaged over a dozen cars, representing Cornwall, Nottingham, Sheffield, Chester, Manchester, and Midlothian. Visitors to the Palace Hotel who brought their own cars included Lord Burton and Lord Llangattock, these being the only two whom the book-keeper could single out from the other guests staying at the hotel. The Empire—Messrs. Spiers and Pond's palatial hotel in Park Road—is closed during the winter months and does not open its hospitable portals to the wayfarer before the last week in May or the first week in June. This hotel possesses garage accommodation for about twelve cars of the largest size, and is fully occupied during the summer months.

◆ ◆ ◆
THE proprietors of many of the hotels and hydropathic establishments in the town do not provide any garage accommodation at all, but there is provision in abundance of a public character, notably Messrs. G. W. Hodgkinson and Sons, the Buxton Garage, in the Market Place, near the Town Hall, capable of accommodating fifty cars; the Great Livery Stables and Garage, near the railway station, with accommodation for about twenty-five vehicles; Mr. G. Sims, Eagle Parade Garage; Messrs. Pyle and Son's garages in Ash Street and Compton Buildings, London Road; and Messrs. Cook and Son, Railway Hotel, Bridge Street. It will thus be seen that in only very exceptional circumstances will the motorist visiting Buxton experience any difficulty in finding a place in which to house his car.

BUXTONIA.

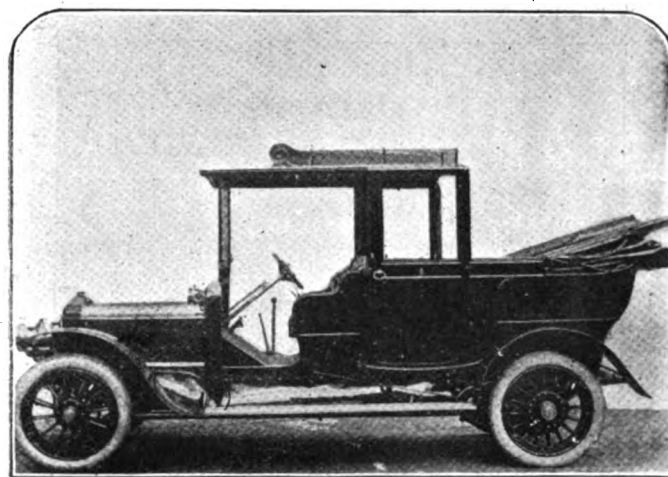
MR. CHATTERTON having offered to conduct a series of lectures on Esperanto to the members of the Auto Cycle Union, has been accorded permission by the committee of that body.

LAST week the Ironmongers' Federated Association held a conference at Nottingham and on the Friday lunched with Messrs. Humber, Ltd., at their works at Beeston, where Mr. Edward Powell, chairman and managing director, received the visitors.

SOME CURRENT TOPICS.

The Setting of Valves.

The attention which has recently been devoted in the pages of the *M.C.J.* to the important question of the setting of the valves of petrol motors has given an impetus to a more serious study of the subject, not only in this country but also in America and on the continent. One of the leading technical motor papers in France, "Omnia," has just gone very deeply into the subject, and in addition to dealing very fully with the ingenious instrument brought out by Larrad's Patents Syndicate, has copied the *M.C.J.* example of getting together particulars of the valve setting of the principal motor manufacturers in France. Pressure of space prevents the reproduction of the whole of these, but it may be useful to give the average practice in France as based on thirty different engines. This works out as follows:—Inlet valve, opens late 12 deg. 16 sec., and closes late 25 deg. 32 sec., exhaust valve opens early 46 deg. 20 sec. and closes late 12 deg. 16 sec. The writer in "Omnia" is apparently unaware that, in addition to their timer, the Larrad Syndicate have brought out what is known as a degree instrument, which may be used to check the synchronisation of the valves in accordance with any setting.



The 58-h.p. Daimler Car, with Hooper body, lately delivered to King Edward.

Wind Screens Galore!

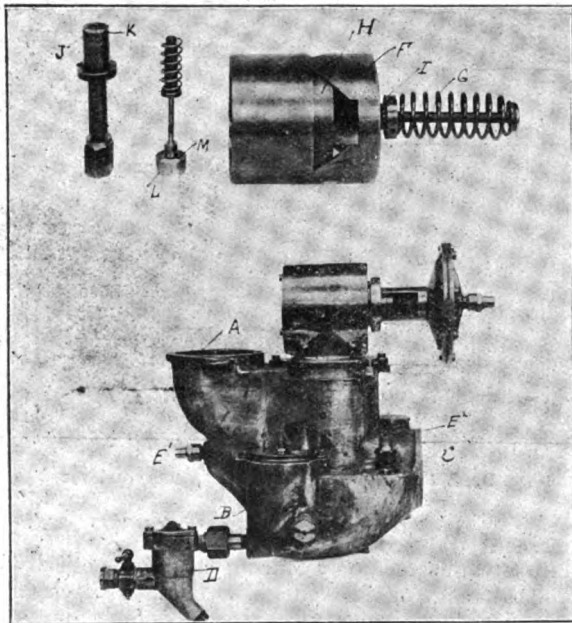
Since a wind screen on a touring car has practically become *de rigueur* the range of types offered to the motorist has increased with such marvellous rapidity that the task of selecting a suitable one has become almost as worrying a question as settling one's life assurance! At the recent Cordingley Show there were nearly a dozen different patterns on view, and these do not by any means exhaust the list, each possessing particular points of merit. Notwithstanding the fact that wind screens do slightly reduce the speed of a car, this is far outweighed by the added comfort they give to motoring—in summer by protecting the driver and passengers from dust and from the myriads of flies and other winged insects, which, when they get in the eyes, often cause acute pain, and in winter in shielding one from the piercing wind. Early this year a long run that I had on a six-cylinder car on a bleak frosty morning proved, owing to the excellent screen fitted, much more enjoyable than was anticipated. Not only was it possible to engage in conversation without having to constantly strain one's lungs in order to be heard, but a cigar or pipe could be indulged in comfortably. As regards the drawbacks to glass wind screens, a serious one is, of course, the danger of broken glass in case of accident, while another is the misleading effect of the rain when travelling at night in wet weather. The first-named difficulty has fortunately not proved so prevalent as many at first feared, while the other has been practically overcome by the introduction of the divided or folding screen, which, while protecting the driver to a certain extent, does not interfere with his outlook.

ARCANUM.

THE NAPIER CONTROLLABLE CARBURETTOR.

THE appended illustration shows some interesting details of the carburettor fitted to the 80-h.p. six-cylinder Napier car. It is known that difficulty is experienced with cars of high horse-power in obtaining maximum power combined with the ability to run slowly in traffic and to be economical in petrol consumption. The new controllable carburettor designed to eliminate these shortcomings has, we learn, proved extremely satisfactory in practice, enabling a 120-b.h.p. Napier to be driven quite silently and smoothly in the thick of the London traffic, and, moreover, without excessive petrol consumption. The outlet at the top of the jet seen at the left of the upper portion of the picture has a curved slot J, and, a short distance from it, a small hole K. On the top of the jet is fitted a moveable baffle cap L ground to its seat, and having in it a curved opening M corresponding to the slot in the jet. The cap is placed over the jet, held down to it by the spring shown, and is capable of being partly rotated.

The flow of petrol is regulated by the amount of exposure given to the slot in the jet by turning the baffle. Up to twenty miles an hour the little hole K, termed



the pilot; is the only aperture exposed; turning the baffle further gradually uncovers the curved slot to its fullest opening when the maximum power of the engine is required. The movement of the baffle is made to exactly coincide by mechanical means with the gas and air throttle by the lever on the steering wheel under the control of the driver. Simultaneously with the opening of the throttle and the exposure of the jet aperture air is automatically admitted, firstly, through the usual air inlet; secondly, as the speed of the engine rises, through the extra air valve operated by the water pressure acting on the hydraulic regulator, the mixture being adjusted exactly to suit the varying speed of the motor. It will be easily seen that the amount of petrol allowed to flow is no more than is actually required for the speed of the engine, and that no excess can get through or waste occur.

There are many other ingenious ideas embodied in the carburettor, a general view of which, complete with its hydraulic air regulator, is seen in the lower part of the illustration. B is the float chamber with the needle top seen in the centre of the cover, and the float agitator at its side. A is the gas outlet to the engine. C is the main air intake. D is the petrol filter fitted with gauzes. One of the special features of the carburettor is that it has an electro-deposited copper water-jacket, of which E¹ and E² are the inlet and outlet unions to pipes connected

with the water-circulating system of the engine. The air throttle worked by the hydraulic air regulator is shown at the upper right hand. F is the sleeve showing one of its three triangular apertures in which the plunger slides. The air is taken in the front end, and its supply to the carburettor is automatically regulated by the speed of the engine increasing or decreasing the pressure of water, which, in its turn, presses on a diaphragm. The diaphragm moves the plunger rod to which is attached the plunger. In the view shown it is half open, and in accordance with the speed of the engine this plunger slides in and out, opens and shuts the three ports, and automatically adjusts itself to admit the exact amount of air necessary for the rate at which the engine is turning.

The spring on the plunger rod is provided to control the pressure of the water, and the nut I is for the purpose of adjusting the spring to its requisite tension, so that the opening and shutting of the valve occurs at the correct moment.

SOME USEFUL NOTES.

It is well to make a practice of seeing that there is a plentiful supply of petrol on board when commencing a return journey. Nothing gives a motorist more confidence when he is miles from home, the roads are heavy, the country hilly, and the weather bad, than the knowledge that there is at least plenty of fuel available.

RUNNING backward is not recommended as a particularly fascinating form of sport, but it is a very good thing to be able to steer a car rear end first in case it becomes necessary, through the disablement of the forward gears or other accidental damage, to resort to this method. Occasionally something will go wrong on a hill, making a hurried backward descent necessary, or a hill may be met which is so steep that it can only be climbed on the low reverse gear.

THE hub brake mechanism is a part of the car which seldom receives the lubrication it should, for in some cases it is far from accessible. Oil is required on the pins supporting the brake shoes and upon the bearing points of the cams or toggle mechanism which actuate the brakes. These parts usually depend for their lubrication entirely upon the use of the oil-can, and as they see hard service they deserve good attention in this regard. Beginning at the operating lever, every joint in the brake rods occasionally requires oil, as do the bearings of the compensating shaft.

THE silencers of petrol cars become more or less coated on the interior with particles of carbon bound together with burned oil, and this not only insulates the walls so that the dissipation of heat is retarded, but in aggravated cases has been known to obstruct and choke the passages, and thereby seriously interfere with the proper working of the engine, sometimes causing a mysterious loss of power. A well-designed silencer is one that can be easily taken down and apart for the purpose of cleaning out. The carbon and oil deposits stick tenaciously to the inside, and washing out by ordinary means cannot be depended upon to clean them out, though in some cases it has proved helpful.

ONE of the most commonly neglected parts of a car, so far as lubrication is concerned, is the clutch operating mechanism. In the case of some multiple disc clutches, which are enclosed in oil tight cases, the oiling of the thrust collar and the lever which operates it is automatic, but in the case of many cone clutches, and, in fact, all that do not operate in an oil bath, the thrust collar and lever require oiling by hand. The duty of these parts is very severe, they being almost constantly in use in throwing in and out the clutch. Very frequent lubrication of the ball thrust bearing and of the end of the lever which actuates it is thus demanded. Not only so, but the bearing of the clutch pedal and the pins which secure together the clutch operating linkage should be frequently supplied with oil.

MR. NORMAN CROSSLAND has been appointed the Motor Union engineer for Manchester.

A PETITION against licensing motor-cabs at Harrogate has been signed by all the cab proprietors in the town.

MR. THOROLD A. STEWART-JONES, of Lewes, who was married last week to Miss Joan Holland, daughter of Admiral Holland, of East Horsley, is spending his honeymoon in a motor tour through the Lake District and Scotland.

MESSRS. DENNIS BROS., LTD., have secured an order from the Dunlop Rubber Company for a 2-ton van, and from the Barnsley British Co-operative Company for a 2-ton van (a repeat order), and for one 15-cwt. and one 25-cwt. van from Mr. Bracewell, of The Llaskett, Llandinabo, Herefordshire.

MESSRS. S. SMITH AND SON, LTD., the well-known makers of watches, chronometers, speed indicators, &c., have a splendid representation in the Applied Arts Palace of the Franco-British Exhibition. Their display includes watches, clocks, jewellery and silver plate of chaste design, and fully reflective of their reputation.

AT Machen, Mr. E. P. Steer, a cousin of Mr. Joseph Chamberlain, was married to Miss Bernice. A feature of the wedding was that the party rode to the church in nine motor-cars supplied by the Newport Motor Company. Later in the day Mr. and Mrs. Steer started on an extended automobile tour in the West of England.

AT Worcester a lad nine years of age has been fined for driving a motor-car without a licence. When stopped in the main street of the city he was accompanied on the car by a little girl about twelve years of age. The lad's father told the Bench that his son was quite competent to drive the vehicle, and had, as a matter of fact, done so for two years.

IT is the intention of the R.A.C. to hold a test of motor spirit, and on the suggestion of Mr. G. H. Baillie the matter is being thoroughly taken up by the committee. It is thought by many who have given the subject attention that the existing tests do not meet the needs of the user, and Mr. Baillie has devised a simple apparatus for testing the volatility of the fuel and its results compared with distillation curves.

THE London County Council has, in reply to a representation from the Stoke Newington Borough Council, expressed the view that no reduction of the maximum speed of electric trams to sixteen miles an hour is necessary within the borough. Numerous accidents are reported in the Kingsland Road, and the Stoke Newington Council have decided to inform the London County Council that the speed of the cars on this route often exceeds twenty miles an hour.

A COMPANY has been organised in Mexico to establish a motor-bus service in that city on lines similar to those in vogue in London. One of an order of ten Straker-Squire 'buses has already arrived and will be put in service during the present month. The vehicles are of the single deck type, with seating capacity for twenty-four people. The points to be served have not yet been definitely decided upon, but the initial service will probably be between the Zocalo through Colonia Juarez to Colonia Roma, and return. A trial may also be made later with a double-deck omnibus, and should this prove popular several of these will be placed in commission.

THE Hutchinson tyres are well known both in France and England, and the new list which comes from 13, Maddox Street, Regent Street, London, W., will be of interest to those who are giving serious attention to the tyre problem. This includes voiturette tyres in four sizes with round tread and car tyres with either round tread or of the grooved pattern. The Hutchinson non-skid is made of wood fibre and steel-studded treads, and deserves attention. A hint which is conveyed in the catalogue with regard to the inflation of tyres will be of general interest, including as it does the following approximate pressure table:—

| | | | | | | | | |
|----------------------------|----|----|----|----|-----|-----|-----|-----|
| Size of Section, mm. — | 65 | 80 | 85 | 90 | 100 | 105 | 120 | 135 |
| Minimum pressure, lbs. ... | 70 | 75 | 80 | 80 | 85 | 85 | 95 | 100 |

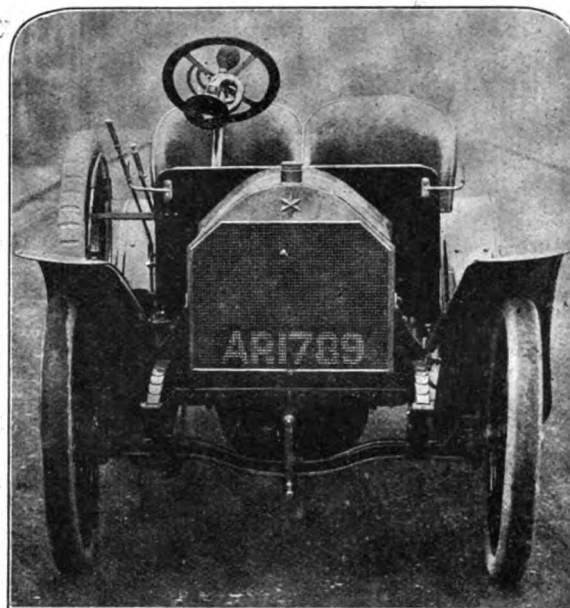
HERE AND THERE.

THE road over the Cairnwell is now open for motor traffic to Braemar, a point of interest to competitors in the Scottish Reliability Trials.

THE Essex County Motor Works, Ltd., of New London Road, Chelmsford, have been elected official country repairers to the Southend and District Motor Club.

AN application from a company desirous of running taximeter cabs having been received, the Scarborough Town Council resolved that they would licence taximeter cabs on the understanding that for each such cab licensed the company should purchase one hackney carriage already licensed.

DR. A. H. HEATON, president of the Automobile Club of Sedalia, Mo., U.S.A., has arrived in Paris for the express purpose of proving that motoring on the Continent need not be expensive. Dr. Heaton, who says he can automobile in Europe for an average of 19s. 6d. a day, and live well, is about to begin a six months' tour to give proof thereof on a Ford runabout. His itinerary includes France, Italy, Switzerland, Germany, Belgium, England, Ireland and Scotland, and he expects to average only about eighty or one hundred miles a day.



A 12-h.p. Star Car fitted with racing body recently supplied by the Star Engineering Company to the Hovian Engineering Company, Hove.

THE Mayor of Godalming has been urging motorists to keep the numbers of their cars as clean as possible; otherwise the local Bench may be inclined to inflict greater penalties in cases of inattention to this advice coming before them in the future than they have in the past.

WE give elsewhere the arrangements that are in hand for the holding of an inter club race meeting on the Brooklands track during the present season. It is settled that the competitors will be restricted to five from each club, and that the vehicles must be driven by their owners or by a member of the club. Several classes will be provided for.

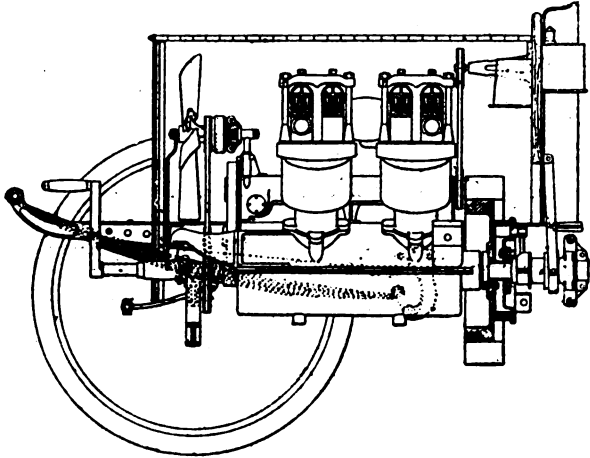
THE New Zealand Farmers' Motor Company, Ltd., which was recently formed in Feilding, North Island, New Zealand, has opened a large motor-car depot in that town. The main showroom is 60 ft. square, and is equipped with every convenience for motorists, club rooms, ladies' retiring rooms, lavatories, and manager's and secretary's offices being provided, while at the rear is the garage and workshop. Among the agencies for cars held by the company are the Weigel, Decauville, Arrol-Johnston, Singer, and Alldays. The company is making a feature of the New Arrol-Johnston motor lorries and delivery vans and the Savage steam wagons.

SIR PATRICK MANSON, K.C.M.G., has placed an order with the Daimler Company for a 30-h.p. chassis.

A NEW motor depot has been opened at 140, Northumberland Street, Newcastle-on-Tyne, by the Rover Company, Ltd.

MESSRS. W. ELDER AND SONS, LTD., have a garage and repair shop at Castlegate, Berwick-on-Tweed, which will be of service to motorists crossing the border.

IN a new car, known as the Payne-Modern, lately put on the market by the Modern Tool Company, of Erie, Pa., U.S.A.,



the somewhat novel arrangement of springs shown in the accompanying illustration has been adopted. As will be seen, they are of the usual semi-elliptic type, but are set at an angle to the horizontal plane, so as to receive road shocks squarely. It is claimed that the arrangement renders the use of shock-absorbers superfluous.

STRANG, who won the recent Briarcliff Trophy race in America on an Isotta-Fraschini, and who is to drive a Thomas car in the A.C.F. Grand Prix, is twenty-three years old, and was born in Amsterdam, New York, U.S.A. Last year he went to France with Walter Christie as the latter's mechanic in the Grand Prix, and therefore is well acquainted with French racing methods.

FOLLOWING the practice which is fortunately becoming very general with motor manufacturers, the Star Engineering Company of Wolverhampton have just issued a book of instructions regarding the up-keep of Star cars, which should be of the greatest value to users of these increasingly popular vehicles. The book extends to over sixty pages and deals with practically every point on which the motorist frequently requires information. The question of lubrication of the engine and other parts of the transmission is very thoroughly dealt with, as is also the subject of ignition troubles, to mention only one or two of the matters touched upon in the booklet. One prominent feature of the work is the free use that has been made of clearly-drawn line illustrations showing the internal arrangement of the engine, clutch, gear-box, live axle, &c. Altogether, Star car users will find the new instruction book an indispensable companion.

UNDER the title "Concerning Repairs" comes an interesting pamphlet from Messrs. Jarrott and Letts, Ltd., descriptive of their repair works at Hythe Road, Willesden Junction. The reputation the firm have gained in connection with repair work has extended beyond the confines of their own business, and in order to meet the demand they have decided to open the works to all motor-cars, irrespective of make. The premises are complete in every essential detail, and comprise, in addition to the actual garage where the cars are overhauled, a foundry, smithy and four well-appointed machine shops. The obtaining of spare parts presents no difficulty, for what cannot be quickly purchased outside can be made within the works without delay, enabling orders, either for repairs or accessories, to be carried out both quickly and at the lowest rates consistent with good work and material. A speciality is made of insurance repairs, and in the case of a badly damaged car the facilities available are such that the vehicle can be entirely rebuilt should occasion arise.

THE "Buggyaut" is the name that has been given to a new car lately brought out in the United States.

WHILE ascending The Slope, a steep incline at Folkestone, a motor-car the other day commenced to run rapidly backwards. It broke down some railings, and was only saved from going over the cliff by a stone coping.

ON Friday, the 8th inst., a meeting of fly proprietors and drivers was held at Hove, at which a resolution was passed urging the authorities not to licence any taximeter cabs for service in the district.

AS announced in the last issue of the *M.C.J.*, Mr. C. Jarrott is taking part in the St. Petersburg Moscow race, which is to be held on the 31st inst. He will, we understand, drive the 80-h.p. four-cylinder De Dietrich on which he recently broke the fifty miles world's record at Brooklands.

EXTENSIVE alterations have been made at the motor garage of Mr. A. L. Gould, at 74, Market Place, Newcastle, Staffordshire. This is well arranged for the storage, and excellently equipped for the repair, of cars. The season has opened well, and many motorists passing through the town will find Mr. Gould's garage well able to serve their needs.

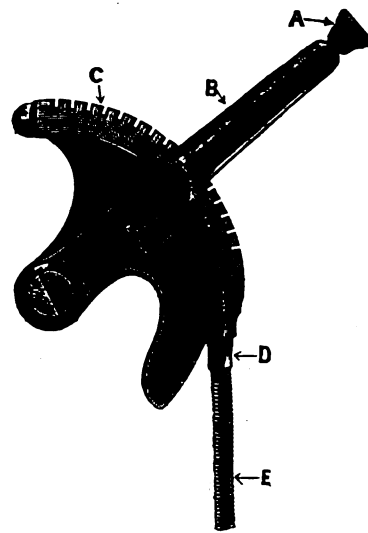
NOW that motor services are being revived at many of the principal holiday resorts we shall be pleased to hear of interesting innovations made for the pleasure of visitors. So far, one of the most enjoyable trips of which we have information is a combined motor-car and motor-boat excursion from Bournemouth, Christchurch, and Mudeford, organised by Messrs. Edmunds Bros., of Boscombe. They arrange to take visitors from their private or hotel residence by motor-car to Christchurch, and after visiting the Priory Church convey them to the Town quay, where a motor-launch awaits their arrival. After a cruise in the harbour a visit is made to Mudeford, the return to Christchurch being by motor-boat, and the trip concluding by the motor-car returning the visitors to any point in the borough of Bournemouth. Messrs. Edmunds Bros. have a large garage at 260A, Christchurch Road, Boscombe, where several hiring cars are at the disposal of visitors.

THE "sector" or quadrant lever is a form of hand lever which is found specially suited to many systems of motor

driving, many motorists having a special predilection for this type in preference to any other where it can conveniently be used. Hitherto there has been nothing on the market specially adapted for use in connection with the Bowden wire mechanism, and to remedy this the E. M. Bowden's Patent Syndicate, Ltd., have just introduced the pattern illustrated herewith. It is supplied for either right or left side, and, like all levers operating the Bowden wire, can practically be placed anywhere on the car that may be desired. The illustration requires little explanation, and will, no doubt, convey a clear

idea of the lever. A is a milled knob operating a pawl, which, with its return spring, are concealed in the stem B. The pawl engages with the rack C, and is released by pulling the milled knob A. E and D represent respectively the Bowden wire and its "stop."

A NOVEL type of vehicle has recently been supplied by the Rover Company through a Liverpool firm for use on the West Coast of Africa. It consists of a standard 6-h.p. Rover chassis, provided with dual ignition by means of dry batteries and magneto; a special body is fitted, the rear portion forming a large box, heavily bound with brass and secured by a pair of special locks. The car is to be employed in conveying specie between various stations on the West African coast.



CONTINENTAL NOTES.

The A.C.F. Grand Prix Race.

The first of the trio of cars which the Panhard Company are building for the A.C.F. Grand Prix Race is now on the road. As will be seen from the illustration we give on another page, the vehicle is an entirely different model to that which represented the firm in last year's contest. The four-cylinder engine has a bore of 155 mm. and a stroke of 170 mm. The gear is adapted to give four speeds forward and a reverse, the lever being inside the body on the driver's right hand. The final transmission is by side chains instead of the live axle which has been employed by the Panhard Company for the last year or so.

The Tour of France.

The annual Tour of France reliability trial for motor-bicycles, tri-cars, and light cars organised by the Auto-cycle Club de France commenced on Monday last, and will terminate on Sunday the 17th inst. Thirty-six entries were received, and all but two of these were duly weighed in at the Clement-Bayard Works at Levallois, near Paris, on Sunday. The competitors include nine motor-bicycles, six tri-cars, six light cars with single

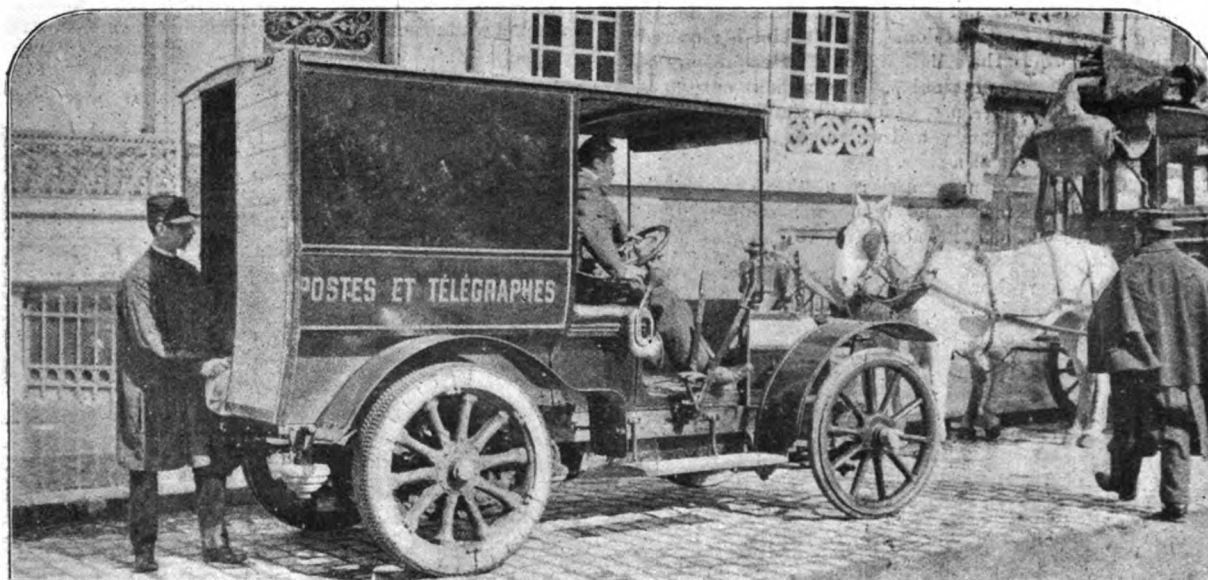
Lion-Peugeot, his time, 6 h. 31 min., being equal to nearly twenty-nine miles per hour. The second, third, fourth, and fifth places were taken by De Dions, a second Lion-Peugeot being sixth.

English Motorists in France.

Among the British motorists who have lately visited France with their cars are. Mr. and Mrs. Alfred Stephens (30-h.p. Renault), Lord and Lady Ingestre (35-h.p. Talbot), Lord and Lady Saville (50-h.p. Léon Bollée), Mr. C. B. Balfour (32-h.p. Daimler), Mr. E. A. Hambro (28-32-h.p. Mercedes), Captain and Mrs. Hamilton (80-h.p. Napier), Mr. and Mrs. Harrison (40-h.p. Isotta-Fraschini), Mr. and Mrs. James Fleming (60-h.p. Fiat), and Mr. E. A. Saunders (35 h.p. Fiat).

Motor Racing in Roumania.

The Roumanian Automobile Club lately held a motor race on a 6½ kilometre circuit near Bucharest, which had to be covered six times. The winner in the over 50-h.p. class proved to be Camarasesco on the 60-h.p. Dietrich (32 min. 34 sec.); Prince G. Bibesco, on a 75-h.p. Mercedes, being second in 33 min. 21 sec. In the under 50-h.p. category, the best time was made by Gaillac on a 40-h.p. Berliet (36 min. 16 sec.).



One of the new Motor Mail Vans now being used in Paris by the French Postal Authorities. The vehicles are of the De La Buitre type.

[L'Automobile.

cylinder engines of not more than 84 mm. bore, viz., three Sinpair, and one each Rontoux, Renard, and La Metais, and thirteen cars with single-cylinder engines of a bore up to 100 mm. —three Ivrys, a Delage, a Le Gui, a Fouillaron, two Demeesters, a Bozier, an Economique, a Clement-Bayard, a Stimula, and a Prima. The programme of the daily runs is as follows:—May 11th, Paris-Dijon, 310 kil.; May 12th, Dijon-Clermont-Ferrand, 280 kil.; May 13th, speed trial and hill-climbing contest; May 14th, Clermont-Limoges, 194 kil.; May 15th, Limoges-Bordeaux, 217 kil.; May 16th, Bordeaux-Tours, 325 kil.; May 17th, Tours-Paris, 225 kil.

Racing in Sicily.

The annual race for light cars in Sicily was held on Sunday last. The event, which was confined to single-cylinder cars up to 100 mm. bore, and up to 80 mm. for two-cylinder vehicles, was over a 150-kilometre course, which had to be covered twice, equal to 187½ miles. Fourteen entries had been received, and of these eleven started, viz., two Sizaire-Naudins, six De Dions, and three Lion-Peugeots. Sizaire led at the end of the first round, but was put out of the race in the second lap by running into a bank. The race proved a victory for Giuppone on a

Public Services in Spain.

Public services of motor vehicles for the transport of passengers and goods are shortly to be established between Coruna and Corubion, between Coruna and Sada, and between Santiago and Coruna.

Miscellaneous Items.

Fifteen members of the Austrian Automobile Club left Vienna on the 3rd inst. for a motor tour in Bosnia.—Tenders are being invited by the French post and telegraph authorities for the carriage of the mails between Epernay and Sezanne (Marne) by motor vehicles.—Arrangements are in hand for inaugurating a summer motor-car service between Lourdes and Bagnères-des-Bigorre, in the Upper Pyrennes, France.—The latest novelty in Paris is a bicycle intended to be carried on a motor-car for use in emergencies. So that it can be carried in a small space, the machine is made so that it can be quickly separated into two parts.—An automobile club has just been formed in Dresden.—Two women motor taxicab drivers have lately taken their place on the ranks in Paris. One drives a Delahaye cab and the other a Corre vehicle.—Two motor-cabs have made their appearance on the streets of Berne, Switzerland

MOTERING ACCESSORIES.

Accumulator Charging Devices.

Reference has already been made in the *M.C.J.* to the fact that Messrs. Ward and Goldstone, of Springfield Lane, Salford, Manchester, are devoting special attention to requirements in connection with the electrical ignition portion of petrol cars. We illustrate in Fig. 1 a little plant known as the "Hydranamo," by means of which accumulator cars can be charged from the cellar tap. As will be seen, it consists of a

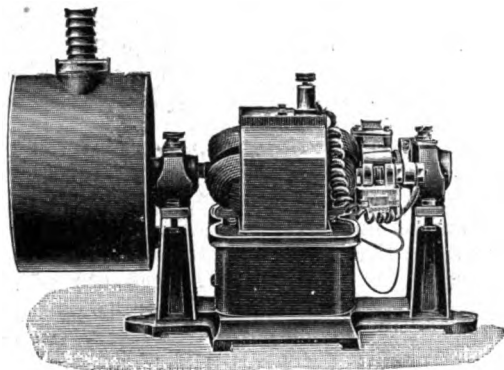


Fig. 1.

combined water motor and dynamo, of which we understand many hundreds are in use, giving every satisfaction. The machine is required to be connected to the water tap in the cellar, and on a water pressure of 45 lbs. or over, excellent results are obtainable. The normal output is 2 amps. at 8 to 10 volts at 45 lbs. pressure, which will readily charge an accumulator up to 60 amp. hours' capacity, and where the water pressure is higher it will charge two or three at a time.

In connection with this little plant a small regulating switchboard is supplied consisting of an ammeter and regulating switch. This enables the user to regulate the current according to the size of the accumulator.

The price of this set is very low and the workmanship is of the highest class, a feature being ring oiler bearings and massive commutator, enabling the machine to run day in and day out without attention.

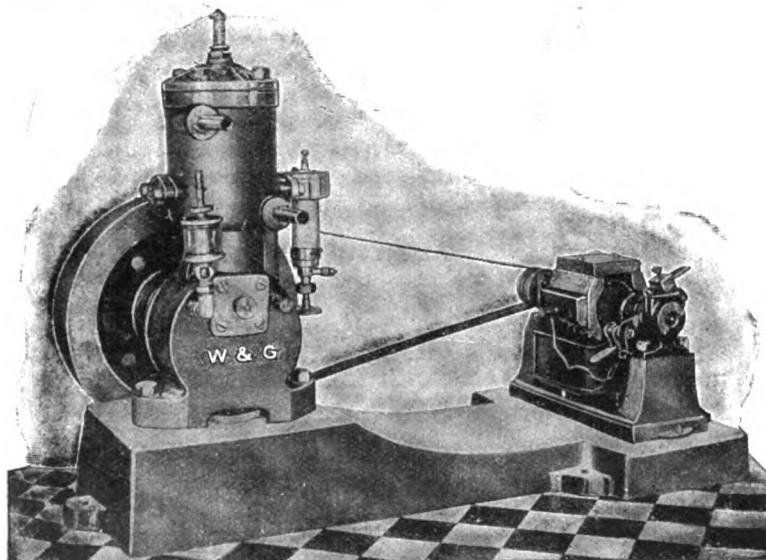


Fig. 2.

We also illustrate a combined charging plant (Fig. 2), consisting of a petrol engine and dynamo for garages, which will be found most useful where there is no electrical supply available. The plant, which takes up very little space, consists of a two-cycle engine mounted on iron bed plate with ring oiling dynamo which will easily give 30 volts at 5 amps. with the minimum of attention. In addition to accumulator charging methods Messrs. Ward and Goldstone have some special lines in voltmeters, ignition accumulators, coils, sparking plugs, electric head and tail lamps, &c.

The "Simplex" Speedometer.

Just as of the "making of books there is no end," so there would appear to be no limit to the types of speed indicators introduced for

the purpose of enabling motorists to check official exaggerations of speed. One of the most modern devices of this kind brought to our notice is the patent "Simplex," for which the United Motor Industries, Ltd., of 45 and 46, Poland Street, London, W., are the British agents. This is apparently well in keeping with its name. The principle is based on the transmission of centrifugal force developed by the axis of rotation. By means of rotating discs with balls running freely in compartments the action of centrifugal force tends to press them to an extremity which is held in check by levers acting upon an outer ring forming the axis or indicating hand. The correct rate of speed is recorded on the dial immediately and at the actual moment of the speed. The "Simplex" speedometer is fixed on the dashboard and can be easily read from the seat. It is connected with the drive attached to the front right hand wheel of the car. The operation is by means of a cable covered in a brass flexible casing running vertically down the dashboard to the ball bearing aluminium wheel of the drive. The latter is positive, a spring belt connecting two grooved wheels. One of these is fixed centrally round the inside of the hub of the car wheel, the other is supported by a clamped and bolted bracket fixed on the steering arm in a direct line with the wheel fixed on the hub. Altogether simplicity and durability combine with accuracy in operation and reasonable cost, to make this speedometer a noteworthy feature among the specialities of the United Motor Industries, Ltd.

The "Scout" Horn.

Messrs. Bleriot, Ltd., of 23 and 54, Long Acre, whose name is universally known in connection with the lighting of cars, have rendered further

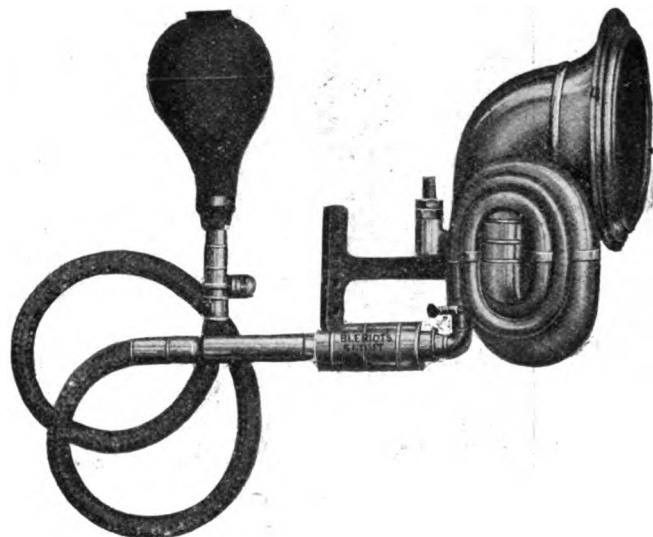


Fig. 3.

service to the motoring community by the introduction of the "Scout" horn, illustrated in Fig. 3. In this the ordinary reed is supplanted by a more effective device not so likely to get out of order. In fact, its durability is a great recommendation, while the powerful, long and harmonious sound emitted constitutes an effective herald of the approach of the car and should quickly clear the road.

INTERNATIONAL TOURING CAR TRIAL.

INSTEAD of the numerical order hitherto adopted, the classification in the International Touring Car Trial is to be alphabetical. Class 2 (a) now becomes Class B; Class 2 (b) becomes Class C; the Classes 3 to 7 are lettered D to H, and, omitting the letter I, Classes 8, 9, and 10 are altered to J, K, L. Horse-power by R.A.C. rating has been worked out for all the cars except the two White steam cars. The bore of the Nagant-Hobson is recorded as 105 mm. and not 100 mm., with the result that that car is transferred from the 20.8 to 25.6 Class to the 25.6 to 32.4 Class. The competing cars are to assemble on Whit-Monday at the "White" Company's new buildings in Camden Town, which have been offered by Mr. Frederic Coleman to the club as a starting place for the trial.

The car entered by Messrs. Benz and Cie. has now been placed in Class No. 7.

Observers were to be nominated by May 7th, and any alterations in the specifications have to be received by the 15th inst.

Correspondence.

[Letters to the Editor should be addressed to the offices, 27-28, Charing Cross Road, London, W.C.]

HANDICAPPING OF MOTOR-CARS.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—I think we have had sufficient experience now of the R.A.C. system of handicapping to realise that from a practical point of view it does not fulfil the purpose for which it was intended. In connection with club handicaps and open handicaps where the R.A.C. formula is adopted, the whole of the interest is spoilt by reason of the fact that the results cannot be worked out quickly, and announced to the interested public and the Press immediately at the conclusion of the meeting, for at the present time the various details affecting the handicap, namely the bore of engine, weight of car, and windage area, have to be forwarded to the R.A.C. officials, and days elapse before any definite announcement is made as to the result of any event, consequently by the time the actual results are received public interest has disappeared entirely.

What is wanted is a practical handicap which can be worked out by club officials on the ground, and the result of every handicap announced at the immediate conclusion of the meeting, and I think it would be wise for club secretaries and committees—who are endeavouring to uphold the sport and pastime of automobilism, and to sustain the interest of their members in the various hill-climbing and speed events organised by them—to see whether some other formula cannot be adopted whereby this can be done. In addition to this, I think it has now been unques-

greater mileage from the covers, and therefore no necessity for the continual removal from the rims; and detachable rims, wheels or spare covers are unnecessary, the carrying of a gaiter only being necessary.—Yours truly,

INTERESTED.

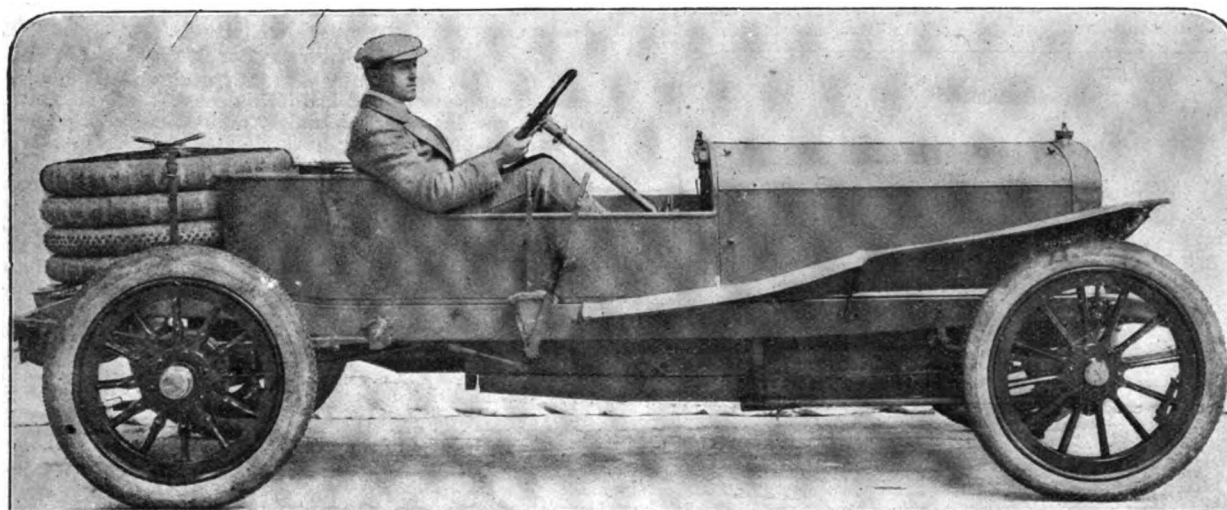
A WARNING RE BACK AXLES.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—Although throughout the whole of last season the sole trouble that we had with back axles was the shearing of two pins on the torque rods—it will be freely admitted that such a record is probably unprecedented—yet knowing the cause of the breakage of the two torque rod pins, we should like to advise your readers of the reason of many back-axle troubles from which we, however, have been free.

In both the cases to which we refer the spring seating sleeve had rusted on to the back axle tubing. We have found in our experience that few chauffeurs or owners take the trouble to keep the spring seating bearings clean and in working order. When a car is used in wet weather this particular bearing gets covered in water and eventually rusts, the result naturally being a breakage.

We have found that owners and chauffeurs think it sufficient, where they find a grease cup, to fill it up and press it home, but this is not so,



Rests at the Wheel of the Austin Racer he will drive in the A.C.F. Grand Prix event. The road wheels, it will be noted, are fitted with Dunlop detachable rims.

tionably proved that the effect of the stroke on the horse-power of an engine is a point to be considered, and should be taken into consideration in connection with any handicap, but the R.A.C. formula ignores this important matter of stroke.

Surely after a year's experience everybody realises that the R.A.C. formula does not meet the requirements of automobile sport, and that some fair and practical handicapping system must be substituted in place of it.—Yours truly,

CHAS. JARROTT.

A NEW INNER TUBE FOR MOTOR TYRES.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—The correspondence on detachable rims and wheels in your recent issues inferred that these were indispensable to motorists, but I venture to suggest that they are palliatives only. The true cause of the troubles is the frailty of the air tubes of pneumatic tyres, therefore to prevent them from damage is the primary necessity, and having done this, tyre troubles will practically cease. As the outcome of a series of experiments in this direction may I be allowed to bring before your notice a new resilient detachable tube shield or protector which has proved itself to be perfectly successful and may be used with any existing cover and rims. An air tube of smaller diameter than ordinarily used is employed; for instance, a 120 mm. cover requires a 90 mm. air tube, and the space thus left between them is filled with a resilient rubber lining or band, so that on this lining and ordinary cover being inflated the tyre as a whole becomes of the same resiliency as compressed air at ordinary pressures, the air tube always resuscitating the tyre in the ordinary manner; at the same time some 1½ in. of space must be punctured before the air tube can be reached. The results are: Absolute resiliency; immunity from punctures or bursts; continual inflation;

and we would strongly recommend owners to see that every two or three days the grease cup is entirely taken out, that paraffin is forced upon the bearing parts through a syringe, and thereby ensure every part being cleansed; that the greaser is then filled up and three or four grease cupfuls forced home.

We think other manufacturers will agree with us that sufficient attention is not given to parts greased by Stauffer boxes, and that the advice we give is wholesome. We trust, sir, that you will give prominence to our letter, not only for our own sake, but for the benefit of every other manufacturer and for the sake of owners. The point we are raising, viz., carefulness, not only in lubricating but in cleansing—is of the utmost importance to prevent breakages.—Yours truly,

WEIGEL MOTORS (1907), LTD.

COURTESY ON THE ROAD.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—I have just returned home after a tour of 1,500 miles round England, and feel it my duty, in the interests of other motorists, to give you my impressions.

(1) I have found that in the great majority of cases passing motorists have shown little or no consideration, either to the general public or to other motorists, the result being that they have left clouds of dust, to the discomfort of those who have as much right to the road as themselves.

(2) In nearly all cases I have observed that the motorist has occupied the centre of the road, and has shown, in many cases, little inclination to take his own side in passing my car.

I have had motor-cars for seven years, and my instructions to my chauffeur have always been to show consideration to every foot

passenger or vehicle passed on the road, and always to drive on his own side of the road. I have maintained in public and private that this was the general custom by those in charge of motors, but I deeply regret that my experience during the fourteen days' tour has been an emphatic "eye-opener," and so long as the present lack of consideration is shown, the motorist must continue to be the "most hated" individual on the road, and need not be surprised if local authorities and Parliament enact stringent regulations to protect the general public.

If the golden rule of "doing unto others, &c.," were more generally acted upon, it would add greatly to the happiness and comfort of all concerned.—Yours truly,

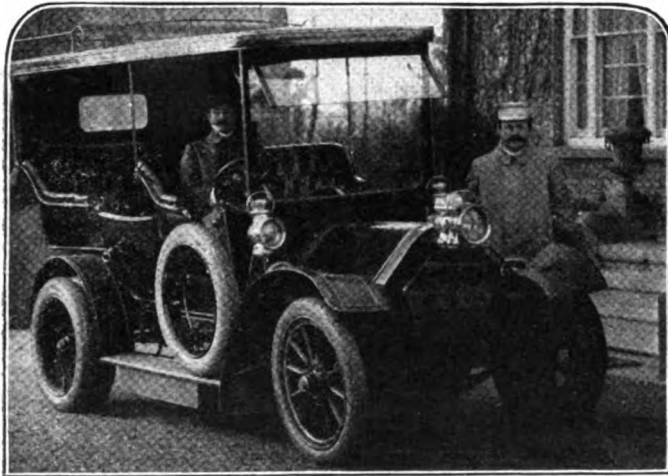
G. B. B.

WET DRIVING SEATS.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—Your contributor "Arcanum" has undoubtedly hit on one of the most difficult problems in connection with motoring. There is nothing more dangerous than sitting in a pool of water, especially on a cold day. Only recently a friend of mine was seriously ill for months as the result of sitting on a damp seat whilst driving his car over a long stretch. An effective method of avoiding the water which collects in wet weather on the seat is to have a small extra seat on top of the ordinary cushion. The rain finds no place to lodge in this, but falls into the space around it. Another good idea is to use a perforated rubber mat, which in dry weather can be kept under the cushion, the water, of course, sinking between the perforations into the rubber spacing.—Yours truly,

OLD HAND.



Messrs. Walter and T. M. Davis, the Inventors of the Stearns Spare Wheel.

The Stearns Spare Wheel has now a world-wide reputation and is in use in every civilized country.

ROUTE FOR MOTOR TRIP.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—Replying to your correspondent who asks for a good route from Sudbury to Ramsgate, the following will be found a very pleasant and easy journey.

Newmarket via Audley End to Bishop's Stortford; then on through Harlow; three miles on the road towards Epping turn off to Ongar, thence to Brentwood through Norley and Grays to Tilbury, cross at Tilbury Ferry, very easy, and men remarkably civil and obliging, cost 1s. per wheel, and 2d. or 3d. each passenger), to Gravesend, thence to Chatham; here go by New Road shortly after crossing the Rochester Bridge, and then, amid traffic, up Chatham Hill, through Sittingbourne to Canterbury, through Canterbury to Ramsgate. There are nice roads all the way, the nasty hills, Chatham, very greasy if wet, Boughton Hill shortly before reaching Canterbury. By this route Ramsgate is about 90 miles from Bishop's Stortford.—Your truly,

J. B. P.

THE DANGERS OF LONDON TRAFFIC.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—At the Clerkenwell Police Court a few mornings ago a motorist was summoned for driving a motor-car in a manner dangerous to the public at the junction of Gray's Inn Road and Theobalds Road, London. In giving his decision Mr. Bros, the magistrate, said the crossing in question was, in his opinion, the most dangerous in London. In addition to motor vehicles and the ordinary traffic, there are now added electric trams, and drivers would have to be on the

look-out all the time and not depend even upon the constables placed on special duty.

It would be interesting to have the opinion of those well acquainted with London traffic as to whether the magistrate was really correct in his view as to the most dangerous crossing in London. Piccadilly, Wellington Street and the Strand, Ludgate Circus and the Bank are all points of danger which in many respects offer as much opportunity for accidents as the point Mr. Bros mentioned.

In this connection it does seem strange that the public do not make a use of such subways as those provided at the Mansion House; although apparently the City Corporation have an idea that an educational process is going on, for they have decided to construct subways underneath the City approaches to Blackfriars Bridge as showing they are fully alive to the risks one has to run in the streets of London today. That these are growing in number in London as well as in the City area is apparent from the reports of the Metropolitan Commissioner of Police, who records the accidents in the area for which he is responsible as follows:—

| | | Killed. | | Injured. |
|------|-----|---------|-----|----------|
| 1904 | ... | 134 | ... | 9,121. |
| 1905 | ... | 157 | ... | 10,280. |
| 1906 | ... | 185 | ... | 12,237. |

This increase is, of course, not wholly due to the progress of the motor vehicle, but, as we might have expected, from the growth of traffic generally. At the same time I do feel it would be useful if the authorities could take special care to regulate the traffic more thoroughly at the points I have mentioned, and that motorists should continue to give their assistance in securing discipline at these dangerous places.—Yours truly,

T. JACKSON.

A WONDERFUL TALE.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—It is wonderful what funny stories about motor-cars get into some of the papers published for the benefit of the multitude. I was reading one the other day under the heading "King Leopold's Pluck." It describes how the King of the Belgians was out in his motor-car one day, going at a rate of some forty miles an hour, when suddenly, on rounding a corner, the Royal motorist perceived a woman, wheeling a perambulator, and leading a child by the hand, standing in the middle of the road, dazed and unable to move from fright. The car could neither be stopped in time nor turned aside, owing to the high banks on both sides of the narrow road. "Reverse, and run into the ditch!" came the Royal command; and the chauffeur did so. The result was that the car turned a complete somersault and landed in the ditch.

No wonder the car went into the ditch! Moreover, I do not think the gear-box would be worth much after the chauffeur's attempt to get in the reverse while travelling forward at a fast speed. But there! I do not think the King's chauffeur would try such a foolish thing.—Yours truly,

T. R. Fox.

CONNECTING UP ACCUMULATORS.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—The manufacturers of a certain car place emphasis on their instructions to always connect up the accumulator in the same way, the positive pole to the coil and the negative to earth. Another authority claims that in passing from one point to another the electric current carries particles of metal with it—e.g., in the case of the contacts on the tremblers of the coil, one point would be eaten away and the other built up. Hence, he advises reversing the poles of the battery each time it is replaced. Is there any merit in this, or is there any reason for connecting up the wires always the same way? Perhaps some readers of the *M.C.J.* will assist me.—Yours truly,

NOVICE.

THE ROVER CARS.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—As to the query about the 8-h.p. Rover car in your issue of the 9th inst., I have had one in almost daily use since November, 1906. Mileage run about 6,700 miles. Petrol consumption averages over thirty miles per gallon. Two new tyres (Dunlop grooved) to driving wheels after about 5,000 miles; former tyres are still serviceable, but grooves worn smooth. Repairs bill: two new brake bands, brake wire twice renewed, Bowden wire for spark control renewed, front spring set up, and two new bolts for this. Back axle was dis-assembled last month for inspection, and the only visible sign of wear was jaws of front dog-clutch of propeller shaft showed very slight wear, but not sufficient for renewal. Gear wheels show no sign of wear.

I have never yet been delayed upon the road except for punctures. Car is two-seated with hood and screen and detachable tonneau, and upon ordinary roads and weather conditions will average twenty miles an hour.—Yours truly,

FRANK HEMMING.

A MOTOR tube and other accessories were found near Kirkwhelpington, on the Newcastle to Jedburgh road, on Saturday, by Mr. G. R. Flowers, of 45, Buxton Terrace, Jesmond, Newcastle-on-Tyne, who will be pleased to return the same to the owner on hearing from him.

RACING AT BROOKLANDS.

PLEASANT weather favoured the motor race meeting on the Brooklands track on Saturday last, when a series of interesting races was carried through. Punctually to time the first event was started at 3 p.m. This was the All-comers' Handicap Sweepstakes, confined to cars which competed at the Easter meeting. The distance was about 7½ miles. No less than nineteen vehicles competed. The limit cars proved too much for the back-markers, and the two 22.5-h.p. Ford cars, with 7,116 yards start, and a 8.9-h.p. Sizaire, 7,472 yards, finished in the first three, Mr. E. A. Anthony managing to beat Mr. H. A. Bate on the post by a yard, with Mr. B. S. Millard on the Sizaire close up. The average speed was about forty-five miles per hour, but the scratch car would have had to be driven ninety-five miles an hour to make a dead-heat. There was an exciting moment at the finish of the race when Cundy, on the Napier, finding himself shut in by several smaller cars, applied his brakes, with the result that the car waltzed round, fortunately without any damage resulting.

Mr. J. W. Stocks (25.6-h.p. De Dion) had practically a walk-over for the Fourth 26-h.p. Race, as the only other competitor, Mr. J. F. Browning on a 25.6-h.p. Napier, started with a punctured tyre and went round quietly, carrying off the second prize.

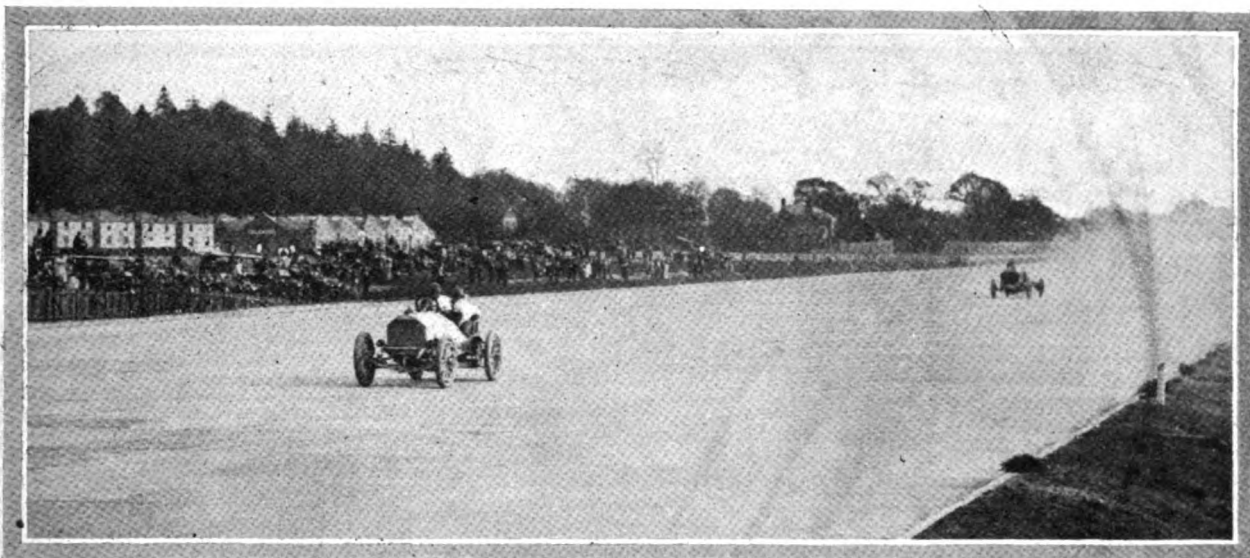
The third event was a Handicap for Private Competitors, for motor-cars entered and driven by private competitors of the Brooklands Club. Distance about eight and a half miles. There were five competitors, two being on scratch, a Delaunay-Belleville and a Weigel, a Nagant-Hobson, 2,335 yards, a Sizaire, 5,363 yards, and a 6-h.p. Wolseley, 8,404 yards (nearly five miles). The handicappers under-estimated the latter, which

Mercedes, third. An objection was, however, lodged in connection with the event, so that the above result can be taken as being definite.

The most exciting event of the day was the Fourth 90-h.p. Race for cars of a cylinder dimension of 225.1 or under. Distance about 5½ miles. There were only three competitors—Resta on Mr. F. R. Fry's 76-h.p. Mercedes, C. Lane on Mr. Warwick J. Wright's 89.5-h.p. Darracq, and F. Newton on Mr. S. F. Edge's 90-h.p. Napier. Although Newton made a fine effort to get by round the back banking, Resta led all through, and, amid much cheering, won by fifty yards, at a speed of ninety-three miles an hour.

The private match over a distance of five miles between Mr. O. S. Thompson on his 36.1-h.p. Austin and Mr. H. G. Nalder on a 35.7-h.p. Berliet was a very close race, the two cars being almost bonnet to bonnet the whole time. At the finishing point, however, Mr. Nalder's car was about a length in front.

The last event of the day was the Fourth 40-h.p. Race for cars of a cylinder dimension of 100 or under. Distance, about 18½ miles. Result: 1, Mr. S. F. Edge's 39.6-h.p. Napier (F. Draper); 2, Mr. S. F. Edge's 38.4-h.p. Napier (F. G. Cundy); 3, Mr. Walter Phillips' 38.4-h.p. Humber (W. G. Tuck). These were the only three competitors, two Napiers and a Humber. Cundy (Napier) made the running, with Tuck (Humber) a few yards behind. These two quickly made a gap of half a mile from Draper (Napier), and so they ran for four laps. On the fifth circuit the Humber began to slow up, one of the inlet valve springs having broken. Cundy was then left with a lead of nearly a mile, but Draper began to quicken up and overhauled him rapidly, and though Cundy managed to accelerate in the last few yards, Draper won a magnificent race by a yard.



Racing at Brooklands.—The Finish of the Fourth 90-h.p. Race, which was won by Resta on Mr. F. R. Fry's 76-h.p. Mercedes.

was driven by Mr. O. S. Thompson, as it won by over a mile, 300 yards separating second and third. Mr. C. Hobson's 27.9-h.p. Nagant-Hobson was second, and Mr. T. Faulkner's 41.9-h.p. Weigel third.

No less than thirty competitors turned out for the Motor Cycle Handicap Plate for motor-bicycles of which the engines, if twin-cylinder, do not exceed 85 mm. by 95 mm. for each cylinder. Distance about five and a half miles. Interest in the race was increased by the fact that the start took place near the judge's box in full view of the spectators. The result was: (1) H. Shanks, jun., 2½-h.p. Chater Lea (2 min. 45 sec. start); (2) H. G. Partridge, 6 h.p. N.S.U. (1 min. 45 sec.); (3) W. H. Bashall, 3½-h.p. Triumph (1 min. 40 sec.). A speed of fifty-eight miles per hour was attained during the race.

The May Cup, a handicap for private competitors, followed. This was for motor-cars driven by private competitors of the Brooklands A.C. Distance about five miles. Fourteen cars turned out, Mr. A. Van Hoboken, 71.7-h.p. Mercedes, being on the scratch mark, and Lieut. H. C. Halahan, 17.5-h.p. Dennis, having maximum start, 3,586 yards. The event proved a victory for Mr. P. D. Stirling on a 35.7 Berliet, 2,214 yards start; Mr. C. Hobson, 27.9-h.p. Nagant-Hobson, 2,870 yards, being second, and Mr. G. C. Moss, 27.2-h.p. Arrol-Johnston, 3,126 yards, third.

The sixth race was the Limit Sweepstakes, for cars which did not exceed a speed of sixty miles per hour during the race. Distance between six and eight miles. Mr. J. W. Stocks, driving his 25.6-h.p. De Dion, made the running from the start, hotly followed by Mr. van Hoboken on his 71.7-h.p. Mercedes. The leading cars turned into the straight a lap too soon, followed by all the others except Mr. Nalder on his 35.7-h.p. Berliet. Eventually the three cars to pass the post the second time were Mr. D. Pigot, 35.7-h.p. Berliet, first; Mr. P. D. Stirling, 35.7-h.p. Berliet, second; and Mr. A. van Hoboken, 71.7-h.p.

It was announced at the meeting that a match will be run on the track in August between Mr. S. F. Edge, driving a Grand Prix Napier car, and Mr. Charles Jarrott, driving a Grand Prix De Dietrich or a Mors car. This should prove an exciting and interesting event.

MOTOR VEHICLES AND ROAD REPAIR.

AN important point in motor-bus law has been raised at the Wandsworth County Court in the case of Barnes Urban Council v. the London General Omnibus Company. The district council claimed £116 under Section 23 of the Highways Locomotive Amendment Act of 1878. According to the plaintiffs the amount claimed had been expended in repairing Avondale Road, Mortlake, which was said to have been used by defendants for their motor-buses. The traffic was extraordinary, and it was contended for the council that the defendants were liable for it.

Mr. Ernest Charles (for the defendants) submitted that the local authority were bound to deal not only with the traffic that was usual, but with all manner of traffic. Counsel urged that what was called extraordinary traffic at one time became ordinary traffic as a sort of custom, and furthermore that the damage to the road was not caused within the period for which the council could recover.

Judge Bray reserved his decision.

M. ABRAN, of "L'Auto," has just returned from a trip round France on an 18-28-h.p. Germain car, fitted with Danlop detachable rims and tyres. On the whole journey of 5,500 kilometres the tyres were never once touched, and on their return to Paris looked almost new.

CLUBS AND ASSOCIATIONS.

ROYAL.

THE Club is endeavouring to secure a date in September for the International "Four-Inch" Race for the tourist trophy, as it is felt that this would be a better month than October for the competition. The decision rests with the Isle of Man authorities.

The Technical Committee of the Club has had before it a letter from the Commercial Motor Users' Association suggesting that the R.A.C. should undertake a series of acceleration tests, extending over one or two days, such tests to be held in respect of public service vehicles which are constructed to comply with the Metropolitan police regulations, limited to a maximum of 35-h.p. R.A.C. rating, and to carry a standard double-decked omnibus body.

The Competition Committee have considered the question of holding the fourth race for the Graphic trophy. It was agreed that the competition should be held during the Tourist Trophy week in the Isle of Man in the autumn, and that the formula employed last year should stand. The competition is therefore restricted to vehicles fitted with internal combustion engines of single piston four-cycle type which comply with the following formula:—Cylinder diameter in inches squared multiplied by the number of cylinders must not exceed 125. Double-piston or other engines will be rated on their merits, but no engine whose combined effective piston-area exceeds 98.17 square inches can be allowed to enter. Particulars as to the bodies of competing cars will be inserted in the regulations, the committee having not yet decided as to the form of body or the wind area which will be necessary for this competition.

A meeting of the General Committee was held in the Council Chamber at the Nottingham Exchange on Saturday. Captain H. H. P.

April brought a continuance of the progress which has marked the career of the Motor Union this year. Individual members enrolled during the month numbered 380. Including the affiliated members, the Union now has a membership of about 15,000.

The following have been elected vice-chairmen of the Motor Union for the year 1908-9:—Mr. C. H. Dodd, Capt. D. Hughes Morgan, J.P., Mr. R. A. McCall, K.C., Mr. W. Ballin Hinde, and Earl Russell; Col. R. E. Crompton, C.B., has been elected a vice-president.

AUTOMOBILE ASSOCIATION.

THE utility of the Automobile Association system of agents has again been exemplified by the recovery of two motor trunks which were lost from a member's car on the road between Banustaple and Gloucester. Immediately on receipt of a telegram advising the loss, the A.A. Road Dept. circulated notices offering a reward, and these were exhibited prominently by the A.A. agent in every town and village on that road, with the result that the finder of the trunks called at the Bridgwater Motor Company within twenty-four hours of the notice being exhibited, and the lost property has been restored intact to the member's keen satisfaction.

CYCLE AND MOTOR TRADES BENEVOLENT FUND.

THE monthly meeting of the executive was held on Wednesday of last week, Mr. E. A. Lamb in the chair. The treasurer reported a balance of £479 1s. 6d. to the credit of the current account at the bank. Twenty-nine subscribers and four members were elected.



Motoring Under Difficulties during the Recent Floods in Detroit, U.S.A.

Deasy presided. In addition to the subjects that are referred to elsewhere the committee decided to give medals for the best performances in events organised by local clubs.

THE MOTOR UNION.

THE Union has confirmed the action of the Touring Committee in appointing hotels and repairers in Scotland. Messrs. Clark, Brodie, and Co., Thistle Street, Edinburgh, were appointed solicitors to the Motor Union in Scotland.

One hundred and twenty-two special danger signs and sixty-eight concealed turning signs have been erected to date, and other local authorities are being approached to use the signs issued by the Motor Union.

The Motor Union will issue an almanack at the end of May. It will cover the twelve months ending May 31st, 1909.

The M. Union have just issued in a small pamphlet, pocket size, their "Rules and Courtesies of the Road," which are now to be seen hung in many of the leading motor garages throughout the country.

The Earl of Dartmouth, P.C., the Earl of Donoughmore, and Lord Leigh, P.C., have been added to the list of vice-presidents of the Motor Union.

The tenth provincial meeting of the Motor Union of Great Britain and Ireland will be held at Bournemouth on Saturday, May 23rd. The General Committee will meet in the morning under the chairmanship of Mr. W. Joynson-Hicks, M.P., at the Municipal Offices, at the invitation of the Mayor and Corporation. Dinner will be held in the evening at the Hotel Mont Doré.

Seven applications for relief were dealt with, and cheques were drawn in five of the cases. One member wrote to say that he had secured a new engagement, so that his name could be removed from the employment register. In three other cases members of the council were in communication with the unemployed subscribers with a view to finding engagements for them.

It is arranged that in future the Executive Committee meetings will be held on the first Tuesday in every month. Mr. A. J. Wilson, 154, Clerkenwell Road, London, E.C., is general hon. secretary and treasurer.

ROADS IMPROVEMENT ASSOCIATION.

THE Roads Improvement Association has accepted the invitation of the French Government to take part in the International Road Congress to be held in Paris in October, 1908. The Association has appointed the following members as its delegates:—Lord Montagu of Beaulieu, Col. R. E. Crompton, C.B., M.Inst.C.E., Hon. C. S. Rolls, M.A., Dr. H. S. Hele-Shaw, F.R.S., Mr. H. Howard Humphreys, M.I.M.E., Mr. W. J. Taylor, M.Inst.C.E., and Mr. W. Rees Jeffreys (hon. secretary).

BLACKPOOL.

A SPEED-JUDGING contest was held by the members of the Blackpool and Fylde District Motor Club on Saturday afternoon. The course was five miles from the Lea Gate Hotel, over Freckleton Marsh and towards Lytham. There were ten entries, and the speeds at which the cars had to travel varied from 16 to 19 miles an hour. The winner was

Mr. F. J. Thompson, of Fleetwood, whose car was marked 16 miles an hour. He covered the distance in 18 min. 50 sec., being only 5 sec. off the time allowed for the distance. Councillor A. Parkinson, of Blackpool, was a good second for the same rate of speed, his time being 18 min. 45 sec. Dr. Buckley, of Poulton, who had to travel at the rate of 18 miles an hour, for which he was allowed 16 min. 40 sec., covered the five miles in 17 min. 15 sec.

MANCHESTER.

THE Manchester Automobile Club on Saturday held a trial of the reliability, fuel economy, and efficiency of members' touring cars. About thirty cars were entered and nearly all started. Leaving Bowdon on Saturday morning with full petrol tanks, the cars were driven under official observation via Chester, Mold, Ruthin, Denbigh, the Sportsman's Arms, and Pentre Voelas to Bettws-y-Coed, where lunch was taken; and in the afternoon the run was continued by Capel Curig, Beddgelert, Portmadoc, Tremadoc, Blaenau Festiniog, and Dolwyddelan to Bettws-y-Coed, where the cars, with their leads, were weighed and their petrol consumption was carefully measured. The total distance was about 132 miles, and included many severe gradients. During the afternoon the speed of the cars was timed from a standing start over a prearranged portion of the steep mountain road above Blaenau Festiniog.

After the completion of the trial the following particulars of the performances of the various cars were announced at the club's headquarters at Bettws, but it was explained that these figures were subject to verification, and that the actual results of the competition and the awards would not be made known until the various calculations, in which weight and cylinder dimensions are factors, had been worked out by the committee:—

CLASS I.—Section A.

| Entrant. | H.p. | Car. | Fuel consumption. | Time on hill. |
|--------------------|-------|-------------|-------------------|---------------|
| | | | gals. oz. | sec. |
| F. A. Baume ... | 24-40 | Berliet* | 7 154 | 64 3-5 |
| G. B. Heywood ... | 28 | Lanchester* | 7 0 | 56 2-5 |
| J. Higginson ... | — | La Buire* | 10 32 | 55 1-5 |
| E. W. Johnson ... | 35 | Mercedes | 11 156 | 57 1-5 |
| H. Kershaw ... | 28 | Daimler* | 14 100 | 60 |
| H. W. Lea ... | 28 | Lanchester* | 7 107 | 54 4-5 |
| J. Moon ... | 30 | Siddeley | 8 77 | 115 |
| H. H. Summers ... | 45 | Mercedes | 14 140 | 53 4-5 |
| C. H. Wallwork ... | 30-40 | Balsize | 9 107 | 64 2-5 |

CLASS I.—Section B.

| | | | | |
|----------------------|-------|----------|-------|--------|
| E. Allen ... | 18 | Siddeley | 5 91 | 55 3-5 |
| J. Duckworth ... | 10-12 | Sunbeam* | 4 92 | 92 |
| W. Jackson ... | 16-20 | S.C.A.T. | 6 33 | 93 |
| Mrs. E. A. Riley ... | 20 | Balsize* | 6 80 | 79 |
| J. L. Tattersall ... | 20 | Balsize* | 5 157 | 65 4-5 |
| A. W. White ... | 14-16 | Argyll* | 8 22½ | 97 1-5 |

CLASS II.—Section A.

| | | | | |
|---------------------|-------|-------------|-------|--------|
| M. O. Ashworth ... | 40 | Berliet* | 7 72 | 52 2-5 |
| G. J. Crawford ... | 28 | Lanchester* | 6 148 | 55 2-5 |
| H. Hollingdrake ... | 35-50 | La Buire* | 7 148 | 43 2-5 |
| A. G. Hogg ... | 45 | New Eagle* | 9 8 | 62 2-5 |

CLASS II.—Section B.

| | | | | |
|-------------------|-------|-----------|-------|--------|
| J. Arrowsmith ... | 18-24 | Horbick* | 9 135 | 78 2-5 |
| T. Hooydonk ... | 14-16 | Argyll* | 8 46 | 59 2-5 |
| V. G. New... .. | 14 | Siddeley | 4 119 | 73 3-5 |
| J. Newton ... | 22 | S.C.A.T.* | 9 28 | 51 3-5 |

*The cars marked with an asterisk all made non-stop runs.

The trial was conducted under the supervision of the following members of the committee:—Messrs. A. E. Jones, A. E. Crowdy, J. Hoyle Smith, D. A. Parkyn, S. Wallwork, and T. M. Young, with the secretary (Mr. J. B. Thistlethwaite).

CRYSTAL PALACE.

THE Crystal Palace A.C. will hold an open competition on the 30th inst. After the competing cars have been weighed and have done a half-mile speed test on the track at Brooklands they will be sent on a road test of from 80 to 100 miles to demonstrate the flexibility of their engines and the efficiency of the means of transmission of power to road wheels. The cars will be divided into five classes:—(A) for engines not over 9-4-h.p.; (B) for engines not over 16-h.p.; (C) for engines not over 25-6-h.p.; (D) for engines not over 40-h.p.; (E) for engines not over 60-h.p.

The finish will take place at the White Lion Hotel, Cobham, and it is interesting to note that the Crystal Palace A.C. is the first club to arrange for a competition on the track at Weybridge.

CAMBRIDGE AND ISLE OF ELY.

THE Cambridge and Isle of Ely A.C., of which Mr. E. F. Bindloss is the hon. secretary, has done good service in opposing the imposition of speed limits within its area and in looking after the proper maintenance of roads. During the season it will hold social meets at the invitation of its president, Col. Duncombe, Sir Chas. Hamilton, and other friends.

HULL.

THE meeting of the Hull and District A.C. was held on Monday at the headquarters, the Imperial Hotel, Hull. Dr. W. H. Coates was in the chair and the report and balance-sheet showed that the club was in a sound financial position.

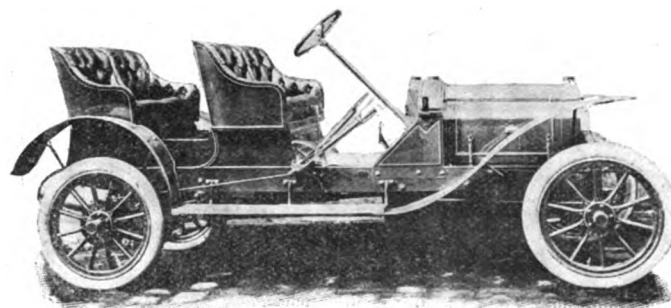
Mr. A. J. Atkinson was elected president, Sir H. Seymour King, M.P., Colonel Harrison-Broadley, M.P., the Hon. Guy Wilson, M.P., and Dr. W. H. Coates, vice-presidents; Mr. Geo. H. Strong, of Prudential Buildings, Hull, was elected secretary, Mr. H. Whitely hon. treasurer, Mr. Henry Strong assistant secretary, and Mr. W. C. Dawson hon. solicitor. Dr. Coates was elected chairman of a strong committee, consisting of Messrs. A. T. Simpson, Dr. Howlett, J. Richards, A. E. Hagestadt, Geo. Wade, H. Brown, and B. Hancock; Mr. J. Richards and Mr. Hagestadt were re-elected auditors.

MOTOR CYCLING.

THE Motor Cycling Club's annual London to Edinburgh 24 hours' run, and London to Edinburgh and back competitions for the Schulte Cup and Motor Cycling Club's Challenge Cup, will take place as usual at Whitsuntide, starting from Highgate at 10 p.m. on the 5th prox. The London to Edinburgh competition is open to motor-cycles and cars. The Schulte Cup is for competition amongst motor-cycles and cars the catalogue price of which does not exceed £250 complete. The M.C.C. Challenge Cup is for motor-bicycles only in the double journey. All those who wish to take part in these events should apply to the hon. secretary of the club, Mr. A. Candler, 1, Lime Grove, Shepherd's Bush, W.

SOUTHERN.

THE first speed-judging contest of the year was held on Saturday and was voted a great success. A large entry was secured. The winner proved to be Mr. Malcolm Brook on his six-cylinder car. His prize was a silver cigarette box.



A 12-h.p. Sisaire et Naudin Car with four-seated body.

The new model has all the features of the well-known racing model, with the exception that the chassis and wheel base are longer, and three-quarter elliptical springs are fitted to the rear. The power is supplied by a 12-h.p. single-cylinder motor. The car has a very smart appearance; the height of the front and rear seats is exactly the same, and the whole vehicle is kept low to the ground.

SOUTHEAST AND DISTRICT.

THE Southend and District Motor Club has decided that country members residing outside a radius of ten miles from the club's headquarters, Southend-on-Sea, should be accepted as active members at half subscriptions. Messrs. E. H. Richards, of Wanstead, and J. W. Austin, of Chelmsford, have been elected to the committee, and Mr. E. Scratton, J.P., of Prittlewell Priory, has been elected a vice-president.

NORTH BERKSHIRE.

THE North Berkshire Automobile Club has distinction in being the only motoring organisation in the provinces with a lady as hon. secretary. Miss Constance Fletcher informs us that the club was formed with the object of bringing motorists together more from the social than any other point of view. Much, however, has been done to discountenance the speedy driving of vehicles and also to bring about a general good feeling amongst users of the road in the area of its operations. During the summer meets, hill climbs, and competitions will be held in private grounds.

AUSTRALIA.

ON the 2nd inst. Mr. Gordon Dixon won the gold medal and championship of the Automobile Club of Australia on his 25-h.p. Talbot car.

There was some excitement at the last monthly meeting of the Automobile Club of Australia at Elizabeth Street, Sydney, owing to a diversity of opinion as to the conditions that are to govern the coming sealed motor-car handicap contest. Many members were adverse to the coming competition, holding that the rules and conditions by which it is to be governed were altogether too vague and impracticable.

Many were of the opinion that something definite should be stated with regard to the conditions and regulations of the trial lest it might turn out to be more farcical than useful. Others, however, held that the test promised to be run on a fair basis, and the fact of the people not knowing anything about their handicap until the last moment would tend to make the event more exciting than otherwise.

SOUTH AUSTRALIA.

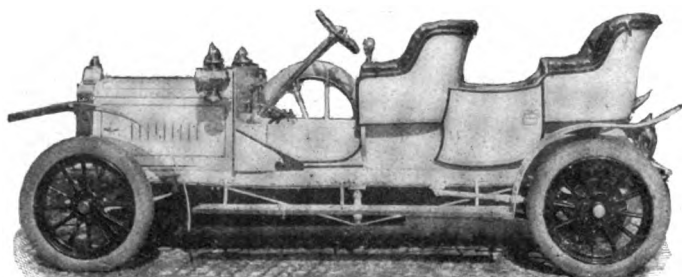
FROM the Automobile Club of South Australia comes a well edited year book giving particulars of the advantage of membership, the rules of the organisation, the annual report for the past year, a long list of hotels and storekeepers in the Colony who stock petrol, a table of distances from Adelaide to various towns in South Australia, the text of the Act relating to motor vehicles in vogue in the Colony, and a list of motor-car owners therein. The organisation is pursuing a wise and watchful course with regard to the movement for encouraging the improvement of the roads, is organising competitions, and taking care that the social side is not overlooked.

THE sum of £218 12s. has been subscribed to the Foundation Fund of the Incorporated Institution of Automobile Engineers.

ON Thursday of last week the Lancashire Motor Cycle Club held a hill climbing competition among its members. This took place at Bunker's Brow, Gib Lane, a little-used road branching off the Livesey branch road which leads to Feniscowles Station.

A NEW DESIGN OF GEAR TEETH.

BEFORE the Society of Engineers Mr. Robert H. Smith, Assoc. M.I.C.E., M.I.M.E., M.I.E.E., Em. Prof. of Engineering, read a paper on this subject. It opened with an acknowledgment of the now forgotten



A "Standard" Six-Cylinder Car fitted with a special body by Messrs. Friswell, Ltd. (the first they have built), for Miss Arnott, of "Woodlands," Cork.

It will be observed that the front is very long, Miss Arnott being a very tall lady; the whole car is exceptionally low. The body-building department is one of the latest departures of Messrs. Friswell, Ltd., who find it handier than sending chassis away to the coachbuilders.

work of Edward Sang, and enumerated ten kinds of excellence in the teeth of wheels, only two of which influenced the orthodox cycloidal and involute designs. Besides uniformity of velocity ratio and strength the other points of consequence were obliquity of action, number of contacts, smallest practicable number of teeth, undercutting, sharpness of outline at shoulders, frictional waste of power, abrasive waste of material, change from correct shape by wear. It explained the advantages of short teeth, and denied that the thrust could be effectively divided between two contacts. It was, however, essential that contact should begin before the previous contact finished. In the author's new design the contact lasts 1.12 times the pitch with two 12-teeth pinions gearing with each other, and 1.4 times the pitch when two very large wheels are in gear, the addendum of the tooth being made $\frac{1}{4}$ of the peripheral pitch. The author gave a simple formula for the frictional waste work of toothed gear, and calculated that of his new design in an average case to be in the ratio of 106 to 180 to that of ordinary involute teeth. The leading aim of the new design was to combine small obliquity of thrust with avoidance of sharp curvature in the outline. The touching face of the one tooth should have a radius of curvature only little less than that of the flank of the tooth geared into it; in other words, the "closeness of fit" between the two should be as great as possible. This prevented the squeezing of the unguent out from between the bearing parts, increased the effective width of bearing surface, and diminished the actual intensity of pressure. The sharpness of outline at the shoulder increased with decrease of obliquity of action, and the actual design was a compromise between these opposing influences such as yields maximum efficiency, such as also secures a substantial increase of strength.

WE learn that the United Motor Industries, Poland Street, London, W., have been appointed sole British agents for the Bousfield silencer, illustrated in the last issue of the *M.C.J.*

CASES UNDER THE MOTOR CAR ACT.

A DISMISSAL.

The Wimbledon magistrates were engaged for a long time on the 6th inst. hearing evidence in a summons against Lionel Savory, 174, Kensington Place, Page Street, Westminster, who was charged with driving a motor-car at an excessive speed in Morden Road. Defendant, sworn, said he was not driving at the speed alleged (twenty-eight miles), and that the signal was given much too soon, thereby exaggerating his speed. The whole object of his cross-examination was to show how carelessly the whole case was carried out. The chairman (Mr. C. Giles, K.C.) said the majority of the magistrates had come to the conclusion that the case must be dismissed on the ground that the evidence did not satisfy them on the charge brought.

UNLICENSED DRIVER.

Cecil Cambridge, of Messrs. Barclay, Perkins, and Co., was summoned, at Highgate, for driving a motor-car without having a licence, and Albert Shepherd, chauffeur, of Deverell Street, New Kent Road, was summoned for aiding and abetting Cambridge in the commission of the offence. It was alleged that on April 14th Shepherd was in charge of the car, and that he allowed Cambridge to drive in Tottenham Lane, Hornsey, where the vehicle was driven on the footway. As a result one of the wheels was smashed by the contact with the kerb. The police came upon the scene, and found that Cambridge had no licence. The car belonged to Messrs. Barclay, Perkins, and Co. Cambridge was fined 20s. and costs, and Shepherd 10s. and costs.

ALLEGED OBSTRUCTION.

An important case has been heard at the West London Police Court, before Mr. Lane, K.C., when three chauffeurs employed by Messrs. Humber, Ltd., were summoned for allowing their motor-cars to remain longer than was necessary in the public street in front of the De Vere Hotel, Kensington. The company had a contract to supply cars for the use of the guests at the hotel, and these were in the habit of waiting outside during the arrival and departure of the visitors. Mr. Englebach, for the defence, submitted that as these were ordinary private vehicles waiting for the hotel guests there were no grounds for conviction. In dismissing the summons Mr. Lane held that as these cars were not "public carriages," they did not come within the section of the Police Act.

UNLICENSED CHAR-A-BANC.

Frederick Ray, of Eastbourne, has been fined £1 and costs for permitting an unlicensed motor char-a-banc to ply for hire in the town on a recent occasion.

THE LONG DISTANCE TRAP.

Five motorists were fined £1 each at Canterbury on Saturday for exceeding the 20-m.p.h. speed limit. They were caught in the "new long-distance check for motor-cars."

EXCEEDING LEGAL SPEED.

A fine of £40 was inflicted by the magistrates at Oxted this week on a summons against Colin Defries, Rosetta Gardens Mansions, Chelsea, for driving a motor-car at a speed of thirty-two miles an hour on the Eastbourne road near Godstone. The defendant gave notice of appeal.

Half a dozen motorists have been fined 40s. each at the Ewell Petty Sessions for exceeding the legal limit on the Ewell Road.

At Woking on Saturday £22 was the total of the fines imposed on four motorists for exceeding the legal limit.

On Saturday, six drivers of motor vehicles were summoned to the Spittlegate (Grantham) Petty Sessions to answer charges of exceeding the twenty mile limit on the Great North Road. All were fined.

On Monday four motorists were fined £3 each at the Shoreham Petty Sessions for exceeding the legal limit at Southwick.

Tom Bates, chauffeur to Earl Fitzwilliam, was charged at Retford, on Monday, with exceeding the ten mile speed limit of the borough, on the London road, on April 3rd. Mr. Staplee Firth (London) defended and Mr. E. S. Spencer prosecuted for the police. P.-c. Hollis said he was standing in Dominic Cross-roads, two or three yards from the end, with Sergeant Wilson, when he heard a car, and went back to the corner of the road. He saw the vehicle pass in the direction of Tuxford, from Retford, numbered L.C. 3070, and estimated the speed at from sixteen to eighteen miles per hour. The defendant said his speed at the point named was not more than five or six miles an hour. Earl Fitzwilliam corroborated, but the Bench fined the chauffeur £2 10s. and costs. Notice of appeal was given.

THE price of Mr. S. T. Robinson's Weigel chassis entered in Class F, of the open section of the Irish A.C., is £495, and complete £570, a slight correction of the figures given officially in our last issue.

FROM the Coventry Chain Company, Ltd., Coventry, comes a copy of their latest reference show-card, which gives in tabular form a list of all the leading British, Continental and American motor-cars, together with the size and dimensions and price of the Coventry chains suitable for the same. The firm have endeavoured to draw up a complete record of chain-driven automobiles, and the chains suitable for them, and, judging from its length, we should think they have succeeded. The Coventry Chain Company will be glad to forward one of the cards to anyone upon request; they should prove invaluable on the walls of the garage or repair shop.

CLAIM AGAINST A MOTORIST DISMISSED.

JUDGE EMDEN, sitting at Bromley (Kent) County Court on the 8th inst., commented upon a claim for damages for personal injuries and damages to a handbarrow made against Mr. John Dewrance (a member of the A.A.), of Chislehurst, by William Phillips, a costermonger. On February 7th, 1908, Mr. Dewrance's chauffeur was driving his employer and two friends towards London, down Mottingham Road, Mottingham, in a White steam car, when, perceiving, some sixty yards ahead, a covered van (pointed towards London) and a costermonger's barrow (pointed the opposite way) standing still on the near side and middle of the road respectively, and obstructing the way, he sounded his horn vigorously. The van moved slowly ahead of the two costermongers in charge of the barrow, one skipped on to the roadside and the other pushed his vehicle a few paces forward and then, flinging it away from him towards the car, was alleged to have hurriedly followed the example of his companion. In spite of this manoeuvre the chauffeur managed to clear the barrow by about twelve inches. Mr. Dewrance received a claim for damages "arising" out of the "collision," and decided, in the interests of motoring, to defend the action subsequently entered.

The plaintiff, in giving evidence, said the back wheel of the car hit the wheel of his barrow and "jumped over," and he himself was flung violently against the iron fence; in consequence of the injury to his arm and the "loss of his barrow" he had been prevented from following his employment. Mr. Walter Stewart (instructed by Mr. T. E. Crocker) appeared for Mr. Dewrance, and elucidated in cross-examination that the barrow did not belong to the plaintiff at all, but was hired, and that there was nothing to prevent his hiring another. The evidence of the defendant and his friends was to the effect that the barrow had not been touched by the car, that the plaintiff and his companion were at least three yards from the car as it passed the barrow, and that there was no iron fence against which the plaintiff could have been thrown had the accident occurred.

The judge, in giving judgment for the defendant with costs, said the case was a trumped-up one of the very worst description. He did not believe there had been any accident at all.

ROAD REPORTS.

HAMPTON.—The Hampton Wick District Council have decided to ask the Middlesex County Council to apply to the Local Government Board for an order limiting to ten miles an hour the speed of motor-cars passing through the district from Normansfield Avenue, along the Hampton Court Road, to Hampton Court Green.

LANCASHIRE.—Motor traffic is alleged to be responsible for an increase of £13,152 in the estimates for main roads which have just been adopted by the Lancashire County Council. Alderman Shuttleworth stated that to lessen the dust evil would cost a sum equal to the increase now asked for. He asked the Council to grant £500 for experiments in dust palliatives. This was granted.

WARWICKSHIRE.—At the last meeting of the Warwickshire County Council the Marquis of Hertford proposed that seven and a quarter miles of the Birmingham and Coventry road be made up with a good foundation of slag, and that as far as practicable a tar compound binding material be used. The cost of work was estimated by the Roads and Bridges Committee at about £15,000. One speaker said that whilst they spent £20,000 extra on the roads they made only £700 or £800 a year from motor licences in the county. The chairman, Mr. J. S. Dugdale, K.C., thought they ought to have motor turnpikes to levy tolls on automobiles, as was formerly done with traffic generally. Ultimately the resolution of the Marquis of Hertford was carried.

READING.—We are requested by the hon. sec. of the Berkshire A.C. to point out that recent timings and prosecutions which have taken place at Reading have nothing whatever to do with the county police. The police trap in Reading, which is worked by the police of the borough, is along the Bath road, at the entrance to the town from the West. All motorists, notwithstanding the breadth of the roadway, should, on reaching the borough boundary, drive into and through the town with more than ordinary precaution.

MITCHAM.—At Mitcham there is a police trap which is in frequent operation, in consequence of which four motorists appeared before the Croydon County Bench on Saturday, a fine of three guineas and costs being inflicted in each case.

WANSTEAD.—The measured furlong at Woodford Road, Wanstead, is frequently in operation by the police, particularly at the week-ends.

WEST SUSSEX.—At the meeting of the West Sussex County Council the county surveyor has drawn attention to the fact that the old system of water and grit binding is by no means economical in view of the development in motor traffic. He suggests more expenditure on tarring.

NEWHAVEN.—Application is to be made to the L.G.B. by the East Sussex County Council to impose a speed limit of ten miles an hour on motor cars on the road leading through the town of Newhaven from the junction of the Lewes and Brighton roads to the junction of the road leading to the harbour on the east side of the railway crossing.

BOLTON ABBEY.—The Skipton Rural District Council is calling upon the County Council of the West Riding of Yorkshire to "tar spray" the roads leading to Bolton Abbey in order to mitigate the clouds of dust caused by the many motor-cars taking visitors to that famous spot.

NORTHALLERTON.—The Urban Council of Northallerton has resolved to ask the County Council to make a new bye-law limiting the speed of motor-cars driving through Northallerton to ten miles an hour.

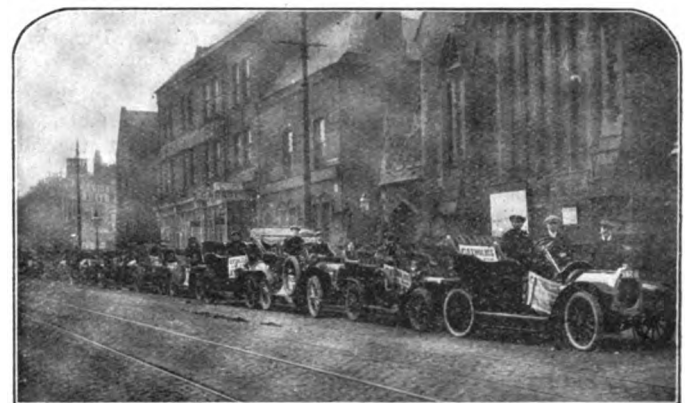
AUTOMOBILE ACCIDENTS.

A COLLISION between an electric tramcar and a motor-car owned by Mr. Francis Back, of Harrow Weald, at Isleworth, occurred on Saturday. The motor-car was borne along several yards by the tram, and the occupants managing to retain their seats were little the worse for their exciting experience beyond the shock they received. The car, however, was seriously damaged.

EARLY on Sunday morning a motor-car and a cab collided at the bottom of Adam's Hill, on the outskirts of Nottingham. The impact precipitated the occupants of the automobile into the road. Two were so severely injured that one died soon after admission to the Nottingham General Hospital, and the skull of the other was fractured.

ON Sunday a motor char-a-banc plying between Brighton and Rottingdean capsized when returning from the latter place, and six persons were injured. Four were taken to the hospital in a motor-bus, and the other two were conveyed thither in a motor-car by the owner, Mr. Colin Defries, of London.

THE coroner and jury at Guildford concluded their inquiry on Monday into the death of John Bryan, who was injured on the highway, near Ripley, late on the night of April 24th by a motor-car, and who was discovered dying in the snow at 5 a.m. by the driver of one of Messrs. Maple's motor-vans. Arthur Meston, chauffeur, employed by Colonel Gore, is on remand from Woking Police Court in consequence of allegations made against him in the matter. The coroner's jury returned as their verdict that Bryan was struck by motor-car D3,128, and that death took place in consequence. The jury strongly condemned the reckless driving of the car, and the behaviour of the driver in not stopping when he felt a jar near Ripley. The coroner had previously pointed out to the jury that he did not think the evidence before them was strong enough to justify a verdict of manslaughter. They had good evidence by which to identify the car, because the top of the lamp found in the road at the scene



A Fleet of Cars leaving the Garage of Messrs. Norman Crossland and Co. in Bury New Road, Manchester, to assist Mr. Joynton Hicks, M.P., Chairman of the Motor Union, during the recent Election in North-West Manchester.

of the tragedy fitted the broken lamp discovered in the garage, 65A, Bolton Mews, South Kensington, where the police found Meston and the car D3,128, and it also corresponded with the other lamp on the car. There was no evidence before them to show that the man who drove the car drove it negligently. Because a man had an accident on the road and then ran away the jury could not make it manslaughter.

In Church Road, Addlestone, on Tuesday a motor-brougham, driven by Harry Bland, chauffeur to Mr. Trevor Williams, Clock House, Byfleet, ran into a group of five persons standing at the side of the kerb. Two men were knocked over and slightly injured. Two boys were dragged some distance and slightly bruised. As the result of the collision with the kerbstone the front wheel of the brougham was broken and the vehicle otherwise injured.

A motor-car accident, causing some excitement, happened on Sunday opposite the Manchester Carriage Company's stables in Rusholme. At this point there is a compulsory stop for electric tramcars. One tramcar had just pulled up at the "stop," and a number of passengers were endeavouring to get aboard when a motor-car ran into them. At least six persons were knocked to the ground, and three were severely hurt and had to be medically attended. The police were quickly on the spot, and it was found that the brakes and chain of the motor-car had been broken in the effort to stop.

DR. BAWTREE, of The Lodge, Maldon, Essex, who had a Coventry Humber for a year, writes that he found it very satisfactory. "I have had the car out in all weathers and on very bad roads. It does, on my ordinary rounds, about eighteen to nineteen miles per gallon of petrol, and about twenty-three to twenty-five miles on a longer run. The car has done about 7,000 miles."

FORTHCOMING EVENTS.

MAY.

- 16th (Sat.).—Fifty miles Consumption Trial of the Hertfordshire C.A.C. Liverpool A.C.'s opening meet of the season. Auto Cycle Union hill climb. Liverpool A.C. first meet of the season. New Forest A.C. club run to Brockenhurst. Sheffield A.C. meet at Langsett 3.15 p.m., for run over Woodhead and via Glossop to Snake Inn. Inter Club meet at Ashby-de-la-Zouch. Lunch of the Kent A.C. at Tunbridge Wells, in connection with the A.C. examination at the Spa Hotel.
- 21st (Th.).—25th.—Reliability Trial of the Irish A.C.
- 17th (Sun.).—Targa Florio Race.
- 23rd (Sat.).—Clipstone race meeting of the Notts A.C. Meeting of the Yorkshire A.C. at Helmsley. Meet of the Motor Union at Bournemouth. Motor Cycling Club—Albert Brown Challenge Cup for cars. Meet of the Sheffield A.C. at the Royal Oak at Edwinstone 2.30 p.m.
- Sir C. B. Locock, Bt., will entertain the Essex C.A.C. at Braintree. Meet of the Kent A.C. at the Mote House, Ightham.
- 25th (M.).—Industrial Vehicle Competition of the A.C. de France.
- 26th (Tu.).—Motor Gymkhana on the links of the Ross Golf Club at Alton Court—Mr. T. H. Coombes, "Montrose," Ross, is the hon. secretary of the event.
- 28th (Th.).—Visit of the Aero Club to Aldershot.
- 30th (Sat.).—Meet of the Herts C.A.C. at Hatfield Park. Devon and Cornwall A.C. hill climb at Moorahop, Tavistock. Lancashire A.C. speed judging contest. Open hill climb of the Auto Cycle Union up the Sutton Bank, in conjunction with the Newcastle and District Motor Cycle Club.
- 31st (Sun.).—Southend M.C. run to Saracen's Head Hotel, Dunmow. Penalty run of the Southern M.C. to Goring.

JUNE.

- International Aeronautical Federation conference in London.
- 5th—6th.—London-Edinburgh twenty-four hours' run of the Motor Cycling Club.
- 6th (Sat.).—Brooklands A.R.C.
- 8th (M.).—Cars competing in the International Touring Car Trial will arrive at the depot. Start of the International Touring Car Trial of the R.A.C. Brooklands A.R.C.
- 9th (Tu.).—Touring competition for Prince Henry of Prussia's prize begins.
- 11th (Th.).—Start of the International Touring Car Trial of the R.A.C.
- 13th (Sat.).—Hill climb of the Notts A.C. at Oakmoor. Speed Trials of the Linca. A.C. at Grimsthorpe. N. Middlesex A.C. speed judging competition for the Gamage Cup. Essex C.A.C. hill climb at Bottledown Hill, Billericay.
- 14th (Sun.).—Mont Cenis hill climb for voiturettes.
- 15th—19th.—Scottish Reliability Trial.
- 17th.—Close of Prince Henry Touring Competition in Germany.
- 18th (Th.).—Meet of the Cambridge A.C. at Hatley Park by invitation of Sir C. Hamilton.
- 20th (Sat.).—Meet of the Hull Auto Cycle Club and the Lincolnshire Motor Cycle Club at Brigg. Annual Hill Climb of the Bristol and Gloucestershire A.C.
- 27th (Sat.).—Saltburn beach races. Buxton meet of the Manchester, Sheffield, and Lincolnshire clubs. Members of the Cheshire A.C. will participate in the Gymkhana of the Manchester A.C. Visit of the Essex C.A.C. to Audley End.
- 28th (Sun.).—Southend M.C. run to Grand Hotel, Clacton.

JULY.

- The Land's End to John o' Groat's Trial of the Auto C.C. will be held.
- 6th (M.).—Grand Prix A.C.F. (Voiturette section).
- 7th (Tu.).—Grand Prix A.C.F. on the Dieppe Circuit.
- 8th (W.).—Meet of the Cambridge A.C. at Wareley Park by invitation of Col. Duncombe.
- 11th (S.).—Provincial meet of the R.A.C. at Hereford. Essex C.A.C. gymkhana at Brentwood.
- 16th (Th.).—Club meet of the Notts A.C. at the Hop Pole, Ollerton.
- 18th (Sat.).—Annual Gymkhana of the Herts C.A.C. at The Grove, Watford, by permission of the president, the Earl of Clarendon.
- Meet of the Liverpool and Cheshire A.C.'s at Delamere. New Forest and Dorset A.C.'s joint hill climb. Hill Climb of the Essex C.A.C.

LIGHTING-UP TIMES—LONDON.

| | | | |
|---------------|-----------|-----------|-----------|
| May 16th—8.43 | 18th—8.46 | 20th—8.48 | 22nd—8.52 |
| " 17th—8.44 | 19th—8.47 | 21st—8.50 | 23rd—8.53 |

THE CHAUFFEUR—BY MR. RUDYARD KIPLING.

MR. RUDYARD KIPLING contributes to "The Flag," the book of the Union Jack Club just published, a curious scene from an imaginary play, "The Marred Drives of Windsor," in which he represents Falstaff as a motorist, and makes the worthy knight speak his mind freely of Prince Hal's French chauffeur, Dumain:

Dumain? Hang him for a pestilent, chicken-chopping, hump-backed, leather-batted, poke-eyed, muffle-gloved ape! He hath been fined as often as he hath broken down; and that is at every tavern 'twixt here and York. Dumain! He's the most notorious widow-maker on the Windsor road. His mother was a corn-cutter at Ypres, and his father a barber at Rouen, by which beastly conjunction he rightly draws every infirmity that damns him in his trade. Item: He cuts corners niggardly and upon the wrong side. Item: He'll look behind him after a likely wench in the hottest press of Holborn, though he skid into the kennel for it. Item: He depends upon his brakes to save him at need—a death-bed repentance, Hal, as hath been proved ere this, since grace is uncertain. Item: He is too proud to clean the body of her, but leaves the care of that which should be the very cote-armour of his mechanic knighthood to an unheeded ostler. Thus, at last, he comes to overlook even the oiling; and so it falls that she's where she must be, and not where thou wuldest have her. Ay, laugh if thou wilt, Hal, but a round worthy knight need not fire himself through three baronies in eight hours to know the very essence of the petard that hoists him. Dumain will one day clutch thee into Hell upon the first or lesser speed.

COMPANY NEWS.

NATIONAL MOTOR CAB COMPANY.—£200,000. Agreement with Comptoir Commercial et Industriel, and to carry on business of owners and manufacturers of and dealers in motor-cabs, &c.

BUSINESS NEWS.

At the third 1908 Brooklands Meeting, on the 9th inst., six of nine races were won by cars using Shell motor spirit.

At the meeting at Brooklands on Saturday last the majority of the winning cars were fitted with Dunlop tyres.

THE Rover Company, of Coventry, have now adapted the Rover 6-h.p. car to the requirements of all kinds of tradesmen as a very neat delivery van. The carrying capacity is about forty-five cubic feet.

ON Wednesday last an auction sale of motor-cars, tyres and accessories was held by the London and Paris Exchange Motor Agency, Ltd., at their headquarters in Shaftesbury Avenue, W.C.

A BOLD and distinctive calendar drawing attention to the merits of the "Shell" motor spirit has been issued.

MR. E. E. WAGSTAFF, of Melbourne, Australia, has written to the Daimler Company stating that he has recently completed a 900 miles trip through the West and North-Western districts of Victoria, across the border into South Australia as far as Mount Gambier. "During this trip I had to negotiate fifteen or sixteen miles of drift sand. One or two little cars had previously successfully negotiated it, but no one thought it would be possible for me to get my Daimler through. You may be very pleased to hear that I succeeded, and covered the distance from Casterton to Mount Gambier (forty-two miles, including sixteen miles of drift sand, in a little over three hours. During that period I got bogged in the sand three times, but, having carried a spade, I got out without damage. I am writing this to you, not that it is any great feat, but to give you some idea of the conditions that have to be negotiated occasionally in Australian back blocks."

TO CORRESPONDENTS.

All communications intended for insertion in this Journal or relating to Editorial matters should be addressed to THE EDITORIAL DEPARTMENT, MOTOR-CAR JOURNAL, 27-33, Charing Cross Road, London, W.C., and must be written on one side of the paper only. Letters must in all cases be accompanied by the name and address of the writer, as no notices will be taken of anonymous communications.

The Editors cannot undertake to return MSS. or drawings, although every effort will be made to do so in the case of rejected communications. Where such are regarded as of value, correspondents are requested to retain copies.

The Editors do not hold themselves responsible for the opinions expressed by their correspondents, or for statements and facts which do not appear in the editorial columns.

To insure insertion communications and contributions must be in the Editors' hands by Tuesday forenoon of the week in which the same are intended to appear. Disappointment may be caused by non-compliance with this rule, and to avoid this earlier receipt, if possible, is necessary.

Photographers, both professional and amateur, are invited to send photographs of current events or of motoring scenes and incidents. The fee, if any, required for reproduction should be stated in each case, otherwise no liability will be accepted.

The Editors and Publishers beg also to state that they will accept no responsibility for unsolicited contributions, even if used, unless payment for same is directly specified in forwarding, and the terms arranged before publication.

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[No. 481.]

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COMMENTS.



ON Monday Sergeant Waghorn gave a good descriptive account of the system of timing motorists as developed by himself and his colleagues on the Brighton road. It will be remembered that on Good Friday, Easter Sunday, and Easter Monday, the East Sussex police adopted what is known as the "long distance trap" on that road. The timing was done from Patcham in the south to the parish of Slaugham in the north of the county, a distance of rather more than 13 miles, or, to be precise, 13 miles 40 yards. Sergeant Waghorn and the police constable were stationed in a cottage at Patcham and had to take the numbers of the cars from the rear, having a view of about half a mile of the road. The time and "who was driving" were recorded in a book. The watch was hanging up before them. They timed as many cars as they could, whether they were travelling up or down the road, and if two cars passed simultaneously they recorded the heavier car. Then with their precious records they met the police sergeant who had been stationed at Slaugham, at the chief constable's office at Lewes on the Tuesday, and carefully examined the record of the cars. On Good Friday alone 152 were timed, 47 of whom were alleged to have exceeded the legal limit of 20 miles, and 23 to have gone beyond 25 m.p.h. During the three days 80 drivers were found to have gone beyond the 20 miles per hour, and summonses were thereupon issued. Only two of these were heard at Haywards Heath on Monday, so that the justices there have considerable leeway yet to make up, thanks to the renewed police activity in the district. In defending one of those who were summoned, Mr. Marshall Hall, K.C., who was retained by the Automobile Association, pointed out that but for the admission of the motorist himself there would be no proof of identity whatever. This certainly was a strong point which should cause the magistrates to be careful when considering cases in future.

No Reason for Summonses.

that any mishaps had arisen in consequence of the driving of any of the motorists summoned by the police. These facts should be important in any effort to justify the prosecution, but unfortunately they do not appear to enter into the calculations of those responsible either for taking action or deciding penalties.

Chief Constables against Police Traps.

country, the gathering was also attended by many of the mayors of the leading cities. Considerable interest was aroused in the

IN connection with these cases, which are likely to prove so very profitable to the county, it should not be overlooked that no suggestion has been made that any of the motorists were driving to the common danger; nor was it even hinted

remarks of the Marquis of Winchester with regard to the regulations under the Motor Car Act. He was, it will be remembered by our readers, a member of the Royal Commission, and therefore considerable importance attaches to his opinion that criticism of the speed of motor-cars had scarcely been fair up to the present. He rightly pointed out that a high speed was not in itself necessarily a source of danger in the country, where the road was straight and open. The majority of the members of the Royal Commission on Motor Cars had come to the conclusion that for the police and the public the right course to pursue was to prosecute any cases of driving to the common danger. At a later stage of the meeting this point was reverted to by Mr. Peacock, the Chief Constable of Manchester, who said that he had recommended the Watch Committee of that important centre not to apply for a speed limit. Experience had proved that such a course was the wise and proper one. During the whole of the four years that the present Act had been in operation he had summoned no person for driving a motor vehicle at excessive speed, but had restricted his attention to those who drove to the common danger. Like the Chief Constable of Belfast in his evidence before the recent speed inquiry in that city, Mr. Peacock has no sympathy with the policy of setting traps for motorists.

Manners on the Car.

At the same important meeting, Mr. J. H. Thewlis, the chairman of the Manchester Watch Committee, drew attention to the habit that some chauffeurs have of smoking while driving, and said he would go so far as to suggest the prohibition of such a practice, as their attention might otherwise be distracted at a critical moment. To those who are familiar with the fashionable thoroughfares of great cities the advice is certainly sound, and professional drivers who are anxious to raise the prestige of their calling should be willing to forego such habits when driving through towns. There is nothing so undignified as to see the driver of a car carelessly smoking a pipe while at the wheel, and common sense as well as regard for appearances should lead to the practice quickly falling into discredit. If ordinary consideration does not lead to such a result the suggestion of Mr. Thewlis should not be overlooked.

A Speed Limit Inquiry in Scotland.

AN inquiry on behalf of the Secretary for Scotland regarding the application by the Helensburgh Town Council to have the speed limit of motor-cars restricted to ten miles within certain streets of the burgh has been held. The Scottish Automobile Club, with characteristic care for the rights of motorists, went to considerable trouble and expense in order that the case against the proposed imposition should be placed clearly and properly before the authorities. The whole length of the streets in the burgh is twenty-five miles, and the Town Council asked that restriction should be made over nearly seven miles. It appears there are 210 motor-cars registered in the county, and of that number twenty-two belong to local people. Apparently the police did not have much complaint against motorists residing in Helensburgh, but animadverted on the conduct of others from Glasgow and throughout the country who apparently were little deterred by fear of the law. This

part of the case, however, should not seriously affect the issue seeing that last year only fourteen motorists were prosecuted for offences against the Act. In the course of the enquiry Sir John H. A. Macdonald gave evidence against the proposed restriction, and Major M'Farlane, the director of the Garloch Motor Service Company, Ltd., said that the restriction of the speed would seriously affect his company and impair the usefulness of the motor service they had been able to develop for the benefit of the people. After two long hearings the matter has been referred to the Secretary for Scotland, and whether he adopts, or refuses to grant, the suggestions of the Helensburgh Town Council, the Scottish Automobile Club will have the satisfaction of knowing that their views were admirably voiced.

The R.A.C. Associates' Badge.

CONSIDERABLE dissatisfaction is felt by members of the R.A.C. with regard to the badges of the Associate members of that body. As will be seen from the accompanying illustration, this, with the exception of the crown at the top of the badge, is identical with that of the members of the Club. The latter have to be elected, while anyone can become



THE R.A.C. ASSOCIATES' CAR BADGE.

an Associate merely by the payment of a guinea. Hence the feeling aroused by the latest action of the R.A.C., which will tend to discourage the sale of the original badge to members of the Club.

An American Club's Run.

ONE of the favourite forms of club enterprise in the United States is the organisation of two-day reliability trials of various kinds with the idea of keeping touring cars up to the standard. Among these events the Harrisburgh Club's run is of considerable importance. Last year no fewer than four cars tied for first place. These were the Pierce, Thomas, Pullman and White. At that time it was decided to engrave the names of all four on the cup and hold it until this year, when the same make of car, entered by the same owner, that made the best score this season would win it. The run, at the beginning of the month of May, was 174.7 miles the first day with a running time of 8 hrs. 50 min. The cars were all sealed, and each carried an official observer. The second day's run was 142.4 miles and the running time was seven hours. At the end of the first day's run there were fifteen perfect road scores, and at the end of the second day there were but seven. The roads were typical Pennsylvania roads, very good in some places and very bad in others, with a great many water breakers and loose stones. At the close of the run there was a technical examination, which was a very searching one. The result of the scrutiny was that they passed the White steam car as being in perfect condition,

which, together with the perfect road score, won the White Company the prize.

The R.A.C. Chairmanship.

MOTORISTS generally will regret to learn of the resignation of Mr. C. D. Rose, M.P., from the chairmanship of the Royal A.C., to which he was recently re-elected. He will be absent from England for some time, and is already on his way to Canada, so that it would have been impossible for him to have continued office with the devotion that has characterised his occupancy of one of the most important posts in the automobile movement. During the whole of the period he has been associated with the R.A.C. Mr. Rose has tactfully and admirably directed its work, with the result that his colleagues on the committee have formed the highest opinion both of his abilities and his character. And only when he made it clear that his continuance at the helm was really impossible did they accept the inevitable resignation. At the same time they adopted a resolution to the effect:—That Mr. C. D. Rose, M.P., be asked to accept a vice-presidency of the Royal A.C., in recognition of the unique services he has rendered to the club and to the whole automobile movement.

Prince Francis of Teck.]

IN these circumstances a successor had to be found, and, on the proposition of a sub-committee of past chairmen and present vice-chairmen of the club, the General Committee have unanimously invited H.S.H. Prince Francis Joseph Leopold Frederick of Teck, K.C.V.O., D.S.O., to become chairman of the club. Consent has been obtained, and thus the club will again possess as chairman one who has given ample evidence in other directions of whole-hearted interest in any work he takes in hand. Prince Francis of Teck is the second son of the late Duke of Teck and a brother of the Princess of Wales. After being educated at Wellington and Sandhurst Prince Francis joined the 1st Dragoons in 1890, when twenty years of age, and was a captain in the Egyptian Army in 1897. Later he became A.D.C. to the General Officer commanding the South-Eastern District, and served with distinction in South Africa in 1899 and 1900. In 1902 he retired from the Army. The recreations of the new chairman of the R.A.C. are hunting and shooting, and motoring will now claim a large share of his leisure.

A "Prohibitive" Suggestion.

REALLY the Scottish A.C. should send their Hand-book to Mr. Cathcart Wason, M.P., whose persistent questionings with regard to motor matters are a feature of Parliament. He has just suggested that as the speed limit of twenty miles an hour under the Motor Act of 1903 was "entirely ignored by owners, drivers, and manufacturers," high-speed cars should be taxed at a prohibitive rate next year. In reply to this suggestion the new Chancellor of the Exchequer writes that the taxation of motor-cars is a subject to which he is giving careful attention, but the policy of His Majesty's Government is not to impose taxes for purposes other than that of raising revenue, and this object was not conveniently attained by imposing taxes which were prohibitory.

The Motor Unionist's Maiden Speech.

MOTORING similes often occur to the politician who is constantly being urged by his constituents or by his election-committee to be wary. Naturally in his maiden speech in the House of Commons on Monday, Mr. Joynson-Hicks—who, by the way, had regretfully to absent himself from the chair of a Motor Union committee to be in attendance at Westminster—drew upon the automobile for an illustration. Speaking of popular control in connection with the education controversy he said he was reminded of a friend who recently came under the notice of the police for not having had his motor-car under

popular control—he meant proper control. He said the car was under perfect control. Then why, he was asked, run into the lamp-post? “Oh,” he replied, “there is a slight defect in the steering gear, but the machine is under perfect control as long as I turn to the left.” So, in the eyes of the Government, popular control, &c.—we are not a political journal, so cannot give the rest of the quotation.

Fees and Roads.

A MEETING of the Dumfries County Council has been held, at which Mr. A. H. Johnstone-Douglas, from the chair, moved that they make a representation to the Secretary for Scotland and the Chancellor of the Exchequer for an increase in the licence duty on motor-cars, and for the licence duty on these and other vehicles being applied to the maintenance of

and the motor-carriage is a friend of animals in relieving them of burdens and the stress of hard labour. At the same time it is significant that all the old-established carriage building firms in Exeter, Plymouth, and the other leading towns of Devon have given attention to the automobile—probably as a means of self-preservation.

A Good Handbook.

THE Scottish Automobile Club may be heartily congratulated upon the comprehensive and convenient form of their yearbook for 1908-9. Its contents include the usual club information, list of members, &c., while the summary of legislation, particulars of licensing, &c., are lucid and authoritative. Information with regard to hotels, pits for inspection purposes, and the supply of petrol are set forth with a fulness



Motoring under Difficulties.

The illustration reproduced above depicts Mr. C. I. Thornton, the well-known cricketer, passing through Bridge Street, Maidenhead, on May 1st last on his 60-h.p. Berliet. A few days previously he had had an equally unique experience, having been delayed on the road by a snowdrift.

highways. We do not like this association of the notion for an increased licence fee with the upkeep of the roads. Surely the fees for registration and licensing are already sufficiently high without increases being advocated in order to meet the expense of road upkeep. Will the Scottish A.C., which has had remarkable success in educating the councillors of Lanark, continue its useful propaganda into the county of Dumfries?

Carriages in Devon.

AN expert in the carriage-building industry has said that the members of his craft located in Devonshire have suffered less from the automobile than those in other parts of the country. He claims that the county has a larger carriage-using population than any other English shire, and that its hills have prevented the more general adoption of the motor. The latter is just the reason that should have secured its advance; for the strain on horses is greatest in such districts,

that is both useful and unusual. Information is also given as to the ferries in Scotland, with the charges for cars passing over the same, these ranging from 2d. at Govan to 12s. at the Dornie Ferry in Ross and Cromarty. Full lists of repairers are also included, and the value of the book to those who are touring in Scotland is enhanced by several pages of selected main roads reproduced by arrangement with the publishers of the Contour route book. This little book is of a compact form and convenient size for the pocket.

AN indication that the summer season, the period of motor trips, is now at hand is afforded in the receipt from Messrs. Dennis Brothers, Ltd., of a couple of photographs, one showing a 28-h.p. twenty-seated char-a-banc with glass shield, which was last week supplied to Mr. Steadman, of Princes Street, Doncaster, and another of a char-a-banc, painted cream, lately delivered to Messrs. A. W. Jackson and Sons, of Hall Gate, Doncaster.

A RUN ON THE 40-H.P. ARGYLL.

SOME weeks ago I decided to possess a new car, but the weather was so atrociously varied and so undoubtedly tearful when it became settled for a few hours that the day of possession was delayed. Meanwhile I looked up goggles, inspected lamps, learned the whole gamut of harmony on horns, whistles, and syrens, took lessons in vulcanizing, and even practised Patience—a virtue that is needed on the road when the motorist has no spare wheel and his tyre has punctured. I intended to buy one of three vehicles, but was undetermined until the other morning the sun broke through the sky and heartened the men in the motor industry. For it encouraged the novices to take their trial runs, and incited the ladies to discuss the advisability of prompt decision as to the selection of some particular car.

I must confess, although not a Scot, I have a partiality for an Argyll, for on one of the reliability trials held north of the Tweed I had enjoyed some good trips on the 14-16-h.p. vehicle of that type. And the car that could get over some of the hills that we negotiated in that event could be safely trusted in



The 40-h.p. Argyll in a Buckinghamshire Byeway.

our more monotonous landscape. So I rang up the London home of the Argyll, to arrange for a trial run on a car—not, however, a car of small degree, but one of 40-h.p. This vehicle has become famous since it was illustrated and described in the *M.C.J.* of November 2nd last year. It has a four-cylinder engine, the cylinders, 120 mm. bore by 140 mm. stroke, being cast in pairs, and the carburettor is one of the interesting features of the vehicle. By means of the improved device it is possible to alter the proportion of air to petrol while the engine is running and thus obtain the best mixture, according to the temperature and weather. It is also possible to shut off all connection with the petrol jet and allow only pure air to be drawn into the engine. So that, in addition to the increased braking power provided, cleanliness is secured, oil cannot be sucked up into the cylinders, and any deposit of carbonised oil on the pistons and plugs is removed. The well-known Argyll multiple disc design of clutch is retained, but the change-speed gear, giving four speeds and a reverse, has points of interest which have proved their value in practice. The direct drive is on the third, being obtained by sliding the clutch on the main shaft into mesh with the clutches on the

third speed wheel. But, as the full details of the car have already been published, let me get along to the run I enjoyed the other day—a fifty mile trip to freshen one after lunch.

The trip was from London to Milton's country. Following the Acton tramlines for several miles, we ran through Hillingdon, and beyond Uxbridge we crossed the Colne, entering the quiet county of Buckinghamshire—a region of handicraftsmen, and of historical associations when King and people were in less mutually friendly mood than now. A mile beyond the extremity of the tramlines we might have turned for Denham, with its Elizabethan house in which Charles II. was hiding for awhile from his pursuers; but the better road to test a car is that to the right at the third milestone. This is a twenty-five mile stretch to Aylesbury. And so we left the Oxford road at that point, and along a winding narrow lane, where traffic is fortunately scarce, and, happily, no vehicles were coming our way, Chalfont St. Peter is reached. It is but a mile from the Jordans, where the grave of William Penn attracts many Americans to see the resting-place of the founder of Pennsylvania, and a little local excitement can be got from the water-splash formed by the meandering little Misbourne. Chalfont St. Peter is described in some of the guide books as the "prettiest village in England." It may have been; but it is not now. From thence to Chalfont St. Giles is but a two-mile run, with a loose bit of road. The illustration, on the opposite page, reproduced by permission of the Great Central Railway, gives a good idea of the hamlet. In front of the church, with its lych-gate of oak, is a duckpond, with eight or nine immigrants from Aylesbury, and a consequential swan—ill preserving his dignity amid the somewhat murky surroundings. A few yards along is a cottage with diamond paned windows, broad chimney stacks and red tiles, that has the distinctive character of age. There Milton sojourned while the plague raged in London—then further away than now—and wrote the conclusion of "Paradise Lost." The little garden runs parallel with the road, from which it is separated by a low wall, over which we can see the little windows of the room where the poet dictated to his amanuensis. In the visitors' book are the names of some American visitors and many English guests—apparently, all who come to London from the United States do not come into the Milton country. The roads are good; there are no ascents worth mentioning when the car employed is an Argyll, and the characteristic pastoral scenery of the locality is pleasant enough when the weather is genial. Turning from St. Giles to reach London by way of Rickmansworth—where the Swan Hotel provides good fare for man and very fair accommodation for motor-cars—we go on a cross-road that certainly demands the attention of those motoring organisations that concern themselves with road questions. It is certainly dangerous, even beyond the risk of most cross-roads, and the sooner warning signs are placed the better the residents round about should be pleased.

From Rickmansworth the way is through Northwood, and by the fourteenth century church of Pinner, skirting Harrow, with its church on the crown of the hill, 400 ft. high; thence by the Welsh Harp, which is "Endon way," into London, which was a good, quick run. Into Maida Vale and along the Edgware Road the trusty Argyll strode. To test the flexibility of an engine under traffic conditions a main London thoroughfare, with all the stops that arise from the vehicles coming from side streets, is an ideal condition of things. And we got to the Marble Arch in good style, manœuvring round the improved roadway with almost juvenile pleasure; for there are no two opinions as to the advantage of the work that has been done in isolating the Marble Arch from the Park and rendering so much more roadway available for the increasing traffic. Nor can there be any doubt as to the Argyll's easy running as a carriage, while it is distinctive among modern cars for its quiet behaviour.

JOHN HAMPDEN.

MESSRS. R. M. WRIGHT AND Co. are about to introduce motor taxi-cabs into the city of Lincoln.

NOTES FROM HARROGATE.

NOWHERE are the outward changes brought about by the evolution of the motor-car more strongly marked than in Harrogate—the motor Mecca of the North. Evidences of this were seen last week-end. Time was—and that comparatively recently—when a string of private carriages and pairs encircled the famous Sulphur Well building whilst titled owners took the waters, but now one of Harrogate's early morning sights is to witness spick-and-span motor-cars luxuriously appointed glide up to the Sulphur Well, and to watch the cars circle round the old building like so many swallows until mi-lord and mi-lady have drunk the prescribed quantity of sulphur water and are ready to again enter their cars. At the Royal Baths special accommodation has been provided for motoring patients. The motorist may drive up to a special entry in his or her car and step out into a sort of Sedan chair on wheels in which they may be run to their respective baths and return the same way to their vehicle without putting foot to floor.

LAST week end the Right Hon. Earl Poulet motored over from his Somerset estates in a 75-h.p. Fiat, putting up at the Grand Hotel. His lordship is staying three weeks and expects to cover a lot of local ground during his visit. Harrogate possesses great fascination on account of the variety of country which may be so readily tapped in the neighbourhood. One minute a car may be swinging down a road pungent with the odour of pine trees, and the next issue out on moorland wide-stretching and swept by crisp winds; whilst in another direction one's car may run through miles and miles of rich foliage and beneath avenues of spreading oak and leafy elm.

CAPTAIN C. B. SOUTHEY ran down from Somerset during the week in a 15-20-h.p. live-axle Fiat, and remarked upon the excellent state of the Harrogate roads. As a matter of fact, the Harrogate Corporation spends upwards of £500 each summer in watering the roads with a patent solution to obviate the dust nuisance, and the experiment has been very successful. They are now, however, turning their attention to road-making as a more completely satisfactory way. The road surveyor, Mr. Thorpe, appears to have solved the difficulty of a watertight seal to the roads, and it is claimed under the new method that the roads will go eight or nine years without needing repairs.

To what extent motor-cars have been adopted by the medical profession was seen last week-end, when three hundred members of the Balneological and Climatological Association visited Harrogate for their annual conference, most of whom motored over. There is a distinctly professional stamp about the medico's motor-car. The garages, particularly Johnson's garage at the Majestic Hotel, were at full pressure. Harrogate's strongest claim on the motorist is that motoring has been recognised as a supplementary aid to the water cures. It has become a psychologically established fact that a patient is all the better for having a soothing mental stimulant such as gentle motoring under the ideal conditions which prevail. Harrogate, it should be understood, stands on the highest tableland in England, and the salt of the sea breezes which may blow from either east or west is sweetened by the moorland air.

THE opening meet of the Yorkshire Automobile Club's season at Harrogate is already having a good effect, as witnessed during the past week in the ready welcome given by the business section of the community to the fleet of twenty motor-cabs introduced by the Provincial Motor Cab Company. It is less than a year ago since the same business houses objected to the introduction of the motor-buses, so this educational broadening of views is all the more striking.

It is recognised that a great attraction to motorists is the magnificent hotel accommodation to be found in Harrogate. Indeed, it has been said of these mammoth hotels, which are modern erections, that the garages were first built and then the picture filled in as seen through a pair of motor goggles; but, whether that is so or not, the motorist who makes Harrogate his

or her head-quarters finds the hotel life, with its social amenities, particularly alluring. The efficacy of building up the mental as well as the physical forces of visiting patients has prompted the municipality to erect a beautiful Kursaal, where a high-class orchestra, under the conductorship of Mr. Julian Clifford, plays morning, afternoon and evening, with frequent special concerts, and the stream of private motor-cars from the hotel to the Kursaal bears eloquent testimony to the combined mental and physical cures in progress. The Mayor of Harrogate (Dr. Neville Williams) is himself a keen motorist, and municipally, as well as in other ways, the motorist is well looked after.

THE local Automobile Association, which numbers over one hundred strong, have hit on a novel method of mutually benefiting each other. Frequent meetings are held and each member commits a question to paper. The papers are then mixed up and drawn, and each member in turn is expected to answer the question which has fallen to his lot, or, if he feels incapable of the task, to select a subject from a number specially put in. In this way a new member may very quickly become a proficient motorist.

THE Harrogate Automobile Association is constantly being approached by letter and by proxy as to which is the most picturesque and desirable route from London to Harrogate, and



The Village of Chalfont St. Giles.

the following is recommended. Starting from the Mansion House, one proceeds along Moorgate Street to Highbury Station, and then follows the Holloway Road on to Finchley. Some stiff hill climbing with an occasional descent meets the traveller *via* Barnet and Hatfield, and so on to Digswell Hill and Welwyn, and then by way of Woolmer Green and Knebworth, with easy running over undulating ground, to Stevenage. Taking in Graveley and Baldock on the way, one goes through Biggleswade to Allowbury Weston, and leaving Stilton behind there is a smooth stretch to Wansford Bridge and on to Stamford. Passing Colsterworth there is a gradual climb to Spittlegate Hill, and then a run down to Grantham. From Gonerby one ascends to Balderton, after which level ground with gentle undulations at intervals into Newark is struck. From Tuxford one ascends gradually to East Retford, and then travels over undulating road to Barnsley and strikes consistently level ground through Doncaster. Reaching Wentbridge there is a sharp ascent to Ferrybridge, after which the road gradually rises through Brotherton, Aberford, and so on to Wetherby, then on through the pretty country of Plompton and down Wetherby Lane to Harrogate. For variety of scenery and the mapping out of easy or quick stages I can recommend this line of travel. FREE LANCE.

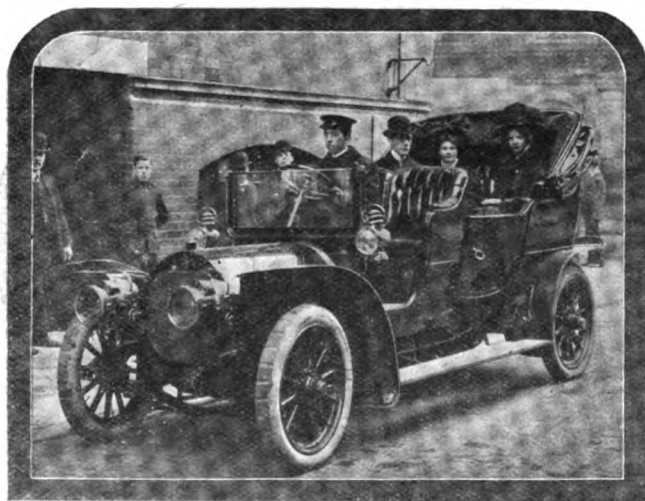
FOR snowballing two motorists, Mr. and Mrs. Bayer, of Forest Hill, London, five boys were recently fined at Coventry.

B

GOSSIP FROM PARIS.

IN this epoch of taxi-autos plying for hire in almost every city, awaiting the moment when they in their turn will perhaps be supplanted by aeroplanes, it is difficult for young people to realise what the world was like when there was no other means of transport in a town than the sedan-chair. Yet it is not so long ago. Monsieur Justin Caumont, who till 1865 enjoyed the monopoly of sedan-chairs at Bayeux, in the department of Calvados, and who made a considerable fortune by it, has only just died at the age of 94 years. Half-a-century ago that place, Beauvais, and numerous other sleepy country towns, did not possess such a thing as a cab. And in certain parts of France private sedan-chairs were in common use much later. Orleans, which has a population of some 70,000 inhabitants, was one of those favoured cities. A select circle of good old-fashioned people kept up the family tradition of being carried to church in their sedan-chairs. It was, most surely, picturesque, but not, as the French say, *dans le mouvement*. However, when her grandson began driving about in a 50-h.p. automobile, the old lady no longer felt herself safe in her sedan-chair, though it was carried by her footmen, and she abandoned it with regret.

M. CLEMENCEAU and the members of his Cabinet are learning by experience the truth of the French proverb "*Il est*



Miss Maud Allan, the popular dancer impressionist at the Palace Theatre, London, W., has fallen a victim to the joys of motoring, and has purchased a 30-h.p. Car.

With a little experience on the Continent the artiste has proved an apt pupil, but at present she confines her driving to quiet country roads, leaving a chauffeur to negotiate the London streets. In the photograph reproduced above Miss Allan is seen in her new car, accompanied by her parents, the Drs. Allan, of San Francisco.

impossible de contenter tout le monde et son pere" (One cannot satisfy everybody). Not long ago, when the Government bill for the regulation of motor-car traffic was presented to the Chamber, its author, the Minister of Public Works, and all his colleagues were accused of seeking to ruin the automobile industry. Now they are attacked with equal violence by M. Jeramer for committing what he describes as nothing less than "the flagrant iniquity" of protecting automobilism, and of aiming at the prompt "disappearance of the horse." The uproar raised against M. Barthou's bill may have been somewhat exaggerated, but certainly not more so than M. Jeramer's accusations. This gentleman has, however, a good excuse for his explosion of wrath, as he is one of the most direct sufferers by the adoption of the new means of locomotion. His utterances were made at the general annual meeting of one of the big Paris cab companies, of which he is a large shareholder. I do not know whether M. Jeramer, and the large number of his fellow shareholders who applauded him at the meeting, were aware of the fact, but only a few days before a great many Councils General adopted resolutions in favour of substituting mechanically-

propelled vehicles for the old diligences which still exist in so many parts of France. The automobile builders were invited to make proposals, which will be examined at the August session of the departmental assemblies. The noble animal the horse will not, however, disappear, but will, sooner than some people seem to think, be relieved of much of the hard work he has till now had to do. No one should rejoice at it more than his friends.

Now that the Dieppe circuit is closed against all racing cars the French competitors in the Grand Prix are testing their new machines in various parts of France. Cissac and Maurice Farman, having at last received their cars from Messrs. Panhard and Levassor, are scouring the country with them, but neither of those drivers cares to say more about them than that they are very satisfied, and that the vehicles are a great improvement on those of last year. Some of the other drivers boast of having attained incredible speed with their new racers. In drawing the long bow no one has, however, surpassed one driver, who has affirmed that in Burgundy the other day he drove his new racer during sixty minutes at an average speed of 160 kilometres an hour. The average speed of Nazzaro, who on the Fiat car won the Grand Prix last year, was 114 kilometres (71 miles) an hour. If the driver in question can travel at the speed of 160 kilometres an hour, the man who may have the ambition to beat him in the race by only 1 kilometre out of the 770 will have to keep up an average speed of 100 miles an hour!

MR. HENRY FARMAN recognises that the Brothers Wright are expert aviators, yet he does not hesitate to challenge them to a friendly contest, which he believes will convince the most sceptical that the definitive conquest of the ethereal element is no longer a chimera. He is the first man in Europe who on an aeroplane flew away, turned the corner, and returned to his starting point, but he does not pretend to have achieved feats equal to those of which his American cousins—he is an Englishman—boast. Whether he will surpass or even equal the Brothers Wright's performances is a question of secondary importance to the general public, that will undoubtedly heartily applaud the victor, whoever he may be. Mr. Farman has, however, confidence in himself and in his machines, and feels sure that in any case he will not cut a bad figure in the match. The contest must be held over a great open space—not like the Issy les Moulineaux parade ground, where the aviator has to veer round every half-minute. The challenge has been received in France with enthusiasm, not only by the aviators and aeronauts but by the sporting world and general public, that even now really do not know what to think of the American champions.

"LOOK, my dear, at that hulking fellow with a fan riding a bicyclette!" That was the remark made the other day by a young woman sitting beside her husband in a motor-car going at the rate of forty miles an hour in the Bois de Boulogne. It was fortunate for them the man had his fan, and that it was sufficiently big to attract their attention. He jumped off his machine just before the young couple passed and displayed it—not to procure for himself the pleasure of what the fan hawkers on the Boulevard call "*un petit vent du nord*," but to warn the imprudent motorists. Just round the corner, at a distance of about 100 metres, were a couple of cycling policemen waiting in ambush to note infringements of the speed regulations and to prosecute offenders. The display of the fan just saved the young and happy couple from the disagreeable ordeal of a "*procès verbal*" for excess of speed and the consequent prosecution with the inevitable fine. "The hulking fellow with a fan" was one of the agents of the A.G.A. (General Association of Automobilists) recently created in France in imitation of the Automobile Association in England. The duty of its agents is to warn motorists against infringements of the traffic regulations sometimes committed by inadvertence or by ignorance of their existence. The big fans they carry and display in case of need bear various warning inscriptions such as "lantern," "smoke," "slow down," &c.

MARNEY.

CONTINENTAL NOTES.

The A.C.F. Grand Prix Race.

The first of the Renault cars for the A.C.F. Grand Prix event is now on the road, and is being put through its road trials by Siz. As will be seen from the accompanying illustration, the vehicle differs but slightly in general appearance from last year's Renault racers. The three Mors cars for the contest are rapidly approaching completion. The four-cylinder engines have a bore of 155 mm. and a stroke of 170 mm.; the cars have wheel-bases of 9 ft. 9 in. and a track of 4 ft. 1 in.

The Targa Florio Race.

The annual Targa Florio race, which was held in Sicily on Monday last, did not attract so large an entry as last year. In fact, only seventeen cars entered—two Fiats, a Franco, a Junior, a Darracq, four S.P.A.'s, three Italas, three Isotta-Fraschini, a Berliet, and a Züst—and of these only thirteen actually started. The event was for cars having four-cylinder engines of a bore of between 120 and 130 mm., and was held over a winding circuit, about 150 kilometres round; this had to be covered three times, giving a total distance of approximately 450 kilometres, or 281

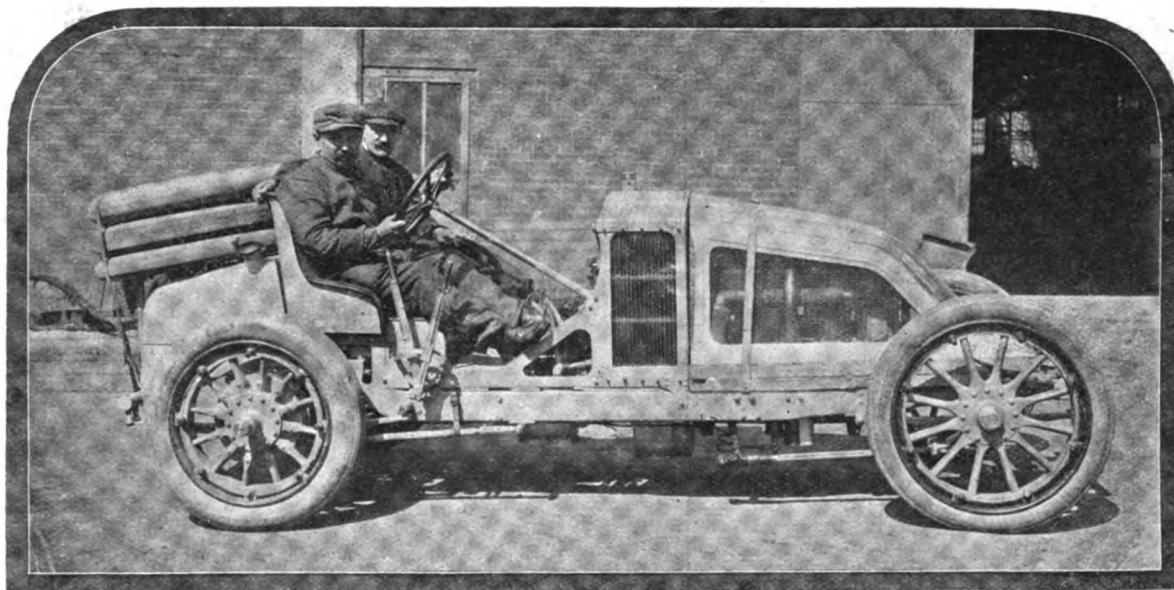
Baraque hill, near Clermont-Ferrand, when the best time of the day (10 min. 34 sec.) was made by Grillet on the Fouillaron.

British Motorists in France.

Quite a large number of British motorists are just now touring in France. Amongst them are—Mr. and Mrs. Fleming, Cheltenham (20-24-h.p. Fiat); Mr. Earle, Liverpool (45-h.p. Daimler); Mr., Mrs., and Miss Scott Murray (40-h.p. Daimler); Mr. and Mrs. Bradley, London (35-h.p. Fiat); Mr. and Mrs. Scribner, London (24-h.p. Peugeot); Mr. Frank Stoop and family, London (40-h.p. Fiat); Lady Cheylesmore (50-h.p. Panhard); Captain Sir Rosslyn and Lady Wemyss (40-h.p. Mercedes); Mr. Chapman and family, London (40-h.p. Itala); Colonel Kinney (60-h.p. Delaunay-Belleville); and Mr. and Mrs. Seligmann, London (20-h.p. Argyll).

Military Motor-wagons in Germany.

It is reported that, as a result of some recent trials, the German War Office has placed an order with the Suddutsche Automobilfabrik, of Gaggenau, for no less than thirty military road trains, each consisting of a 5-ton petrol motor-wagon and a 2½-ton trailer.



Siz at the Wheel of the Renault Car he will drive in the A.C.F. Grand Prix Race.

miles. The start took place at 6 a.m., the competitors being sent off at intervals of ten minutes. Lancia (Fiat), Trucco (Isotta-Fraschini), Nazzaro (Fiat), and Ceirano (S.P.A.), all finished the first round within 3 min. of each other. At the end of the second round the order was the same, but in the third lap Trucco took the lead, and won on his Isotta-Fraschini in 7 hr. 49 min., Lancia (Fiat) being second in 8 h. 2 min., Ceirano (S.P.A.) third, in 8 h. 9 min.; and Porporato (Berliet), fourth, in 8 h. 22 min. Trucco's time is a record for the race, that of last year's winner, Nazzaro (Fiat) being 8 h. 17 min.

The Tour of France.

The annual Tour of France reliability trial for motor-bicycles, tri-cars, and light cars organised by the Auto-cycle Club de France, which commenced on the 11th inst., terminated on Sunday last, when of the nine motor-bicycles, six tri-cars, six light cars with single-cylinder engines of not more than 84 mm. bore, and thirteen cars with single-cylinder engines of a bore up to 100 mm., which left Paris six, two, six, and twelve respectively, arrived back in the capital after covering a distance of 1,550 kilometres. In the 84 mm. bore car section the Sinpar, driven by Schweitzer, went through without losing any marks, as did also a Fouillaron, a Prima, a Delage, a Stimula, a Demeester, two Ivrys, a Bayard-Clement and a Bozier in the 100 mm. category. The programme on the 13th inst. comprised a 5-kilometre speed trial on the

Miscellaneous Items.

Arrangements are in hand for the inauguration of a public motor-car service between Innsbruck and Kufstein, in the Tyrol. —The Kaiser is stated to have now no less than nineteen cars in his Imperial motor garage.—No less than from eighty to a hundred volunteer motor-cyclists are expected to take part in the forthcoming military manoeuvres in Alsace.—It is proposed to establish a public motor-car service between Karlsbad and Keilberg, Austria.—The annual hill-climbing competition, known as the "Coupe Monod," organised by the Montreux section of the Swiss Automobile Club, over a 6-kilometre course between Montreux and Caux, is to be held on the 24th inst.—Messrs. Laurin and Klement, of Jungbunzlau, Austria, have just completed four motor-buses for a service between Pardubitz, Holitz and Botzdanek.—The Circuit des Ardennes and Coupe de Liedekerke races are to be held on the Bastogne course on August 12th next.—Seventeen entries have so far been received for the Copa Catalunya race for light cars, which is to be held near Barcelona on the 28th inst.—The trophy which is to be competed for in the Prince Henry of Prussia reliability trial for touring cars, to be held in Germany next month, consists of a finely-executed model in silver of a 50-h.p. Benz car.—An attempt is about to be made to establish a new record between Paris and Moscow, on a 40-h.p. Lorraine Dietrich, which will be driven by Messrs. Sorel and Rougier.

THE IRISH TRIAL.

DURING the next few days the Reliability Trial for touring cars organised by the Irish Automobile Club will be in progress. In our issue of the 9th inst. we published a full list of the entries in this interesting event, as well as detailed particulars as to the cars taking part in it. Given good weather it should prove a delightful experience for the drivers, observers and others participating therein. On Thursday the passengers and others concerned with the observation of the vehicles met and were weighed in the garage of the Automobile Club at 34, Dawson Street, Dublin, and on the premises of the Royal Dublin Society. The cars were similarly dealt with in Messrs. McLaughlan and Harvey's Yard, Dartmouth Road, Dublin. From thence they were driven to Ballsbridge—a distance of just over a mile—where they were garaged on Thursday night.

To-day (Friday) the run is from Dublin to Cork, a distance of 173½ miles, the luncheon stop being at Kilkenny. On Saturday the first car will leave Cork at 7 a.m., and is timed to arrive at Killarney shortly before five o'clock, the distance being 171



The Depot of the Auto Agencia Bolhao, Oporto, Portugal, with whom the Daimler Company have recently fixed up an agency for the handling of Daimler Cars in that country.

miles. The route will be *via* Macroom Bridge, up the Pass of Keimaneigh to Glengariff and Parknasilla, where lunch will be taken; hence the journey will be resumed to Rosbeigh, where a speed trial will be made on the Strand. Sunday will be spent at Killarney, and on Monday there will be a run of 184½ miles back to Dublin *via* Limerick for lunch. At Maryborough the course of the Gordon Bennett race of 1903 will be struck, and then after tea at Kildare the road will be taken through Newbridge, Naas and Rathcoole. On Tuesday the journey is 124½ miles north to Belfast by way of Dundalk and Warrenpoint, where luncheon will be taken. On the 27th the cars will return to Dublin by a route of 101 miles for luncheon. In the afternoon a trip of 52½ miles along the Wicklow Hills will bring the cars back to the Ballsbridge premises of the Royal Dublin Society on the conclusion of the Trial.

THE motor house adjoining the Grand Stand at Ascot has been reserved for the use of members of the R.A.C. during the racing that begins on Tuesday, June 16th, and continues until Friday, June 19th.

SOME CURRENT TOPICS.

Commercial Travellers' Vehicles on the Yearly Contract System.

Quite by accident I recently came across a firm in London which is slowly but surely building up a connection in hiring out light motor vehicles suitable for commercial travellers' use. The firm in question is the Portman Garage, of Portman Mews North, Portman Square, W., who for £260 a year, that is £5 per week, not only supply the vehicle, but furnish the driver and the petrol, &c., in fact, for the one payment the users have a vehicle at their disposal for five days in the week ready for an average daily run of fifty miles without any further charge. At present the firm have nine vans available, but these are all so fully occupied that an extension of the fleet at an early date is planned. The cars are mainly used by commercial travellers in the London suburbs, but some of them are employed on relatively long trips—as far out as Chelmsford on the east, and westwards to Windsor. The vehicles, which are of the 8-h.p. single-cylinder type, have, I understand, given general satisfaction, the owners making a point of having them carefully gone over every Saturday so that they will be in perfect running order for the ensuing week's work.

Damage by Self-Ignition.

The thanks of motorists are due to Mr. J. S. Critchley for drawing attention to an unsuspected danger in motor-cars. He has recently investigated two cases in which valuable vehicles were entirely destroyed by fire, the causes of which appear identical, as the flames burst upwards from the under part, and both cars were fitted with long under-trays extending to the back of the gear-box, in which the exhaust pipe was also inclosed. "The cause was evidently due," he writes, "to the collection of petrol in the trays, leaking from the carburettor or supply pipes, and which was ignited by the heat of the exhaust pipe, or, perhaps, a spark from the brakes. In the one case, however, the latter could not be the cause, for the reason that the car had been travelling up a very long hill and burst into flame immediately upon reaching the summit. In view of these disasters, I have recently advised that the exhaust pipes should be placed outside the tray, or the under-cover, and so arranged that any escape of petrol from the carburettor or pipes will be conducted direct to the roadway, and not be allowed to collect in the tray. In many instances a large amount of lubricating oil is also allowed to collect within the trays, which, of course, as soon as any flame is produced by the ignition of petrol, only causes further increase of the fire. It is obvious that the surplus oil should never be allowed to collect."

Some other Causes of Motor-Car Fires.

Since Mr. Critchley's note came to hand I have, curiously enough, received a copy of a circular issued by an American insurance company giving a list of causes of motor-car fires which have, since they took up the motor insurance business, come under their notice. Pressure of space precludes the reproduction of the complete list, but I have picked out three cases just to show how serious results may arise from simple causes:—Lighted cigar laid on a car and forgotten caused bad fire.—Spontaneous combustion of waste and rags used in cleaning and painting caused a fire at a garage resulting in serious damage.—Chauffeur struck a match to light lamps while petrol tank was being filled. The explosion and subsequent fire resulted in the destruction of the car. Needless to say quite a number of cases are cited where fires have resulted owing to leaking petrol being ignited by carelessly thrown down matches and cigarette ends, thus again emphasizing the fact that too much care cannot be taken in seeing that the connections between the petrol tank and the carburettor are maintained in a perfectly tight condition.

ARCANUM.

THE cars of members of the Motor Union attending the forthcoming meeting at Bournemouth will be accommodated free of charge at the Imperial Motor Works, Holdenhurst Road, Bournemouth.

THE first motor-car visiting the Isle of Man this year was registered at the Highway Board's office at Douglas on the 1st inst.

IN the death of Sir F. S. Philipson-Stow the A.C.U. has lost a great supporter, for it was on his Fernhurst estate that their most successful hill climbs have been held.

MOTORISTS attending the Franco-British Exhibition at Shepherd's Bush will be interested to learn that there is a motor garage at the Notting Hill Gate end of Church Street, Kensington. This is owned by Mr. G. H. Stanley Rawdon.

THE Rev. Dr. Darlington, of St. Mark's Vicarage, Kennington Oval, London, S.E., the president of the Tramways Brotherhood, has been conducting a motor-car mission to the tramway men at Northampton and other places in that district.

THE latest complaint against the motor-car in France comes from the makers of billiard tables and owners of billiard saloons. The game has considerably declined in popularity in recent years, which, according to these authorities, is ascribable to the popularity of motoring.

THE number of motor-cars registered in the county of Surrey from January 1st to March 31st was ninety-two, the number of motor-cycles forty-six, and the number of drivers licensed 1,420, the total receipts for the quarter under the Motor Car Act amounting to £499 18s.

WE learn that Messrs. J. Keele and Co. have been appointed the London wholesale and retail agents for the well-known Weigel cars, and that they have the latest models on view in their show rooms at 72, Bond Street, W., where the cars can be seen, and arrangements made for trial runs.

IN giving a verdict of "Accidental death," at an inquiry at Wimbledon, into the circumstances attending the death of a little girl who was knocked down and killed by a motor-car, the jury added that they were of opinion that a speed limit should be imposed throughout the principal thoroughfares of the town.

THE term of holdship of the Hereford Trophy having expired, Messrs. Clement-Talbot, Ltd., inform us they have now returned the same to the Hereford Automobile Club, in whose charge it will remain until it is competed for again. This trophy was won on the Earl of Shrewsbury's 12-16-h.p. Talbot at last year's Frome's Hill Climb.

THE Gloucestershire Historical Pageant will take place at Cheltenham from July 6th to 11th, and doubtless a number of motor-cars will convey spectators to what promises to be a unique event in the history of modern pageantry. Messrs. Norton and Co., of 1-6, Bath Road, Cheltenham, have an excellent garage, which will be of considerable service to motoring visitors.

THE Maudslay Motor Company, Ltd., Coventry, have recently secured several orders for industrial vehicles, one of which is a two-ton lorry for Messrs. Lucas and Co., Ltd., the Brewery, Leamington; whilst another is for use as an estate cart at the Earl of Wimborne's place, Canford Manor. The company also have an order in hand for a private omnibus for the Huntercombe Golf Club, Nettlebed.

THE programme of the Inter-Club meet of members of the Motor Union to be held to-day (Saturday) at Bournemouth includes an assembly of the cars at the Pier entrance at 3 p.m. The New Forest Automobile Club and Hampshire Motor Union are inviting motoring visitors to tea in the winter gardens at 4.30 p.m., and the tenth provincial dinner of the Motor Union will be held at 7 for 7.15 p.m. at the Hotel Mont Dore.

EARLY the other morning a derelict motor-car was taken to Hounslow and left in charge of the police. Subsequent inquiries disclosed that the car was the property of the Hon. Ivor Guest, and had been taken out by the driver, who was accompanied by two friends. While proceeding along the Bath road a collision occurred, in which the car was damaged and a horse much injured. The chauffeur is reported to have abandoned the car and to have failed to have subsequently appeared before his employer.

HERE AND THERE.

TWENTY candidates for the R.A.C. driving certificate have been examined at the Naval Motor School, Twyford Avenue, Stamsshaw, Portsmouth.

AMONGST recent purchasers of Weigel 40-h.p. cars are:—

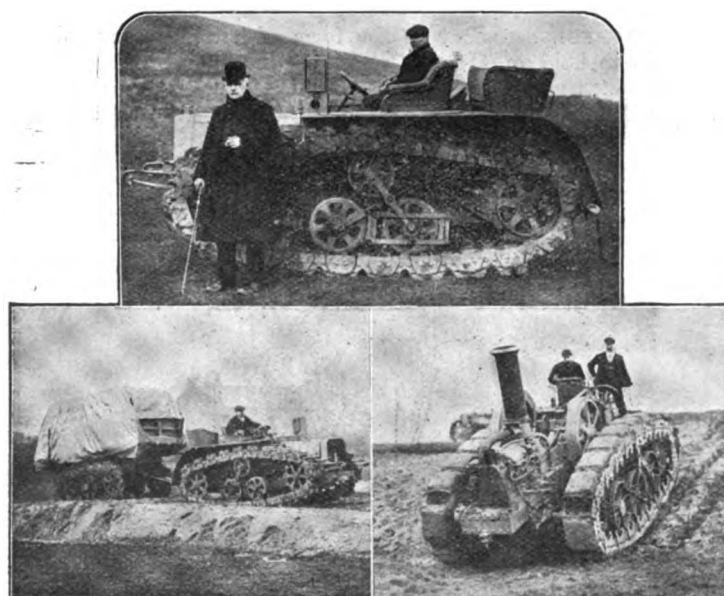
Colonel Mainwaring, Mr. David Davis (the well-known counsel, of Birmingham), and Sir Hugo de Bathe.

AT the August meeting, at Brooklands, a match will be run between Mr. S. F. Edge, driving a Napier car, and Mr. Charles Jarrott, driving either a De Dietrich or a Mors car.

THE East Sussex County Council has authorised the county surveyor to report generally upon the erection of special motor danger signs throughout the area of their jurisdiction.

THE Corporation of Edinburgh is inviting tenders, to be received not later than Wednesday next, for the supply of a 16-20-h.p. four-cylinder motor chassis with Palmer tyres.

MESSRS. A. AND F. NORTHCOTE, of the Royal Mews and Motor Garage, Bear Street, Barnstaple, who last year established a motor service which has proved popular, have just made two important additions to their stud of cars.



The Hornsby Chain Track Motor Vehicles.

The upper illustration depicts the Hornsby 35-h.p. petrol chain track car, with the inventor, Mr. D. Roberts, M.I.Mech.E., standing at the side. The two lower illustrations show a 35-h.p. heavy oil tractor passing over soft sand.

THE Committee that is responsible for the public parks in the Metropolis is making a recommendation to the L.C.C. to purchase seven motor lawn mowers for use in the open spaces in London.

MR. C. B. KELLOW, of the Kellow Motor Company, Melbourne, Victoria, is at present on a visit to this country to investigate the commercial motor vehicle with a view to introducing into Australia machines which are most suited to existing local conditions.

THE exports of motor-cars and parts from the United States during March last attained a value of only £107,877, as compared with £109,075 in the corresponding month of 1907. The United Kingdom heads the list, being responsible for £31,364 of the total, Canada taking the second place with £27,189.

AT a meeting of the Farnham Board of Guardians it was reported that the widow of John Bryan, who died from injuries sustained through being knocked down by a motor-car on the Ripley road on April 25th, had been compelled to enter the workhouse, and it was suggested that the case against the owner of the car should be watched on behalf of the Guardians with a view to compensation being obtained for the widow.

A MOTOR-BUS is now running between Leamington and Stratford-on-Avon.

EARL BEAUCHAMP has acquired an electromobile for town use from the Electromobile Company.

SIR ALFRED FRIPP, Surgeon-in-Ordinary to His Majesty the King, has lately acquired a 15-20-h.p. Fiat landaulet.

THE Hove Council has extended the licence of the Brighton, Hove and Preston United Omnibus Company, Ltd., to store 500 gallons of petrol.

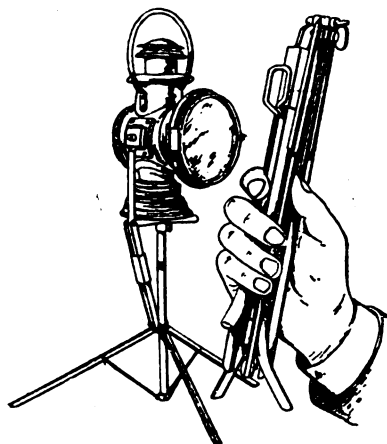
SPECIFICATIONS have been issued by the U.S. War Department of a motor supply wagon required for the use of the signal corps of the United States Army.

EARL FITZWILLIAM considers that no place in the North of England with which he is acquainted has so much traffic in the same small area of street as the town of Retford.

THE imports of motor-cars and parts into the United States during March last only attained a value of £23,888 as compared with £68,934 in the corresponding month of 1907.

ACCORDING to the clerk of the Torrington (Devon) Rural Council every motor lorry and heavy hauling engine working regularly within the area of the Council's operations costs that body £150 per year in consequence of alleged damage to the roads.

A USEFUL accessory in the form of a tripod lampholder, designed to hold an oil lamp while the driver may be making a repair about the motor, has lately been introduced by the Beloit Supply Company, of Beloit, Wis., U.S.A. The tripod consists of



the usual spreading feet, together with a stand on which the lamp rests, and a swinging arm is inserted into the socket used for supporting the lamp on the dash. When not in use the tripod can be folded most compactly and carried in an ordinary tool box.

At the meeting of the Sleaford Rural Council it was stated, on behalf of the Blankney, Linwood, and Martin Commissioners, that, owing to the enormously increased motor traffic from Lincoln to Woodhall Spa, the Commissioners found it necessary to rebuild a bridge over the river near Kirkstead.

ONE of the most ardent motorists at present in London is Signor Bonci, the great tenor, who is engaged at the Royal Opera. At his home in Italy he possesses a particularly fine car, in which he delights to explore the country. Another operatic motorist who has made an enviable name for himself at Covent Garden is Signor Zenatello, who attributes his good health partly to his love of fresh air.

IN the early part of last week the premises of Messrs. Halleys, Ltd., at Manchester, were broken into, the attraction for the burglars being five gold and one silver medals (awarded to the Swift cars in various years for reliability), which had been lent by the Swift Motor Company, Ltd., to their Manchester agents for exhibition. The burglars smashed the frame and carried off what they evidently thought to be solid gold trophies, but it is gratifying to know that the real medals are still resting securely in the strong room of the owners, the burglars' "haul" consisting of hollow brass electrotypes worth fifteen pence apiece.

MOTOR-CARS are announced to run to Aymchurch and New Romney.

MESSRS. J. ASH AND SONS, of Alfred Street, Nottingham, are doing considerable business in bodies for motor-cars.

THE "Skimabout" is the name given to a new motor-car which has just been put on the market in the United States.

HIS Excellency General Grant, Governor of Malta, has purchased from the Daimler Company a 42-h.p. Aston landaulet.

THE Battersea Borough Council has decided to apply to the L.G.B. for a speed limit for motor vehicles in certain thoroughfares in the borough.

A LARGE catch of herrings off the Co. Down coast the other night were immediately transferred by a 20-h.p. Argyll motor lorry to Belfast, and were retailed at St. George's Market the next morning.

ANSWERING Mr. Cathcart Wason in the House of Commons, Mr. John Burns has expressed a doubt as to whether it would be practicable to adopt a maximum speed of twelve miles an hour for all vehicles in London.

EFFORTS are being made by the Brighton owners of horse-cabs to restrict the number of licences issued, and especially to prevent persons who have transferred their licences to taxi-cabs from obtaining fresh permits.

PROMPTED by their adjacency to the Franco-British Exhibition, the conductors of the National Motor Academy have arranged garage for a hundred cars on their private instruction track at Boundary Road, Notting Hill, W., near the Exhibition.

AMONG the orders recently secured by Messrs. Durham, Churchill and Co., Sheffield, are a 24-30-h.p. three-ton chassis for the Bradford Corporation, and a 40-h.p. char-a-banc, with seating capacity for twenty-two persons, complete with canopy, for Mr. D. E. Davies, of Barmouth.

THE bursting of a tyre on the King's motor-car delayed His Majesty at Stevenage on Tuesday *en route* for Newmarket. Half an hour elapsed before the journey could be resumed. His Majesty left the car and strolled about, taking a keen interest in the picturesque church of Holy Trinity close by. By the time the car was ready to restart several hundred persons had assembled, and gave His Majesty a hearty send-off.

WE regret to hear of the death of the Hon. Mr. Hungerford Tutor Boddam, who died suddenly a few days ago in a train while travelling from Madras to Bombay, *en route* to England, on his retirement from the Bench as a judge of the Madras High Court. Mr. Boddam was travelling with the Chief Justice of Madras, Sir Arnold White, and Sir Ralph Benson. During the time Mr. Boddam was in Madras he became extremely popular with all classes. Especially will he be missed by the Mohammedan community, whose welfare he had at heart, and whose cause he had warmly espoused ever since his arrival in India. He was President of the Anjuman and other kindred Mohammedan institutions, and at the late Mohammedan conference of all India, held in Madras, the Governor, Sir Arthur Lawley, acknowledged his services. Mr. Boddam was also president of the Motor Union of Southern India.

VISITORS to London are often at a loss to know how to spend Sunday. They have "done" the sights during the week, and the majority decide to go with their City brethren away into the adjoining country or down to the seaside. The habitual week-ender will heartily welcome the latest innovation of the Daimler Company, who are arranging trips to Brighton every Sunday during the coming season. The cars used will be of the standard 42-h.p. type, and the driver will be in a smart uniform. The start will be made each Sunday as follows:—The Hotel Waldorf at 10 a.m., Savoy at 10.5 a.m., Cecil at 10.15 a.m., Grand at 10.25 a.m., Metropole at 10.30 a.m., Victoria at 10.35 a.m., and the Grosvenor at 10.45 a.m., arriving at Brighton in time for lunch. On the return journey the car will start from Brighton at 5 p.m., reaching London in time for dinner. The fares are very moderate, viz., 12s. 6d. single journey, and 15s. return, and the seat by the driver 2s. 6d. extra each way. There is no doubt that the reputation of the Daimler car, coupled with the very moderate charges, will appeal to many, and make these trips very popular during the summer months.

MOTORING ACCESSORIES.

The new Stepney Flange.

The Stepney Wheel Company are putting on the market a new invention under the above name with the object of facilitating the fitting of the Stepney Spare Wheel. Hitherto it has been necessary to push the outer covers inwards in order to fix the hooks of the Stepney wheel to the rim of the damaged car wheel. To obviate this the flange, illustrated in Figs. 1, 2 and 3, has been introduced. As will be seen, it consists of a ring, which, by means of bolts and nuts, is fixed through the

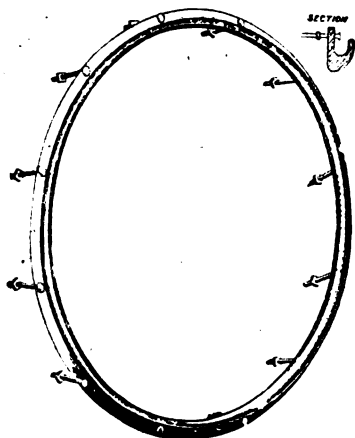


Fig. 1.—The new Flange which, when fitted permanently to motor-car wheels, enables the Stepney Spare Wheel to be quickly and easily attached.

felloe, improving the appearance of the artillery car wheels and at the same time considerably strengthening them.

Although the new flange enables the Stepney wheel to be fitted in much less time and with less trouble, it has primarily been designed with the view of extending the utility of the Stepney by rendering it an "anti-skid," therefore serving the double purpose. With the introduction of the new flange it will not be necessary to have a steel studded tyre permanently fitted to the car wheel, but the spare one can be fitted with a steel studded tyre, and when the necessity of a non-skid arises the Stepney Non-Skid Spare Wheel can be placed in position in a few seconds, by means of the new flange, to one of the driving wheels. The company look upon this new feature of the Stepney as being likely, when its use is generally adopted, to remove a good deal of opposition

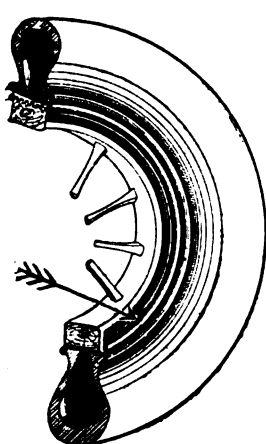


Fig. 2.—Sectional View of Wheel fitted with Flange.

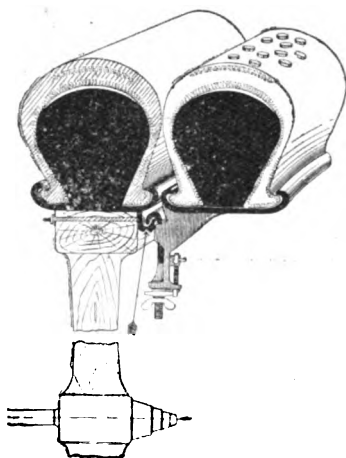


Fig. 3.—Sectional View of Wheel with new Flange and Stepney Non-Skid Spare Wheel.

at present existing to motoring on account of the studded tyres, as it is obvious the car will be running on plain tyres in dry weather and in this way the minimum wear of the road surface will follow. We may mention that when the Stepney wheel is to be fitted as a non-skid it is not necessary to jack up the car or deflate the car tyre.

The new flanges are very light and have been exhaustively tested, and in putting them on the market the company have every confidence that their adoption by motorists generally is only a question of time. In this belief they have taken show rooms in London at 168, Great Portland

Street, W., where the flange will be on view, and a responsible official in charge to demonstrate its advantages and to fit them to the car wheels of motorists adopting them.

Pullman's Non-skid.

We recently referred to the salient features of the "Detachable 1908" non-skid, introduced by Messrs. R. and J. Pullman, Ltd., of the Westbrook Mills, Godalming. The registered clip, which has been brought out to assist the operation of fitting and removing, is shown on the right hand side of Fig. 4. Those who intend to adopt this speciality

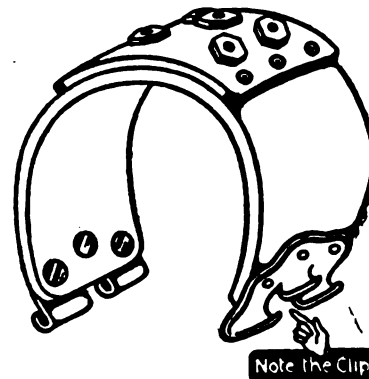


Fig. 4.

should take care when sending the circumference of the cover to state whether the measurement was taken when the tyre was deflated or inflated. The outside measurement from bead to bead should also be given.

The Star Weather Screen.

Fig. 5 depicts the patent weather screen which has just been placed on the market by the Star Engineering Company, Wolverhampton. The screen is composed of a sheet of flexible waterproof canvas that is wound round a spring roller, the axis of which is carried by the dashboard; the free edge of the sheet is stiffened by a suitable bar, which is connected with the dashboard through the medium of a pair of jointed bars, each of which is formed in two lengths pivotally connected together by means of a joint of the knife-blade type which allows the two lengths to be substantially closed together in one direction but prevents them from being moved more than slightly out of line with one another in the opposite direction. The portions of each bar are also provided with joints either at their connection with the main support or with the stiffening bar, which limits their turning movement either way, so that when the bars

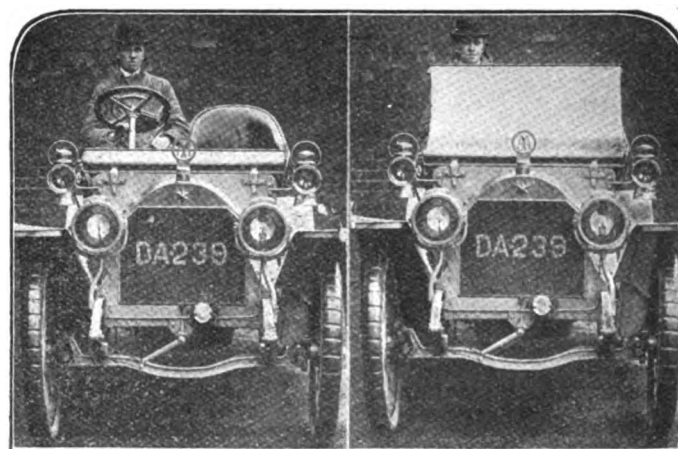


Fig. 5.

have been opened out to hold the stiffening bar in its upward position with the sheet drawn upward from the roller the bars cannot move sideways and allow the stiffening bar to fall. When the bars have been opened for the purpose of holding up the stiffening bar of the sheet against the pull of the roller spring they are stopped from further movement in the same direction by the stop joint between the two lengths of which they are composed; at the same time the two lengths of each bar have moved sufficiently out of line with the other to ensure that they cannot accidentally turn backwards in relation to one another.

Correspondence.

[Letters to the Editor should be addressed to the offices. 27-33, Charing Cross Road, London, W.C.]

GEAR-BOX LUBRICATION.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—Sufficient attention is not given to the question of gear-box lubrication. Mostly the gear-box is filled nearly to the top with thick grease, and the motorist is satisfied so long as the grease does not run out, and the gears are not noisy. Such filling of the box means a great absorption of power, as can be shown in many ways. For instance, take the temperature of a box which has run with a little fairly heavy oil in the bottom (just enough to splash up all over the inside of the box is all that is necessary) and then take out the oil and fill the box with grease. Run the same distance and again take the temperature—the increase in heat is most astonishing. Indeed, the boxes frequently become so hot that they cannot be touched with the hand. Or again, with clutch out, and gear in neutral, turn the gears by hand—with the little oil they run easily, and continue to run after the hand is removed, but with the grease it is a labour to turn them at all, and they stick in the lubricant as soon as the motive power is taken away. Also a distinct difference is found in the car when coasting, and this brings home the effect that such useless absorption of power must have on efficiency.

Further, a grease will keep grit, pieces of metal off the gears, &c., in suspension, and these particles are continually getting between the teeth, and by their presence adding to their number. On the other hand, with an oil, on emptying the gear-box, you will find the solid particles collected in the bottom of the box. If using a little oil in the gear-box is

shaped as to catch in front of the heel of the boot, and extend to within two or three inches of the toe, while another good arrangement is that on the Leon Bollée car, where the pedals are made half round and fairly wide, so that the sole of the foot may rest upon them.—Yours truly,

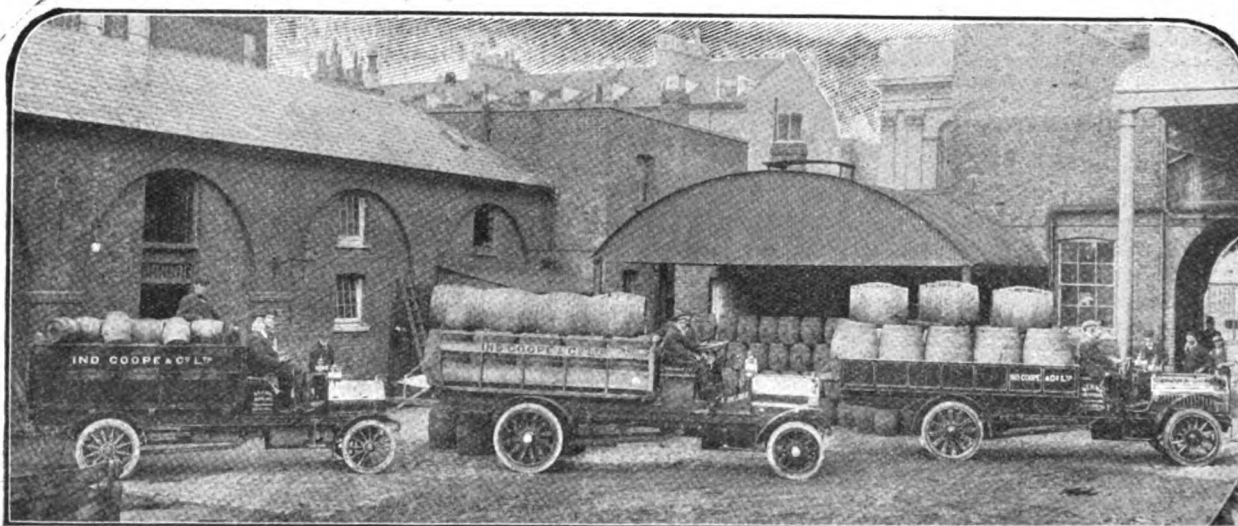
HERBERT J. CHAPMAN.

SUNDAY MOTORING.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—I notice in your last issue you refer to the attack of a reverend gentleman on those motorists who take advantage of the Sunday to use their motor-cars and see a little more of their native land than would otherwise be possible. The Lincolnshire Motor Cycle Club have, in this connection, been discussing a suggestion which should appeal to those who try to harmonise the motor with the Sabbath.

They have suggested that motor-cyclists of the city of Lincoln and of other places where they have centres should meet for the purpose of attending Sunday morning service at the churches of those clergymen who are members of the club. This association has set its face against Sunday meets, but to ride out on a pleasant Sunday morning to some church such as that at Gayton and join in a service conducted by a fellow-member of the club, and then take lunch together at a popular resort, should prove beneficial to all members and a means of keeping together without offending the susceptibilities of those who prefer to walk rather



Three of the Berna Motor-Lorries used by Messrs. Ind, Coope and Co., Ltd., Romford.

found to be noisy, it can be remedied by covering with felt or some such sound-absorbing medium.—Yours truly,

A. DUCKHAM.

THE POSITION OF PEDALS.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—In furtherance of the discussion *re* the pedals on cars, I should say that the use of these becomes as second nature to the driver of a car in the course of a few hours; and I cannot see that the position of the pedals is conducive to the safety of the public, as Mr. L. Hull says, nor that even a (careful) driver in a tight corner would jam down his brake pedal at all. He should use side brakes judiciously, but with confidence, although I must say some hand brakes call for an acrobatic performance on the part of a driver before they can be brought into action. One of the nicest arrangements is that adopted on the Fiat and Humber cars with their familiar little accelerator buttons practically between the pedals but nearer the seat, so that one's foot rests upon it naturally and seems to glide automatically to the footbrake when desired; but, after all, it is only a matter of fancy. Darracq, Panhard and others fit a neat little accelerator pedal on the extreme right, while, of course, many cars have none at all. I once had a 40-h.p. Napier which had both clutch and brake pedals on the left side of the steering column, and that was very awkward and tricky to drive until one got used to it.

I certainly do not like the clutch pedal to be on the right, and there are a good many of these; neither do I think that to have the clutch connected to the brake is good practice. A good many pedals are not half large enough, they should be about three inches wide, and be so

than ride on this one day of the week. I do not know whether the idea could be applied to those who own motor-cars, but, as a Lincolnshire motorist, I feel there is no reason why it should not be possible, especially as one of our popular canons at the Cathedral is himself an enthusiastic motorist.—Yours truly,

TOM OF LINCOLN.

EVIDENCE IN MOTOR-CAR CASES.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—I am not a lawyer, but, notwithstanding, it has always struck me as an extraordinary thing that magistrates permit evidence to be brought forward in motor-car cases of things and acts which take place when the defendant is not present, and thereby place him in an absolutely impossible position to deny, repudiate or accept such evidence.

I have always understood that in English courts of justice no evidence would be permitted as to what took place between two persons when the party accused or the party in litigation was not present. This, however, is exactly what is taking place in all motor-car prosecutions.

The police constable swears that he started his watch at a given signal and stopped it at no given signal, and then evidence is brought forward by another constable to say that he saw the first man do it.

What this has to do with the facts of the case I fail to understand. The case is not whether the police-constable pressed the button or not; the real case is against a certain person who knows nothing at all about the starting or the stopping of the watch. He was not present when the watch was started or stopped, and is, therefore, put into the position of being unable either to agree with the constables or disagree. As Mr. Plowden rightly stated, he fails to comprehend how any motorist can get

out of the charge, and he had the greatest sympathy for anybody caught in a trap owing to this.

If any of your readers can point out to me cases where similar evidence is admitted, I think it will be interesting, and I equally think it will be interesting if a case on these lines were fought. In the meantime I have addressed a letter, of which the enclosed is a copy, to the Home Secretary.—Yours truly,

D. M. WEIGEL.

[COPY.]

The Home Secretary,
Whitehall, S. W.

May 14th, 1908.

Dear Sir,—Might I call your attention to the evidence which has always been admitted when persons are charged with exceeding the speed limit under the Motor Car Act?

Evidence is tendered by constables that they pressed a watch at a certain time and stopped it at a certain time, and this evidence is corroborated by some other constable.

Might I submit to you, sir, that evidence which is given of acts which are done when the defendant was not present and was, therefore, absolutely unable to deny or acknowledge, is contrary to all practice in British courts?

The prosecution of motorists for exceeding the speed limit becomes a farce, inasmuch as, if such evidence as this is admitted, they are convicted upon a statement and not upon the evidence of fact.

Evidence which is tendered as to what took place when the defendant was not present, I submit to you, sir, is inadmissible evidence. Apart from this, it places the power in the hands of the prosecutor, which is contrary to the interests of justice, and which permits of a possible gross abuse.

As I think, sir, that motorists are entitled to the same justice and the same method of administering it as other people, I put this matter before you for your kind consideration.—Faithfully yours,

(Signed) D. M. WEIGEL.

AN INJUSTICE TO GARAGE OWNERS.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—We should like to draw attention to a certain class of motorists who, when hung up on the road, send a messenger to the nearest garage, or one recommended, for assistance. Now, during the time that help is arriving they manage to find out and rectify the trouble themselves; they then drive away, never waiting for the assistance that has been sent to them, or troubling to call at the garage and thanking them for their trouble.

We may state that we have been served this way a considerable number of times. On May 9th last a powerful racing car, evidently on its way to Brooklands, got hung up, and we were sent for to tow it along. We telephoned to our other depot for a car to go and tow them, and at the same time gave one of the persons who was with the vehicle a tow rope and asked him to go back and meet the car sent to his assistance. A few minutes afterwards the racer was started up, and the persons jumped up and drove straight away, at the same time taking our tow rope with them, never troubling to call and thank us for the trouble we had been put to, although the car sent to their assistance was searching the highways for them.—Yours truly,

LETZER AND JORDAN.

SELF-STARTING DEVICES.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—What has become of the many self-starting devices of which so much was heard about the time of the last Paris show? One hears so little of them at the present time that one is not unfairly inclined to imagine that they have been tried and found wanting. This is a great pity, for undoubtedly there is a market for such a device, and the maker who brings out a really practical self-starter should meet with a full reward.—Yours truly,

T. R. BURGESS.

SOME FACTS IN THE SELECTION OF MOTOR OILS.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—“Who will believe? not I, for in deceiving
Lies the dear charm of life's delightful dream;
I cannot spare the luxury of believing
That all things beautiful are what they “seem.”

Such thoughts come into one's mind when the now daily offers of cheap and reputed excellent lubricating oils come to hand. Few motorists pass a day without receiving some advertisement of a motor oil. Some are most enticing, price so low and quality so good, anyway according to the printed matter that nearly every post brings. The danger of employing a bad oil is great, but the chance of getting a good cheap oil is most inviting. So it has struck me that the automobilist might like just a few tests, so that he can test for himself the many kinds that are offered.

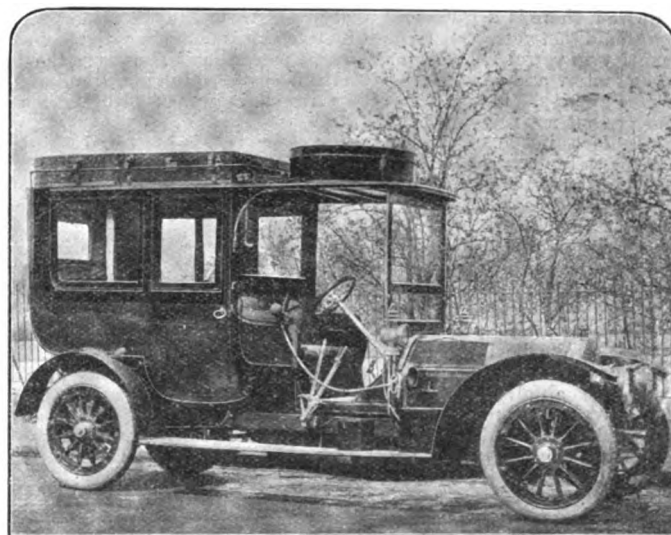
If a chemical balance is at hand, a good test is to weigh a gramme of the oil in a Berlin porcelain dish, then place the dish with the oil in

it in an ordinary kitchen oven and keep it there for about four hours; the temperature in such an oven is about 300 deg. Fahr., which is enough for a rough and ready test. Then re-weigh; if there is more than a 2 per cent. loss, do not buy the oil, even if it be offered for nothing. The oil too, after four hours in the oven, should merely feel “tacky,” that is, like treacle. Another excellent and simple test is to get a drop tube, the point of which is one millimetre in diameter, heat some of the oil to be examined to 200 deg. Fahr., fill the improvised pipette with it, and note the time it takes to run out; carry out a similar test with a standard reliable oil; if the oil under test varies more than 20 sec. either way, at the same temperature, it should be discarded.

The flash test is probably the one most to be depended upon. An oil that gives a flash at anything between 380 and 500 Fahrenheit is fair, and the nearer 500 deg. the better. This test can also be carried out by a layman without much trouble. The apparatus needed is but a spirit lamp or Bunsen burner, a porcelain dish, a thermometer, and a taper, and either a tripod or some form of retort stand; the ordinary drawing-room kettle stand will answer. The oil is put in the dish over the lamp and the thermometer is placed in the oil and is used to stir the latter up. When it shows 250 Fahr. apply a lighted taper to the surface of the oil, and go on doing so as the temperature rises, until there is a faint blue vapour on the surface that catches light or flashes; note reading of the thermometer when this occurs, and that is the “flash point.” If it is near 500 Fahr. the oil will do for petrol engines.

These tests are, as I have already stated, merely rough and ready ones, but I am sure if the specimen answers to the three given the oil may be used with perfect safety.—Yours truly,

C. T. W. H.



The 60-h.p. Six-Cylinder Weigel Car recently supplied to the Right Hon. Earl of Wiltshire by the London and Parisian Motor Company. The car is entirely British made, the chassis being manufactured by Weigel Motors, Ltd., and the limousine body is by Messrs. J. Rothschild et fils, of Westminster.

WET DRIVING SEATS.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—If your correspondents “Arcanum” and “Old Hand” will try a leather or mackintosh rug, fastened round the waist by a piece of elastic and a catch, so as to bring the overlap of the rug well to one side, or the front, and over this put on the ordinary motorist's mackintosh coat, with the back seam unslit, pulling it well under him as he sits down, so that both mackintosh and rug are between him and the cushion, he will find he can keep dry for many hours in heavy rain. I get these rugs from Messrs. Gamage, but no doubt any motor shop supplies similar ones. The rug must be short enough to leave the feet clear for driving.—Yours truly,

H. E. R.

CONNECTING UP ACCUMULATORS.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—Referring to “Novice's” inquiry on the above subject in the last issue of the *M.C.J.*, there is no reason I know of why the battery connections should always be the same in order to obtain satisfactory ignition service. The authority in question is quite correct with regard to the depositing action of the contact on the tremblers of the coil. The action is exactly the same as that of the ordinary arc lamp, which, when trimmed, is supplied with a negative carbon but half the length of the positive. At the end of its usual period of burning there is scarcely anything left of the positive carbon, while the negative has hardly decreased in size at all. Personally, I make a practice of occasionally reversing the wire connections to the accumulators.—Yours truly,

W. SIMPSON.

PETROL AND PETROL TESTS.*

By G. H. BAILLIE.

It is easy enough to formulate what a good fuel should be.

1. It should enable the engine to start easily from cold.
2. It should not smell too bad before or after combustion.
3. It should run the car as many miles as possible to the shilling.
4. It should not lead to deposits in the cylinder or on the valves under any of the various conditions of running.

Conditions 3 and 4 are not easy to test. One may find that a new fuel does not run the car as many miles as does its accustomed fuel, but it does not follow in the least that the new fuel is not so good. Its specific gravity may be different weight of float. Its specific gravity may be greater, and require, therefore, a larger jet to give sufficient fuel. It may take a larger amount of air for combustion, and need, therefore, a change in the carburettor inlets. Finally, it may be less volatile, and may not be fully evaporated and utilised. It is, in fact, impossible to judge of the value of a new fuel by running a car on it without taking a great deal of trouble to be sure that the fuel is given a fair chance.

The number of miles to be got out of a shilling's worth of fuel depends on three things. First, the price per gallon; secondly, the calorific value per gallon; thirdly, the extent to which the fuel is utilised. There are several known methods of testing the calorific value, but it is seldom necessary to carry out the test. The calorific value of most common hydrocarbons is known, and in dealing with the hydrocarbons of a particular series their calorific values per pound differ only very little, generally diminishing slightly as the specific gravity increases. In the paraffin series, of which the American petrols are almost entirely composed, there is a difference of only 1 per cent. in the calorific value per pound between the highest and lowest members present in any quantity in petrol. The calorific value per gallon is, however, the interesting factor, and this can be obtained from the value per pound and the specific gravity. In any particular series it increases with the specific gravity, but not very much.

In fact, if the nature or source of the fuel is known, I think the calorific value could always be estimated to within 5 per cent., without knowing the exact composition of the fuel, and as regards petrols, I do not think the calorific value per gallon of any petrol will be 5 per cent. different from, say, Pratt's.

The ideal fuel would all vaporise in its passage along the induction pipe from jet to inlet valve. Probably no fuel does it. In an engine running at 600 r.p.m. the time of transit from jet to inlet valve is of the order of $\frac{1}{100}$ of a second, depending, of course, on the diameter and length of the inlet pipe, while the whole time available before the compression stroke begins is $\frac{1}{60}$ of a second.

Seven pure fuels are: pentane, hexane, heptane, benzene, octane, nonane, and absolute or ethyl alcohol. Hexane and heptane are the chief constituents of petrol, and octane enters also to a greater or less extent into every petrol. The American petrols consist almost entirely of members of the paraffin or saturated series of hydro-carbons. Table I. gives the properties of the earlier members of this series:—

TABLE I.—Properties of the principal constituents of fuels.

| | Formula. | Density at 15 deg. C. | Boiling point. | Lower calorific value per litre. |
|-------------------------|----------------|-----------------------|----------------|----------------------------------|
| Butane | C_4H_{10} | ·600 | 1 | — |
| Pentane, iso- | C_5H_{12} | ·628 | 31 | — |
| Pentane, normal | C_5H_{12} | ·626 | 36 | — |
| Hexane | C_6H_{14} | ·674 | 68·5 | 7155 |
| Hexahydrobenzene | C_6H_{12} | ·760 | 69 | — |
| Hexahydrotoluene | C_7H_{12} | ·772 | 97 | — |
| Heptane | C_7H_{16} | ·688 | 98 | 7380 |
| Octane | C_8H_{18} | ·719 | 120 | 7560 |
| Octane, normal | C_8H_{18} | ·707 | 125 | — |
| Nonane, <i>n</i> | C_9H_{20} | ·740 | 136 | 7900 |
| Nonane, normal | C_9H_{20} | ·722 | 150 | — |
| Decane | $C_{10}H_{22}$ | ·738 | 160 | 8060 |
| | | | | |
| Benzene | C_6H_6 | ·884 | 80·4 | 9800 |
| Toluene | C_7H_8 | ·871 | 111·0 | — |
| | | | | |
| Ethyl alcohol | C_2H_6 | ·794 | 78·3 | 5270 |
| Methyl alcohol | $C H_4$ | ·797 | 66·0 | — |

The petrol hydrocarbons are arranged in the order of their boiling points, and it may be noted that the densities and boiling points increase together only in one and the same series. Of the two naphthenes given, which are found in Eastern petroleum, hexahydrobenzene has the same boiling point as hexane, but a density of ·760 instead of ·674, and hexahydrotoluene, with the same boiling point as heptane, has

* From a paper read before the Royal Automobile Club on the 14th inst.

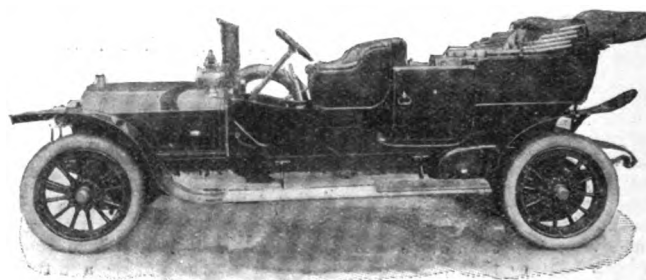
a density of ·772, while that of heptane is ·688. The density therefore forms no ground on which to condemn a fuel. Industrial alcohol is composed of 90 per cent. of ethyl alcohol (with some water) and 10 per cent. of methyl alcohol or wood spirit.

Hexene would form an ideal fuel. Its boiling point of 68·5 is high enough to prevent boiling in the carburettor, and it vaporises very quickly at the ordinary temperature of the air. Its price, however, is about that of eighteenth-century cognac. Heptane has a boiling point about that of water, and is readily vaporised in the ordinary running of a motor, but at starting there might be difficulty in cold weather, and it probably yields some deposit in the cylinders while the engine is cold.

Every petrol that I have tested contains pentane and octane besides hexane and heptane, and most contain butane, nonane, and decane. One actually contained twelve members of the series, down to pentadecane. Butane, boiling at 1 deg., is really a gas, and is contained in petrol in a dissolved state. It comes off as gas under the slightest provocation, and a petrol is certainly better without it. The presence, in appreciable quantity, of any member heavier than heptane leads to deposits in a cold engine or when conditions are not quite right.

I might here call attention to the confusion that often arises between "benzene" and "benzine." Benzene is a definite hydro-carbon, with formula C_6H_6 , and is a coal-tar product. Benzine is a popular name for a certain class of spirit distilled from petroleum, and both names are frequently used for benzol or a mixture of benzene and other coal-tar spirits. The benzol of the South Metropolitan Gas Company has approximately the boiling point of benzene for about three-quarters of its volume, and then the boiling point rises to that of toluene, viz., 111 deg.

As it has been found that the best results are obtained in an engine when the mixture contains about 30 per cent. more air than the quantity theoretically sufficient to completely burn the fuel, I have worked out the results for four mixtures—that containing the right



The 40-60-h.p. Gobron-Brillie Car recently delivered to Major H. Stuart Murray, of New Milton.

The vehicle, which was supplied by Mr. Wm. Vincent, of Reading, is fitted with a very roomy and original type of body of Mr. Vincent's construction. It is built to seat seven persons, with two folding seats facing forward in the back, pull-out table, and screen behind driver's seat, which may be raised or lowered at will by means of a rack and pinion device. Attention may also be drawn to the neat way in which the Cape hood is folded back, giving a clear view of the road behind for reversing purposes, also to the special hood cover fitted, keeping the hood quite clean.

amount of air theoretically, and those with 20 per cent. less, 20 per cent. more, and 40 per cent. more air. The figures are given in Table II.

TABLE II.—Minimum Temperature at which Fuel can Exist as Vapour.

| | 20 | | 20 | | 40 | |
|----------------------|------------|------------|------------|------------|------------|--|
| Air. | per cent. | Right | per cent. | per cent. | per cent. | |
| | less. | amount. | more. | more. | more. | |
| Hexane | - 14·2 ... | - 17·7 ... | - 20·6 ... | - 24·2 ... | - 24·2 ... | |
| Heptane | 7·3 ... | 3·6 ... | 0·7 ... | 2·0 ... | 2·0 ... | |
| Octane | 22·9 ... | 19·0 ... | 16·0 ... | 13·0 ... | 13·0 ... | |
| Decane | 46·1 ... | 42·0 ... | 39·0 ... | 36·5 ... | 36·5 ... | |
| Benzene | - 0·7 ... | - 4·3 ... | - 6·9 ... | - 8·3 ... | - 8·3 ... | |
| Ethyl alcohol | 26·5 ... | 23·3 ... | 20·7 ... | 17·8 ... | 17·8 ... | |

From this it appears that octane, decane and alcohol cannot exist as vapour under ordinary atmospheric conditions except in very weak mixtures. The large difference between benzene and alcohol accounts for some of the difficulty in using the latter as compared with the former in an engine.

But if these fuels were mixed with the air in the form of liquid at these temperatures they would not vaporise completely, for in evaporating they reduce the temperature. The fall in temperature due to evaporation can be calculated from the latent heats of the fuel and the specific heat of the air. Table III. gives the drop in temperature for the same fuels.

Table III.—Drop in Temperature due to Evaporation.

| | 20 | | 20 | | 40 | |
|---------------|-----------|---------|-----------|-----------|-----------|--|
| Air. | per cent. | Right | per cent. | per cent. | per cent. | |
| | less. | amount. | more. | more. | more. | |
| Hexane | 23·3 | 19·0 | 16·3 | 14·2 | 14·2 | |
| Heptane | 22·4 | 17·9 | 15·0 | 12·8 | 12·8 | |
| Octane | 21·5 | 17·2 | 14·3 | 12·3 | 12·3 | |
| Decane | 18·5 | 14·8 | 12·4 | 10·6 | 10·6 | |
| Benzene | 47·3 | 32·2 | 23·5 | 20·9 | 20·9 | |
| Ethyl alcohol | 95·5 | 76·3 | 63·7 | 54·6 | 54·6 | |

Here, again, alcohol in evaporating lowers the temperature twice as much as benzene does. Benzene, too, which, according to Table II, can vaporise at about the same temperature as heptane, produces twice as big a drop in temperature as heptane does.

If the figures in Tables II. and III. be added together the result gives the minimum temperature which the air must have before the fuel is evaporated in order to completely evaporate it. Table IV. gives these temperatures.

TABLE IV.—Minimum Temperature of Air before Evaporation.

| Air. | 20 | | Right amount. | 20 | | 40 |
|-------------------|-----------------|-----|---------------|-----------------|-----|-----------------|
| | per cent. less. | | | per cent. more. | | per cent. more. |
| Hexane ... | 9.1 | ... | 1.3 | 4.3 | ... | 10.0 |
| Heptane ... | 29.7 | ... | 21.5 | 15.7 | ... | 10.8 |
| Octane ... | 44.4 | ... | 36.2 | 30.3 | ... | 25.3 |
| Decane ... | 64.6 | ... | 56.8 | 51.4 | ... | 47.1 |
| Benzene ... | 46.6 | ... | 27.9 | 16.6 | ... | 12.6 |
| Ethyl alcohol ... | 122.0 | ... | 99.6 | 84.4 | ... | 72.4 |

With the right amount of air none of the fuels except hexane can be evaporated completely in a cold engine, while alcohol requires the air to be at the boiling point of water for complete evaporation. With 20 per cent. more air, heptane and benzene can be vaporised cold. It may be noted that the temperature required for benzene falls very rapidly as the mixture becomes weaker.

Another factor, however, enters into the question, and that is the rate of the evaporation. The effect of the time required for evaporation can be estimated only by calculating from this expression the different temperatures which will cause the fuels to evaporate in the same time, and by arbitrarily assuming for one fuel, say, hexane, that a certain increase of temperature above the minimum is required to evaporate is sufficiently fast. I have, therefore, assumed that for hexane in a theoretically correct mixture the air should be at the normal temperature of 15 deg. Cent.—that is, the 13.7 deg. must be added to the minimum temperature to evaporate the fuel quickly enough. On this basis I have calculated the additional temperatures to be added in the case of the other fuels to produce evaporation in the same time. Table V. gives these temperatures added to those of Table IV.

TABLE V.—Temperatures before Evaporation to cause Evaporation in the same time for each fuel.

| Air. | 20 | | Right amount. | 20 | | 40 |
|-------------------|-----------------|-----|---------------|-----------------|-----|-----------------|
| | per cent. less. | | | per cent. more. | | per cent. more. |
| Hexane ... | 26.8 | ... | 15 | 6.6 | ... | 2.8 |
| Heptane ... | 71.4 | ... | 58.4 | 48.7 | ... | 40.2 |
| Octane ... | 104.6 | ... | 91.4 | 81.0 | ... | 72.4 |
| Decane ... | 149.3 | ... | 136.0 | 126.4 | ... | 111.4 |
| Benzene ... | 81.0 | ... | 57.3 | 42.3 | ... | 34.4 |
| Ethyl alcohol ... | 181.9 | ... | 154.3 | 135.4 | ... | 120.3 |

Heptane and benzene can be used readily in engines, even starting from cold. But this temperature of 53 deg. required for evaporation shows that they do not fully evaporate till the mixture comes in contact with the hot gases in the cylinder. In actual petrols there is always hexane present to facilitate starting, and the fact that it is so often necessary to flood the carburettor to obtain an abnormal quantity of petrol also shows that the evaporation of the heptane is far from complete when there are no hot gases to give the requisite temperature. Anyone who has used a surface carburettor of the old motor-bicycle type knows what starting from cold on heptane is like; the "stale" petrol that these carburettors so often produced was simply petrol from which the lighter constituents had been evaporated off.

The benzols of commerce also have certain constituents lighter than benzene, though only in small quantity; but, apart from these, starting from cold is comparatively easy, because a much lower temperature is sufficient to give a weaker mixture, but one which will still fire readily. With benzene the temperature diminishes more rapidly as the mixture becomes weaker than it does with heptane, and benzene has the further advantage over heptane that a mixture with 100 per cent. more than the right amount of air is combustible, while heptane is not combustible with more than 75 per cent. more air.

AUTOMOBILE ACCIDENTS.

A SERIOUS motor accident occurred near Brighton shortly after midnight on Saturday. The coastguard at Black Rock, Brighton, was cycling on the main road between Black Rock and Roedean when a motor-car, going towards Brighton, collided with him. He was hurled to the roadside, and his machine damaged.

The motor-car is said to have gone on, but after reaching the garage at Brighton, two of the occupants of the vehicle, who fancied they had hit something on the road, walked back. They reached the scene of the accident and did all that was possible, calling in the police and the doctor, who found the poor fellow suffering from broken ribs.

FROM Messrs. Turvey and Co., motor-car agents, Sunderland, come specimens of a novel picture post-card they have lately issued; it depicts a motor-car party that has been stopped by the police for travelling too speedily.

SMITH v. CORDINGLEY & CO.

IN the King's Bench Division, on Tuesday, before Mr. Justice Grantham and a special jury, the case of Smith v. Cordingley & Co. was down for hearing. This was an action for libel brought by Mr. Sidney Smith against Messrs. Cordingley & Co., proprietors of the *Motor-Car Journal*.

Mr. Duke, K.C., and Mr. H. A. McCardie appeared for the plaintiff, and Mr. Marshall Hall, K.C., and Mr. Grimwood Mears represented the defendants.

Mr. Duke, K.C., explained, in opening the case, that the defendants were the proprietors of the *Motor-Car Journal*, and complaint was made of a statement published in that paper on October 5th last. The defendants admitted the words complained of were libellous, but said they were published without malice and without gross negligence.

At this stage, Mr. Marshall Hall, K.C., consulted with Mr. Duke for a few minutes.

"My friend has just made a communication," said Mr. Duke, "which will very greatly shorten the matter." The learned counsel went on to state that he wished to make a public announcement. For a number of years the plaintiff had been engaged by Messrs. S. F. Edge and Co., and he had become an expert driver in motor competitions. In September last, in a race at Brooklands, in which motor-cars of 60-h.p. were racing for the first time, there was an unfortunate accident to Mr. Hermon, one of the competitors, who seemed to have lost control of his car, which travelled up a bank and turned over, Mr. Hermon being killed. About a fortnight or three weeks after that the defendants published a letter in their newspaper, in which blame was imputed to the plaintiff, who was the driver of one of the cars. That was an imputation under which the plaintiff could not rest, and he had not driven in any match since. Subsequently, the defendants published an apology for that statement, and he was sure that Mr. Marshall Hall would make it clear that the plaintiff was in no way to blame for the death of Mr. Hermon. The object the plaintiff desired would be attained if Mr. Hall would state that the charge was unfounded. It was written by a correspondent whom the plaintiff could not find, because he did not live, and never had lived, at the address on the letter.

Mr. Marshall Hall, K.C., said that whilst fully accepting the statement made by Mr. Duke, he desired to put before the Court the circumstances under which the letter containing the statements complained of was published. He could not accept the statement about the letter made by his learned friend, for as far as they knew the letter was absolutely genuine. The writer's name was attached to the original document, which he held in his hand at that moment, and the address he gave them they honestly believed to be his address. The letter came to them in the ordinary way of their duties as newspaper proprietors. On behalf of the defendants, who had left themselves in his hands, he unreservedly expressed regret that the statement should have been made, because undoubtedly the letter did say that the plaintiff should be severely censured for failing to stop on the proper side. The facts were peculiar altogether. The speed at which these 60-h.p. racing cars passed the winning-post was enormous. The actually winning car averaged something like 85 miles per hour, the speed in passing the winning line being at the maximum. The car driven by Mr. Smith had unfortunately shed its tyre in the course of the last lap, which unfortunately caused some of the rivets binding the steel spokes of the wheel to come out. Mr. Smith pulled up as soon as possible after he passed the winning mark. Unfortunately the car remained almost in the middle of the track. Mr. Hermon's car, in going past the winning line, pulled up the banked slope, and in doing this his offside wheel went off the track, and the car turned over. He (Mr. Hall) said unreservedly that it was in no way due to any negligence on Mr. Smith's part, and he had only to tender to Mr. Smith his most sincere regret that this letter found its way into the newspaper. He hoped the insertion of the letter would cause him no damage or detriment whatsoever. The defendants had paid a certain sum into court and pleaded this apology. He had assented to certain terms, which would be endorsed on their briefs, and the record in the action would be withdrawn.—*Central News*.

CHARGE AGAINST CHAUFFEUR.

AT the Town Hall, Chertsey, Harry Bland, a chauffeur, employed by Mr. Trevor Williams, of the Clock Tower, Byfleet, has been charged with having been drunk while in charge of a motor-car, and recklessly driving at Addlestone on the previous day. The prisoner had been admitted to bail, and was represented by Mr. T. E. H. Chaldecott, solicitor, of Chertsey. Application was made for an adjournment by Mr. Chaldecott. This was granted, and the prisoner was admitted to bail in his own surety of £50, and one of £50.

MESSRS. HERWIN, CANNY AND CO. have just opened large works, garage and showrooms at 36, William Street, Woolwich, S.E.

THE site of the works of the Sirdar Rubber Company, Ltd., at Bradford-on-Avon, covers an area of six acres, and the fact that considerable water power is available contributes to their being able to take full advantage of the recent fall in the raw rubber market in consequence.

CLUBS AND ASSOCIATIONS.

ROYAL.

THE Earl of Shaftesbury, Lord Burton, Sir Charles Metcalfe, Bart., Sir Thomas Gooch, Bart., Sir Lindsay Wood, Bart., Messrs. E. A. Brotherton, M.P., W. H. Lever, M.P., and W. H. Cowan, M.P., have been elected to life membership of the R.A.C.

New members of the R.A.C. include H.H. Maharaja Ranjitsinhji, Lord Monson, the Hon. E. S. Montague, M.P., Sir William Bennett, and Major W. Madocks.

AUTOMOBILE ASSOCIATION.

A MEETING of the Northern Committee of the Automobile Association was held in Manchester last week. Sir Nevill Gunter, Bart., of Wetherby, Yorkshire, presided. The chief business under consideration had regard to the extended plans for the present season in the northern counties, and also the extension of the cyclist patrols. The scheme for the further development of the Association's assistance to motorists was dealt with fully, and it was announced that ten extra patrols had been placed on main highways in Lancashire, Cheshire, and neighbouring counties, and twenty had been appointed to various dangerous points on roads in the south-west of Scotland.

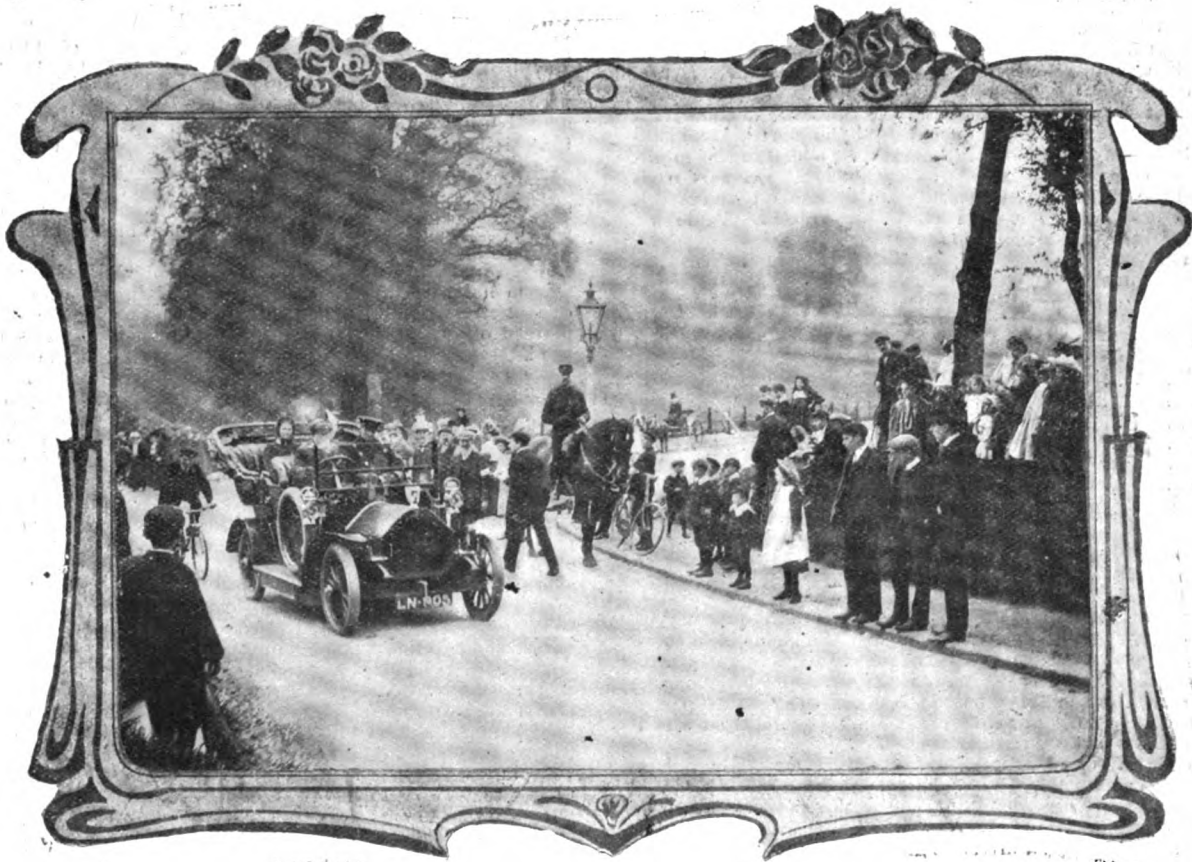
De Dion; 10, Dr. Fulham Turner's 12-h.p. Benz; 11, Mr. S. T. Kent's 8-10-h.p. Humber; 12, Mr. Carr Huss's 10-12-h.p. Humber; 13, Mr. Paul's six-cylinder Climax; 14, Mr. Woodhead's 24-h.p. Darracq; 15, Mr. Alsford's 18-22-h.p. Lloyd and Plaister.

The fastest time was made by Mr. Max Graddon's 16-24-h.p. Fiat, who took the hill in splendid style.

BROOKLANDS.

AT the Whitsuntide meeting of the Brooklands A.R.C. the races to be run include the 26-h.p., 60-h.p. and 90-h.p. classes of 150 sovs. each; the second 'All Comers' Handicap Sweepstakes of 2 sovs. each for motor-cars which competed in certain races at Brooklands May meeting; a handicap for private competitors over a distance of five and a half miles for the President's Cup; a handicap for the Household Brigade Cup; the June Sweepstakes of 5 sovs. each; the Naval Motor Cycle Race for commissioned officers in his Majesty's Navy; the Training Plate of 25 sovs. for Austin motor-cars made for the Grand Prix, 1908, the distance being two inner laps, in the first of which two complete tyres are to be changed on each car; and the second Limit Stakes for cars the average speed of which over the three mile course does not exceed fifty miles per hour.

On June 5th the fourteen mile match between Messrs. S. F. Edge and Oscar Cupper in the 26-h.p. class, and a similar match over a seven-



The Middlesex Motor Club's Cat Hill Climb.—Mr. A. C. Denham on the 15-h.p. Humber Car.

MIDDLESEX.

THE hill-climbing contest arranged by the Middlesex A.C. was brought off successfully at Cat Hill, Southgate, on Saturday last. The competition was held under the closed competition rules of the Royal Automobile Club and the R.A.C. handicapping formula, and there were twenty-two entries, of whom fifteen started.

The course was admirably kept by the local police, the necessary permission having been given by the Commissioner.

Col. Bowles, the club's President, acted as judge, Mr. A. W. Gamage, a vice-president, as clerk of the course, Capt. Bagnell-Wild, R.E., handicapper, with Mr. Mitchell as clerk of the scales. The head marshal was Mr. H. Johnson, assisted by Messrs. Simmons, Kerrison, Gillett, and Witham. The whole of the arrangements were admirably managed by the hon. sec. of the club, Mr. J. T. Barber. Mr. J. W. Orde, of the R.A.C., was also present.

The following was the official result:—1, Mr. A. Alexander's 8-h.p. De Dion; 2, Mr. Vincent's 9-11-h.p. Gladiator; 3, Mr. Cannon's 6-h.p. De Dion; 4, Mr. Max Graddon's 16-24-h.p. Fiat; 5, Mr. Cutler's 15-h.p. White steam; 6, Mr. Comley's 16-h.p. Napier; 7, Mr. Denham's 15-h.p. Humber; 8, Mr. Chas. Smith's 12-h.p. Darracq; 9, Mr. Hoare's 6-h.p.

teen miles course between the same gentlemen in the 40-h.p. class will be run. These are for £250 a side. On the Monday the match for the same stakes between Mr. S. F. Edge and Mr. D'Arcy Baker in the 90-h.p. standard class will be contested over a course of twenty-eight miles.

THE SCOTTISH MOTOR TRADE ASSOCIATION, LTD.

THE first quarterly general meeting of the Association was held in the North British Station Hotel, Edinburgh, with Mr. Thomas Shaw, Dundee, in the chair. Those present included:—Vice-president, Mr. W. L. Sleigh (Edinburgh); Messrs. J. H. Paterson (Aberdeen), A. G. Rennie (Glasgow), James Gibbon (Glasgow), Reginald R. Smith (Edinburgh), W. E. Townsend (Edinburgh), John Love (Kirkcaldy), Mr. Kennedy (Glasgow), and Mr. Rutherford (Edinburgh). The secretary submitted a long report of the work done by the Council of the Association, which was unanimously approved.

At a meeting of the Council of the Association the following firms were elected members:—The Continental Tyre and Rubber Co. (Great Britain), Ltd., 3, Cadogan Street, Glasgow, represented by Mr. R. A. Whyte, associate member. The Peebles Motor Co., Ltd., Eastgate, Peebles, represented by Mr. Lawrence Bell, founder member.

The Association's electro, as shown in the accompanying illustration, has been issued to the members of the Association who are entitled to have same imprinted on their stationery. As no company can use this without being members of the Association, and as only *bona fide* motor traders are eligible for admission, this electro is invaluable to its members and the motor trade.



At a council meeting of the Scottish Motor Trade Alliance, held in Edinburgh, the following companies were elected members:—Messrs. Thomas Shaw (Dundee), Ltd., represented by Mr. Thomas Shaw; James Gibbon and Sons, Glasgow, represented by Mr. James Gibbon; Rossleigh, Ltd., Edinburgh, represented by Mr. W. L. Sleight; Caledonian Motor-car Company, Ltd., Aberdeen, represented by Mr. J. H. Paterson; Middleton and Townsend, Edinburgh, represented by Mr. W. E. Townsend; Rennie and Prosser, Ltd., Glasgow, represented by Mr. A. G. Rennie; Scottish Automobile Company, Ltd., Edinburgh, represented by Mr. T. M. Sleight; Knowles and Cumming, Nairn, represented by Mr. Knowles; David Millar and Sons, Crieff, represented by Mr. A. Millar; Wilson and Vass, Oban, represented by Mr. Wilson; A. W. Chapman and Co., Inverness, represented by Mr. Chapman; Robert Anderson, Newton Mearns, represented by Mr. Anderson; Peebles Motor Company, Ltd., Peebles, represented by Mr. Laurence Bell; Alexander Paterson, Elgin, represented by Mr. Alexander Paterson; Wilfred Foulis, Ltd., Edinburgh, represented by Mr. Foulis.

Motor traders in Scotland who have not yet received particulars should apply for same to the secretary, Mr. David A. Fairley, C.A., 13, York Place, Edinburgh.

MANCHESTER.

LAST week we recorded the interesting reliability trial of 132 miles organised by the Manchester A.C., and gave the fuel consumption and time of the various contestants. Seventeen cars out of twenty-eight entered obtained non-stop certificates, and only six cars failed to complete the course within the prescribed time and in accordance with the regulations. In awarding marks for petrol consumption due attention was given to the weight of the car and the load carried, and the results below are based on the actual number of ton miles per gallon of petrol used. In calculating the result of the hill climb the factors considered were the weight and horse-power of the car and the time taken in ascending the hill. The horse-power was ascertained by the following formula:—

$$D^2 \times \sqrt[3]{S \times N}$$

where D = diameter of cylinders. S = piston stroke, and N = number of cylinders. Marks were lost for non-reliability on a sliding scale by which long stops were relatively more severely penalised than stops of less than five minutes' duration. Mr. H. W. Lee's silver cup for the best performance, irrespective of class, was awarded to Mr. J. L. Tattersall, whose 20-h.p. Belsize obtained the maximum number of marks for economical petrol consumption and also did exceedingly well on the hill climb:—

| Entrant and Car. Class 1 (amateurs). Section A. | Weight. T. c. q. | H.M.L. Petrol con- sumption marks. | Relia- bility marks. | Total marks. |
|--|---------------------|--|----------------------------|-----------------|
| | | Max. | Max. | Max. |
| F. Baume, 24-40-h.p. Berliet .. | 1 13 1 | 114 | 145 | 600 |
| G. B. Heywood, 28-h.p. Lancaester .. | 1 19 2 | 176 | 191 | 600 |
| J. Higginson, 30-h.p. La Buire .. | 2 7 1 | 92 | 157 | 600 |
| H. Kershaw, 28-h.p. Daimler .. | 1 19 1 | 141 | 91 | 600 |
| E. W. Johnson, 35-h.p. Mercedes .. | 1 16 2 | 168 | 103 | 595 |
| H. W. Lee, 28-h.p. Lancaester .. | 1 19 0 | 179 | 173 | 600 |
| J. Moon, 30-h.p. Wolseley-Siddeley .. | 2 1 1 | 85 | 165 | 500 |
| C. H. Wallwork, 30-40-h.p. Belsize .. | 1 16 3 | 136 | 129 | 585 |
| Section B: | | | | |
| E. Allen, 18-h.p. Wolseley-Siddeley .. | 1 3 2 | 145 | 143 | 595 |
| J. Duckworth, 10-12-h.p. Sunbeam .. | 1 4 1 | 138 | 180 | 600 |
| Mrs. E. A. Riley, 23-h.p. Belsize .. | 1 10 2 | 123 | 159 | 600 |
| J. L. Tattersall, 20-h.p. Belsize .. | 1 15 1 | 170 | 200 | 630 |
| A. W. White, 14-16-h.p. Argyll .. | 1 14 1 | 145 | 143 | 600 |
| Class 2 (trade). Section A. | | | | |
| M. O. Ashworth, 40-h.p. Berliet .. | 1 13 0 | 139 | 150 | 600 |
| G. J. Crawford, 28-h.p. Lancaester .. | 1 18 1 | 174 | 187 | 600 |
| H. Hollingdrake, 35-50-h.p. La Buire .. | 2 0 3 | 177 | 174 | 600 |
| A. G. Hogg, 45-h.p. New Eagle .. | 1 13 1 | 72 | 125 | 600 |
| Section B. | | | | |
| J. Arrowsmith, 18-24-h.p. Horbick .. | 1 12 0 | 157 | 110 | 600 |
| T. Hooydonk, 14-16-h.p. Argyll .. | 1 3 3 | 200 | 118 | 600 |
| V. G. New, 14-h.p. Wolseley-Siddeley .. | 1 6 0 | 153 | 156 | 600 |
| J. Newton, 22-h.p. S.C.A.T. .. | 1 9 0 | 183 | 107 | 600 |

In Class 1, for amateurs, Mr. G. B. Heywood was awarded the silver, and Mr. H. W. Lee the bronze medal in Section A, Mr. J. L. Tattersall took the cup and silver medal in Section B, and Mr. J. Duckworth the bronze medal. In the trade class silver medals were obtained by Messrs. J. Crawford and V. G. New, and bronze medals by Messrs. H. Hollingdrake and T. Hooydonk.

THE Wolverhampton and District A.C. will have a hill climb on the Calport Hill, near Ironbridge, Salop, on July 4th. Entries close on June 24th, and all information may be obtained from the hon. secretary, at Royal London Buildings, Wolverhampton.

KENT.

THE Kent Automobile Club, which has its headquarters at the Royal Star Hotel, Maidstone, was formed in 1903, and has rendered good service to the motorists of the county by carefully watching the local administration of the Motor Car Acts and regulations and maintaining the general survey for the improvements of roads, erection of sign and danger signals, &c. The Marquis of Camden is the patron, with Sir David Salomons, Bart., as president. Mr. W. Willis is the chairman of the committee, and a sub-committee has been formed for the East Kent division. The hon. secretary and treasurer is Mr. G. M. Kenyon, of Wycliffe Lodge, Bromley, Kent.

In conjunction with the Royal Automobile Club's examination held at the Spa Hotel, Tunbridge Wells, on Saturday, this club held a luncheon meet at that hotel. The fine weather brought a very large number of members and friends together, over fifty sitting down. Dr. Charles Firth presided, and the visitors included Messrs. Alfred Hicks, Dr. Watson, Maxwell (the Borough Surveyor of Tunbridge Wells), Beever, Fox and Smith (the examiners for the R.A.C.). Dr. Firth, in welcoming the visitors, pointed out the usefulness of the R.A.C.'s driving certificate, and hoped that many of those present would utilise the afternoon in attempting to obtain this club's gold medal for mechanical proficiency. Mr. Hicks and Mr. Beever replied on behalf of the visitors. Mr. A. Booth-Hearn then proposed the health of the chairman.



The 25-30-h.p. Milnes-Daimler Char-a-banc recently supplied by Messrs. H. J. Chapman and Co., Ltd., of Regent's Park, N.W., to the Mid-Glamorgan Motor Company, of Aberavon, by whom it will be used to convey colliers between the Ocean Collieries, Treorchy and the Cribbur Farm Collieries, Pyle, Bridgend, Port Talbot.

The chassis, which until recently was in regular service as a motor-bus in London, has been fitted with a neat and light char-a-banc body of Messrs. Chapman's design.

ESSEX.

At Lippett's Hill, High Beech, on Saturday, the Essex M.C. held an open hill climb, when the results were as follows:—

Handicap for light cars of a chassis price up to £200.—1, V. Riley's 9-h.p. Riley (35 sec.) 268.8 points on formula; 2, W. M. Letts' 9-h.p. Sizaire-Naudin (zero) 272 points; 3, C. Jarrott's 9-h.p. Sizaire-Naudin (4½ sec.) 295 points. The fastest time was made by W. M. Letts' Sizaire, which beat the Riley by ½ sec. and other competitors by times ranging up to 50½ sec.

Several motor-bicycle events were decided as follows:—Motor-cycles up to 2½-h.p.: 1, G. L. Fletcher, 2-h.p. Moto-Reve; 2, R. M. White, 1½-h.p. Hazel. Passenger motor-cycles: 1, R. M. White's 7-h.p. Brown; 2, A. P. Howard's 9½-h.p. Singer; 3, F. Cozens, 10-h.p. Lagonda. Single-cylinder motor-cycles up to 82 mm. bore: 1, R. M. Brice, 13½-h.p. Brown; 2, E. Varney, 2½-h.p. Givandun; 3, L. W. Bellen-ger, 3½-h.p. L.M.C. Single-cylinder motor-cycles up to 85 mm. bore: 1, C. B. Heaton, 4½-h.p. Noble; 2, R. M. Brice, 3½-h.p. Brown; 3, G. Gibson, 3½-h.p. Triumph. Single-cylinder motor-cycles up to 90 mm. bore: 1, R. M. Brice, 3½-h.p. Brown; 2, W. Jacobs, 3½-h.p. Rex.

In the twin-cylinder bicycle section the results were:—Up to 76 mm. bore, 1, F. W. Applebee, 5-h.p. Rex; 2, C. R. Collier, 6-h.p. Matchless; 3, F. W. Applebee, jun., 5-h.p. Rex. Up to 80 mm. bore: 1, F. W. Applebee, 5-h.p. Rex; 2, F. W. Applebee, jun., 5-h.p. Rex; 3, O. C. Godfrey, 5-h.p. Rex. Up to 85 mm. bore: F. W. Applebee, 5-h.p.

Rex; 2, F. W. Applebee, jun., 5-h.p. Rex; 3, O. G. Godfrey, 5-h.p. Rex.

In the section for members not connected with the trade, E. Varney, 3½-h.p. Givandun was first in the single-cylinder section, A. G. Reynolds, 5-h.p. Vindec, in that for twin-cylinders up to 76 mm., and E. J. Bass (the hon. sec. of the competition) 7-h.p. Peugeot, in that for twin-cylinders up to 80 mm.

WEST ESSEX.

THE result of the 80 miles competition on the 9th inst. for the Gamage Cup was that the following made non-stop runs:—Messrs. R. E. Denby (3½-h.p. Brown), W. E. Gunnett (3½-h.p. Triumph), W. M. Gunnett (3-h.p. Triumph), V. Baldwin (3½-h.p. Brown) and G. W. Glenny (8-10-h.p. Darracq). The final, in order to find the winner, will be run off in June, and will take the form of a speed judging competition.

The inter-club contest with the Essex M.C. will be held to-day (Saturday). The course will be a circular one from The Castle, Woodford, by Sewardstone, Waltham, Epping, Ongar, Chigwell, back to Woodford. The circuit, covered twice, totals 70 to 80 miles. The team consists of four motor-cycles, one passenger motor-cycle and one car. The motor-cyclists will ride in pairs, one rider from each club, to observe one another. Passenger vehicles will carry the other club's representative as observer.

The next club competition is the 100 miles reliability run for motor-cycles only for the club cup, and will be held on Saturday, June 13th.

HERTFORDSHIRE.

THE results of the Hertfordshire C.A. Members' 50 miles Consumption Trial held on Saturday last are as follows:—

| Car. | Entrant. | Gallons per Ton mile. | Miles per gallon. | Placing. |
|-------------------------|---------------------|-----------------------|-------------------|----------|
| 10-h.p. Argyll, | Mr. J. E. Young | ·0174 | 48·6 | 1 |
| 20-h.p. Rover, | Mr. F. J. Jenkins | ·0185 | 32·05 | 2 |
| 8-h.p. Phoenix, | Mr. J. Hooydonk | ·0288 | 51·4 | 3 |
| 10-12-h.p. Humber, | Mr. R. V. Beveridge | ·032 | 23·2 | 4 |
| 18-h.p. Clement, | Mr. A. Hunt | ·0332 | 22·5 | 5 |
| 20-h.p. Rothwell, | Mr. W. G. James | ·034 | 22·0 | 6 |
| 20-h.p. S.P.A., | Mr. S. Marples | ·037 | 18·0 | 7 |
| 14-16-h.p. Fiat, | Mr. H. W. Colliver | ·04017 | 15·35 | 8 |
| 7-8-h.p. Swift, | Mr. A. J. Salmon | ·0474 | 25·5 | 9 |
| 10-h.p. Lagonda Tricar, | Mr. H. J. Stewart | ·060 | 37·6 | 10 |

NORWOOD AND DISTRICT.

SEVERAL enthusiastic motorists in the Norwood district have formed a motor club, of which Mr. Douglas S. Cox is the captain and Mr. W. H. Wilson, 2, Wolfington Road, West Norwood, is the hon. secretary. The annual subscription has been fixed at half a guinea, and a preliminary run will be held on Sunday (the 24th inst.) to Box Hill.

THE MOTOR CYCLING CLUB.

THE date for the Motor Cycling Club's London to Edinburgh, twenty-four hours' run and London to Edinburgh and back competitions for the Schulte Cup and M.C.C. Challenge Cup is rapidly drawing near, and the list of entries will shortly be closed. Application forms for membership can be obtained from the hon. sec., Mr. A. Candler, 1, Lime Grove, Shepherd's Bush, W., and should be applied for immediately, as Monday next, May 25th, will be the last day for the election of new members before the competition, which takes place at Whitsun.

WELSH.

AT Philadelphia Hill, Carmarthenshire, the Welsh Automobile Club will hold a hill-climbing competition on Thursday, June 4th. Mr. James Livingstone, J.P., will be the judge, and Mr. J. Shimell Andrews, of Rutland Street, Swansea, is the hon. secretary of the meet. All persons entering for the contest will be subjected to the closed competition rules of the Motor Union, under which it is held. On the following day the club will hold a motor-cycle hill-climbing contest, when Captain D. Hawes Morgan will be the judge. Particulars for both contests close on the 25th inst.

THE Halifax Cycle Club has its headquarters at the Old Cock Hotel, Halifax.

THE Leicester A.C. held its first meet of the season at Ashby de-la-Zouch on Saturday.

MR. TURNER, of Haslingden, made the fastest time on his 6-h.p. N.S.U. motor-cycle at the Lancashire M.C.C.'s hill climb on Bunker's Hill last week.

ENTRIES for the Crystal Palace Club's Flexibility Trials close on Monday next. They should be sent to Mr. F. W. Bailey, 35, Earlsthorpe Road, Sydenham, London, S.E.

THE Home Counties Garage Company, Ltd., is carrying on a motor hiring department from the Green Man Garage, Leytonstone, London, N.E.

CASES UNDER THE MOTOR CAR ACT.

EXCEEDING LEGAL LIMIT.

At Helensburgh eight motorists caught in local traps were fined between £40 and £50 in the aggregate one day last week.

Earl Compton, of the Royal Horse Guards, took a novel way of answering a summons against him for driving his motor-car at an excessive speed in St. James's Park, which came up at Bow Street (London). Instead of appearing himself or employing a solicitor he sent a district messenger with a letter pleading guilty and enclosing a £5 note to pay any fine that might be imposed. Park-keeper Gould said he timed the car as having covered a measured furlong at the rate of 21 miles an hour. When Lord Compton was stopped and told the pace he had been driving at he remarked: "Cannot deny it. How is it done?" The system of timing the car was explained to him, and he expressed himself satisfied. The magistrate imposed a penalty of 40s. and 2s. costs, the balance of the £5 note being returned to the messenger.

Four motorists have been fined £23, in addition to costs, at Lytham for exceeding the speed limit on the North Drive, St. Anne's.

The Kingston justices on Thursday week established a record in the imposition of fines upon motorists for exceeding the speed limit. In the first court thirteen defendants had their cases dealt with in nine and a half minutes, the fines and costs amounting to £58 13s. 6d., which is at the rate of about £6 a minute.

On Saturday, at Horsham, five motorists were fined £2 each and costs for exceeding the legal limit at Cowfold; fines amounting to £26 10s. were also imposed on motorists at Guildford.

Thirteen motorists were fined at the Arundel County Bench on Monday for exceeding the legal limit; on the same day six cases at Horsham added £15 to the county revenues.

DISMISSALS.

Some time was spent by the Guildford magistrates on Saturday in the case of Mr. A. Campbell Swinton, of 66, Victoria Street, S.W., who denied that he drove a car to the danger of the public at Thursby on April 16th. The police stated that the speed was 48½ miles per hour, but admitted that the road was clear for over a mile, and that there was no one on the road. Defendant, who said he was an expert on motor traffic and had given evidence before Royal Commissions on the subject, estimated the speed at from thirty to thirty-five miles an hour. The case was dismissed.

At Westminster Police Court, on the 14th inst., Mr. Staplee Firth appeared for Mr. R. W. A. Brewer, who was summoned by the police for driving in a manner dangerous to the public. The gist of the case was as follows. On May 2nd the car was stopped for passing round a refuge, which was situated in a somewhat peculiar position at the entrance of a road which branched out of a main road. Mr. Firth made a particular point of the fact that in the ordinary way this refuge may have been taken as a dividing point between traffic crossing the main road from either the north or south end in order to enter the side road, and his argument was upheld by the magistrate, who dismissed the case with the remark that he considered that Mr. Brewer had endeavoured to take the most reasonable course in passing this refuge.

THE LONG DISTANCE TRAP.

At the Haywards Heath Petty Sessions, on Monday, several cases were before the Justices, arising out of the new system of long distance motor-car timing on the London and Brighton road during the Easter holidays. Mr. C. F. Gill, K.C., and Mr. W. W. Grantham (instructed by Mr. Lawson Lewis) appeared for the prosecution, and Mr. Marshall Hall, K.C., and Mr. Rowland Harker (instructed by Messrs. Parkes and Mackin, solicitors for the Automobile Association) for the defendants.

Mr. Marshall Hall said he was prepared to deal with the cases against Mr. Warwick Wright and Mr. Powell, but in the other cases the summonses were only served on Friday last, and he asked that they might be deferred. Mr. Gill, K.C., opening for the prosecution, said Major Lang, the Chief Constable for East Sussex, had received many complaints from many different sorts of users of the highway, and he had from time to time made tests over measured furlongs, and a great number of prosecutions had resulted. It had been suggested that these tests were rather a hardship, and that motorists' times should not be tested over so short a distance. It had been determined that the tests should be made over a distance of thirteen miles, and the selected days had been Good Friday, Saturday, and Monday, last Easter. The result had been that eighty summonses had been taken out. Mr. G. D. Powell was summoned for an average speed of thirty miles, between Patcham and Slaughtam, on April, 17th and for an average speed of thirty-one miles the same evening, between Slaughtam and Patcham. P.C. Waghorn, Lewes, said he and P.C. Terry were stationed at a cottage at Patcham on Good Friday, Saturday, Sunday and Monday. They had to take the numbers of the cars from the back registration plates. When defendant told witness he was driving on Good Friday, he also said he generally drove his car. Witness could not personally see who was driving. P.S. Budgen said he was with P.C. Pilbeam on Good Friday, and after comparing watches, they were stationed about a quarter of a mile south of the Slaughtam cross roads. He recorded the time defendant's car passed him.

Mr. Marshall Hall said he was authorized by the Automobile Association to say it was the aim and object of all people interested in motoring to see that the speed limit was not abused and that motoring was exercised at the minimum of inconvenience to other people.

who used the roads. The weakness of that class of trap (he did not use the word at all offensively) was demonstrated by the evidence before the Bench. It would be perfectly useless against the class of men it was intended to catch—the "scorcher"—whose repression was the aim and object of the various associations, as it was that of the police, and the man whom all respectable motorists abominated. That man would be immune from discovery from the very nature of the "trap," because, were it not for the admission of defendant himself, there would be no evidence upon which to identify him as the driver of the car, and so bring a case before the Bench for their consideration. The man who deliberately intended to drive through a trap of this description had only to put on a pair of motor-goggles to conceal his identity and refuse to give any information to incriminate himself. The defendant had given the police every information. But supposing Waghorn, on putting the inquiry, "Were you driving on that occasion?" was met with the answer "That's your part of the business to find out," the police would have had no evidence as to who was driving the car. The police had to prove that there was no change of driver during the distance, for if there were no evidence that one man was driving at the speed alleged, the charge of reckless driving against that individual could not be sustained, and the very class aimed at would escape. It was in the interests of the Automobile Association to see that the speed limit was not recklessly broken. Although Section 9 existed there was no obligation to enforce that section. There would be places where twenty miles an hour would be perfectly safe, but at other places four or five miles would be a dangerous pace, and Section 1 should be enforced. He would ask Major Lang, and put it forward as a serious suggestion, that, if he and other Chief Constables would submit to the officials of the Automobile Association the places within which extra caution should be taken by motorists in driving, the Association would do everything they could to enforce a safe speed upon their members, and others. They would patrol these places and warn motorists to be extra cautious, and they would undertake to furnish the Chief Constables with all information in their possession as to motors passing over those portions of road. He would ask the Bench to treat the case before them as a test case and inflict a nominal penalty.

Mr. Gill said Major Lang was not in a position to enter into any arrangement, but he was very glad to see the way in which the case had been approached.

Mr. Warwick Wright, Marylebone Road, London, W., was summoned for a speed averaging twenty-six miles, seven furlongs, twenty yards per hour, between Patcham and Slaugham, on April 17th, and for a speed averaging twenty-six miles between Patcham and Slaugham on April 20th.

The Chairman announced that the penalties in each case would be £5, and the costs £55s. on each summons. As regards the points raised as to a consultation between Major Lang and the Automobile Association the chairman said they did not consider it a point upon which they could express an opinion, and that it was a matter that rested entirely with Major Lang and the Association.

At Reading Police Court, on Tuesday, Edwin Feis, and Alfred Ellis, chauffeur, were summoned for driving motor-cars on the Bath road, the former at a speed of thirty-one miles an hour, and the latter at over twenty-six, in what is known as "the long distance trap." Mr. Rowland Harker, who defended on behalf of the Automobile Association, said that the only evidence as to the identification of the defendants was that when the police-sergeant served the summons they made voluntary admissions. That, however, he contended, was not evidence. The chairman of the magistrates pointed out that it would be difficult for the police to stop motor-cars which were exceeding the speed limit. If an officer in uniform stood at either end of the "trap," the motorists would naturally slow down. Feis was fined £4 and costs, and Ellis £3 and costs.

LIABILITY FOR COLLISION.

THE appeal in the case of the City of London Electric Lighting Company, Ltd., against the Vanguard Motor-bus Company, Ltd., was decided on the 15th inst. The plaintiffs had claimed £75, the cost of repairing an electric light standard and lamp in Threadneedle Street, damaged by the skidding of motor-buses belonging to the defendants, owing to the negligent driving, as was contended, of their servants. Mr. Justice Ridley had held that there was no evidence to go to the jury of negligence on the part of the defendants as to the accident on June 25th, but he left to the jury the question whether there was any negligence in the other accident, and whether the omnibuses of the defendants were a nuisance in law. The jury found a verdict for the plaintiffs, on the ground that there was negligence on the part of the defendants' driver on the occasion of the accident on June 15th, but that the vehicle was not a legal nuisance. Judgment was entered for the plaintiffs for £43 3s. 4d., being the amount attributable to the accident.

After hearing counsel the Appellate judges on the 15th intimated that in their view the verdict was unsatisfactory, and they must set it aside as a whole and order a new trial. They directed that the costs of the first trial and of the appeal should be left to be dealt with by the judge at the second trial.

THE Director of the Customs of Teheran, Persia, has recently bought an 18-h.p. Minerva car.

ROAD REPORTS.

LONDON.—The General Purposes Committee of the Paddington Borough Council have arrived at the conclusion that "the speed limit of motor vehicles throughout the County of London should be reconsidered with a view to the police authorities being empowered to exercise greater control."

HEATHFIELD.—Several improvements in widening the Heathfield roads and removing some extremely awkward corners thereon have been sanctioned by the Hailsham Rural Council.

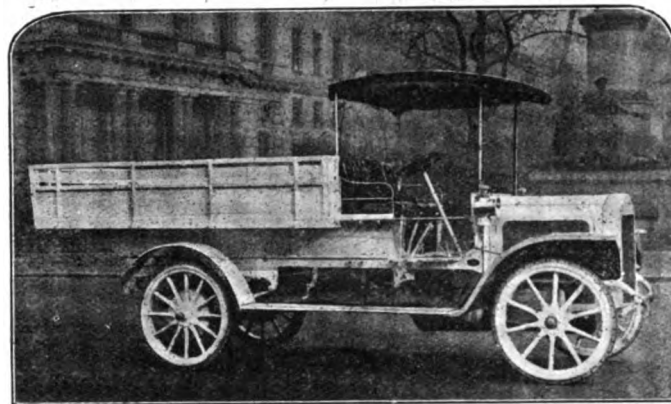
WORTHING.—The police have been timing motor-cars on the Upper Arundel Road at Worthing. Several motorists who have exceeded the speed limit have lately found their way to the Worthing Petty Sessions in consequence.

RICHMOND.—The Surrey County Council has decided to make a contribution of £1,475 to the Richmond Corporation towards the removal of Chancellors' Corner, an obstructive property at the bottom of Richmond Hill.

DEVON.—We hear that in several smaller towns in Devonshire the authorities are arranging to tar the main roads for the forthcoming touring season. The authorities at Exmouth have been the first to do this.

WANDSWORTH.—Reporting upon his experience with tar macadam paving, Mr. P. Dodd, the borough engineer of Wandsworth, says that the advantages in roads of medium traffic are that it is cleaner, more silent, costs less in scavenging, reduces the quantity of mud to a minimum, and requires less watering. It is, however, not suitable for roads with heavy or 'bus traffic. The disadvantages are greater initial cost, it is slippery in frosty weather, and the work, to be successful, must be done in fine warm weather.

MIDLOTHIAN.—The Midlothian County Council have had before them a report from their Road Board to the effect that on the three miles



A White Steam Lorry for Sumatra.

This has been supplied to a mining firm in Sumatra by Mr. Frederic Coleman, the European representative of the White Company. The vehicle has a standard 30-h.p. chassis with a 10 ft. 2 in. wheelbase, the lorry body having been built by Messrs. Cann, Ltd., of Camden Town, N.W.

of road on which motor-buses travel an additional outlay of £678 during the last two years has been incurred.

WOKING.—It is proposed by the County Council to suggest the ten-mile speed limit for motor-cars applicable to Chertsey Road and High Street, which are the most congested business thoroughfares of the town. The Urban Council are considering a proposal to adopt road-tarring as a means of minimizing the amount of dust raised in the principal streets.

LANARKSHIRE.—At a meeting of the Lanarkshire County Council held in Lanark last week, proposals from the district committees of the Lower and Middle Wards for the imposition of ten miles an hour limits in villages and populous places were negatived by very considerable majorities. In view of this discussion, Councillor John Adam, the chairman of the Scottish A.C., arranged beforehand to have a considerable number of the members of the Council driven to the meeting on motor-cars, in order that they might have some experience of various rates of speed and of the control of cars. Messrs. David Provan, Geo. F. Paisley, John H. Rose, and Robert J. Smith assisted him in this matter.

HENDON.—At the Hendon Rural District Council Mr. C. H. Wainwright called attention to the great danger that existed at the junction of the Edgware and Watford roads by the absence of notice boards warning motorists and others of the presence of the electric trams. The stopping-point being round the angle, the trams were not seen until the motorists were turning the corner. It was agreed to communicate with the County Council of Middlesex on the subject.

THE British Petroleum Company, Ltd., advise us that the price of their "Shell" motor spirit and 760 spirit was reduced on the 18th inst. by one halfpenny per gallon.

FORTHCOMING EVENTS.

MAY.

- 21st (Th.)-25th.—Reliability Trial of the Irish A.C.
 23rd (Sat.).—Clipstone race meeting of the Notts A.C.
 Meeting of the Yorkshire A.C. at Helmsley.
 Meet of the Motor Union at Bournemouth.
 Motor Cycling Club—Albert Brown Challenge Cup for cars.
 Meet of the Sheffield A.C. at the Royal Oak at Edwinstone 2.30 p.m.
 S.r C. B. Locock, Bt., will entertain the Essex C.A.C. at Braintree.
 Meet of the Kent A.C. at the Mote House, Ightham.
 Cheshire A.C. meet at Acton Park, Wrexham, 3.30 p.m.
 Essex M.C. Inter-club Competition with W. Essex A.C.
 I.L.A.E.: Graduates' Section. Visit to the Clement-Talbot Works, 2.30.
 Midland A.C. closed hill climb, Shelsley Walsh.
 24th (S.).—Cardiff M.C. run to Whitechurch.
 Richmond M.C.C. hill climb, Duncton Hill.
 Southern M.C. run to Rickmansworth; meet, Green Man, Putney Heath, 11 a.m.
 Worcestershire M.C.C. run to Bridgnorth, 3 p.m.
 25th (M.).—Industrial Vehicle Competition of the A.C. de France.
 26th (Tu.).—Motor Gymkhana on the links of the Ross Golf Club at Alton Court.
 Meet of the Cambridge A.C. at Croxton Park.
 27th-(Sat.) 30th.—International Aeronautical Federation, Royal United Service Institution, Whitehall.
 28th (Th.).—Visit of the Aero Club to Aldershot.
 30th (Sat.).—Meet of the Herts C.A.C. at Hatfield Park.
 Devon and Cornwall A.C. hill climb at Moorahop, Tavistock.
 Lancashire A.C. speed judging contest.
 Open hill climb of the Auto Cycle Union up the Sutton Bank, in conjunction with the Newcastle and District Motor Cycle Club.
 A.C. of N. Wales meet at Wygfair, St Asaph.
 A.C.U. open hill climb, Sutton Bank, near Tairak.
 Birmingham M.C.C. run to Weston Bank.
 Blackheath A.C. reliability run.
 Coventry M.C. touring reliability run to Holyhead and back.
 Derby and District A.C. speed-judging competition.
 Herts C.A.C. meet at Hatfield Park.
 Manchester A.C. run to Vale Royal.
 N.W. London M.C.C. run to the Whitehorse, Shenley.
 31st (Sun.).—Southend M.C. run to Saracen's Head Hotel, Dunmow.
 Penalty run of the Southern M.C. to Goring.
 The Lincolnshire Motor Cycle Club's open-air service in the Dukeries.

LIGHTING-UP TIMES—LONDON.

| | | | | | | |
|---------------|-----|-----------|-----|-----------|-----|----------|
| May 23rd—8.53 | ... | 25th—8.56 | ... | 27th—8.59 | ... | 29th—9.1 |
| " 24th—8.55 | ... | 26th—8.58 | ... | 28th—9.0 | ... | 30th—9.2 |

THE MOTOR UNION TOUR IN FRANCE.

THE following is an outline of the arrangements for the organised tour of the Motor Union to the Valley of the Loire at Whitsuntide. Cars will be embarked at Southampton and will rendezvous at Havre, where the Customs formalities will be seen to by the local agent of the Union. On the Friday morning (June 5th) the run will be to Rouen (56 m.), lunching at Caudebec on the way. The second day's run will be to Chartrea (81 m.) via Evreux. On the third day the Loire Valley will be reached at Orleans (46 m.), and the fourth day will see the party to Blois (50 m.) having previously lunched at Chambord. As the fifth day's run a tour from Blois to the chateaux of Taley and Beaugency has been arranged, returning to Blois in the afternoon (66 m.). A short run to Tours (37 m.) is planned for the sixth day. A circular run will be made on the seventh day from Tours to the chateaux of Chenonceaux, Montrichard, and B'ere, returning to Tours in time for dinner (51 m.).

Arrangements for the eighth day comprise a run to the castles of Loches (the State prison of Cardinal Mazarin) and Ligneil (62 m.).

Leaving Tours on the ninth day, the members will continue down the Valley of the Loire to Chinon (32 m.), visiting the chateau of Azay le Rideau on the way, and arriving at Chinon. On the tenth day the homeward route will be begun, the run being to Le Mans (74 m.), via Chateau la Vallière, where are the ruins of the chateau of Vaujours. For the eleventh day there will be a short run to Alençon (31 m.), but it would be advisable to continue to Caen, a further 63 miles. The opportunity could then be taken to run over to Bayeux, in the cathedral of which town is the famous Bayeux tapestry. Le Havre (79 m.) will be the destination on the thirteenth day. The party will be met by the local agent of the M.U., who will see to the cars being embarked.

It is estimated that the average daily cost per head for hotel expenses may be taken as 15f. (12s.)—that is to say, £8 10s. for the entire duration of the tour. Arrangements will be made for the supply of petrol, but it is advisable that all cars should carry two spare tyres. For the benefit of members owning high-powered cars, and who desire to make longer runs, more ambitious schedules, including other interest-

ing sites, will be arranged. The charge for joining the tour is £1 1s. per head, to cover the cost of making arrangements, organisation, courier, &c. The tour will not be undertaken unless at least forty persons (say, twelve cars) join.

INTERNATIONAL TOURING CAR TRIAL.

It was decided that the following addition to the supplementary regulations be put in under Regulation 19: "All tyres must be changed before the Brooklands race, and only rubber tyres will be allowed during the race."

Also that the following addition be put in under Regulation 17:—"The observer appointed at the commencement of the trial shall not be changed during the trial, except in the case of illness or in such other case as may be approved by the judges."

Benz Motors have changed their entry from Class 7 to Class 4.

BUSINESS NEWS.

THOSE who intend spending their Whitsuntide holidays touring the countryside will do well to get into communication with the Daimler Hire Department, 112, Wardour Street, Oxford Street, London, W., immediately, as, although it is yet three weeks to the vacation, enquiries for cars are being received by every post.

MESSRS. HARVEY FROST AND COMPANY, LTD., have issued an illustrated catalogue of their vulcanizing appliances, which can be had on application to 27, Charing Cross Road, London, W.C. The list is replete with particulars and prices of all the various H.F. vulcanizers, from the smallest to the large vulcanizing plants, and should be regarded as indispensable for purposes of reference by every motorist.

As there will undoubtedly be a very large contingent of British motorists desirous of viewing the A.C.F. Grand Prix races, Weigel Motors (1907), Ltd., have made arrangements with Messrs. Thos. Cook and Sons, the well-known tourist agents, to issue return tickets from London to Dieppe, July 3rd, 4th, 5th, and 6th, by day and night services, at the fare of 30s. first-class, and 22s. second-class, with facility for returning by both services up to and including the night service on Wednesday, July 8th. For the accommodation of passengers going over to Dieppe by the night service on Monday, July 6th, arrangements have been made for the passengers to remain on board the steamer until 5.30 on Tuesday morning if desired. Anyone desirous of obtaining these tickets should apply to Messrs. Thos. Cook and Sons, Ludgate Circus, E.C.

THE Secretary of the Cab Proprietors' Federation, which represents 8,000 of the 10,000 horse-drawn cabs in the Metropolitan Police District, is authority for the statement that more than 2,000 horse-drawn cabs have been taken from the London streets during the last twelve months.

A MASS car, fitted with Henderson patent wheels, has been entered for a 1,000 miles long distance trial in order to make an independent test of these wheels, and this trial will take place under the auspices of the Scottish A.C. within the next week or two.

A NEAT little guide to Crickhowell has been issued by Mr. W. Howells, of Victoria House, in that interesting centre of the Garden of Wales. This is one of the "borough" guides that are published for 300 towns in the United Kingdom by Mr. E. J. Burrow, of Cheltenham.

TO CORRESPONDENTS.

All communications intended for insertion in this Journal or relating to Editorial matters should be addressed to THE EDITORIAL DEPARTMENT, MOTOR-CAR JOURNAL, 27-33, Charing Cross Road, London, W.C., and must be written on one side of the paper only. Letters must in all cases be accompanied by the name and address of the writer, as no notice will be taken of anonymous communications.

The Editors cannot undertake to return MSS. or drawings, although every effort will be made to do so in the case of rejected communications. Where such are regarded as of value, correspondents are requested to retain copies.

The Editors do not hold themselves responsible for the opinions expressed by their correspondents, or for statements and facts which do not appear in the editorial columns.

To insure insertion communications and contributions must be in the Editors' hands by Tuesday forenoon of the week in which the same are intended to appear. Disappointment may be caused by non-compliance with this rule, and to avoid this earlier receipt, if possible, is necessary.

Photographers, both professional and amateur, are invited to send photographs of current events or of motoring scenes and incidents. The fee, if any, required for reproduction should be stated in each case, otherwise no liability will be accepted.

The Editors and Publishers beg also to state that they will accept no responsibility for unsolicited contributions, even if used, unless payment for same is directly specified in forwarding, and the terms arranged before publication.

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COMMENTS.



THE many motorists who will visit the Franco-British Exhibition at Shepherd's Bush will feel grateful to the Automobile Association for their enterprise in arranging for garage facilities. They have secured extensive accommodation for the cars of members almost directly opposite the Wood Lane entrance to the Exhibition, and affording standing room for about 120 automobiles at one time. There is a separate exit from the grounds,

so that confusion will be avoided when the cars are driven through the open garage to a public street at right angles to Wood Lane. A staff of A.A. officials as well as a mechanic will be in daily attendance from 11 a.m. to 11.30 p.m., and the presence of the Association's badge on the car will be an indispensable qualification for securing admittance to the garage. This advantage is exclusively confined to the members of the A.A., and testifies to the earnest way in which the policy of the committee to be of service to the individual motorist is being pursued.

Jaunting Car V. Motor 'Bus.

THE jaunting car of Ireland is not likely to be easily set aside, although it is apparent that the jarveys of Dublin feel they have a strong competitor in the motor-'bus. During recent years the Dublin car driver has been severely hit by innovations in traffic which have provided passengers with less vibration and more speed than is associated with the national vehicle of the Emerald Isle. First the tramcar and then the loop line railway linking up all the termini in the city were great blows to the prosperity of the jarveys. Now the motor-'bus has appeared, and so great was the enmity aroused by its introduction that, having exhausted their stock of caustic comments on its appearance, a band of jarveys recently turned on the driver, who had many marks of their attention when he was later carried to the hospital. Several summonses and cross-summonses followed the mimic battle between the jarveys and the motor-'bus men, and although the former may have won on that encounter, we are afraid they will in the long run find themselves on the losing side.

The Motor Union at Bournemouth.

THE provincial meeting of the Motor Union at Bournemouth on Saturday last took place in glorious weather, and was, perhaps, one of the most pleasant functions which has lately taken place in the automobile world. With that excellent organisation for which the Motor Union is well known, and combined with the hearty co-operation of the local motoring club, nothing less than success was anticipated. An additional attraction to the "Meet" was the first public appearance of the new Chairman of the Union, Mr. Joynson Hicks, M.P., at an automobile gathering. This gentleman, by his *bonhomie* and evident strong personal interest in Motoring, soon gained the goodwill of all who came in contact with him, and he was certainly the "man of the hour." Mr. Rees Jeffreys, the ubiquitous Secretary, was well to the front, as was also Mr. Ballin Hinde, the popular Treasurer. This enthusiastic motorist was regarded with

envious eyes when it was known that he was the keeper of the invested funds of the Union, now amounting to the handsome sum of £11,000. Mr. G. T. Langridge paid a flying visit on a Swiss-built chassis without mud-guards, and provided with an egg-box for a seat. Mr. E. C. Dodd, the Chairman of the committee, and Mr. Moresby White were among those present, while the popularity of Lord Montagu of Beaulieu, the President of the New Forest A.C., received cordial demonstration when he rose to respond to a toast. The various events of the day passed off with aplomb, and the dinner, at which there was a good sprinkling of ladies, was one of the best we have enjoyed in automobile circles, and reflected great credit on the manager of the Mont Dore Hotel, Mr. W. H. Kneese. The after-dinner oratory was of the high standard that is associated with functions held under the auspices of the Motor Union, the badge of which was well in evidence on cars in and about Bournemouth during the day.

A Bad Policy.

IN the early days of the motor movement the way in which, for a season, owners of motor-cars ignored Brighton in consequence of the number of traps with which the road from London was infested served its purpose in demonstrating to the Brighton people the folly of "killing the goose that lays the golden eggs." We understand that quite spontaneously similar action seems to have been taken by many motorists towards the southern watering resorts since Easter. The operation of the "long-distance trap" has neither brought peace on the road nor prosperity to the hotels at the end thereof. Doubtless those who are interested in the welfare of Brighton and other places in the vicinity will not be long ere they bring to the notice of the authorities the fact that people are not likely to wittingly enter towns to reach which they have to run the gauntlet of police espionage on the road.

Heavy Motor-cars at Limerick.

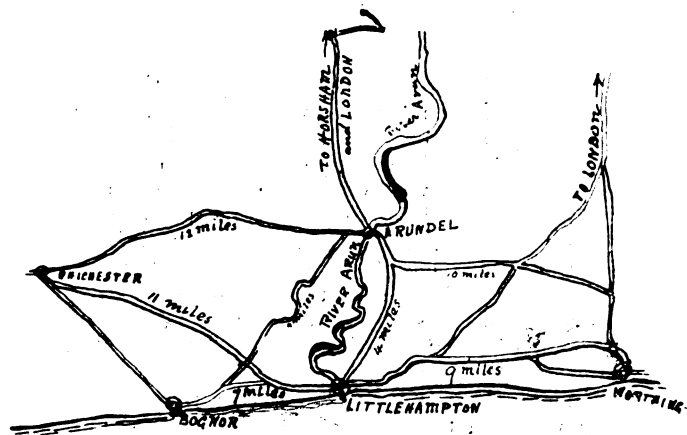
AT Limerick, Mr. Saunderson, on behalf of the Local Government Board for Ireland, has held an enquiry into a request from the Corporation of the town that a regulation should be made limiting the speed of heavy motor-wagons to 2½ miles an hour while passing through certain streets of the city. In support of the contention of the Corporation the City Surveyor gave it as his opinion that the speed of steam motor vehicles at present in use in Limerick was excessive and certainly more than five miles an hour. An ex-town councillor gave evidence to the fact that his house had suffered seriously owing to the vibration caused by the motor vehicles passing round the old portion of the town; but on the other hand it was admitted by the City Surveyor that tests made in some dilapidated houses did not indicate any extraordinary vibration—in fact a pencil placed perpendicularly on a window sash remained in position in front of the house. Several engineers opposed the application and evidence was also given to a similar effect on behalf of Messrs. Cleeve Bros., who use a large number of steam motor vehicles in the ordinary course of their business. We believe this is the first occasion on which any attempt has been made to bring the limit of the speed of heavy motor-cars below the "five miles an hour if the car exceeds in weight three tons unladen, or has any axle with an axle-weight exceeding six tons, or draws a trailer."

An "Accumulator."

THE warning to motorists when leaving their vehicles standing unattended on the public highway not to allow loose articles to remain on the seats has been given with such frequency that those who are careless in this respect really deserve to suffer loss. But a correspondent brings to our notice a novel form of theft which proves a growing knowledge of technical matters as well as some criminal courage on the part of an unknown person. A motor-van was standing in one of the side turnings in Holloway Road, N., when the driver left the vehicle a few minutes. On trying to re-start the car he was greatly surprised to find that the machinery would not act, and after a short examination he discovered that the box containing the accumulators had been opened and the contents stolen. In view of the extension of automobile knowledge to all classes of the community, motorists should not trust too much to chance.

The New Bridge at Littlehampton.

MOTORISTS along the South coast will hail with joy the opening of the new bridge over the river Arun at Littlehampton, which now replaces the intensely slow and dangerous ferry that has long been the bugbear of every traveller along that portion of Sussex. To cross by the old ferry involved at best a delay of fifteen minutes, and often, when one missed the



Sketch Map showing the saving in distance effected by the new Route through Littlehampton.

boat and had to wait for its return, three-quarters of an hour had elapsed before one was safely over, with the result that many preferred to take the longer and more hilly route *via* Arundel. The new bridge, which has been built at a cost of £27,000, and which was opened on Wednesday by the Duke of Norfolk, opens up, as will be seen from the accompanying sketch map, what is practically a new and direct coast route for those travelling by road between Brighton and Worthing, and Bognor, Caichester, and Portsmouth. The general view of the bridge given on page 289 shows that it is a very novel structure, as the whole of the big main span, 188 ft. long, swings round to let ships pass through, the machinery being actuated by a 10-h.p. petrol engine. The span can be completely swung round in 1½ minutes.

Beyond the Fringe.

THE motor-car is probably responsible for some of the empty houses that now cause London estate agents to pause and wonder whether the city is over-built. People are going further from the centre of the City, and a number of hamlets within a radius of twenty miles have become great populated areas, many of the new residents insisting on the provision of motor houses and accommodation for cars. The week-end motorist does not care about tram lines and crowded streets, and if he can find residence so that runs into the country can be taken without the discomfort of winding through streets of con-

gested traffic, it is all to his advantage. But what London loses in rateable value the nation gains in the physical well-being of its people who are able to maintain a motor-car.

A Trial Innovation.

THIS has been the week of the Irish Trials over a course of 806 miles of varied country in equally varied weather. One little point in the organisation deserves recognition, viz., that by which late comers whose unpunctuality was a matter of a few minutes only were not barred from the contest, but were fined £1 per hour's delay up to 6 p.m. This actually secured £4 for the coffers of the club, and did not baulk any from their intention to compete. The latitude, hedged as it was by a monetary consideration, was wisely conceded in view of what has previously proved a hardship to some competitors in the Scottish and Tourist Trophy Trials.

Holidays by Motor-Car.

ONE of the most useful features of the Trials nowadays is the impetus they give to motorists to use their cars when on holiday bent. Thus the Scottish trials have done much to open up the Highlands as a motor-touring land, and a chief concern of the Irish A.C. in the event it has just successfully negotiated has been to make more widely known the pleasures of touring on the Irish roads. Some are good, many are bad, and there is a large proportion that might be assigned to the category of the indifferent. The influence of an organised trial is greatest on these latter, for many are capable of distinct improvement with only a little expenditure. And the authorities may be expected to prove susceptible to the undoubted national advantage that would accrue from a proper maintenance of the highways.

Trials Abandoned in India.

IN view of the frequent questionings in this country as to the need of further official trials of cars such as are to be held within the next few weeks, some remarks that fell from the chairman's lips on the occasion of the annual dinner of the Motor Union of Western India are of more than passing interest. The Hon. G. O. Dunn has done much to further the motor movement in the great Dependency, and has worthily fulfilled his office of chairman of the Union. He announced, on the occasion referred to, that the committee had definitely decided to organise no more trials such as have recently been held. They have had their day, and he went on to observe that "there is so little to choose nowadays between the best cars of different makes that such trials have become unnecessary." Much remains for the motoring associations of India to do in other directions. There is opportunity for improvement on the highways, particularly below the ghats in the neighbourhood of Bombay. One motor-retarding force in India is the system of tolls—expensive and irritating seeing that, as carried out in the Bombay and Madras presidencies, it is used as the method of raising funds for the upkeep of the roads. So that the Motor Union of Western India, having abandoned its trials, can now set to work resolutely to raise the standard of travel generally throughout its area.

The Thirteen Days' Trial.

WE are now within easily measurable distance of the long Trial, and yet there is no enthusiasm for the event. Several of the entrants are reported to be sadly contemplating their self-imposed fate, and many feel that had they confined their activities to the Scottish section of the event it would have been trial enough. As it stands it spells tribulation for many who will participate in its wearisome length. Even the prospect of a hurried scamper round Brooklands—entering, of course, by the new way that will have to be provided for competing vehicles in consequence of the decision in the courts—does not quicken the languid interest of those who entered in haste and are already

repenting. After the preliminaries have been got over in the London garage the Trial will start on Thursday week, the 11th prox., for Nottingham; on the following day the run will be to Newcastle-on-Tyne, and then on the Saturday the journey will be taken to Glasgow for the Scottish section, which, on the 15th, 16th and 17th, will follow the track of last year's Scottish Reliability Trial, the headquarters being Aberdeen, Inverness and Pitlochry respectively. On the 18th a run will be taken to Oban, whence the journey will be to Windermere for the week-end. On the 24th the trip will be to Church Stretton, and then the last stage will be to Brooklands on the thirteenth day of the Trial.

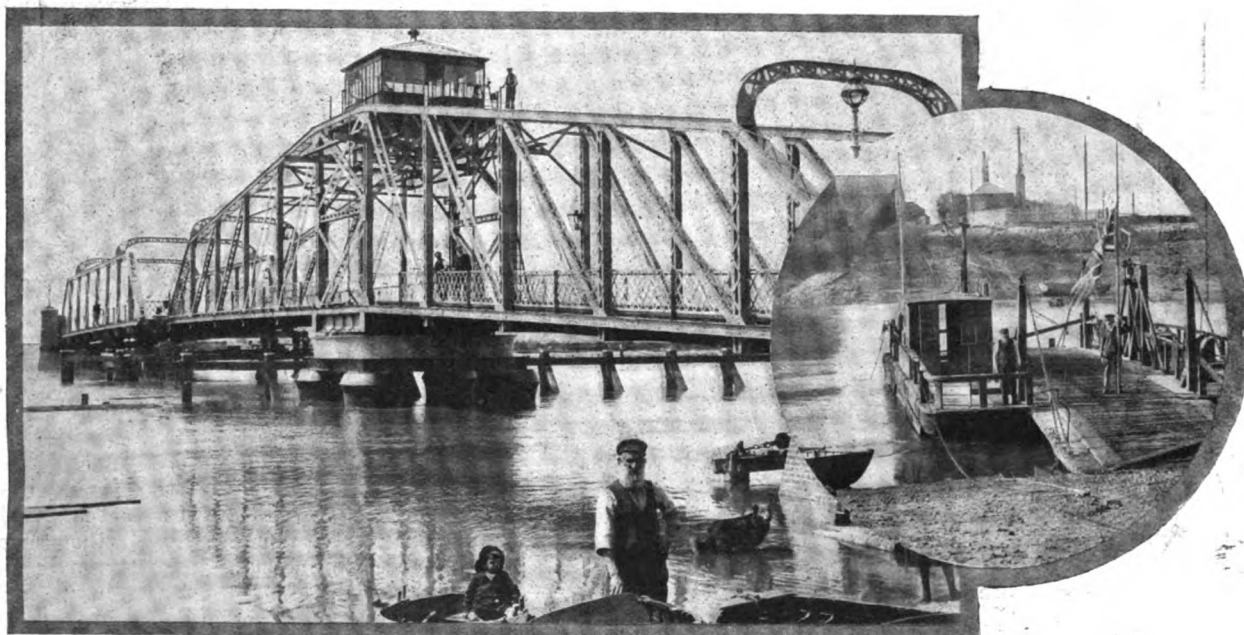
The City's Nerves.

APPARENTLY the motor-'bus is getting on the nerves of City men, and the petition addressed to the Lord Mayor of London by some of the leading bankers, financiers, and steamship and insurance companies is a notable proof of the impression made by the motor-'bus that noisily makes its way along. True, the vehicle is more silent to-day than it was a year

Clerk if he would allow his fifty-guinea prize to be given to the best car in this respect in a long-distance trial carried out under the observation of the Club. Mr. Dugald Clerk has agreed to this arrangement, and a further recommendation is now to be made that competitors may at their option enter for the prize as part of a long-distance trial, or for a special one-day trial of about 100 miles on the road.

The Streets of Great Cities.

IN the Council Chamber of one of the most important municipalities in the country we recently had a chat with a gentleman who, as chairman of the Highways Committee, realises more than the average municipal expert the advantage that motor traffic will be to the authorities responsible for keeping clean the streets of great boroughs. In an early issue his views will have due prominence in our columns; meanwhile, suffice it to say that he is of opinion that the death-knell of the horse has been sounded, and that the time is coming when instead of new roads being made for motorists the old thoroughfares will be improved with a view of meeting the conditions that



The new Swing Bridge over the River Arun at Littlehampton, and the Old Ferry which it has replaced.
The new bridge, which was opened on Wednesday last, opens up a new coast route between Portsmouth, Worthing, Littlehampton, Bognor and Chichester.

ago, but the indictment is still comprehensive, including the "speed, noise, noxious fumes, and escape of oil." It is urged that the narrow winding streets of the City were never designed for such traffic, that the noise and vibration are detrimental to the health and comfort of those who sit at desks in the vicinity of motor-'bus routes, and that "concentrated thought and attention" has been banished from the congested districts served by the motor-'bus. Hence the demand for a meeting at the Mansion House, when denunciatory speeches will be made—and the motor-'bus subsequently pursue the improving tenour of its way.

Exhaust Gases.

AFTER the Vapour Emission Competition promoted by the R.A.C. in March of last year, Mr. Dugald Clerk, one of the judges, offered a prize of fifty guineas to be given to the winner of the next Vapour Emission Competition. It has been decided, however, not to hold a separate competition of this character during the present year, but, in order to encourage makers to give their attention to this important subject, the technical committee decided to ask Mr. Dugald

are essential to the universal development of mechanical traction. The presence of the horse on our streets is a menace to the sanitation of the cities and an expensive privilege for which the authorities have to pay pretty heavily. But if motor vehicles are to take their place, care must be taken that they shall not surround their early career with such fumes and prejudices as have become associated with the motor-'bus.

Illegal Speeds a Mechanical Impossibility.

At a meeting of the Road Surveyors' Association in Scotland a suggestion was made that not only should the speed of motor vehicles be restricted by law to twenty miles per hour, but that no cars should be allowed on the road which were not mechanically controlled with that end in view. This was brought before the Selkirk County Council a day or two ago by the convener of the county, who not only recommended the adoption of the suggestion, but also the taxation of cars in proportion to their horse-power. Both these views were approved by the County Council, and are being transmitted to the Secretary of Scotland. Whether they will come further south to Westminster is a very open question.

MOTERING NOTES FROM BRIGHTON.

THE latest development of police persecution on the London-Brighton road—the long-distance trap—is undoubtedly exercising a baneful influence on Brighton's perennial attractiveness to the metropolitan motorist. The fact that the week-end traffic down here has fallen off considerably since Easter is, no doubt, partly due to the reincarnation of summery diversions in town, but, nevertheless, I gather from the principal garages and the hotels, outside which one usually sees quite a regiment of cars drawn up for the return journey on Sunday afternoons, that there is a growing disinclination among motorists to drive as freely as of yore, not merely to Brighton, but to Hastings, Eastbourne, and the other neighbouring sea-coast towns, on account of the unreasonable and often grossly unfair treatment which even the most careful and considerate among them have experienced at

ALTHOUGH Major Lang's attitude at the test case last week was politely non-committal, the impression now prevails in motoring circles in Brighton that there will be some sort of informal *rapprochement* between the authorities and the responsible motor organisations. At least, that is the hope expressed in influential quarters, for, as I have said, the recent activities of the police have seriously diminished the car traffic on the Brighton road, and a number of fashionable local hotels have experienced a correspondingly substantial "slump" in business. At the Royal York Hotel, on Sunday, the resident company at luncheon were supplemented by from twenty-five to thirty car-arrivals during the morning. Mr. "Jack" Dones, the brother of the sisters Dare, Zena and Phyllis, and the driver of the car which was erroneously alleged to have been concerned in the serious spill near Albourne, on the London road, last Easter, drove down with his father in a speedy



The Targa Florio Race.—Truce at the wheel of the winning Isotta-Fraschini Car.

the hands of the Sussex police. For by means of the long-distance trap the latter sweep into their net all and sundry who, timed by unseen and unsuspected "recording angels," are found to have travelled between two points, perhaps fifteen miles apart, at a greater average speed than twenty-five miles an hour.

THIS concession of five miles grace—in itself a remarkable piece of indulgence on the part of the trappists!—does not mitigate the injustice of the proceeding. Even on the busy Brighton road there are stretches where speed bursts may be safely indulged in by the "model" driver without the slightest twinge of conscience, but if he does so he is almost bound to send up his average. And the magisterial sequel is inevitable and expensive! Whether this new species of tyranny is to be perpetuated I know not. Its inauguration during the Easter holidays led to the issue of no less than eighty summonses to appear before the Haywards Heath bench—and at the time of writing the bulk of these have still to be heard.

little Metallurgique, and Mr. Powell, one of the two Haywards Heath "martyrs," arrived in his fine 120-h.p. Mercedes. Mr. Holt, the owner of a big Daimler, was there too, and among others lunching were Mr. Mack and Mr. Wm. Griggs, who each brought friends in powerful cars—a Fiat and a Napier respectively.

THE week and week-end visitors at the Metropole and Grand included the Spanish Conte Pedro Agote, Mr. Davenport-Powell another fortunate 120-h.p. Mercedes owner, Mr. S. Lampard, with a Lanchester car, Mr. Carter, Mr. Butterworth, and Mr. Barnes (Humbers), Mr. de Pinna, Mr. O'Donoghue, and Mr. Benson (Renaults), Mr. Taylor (Benz), Mr. T. Manning and Mr. Sanderson, each driving a De Dietrich, Mr. Hemmings (Metallurgique), Mr. A. Lidington (Rover), Mr. Coates (Jackson), Mr. Knowles (Iris), Mr. Pookman (Darracq), Mr. Gordon (Napier), Mr. Houldsworth (Argyll), Mr. Howes (Clement), and Mr. Burbridge (Daimler).

SAXONIAN.

THE IRISH TRIAL.

PREVIOUS articles have given the reader a clear idea of the itinerary of this tour of 806 miles, and also of the cars participating therein. They assembled, as we recorded last week, in Dublin, and on the morning of Friday, the 22nd, set forth from the Royal Dublin Society's premises at Ball's Bridge. On the previous day sixty-one had reported themselves by 3 p.m., and, with the two late comers, who were fined for their unpunctuality, made a total of sixty-three that started on the long jaunt. One of the absentees from the original entries was the S.K. Simplex car, that unfortunately met with an accident a few days before.

The cavalcade was led out of Dublin by the 6-h.p. Rover, which got away by 7.45 a.m. By 9 a.m. the crowd at Ball's Bridge had dispersed, and the early cars were engaged on the hill climb at the Hollywood cross roads, or were on the way to the Wicklow Gap. The cars were timed over a distance of 1 mile 71 yards, the average gradient being 1 in 13.3 over the greater part of the hill. The surface was somewhat greasy

16-20-h.p. Calthorpe, 2 min. 55 2-5 sec.; 18-24-h.p. Swift, 3 min. 24 2-5 sec.; 14-16-h.p. Argyll, 5 min. 29 1-5 sec.; 15-h.p. Coventry Humber, 5 min. 42 2-5 sec.

CLASS E.—18-22-h.p. C.C.C., 3 min. 28 2-5 sec.; 15-h.p. Clement-Talbot, 2 min. 30 2-5 sec.; 14-16-h.p. Berliet, 4 min. 15 2-5 sec.; 16-20-h.p. Stella, 3 min. 58 1-5 sec.; 20-h.p. Scout, 4 min. 8 1-5 sec.; 20-h.p. Beeston-Humber, 3 min. 7 2-5 sec.; 20-h.p. Rover, 4 min. 6 4-5 sec.; 20-h.p. Cadillac, 4 min. 16 1-5 sec.; 15-h.p. Clement-Talbot, 2 min. 30 2-5 sec.; 14-22-h.p. Germain, 3 min. 48 4-5 sec.; 12-14-h.p. De Dion, 4 min. 40 4-5 sec.; 16-20-h.p. Argyll, 5 min. 12 2-5 sec.

CLASS F.—20-h.p. Sunbeam, 3 min. 45 2-5 sec.; 25-h.p. Clement-Talbot, 2 min. 7 sec.; 25-35-h.p. Darracq, 3 min. 12 2-5 sec.; 28-h.p. Minerva, 2 min. 37 1-5 sec.; 22-h.p. Berliet, 3 min. 51 sec.; 18-24-h.p. Gladiator, 3 min. 17 2-5 sec.; 20-24-h.p. Clement-Talbot, 2 min. 53 sec.

CLASS G.—48-h.p. Daimler, 1 min. 52 1-5 sec.; 35-45-h.p. Gladiator, 3 min. 55 1-5 sec.; 40-h.p. Berliet, 2 min. 57 2-5 sec.; 25-30-h.p. Austin, 3 min. 20 sec.; 24-30-h.p. De Dietrich, 3 min. 19 3-5 sec.; 48-h.p. Daimler, 1 min. 59 sec.

CLASS H.—60-h.p. Napier, 1 min. 46 4-5 sec.

The hill climb over, there was a good run to Kilkenny, where lunch was taken, and on the journey being resumed we were not long in reaching Co. Tipperary, where the good effects of steam-rolling were observable. Beyond Clonmel a corkscrew



The Irish Reliability Trials.—The Cars in the Corn Market at Cork.

owing to rain overnight, and a shower of hailstones added to the variety of the experiences. Sixty-two cars were timed up the hill as follows:—

CLASS A.—6-h.p. Rover, 7 min. 14 4-5 sec.; 8-h.p. Phoenix, 6 min. 24 4-5 sec.; 8-h.p. Imperial Starling, 7 min. 32 4-5 sec.; 10-h.p. Royal Starling, 5 min. 45 3-5 sec.; 10-h.p. Royal Starling, 5 min. 10 2-5 sec.; 15-18-h.p. Ford, 3 min. 37 sec.

CLASS B.—8-h.p. Rover, 5 min. 55 3-5 sec.; 8-10-h.p. Rover, 6 min. 7 2-5 sec.; 9-10-h.p. Cadillac, 5 min. 52 sec.; 9-h.p. Adler, 5 min. 52 1-5 sec.; 10-12-h.p. Chambers, 6 min. 40 4-5 sec.; 10-12-h.p. Swift, 3 min. 56 2-5 sec.; 10-12-h.p. Swift, 5 min. 54 4-5 sec.; 15-18-h.p. Ford, 3 min. 31 1-5 sec.; 15-20-h.p. Buick, 4 min. 42 sec.; 8-10-h.p. Darracq, 21 min. 1 3-5 sec.; 8-h.p. Rover, 5 min. 50 2-5 sec.

CLASS C.—10-12-h.p. Humber, 5 min. 22 4-5 sec.; 10-12-h.p. Humber, 3 min. 41 2-5 sec.; 12-h.p. Riley, 4 min. 2 sec.; 10-12-h.p. Chambers, 6 min. 2 1-5 sec.; 10-12-h.p. Chambers, 6 min. 20 2-5 sec.; 10-h.p. Cadillac, 7 min. 3 2-5 sec.; 14-16-h.p. Belsize, 4 min. 6 1-5 sec.; 12-18-h.p. Riley, 6 min. 17 1-5 sec.

CLASS D.—12-14-h.p. Gladiator, 4 min. 31 3-5 sec.; 15-h.p. Humber, 2 min. 55 4-5 sec.; 14-16-h.p. Argyll, 3 min. 21 4-5 sec.; 14-16-h.p. Darracq, 4 min. 3 2-5 sec.; 16-h.p. Bell, 3 min. 55 sec.; 16-20-h.p. Calthorpe, 3 min. 7 1-5 sec.; 16-20-h.p. Calthorpe, 3 min. 31 2-5 sec.;

road was taken along the ledge of a spur of the Knockmealdown mountains to Lismore—the nearest hanlet in all Ireland. Then on through Tallow and Middleton the cars reached Cork.

Of the cars that started forty-five had an unblemished record, while some of the lost marks were of a trivial description—the 48-h.p. Daimler losing a minute owing to the stopping of the engine in colliding with an artillery wagon, and the Napier and Royal Starling losing time in fixing their number plates, which became loose. Among those that did not finish were the 8-h.p. Rover, driven by Mr. T. W. Murphy, which in rounding a corner near Cork seems to have side-slipped and dashed into a piece of masonry with such violence that the body was forced from the chassis and the observer and driver thrown from the car. Mr. Murphy was projected against the masonry, striking it with his head. Towards the end of the day the 15-20-h.p. Buick side-slipped at Middleton, breaking a couple of wheels.

The run from Cork to Killarney on Saturday was in delightful weather and through some of the grandest scenery in the

Emerald Isle—desolate passes being alternated with woodland glens. On the whole the road surfaces were not bad—for Ireland. All who got to the city by the Lee on the previous evening went off for the run to the lakes with the exception of the 12-14-h.p. De Dion. We went by way of Macroom and Bealnageary through the Pass of Keimaneigh. Those who were familiar with the country would have liked to have whiled away some hours by the Lakes of Inchigeala, or have turned aside before entering the Pass to the lonely shrine of Gougane Barra—most solitary of all Irish solitudes. But the road lay straight ahead, and up the Pass the cars went by lovely Glengariff, through the tunnel of Kenmare, to Parknasilla for lunch. Shortly after the 28 h.p. Minerva slid into a bog, from whence it was rescued by the natives. In passing a horse-drawn vehicle it drew closely to the side of the road and went on the grass—grass which proved to be a bog. This was recognised as a traffic stop and the journey was resumed. Just beyond Glenbeigh, Rosbeigh was reached, and there, on the Strand, the speed trials were run over a mile and a-half measured distance, the cars being given a flying start of 400 yards. The fastest time was made by the Napier, its speed being at the rate of 62.94 m.p.h. The three fastest cars in the several classes were as follows:—

where Sunday was spent, most of the motorists exploring the beautiful country of this part of Kerry, visiting the Gap of Dunloe, boating on the lakes, and generally enjoying the concentrated beauty of the south-western corner of the Emerald Isle.

Monday's route was the longest of the trial, the journey from Killarney to Dublin being one of 184½ miles. Luncheon was taken at Limerick and tea at Kildare, while the run across the Curragh to Naas brought memories for those of us who had participated in the busy doings of Jenatzy's year, 1904, when Mr. Winton came from America and found the Curragh a very different place to that which he had imagined. But, although there were no exciting aspects of the trial, the day was not without incident—especially to some vehicles that had been prominent successes thus far. Mr. S. T. Robinson's 15-h.p. Clement-Talbot was worsted, owing to trouble with a big end bearing, and Mr. T. Henshaw's 48-h.p. Daimler had a broken petrol pipe, which caused a brief delay; the 60-h.p. Napier suffered from running short of spirit. Mr. Henshaw's mishap was all the more irritating as, besides making the fastest time in Class G in the speed test, he was anxious to preserve the non-stop record he established with a similar vehicle in last year's event. Unhappily, too, for the 15-h.p. Humber, a hole in its lubricating feed pipe



The Irish Reliability Trials.—The scene at the start of the Hollywood Hill Climb.

CLASS A.—15-h.p. Ford, 2 min. 46 sec.; 8-h.p. Starling, 3 min. 32 2-5 sec.; 8-h.p. Starling, 3 min. 57 sec.

CLASS B.—15-h.p. Ford, 2 min. 35 1-5 sec.; 10-h.p. Swift, 3 min. 32 4-5 sec.; 10-h.p. Swift, 3 min. 32 4-5 sec.

CLASS C.—14-h.p. Belsize, 2 min. 39 1-5 sec.; 12-h.p. Riley, 2 min. 47 1-5 sec.; 10-h.p. Humber, 2 min. 59 3-5 sec.

CLASS D.—16-h.p. Calthorpe, 2 min. 17 1-5 sec.; 14-h.p. Gladiator, 2 min. 21 2-5 sec.; 16-h.p. Calthorpe, 2 min. 21 4-5 sec.

CLASS E.—15-h.p. Talbot, 1 min. 57 4-5 sec.; 15-h.p. Talbot, 2 min. 21 4-5 sec.; 18-h.p. C.C.C., 2 min. 28 3-5 sec.

CLASS F.—25-h.p. Talbot, 1 min. 56 2-5 sec.; 25-h.p. Darracq, 2 min. 12 4-5 sec.; 18-h.p. Gladiator, 2 min. 20 2-5 sec.

CLASS G.—48-h.p. Daimler, 1 min. 45 sec.; 35-h.p. Gladiator, 2 min. 6 2-5 sec.; 40-h.p. Berliet, 2 min. 23 sec.

An unfortunate and regretted mishap occurred to the 48-h.p. Daimler entered by Mr. T. L. Plunkett in the amateur section. He was rounding an acute bend four or five miles from Waterville, when the car is said to have skidded so violently that it overturned, and the passengers were thrown out. The honorary observer, Mr. J. E. St. George, was pinned under the front wheel and seriously injured. Mr. Cundy, on the Napier, conveyed him to the hotel at Waterville, where medical assistance was available, and it was found that his thigh was fractured.

The speed trial over, there was a brisk run to Killarney,

caused a loss of oil that led to the bearings becoming overheated, with the result that the car was withdrawn—altogether a piece of bad luck entirely undeserved.

On Tuesday fifty-four of the sixty-three cars that started from Dublin on the 22nd inst. set forth again from the Irish capital, this time for a journey north to Belfast. An improvement in the surface of the roads as compared with those through which we had journeyed in the south was noticeable, and competitors began to discuss the chances of awards. Thus far the following had made non-stop runs:—

CLASS A.—6-h.p. Rover and 15-h.p. Ford.

CLASS B.—8-h.p. Rover, 15-h.p. Adler, 15-18-h.p. Ford, and 8-h.p. Rover.

CLASS C.—10-12-h.p. Humber, 10-12-h.p. Chambers, and 14-16-h.p. Belsize.

CLASS D.—14-16-h.p. Argyll, 16-20-h.p. Calthorpe, and 18-24-h.p. Swift.

CLASS E.—18-22-h.p. C.C.C., 14-16-h.p. Berliet, 16-20-h.p. Stella, 20-h.p. Beeston Humber, 20-h.p. Cadillac, and 15-h.p. Clement-Talbot.

CLASS F.—20-h.p. Sunbeam, 25-h.p. Clement-Talbot, 25-35-h.p. Darracq, 18-24-h.p. British Gladiator, and 20-24-h.p. Clement-Talbot.

CLASS G.—35-45-h.p. Gladiator, 40-h.p. Berliet, 25-30-h.p. Austin, and 24-30-h.p. De Dietrich.

Wednesday saw the return to Dublin and conclusion of the Trial. In the afternoon a hill-climb was held at Ballinaslaught,

GOSSIP FROM PARIS.

A CHIEF of the police can rarely boast of popularity, but M. Lepine can. Though not tender towards them, he is almost as great a favourite with the revolutionary socialists of Belleville, Menilmontant and La Villette as he is with the aristocratic inhabitants of the Faubourg Saint Germain and the wealthy denizens of the Arc d'Etoile and Parc Monceau quarters of the French capital. The Prefect of Police has also from the very beginning always enjoyed the confidence of motorists, because he was just if not indulgent towards them, and foresaw and encouraged the transformation which the horseless vehicles were destined to operate in the traffic. The drivers of automobiles knew that if the Paris and provincial police-courts earned for themselves a detestable reputation for the manner in which they pronounced on alleged infringements of the traffic laws and regulations, M. Lepine was not to be blamed for it, and they are now grateful to him for seeking to defend them against such injustice. Knowing that an extraordinary number of condemnations to fine and imprisonment have been pronounced on innocent persons for infringements of the traffic regulations, the Prefect of Police has just addressed a circular to all his subordinates in Paris and the suburbs ordering them to modify their mode of procedure.

TILL now when a policeman took the number of a motor-car which in his opinion was travelling at too high a speed or emitting smoke, the owner of the vehicle was prosecuted and invariably condemned, very often without even having any knowledge that the alleged offence had been noted. It happened constantly that the *sergent de ville*, though animated with the best intentions, failed to take down the number correctly, 3 being mistaken for 5, 9 for 0, &c. The result was that the owners of cars were sometimes fined for alleged offences committed in Paris, when their cars had been travelling in distant parts of France, or had not left their garages. By the new instructions, if a policeman takes the number of an automobile which for one reason or another he is unable to stop, the owner of the vehicle will not be prosecuted till he has been summoned before the police commissary to give explanations. This method of proceeding gives general satisfaction, as it is calculated to conciliate the interests of the public and of the motorists. It will not prevent the prosecution and condemnation of those drivers who, by breaking the rules of the road, endanger the lives of other persons using the thoroughfares, but it will save innocent persons suffering for their offences.

WHEN the list of entries for the Grand Prix was closed on February 15th forty-five racing cars had been inscribed, of which twenty were French and twenty-five foreign. Since then three Mors cars, a Rochet-Schneider, and a third Porthos have been entered at double fees. The number of French racers will thus be exactly equal to that of their foreign competitors. The reports circulated about their trials are of the most glowing description. If implicit confidence is to be placed in them, the ten laps of the Dieppe circuit, or the 770 kilometres (478 miles and a half), will be covered on July 7th next in a much shorter time than it was last year. However, from what I hear from competent judges, the French drivers are "bluffing." The motors, with their cylinders limited to a maximum stipulated bore, can scarcely be more powerful than their predecessors, and the cars must by the new regulations be heavier. In spite of this, I know many people who affirm that last year's time will easily be beaten. But, on the other hand, I am acquainted with others who are willing to back their opinion that Nazzaro's record of 770 kilometres in 6 hours 46 minutes and 33 seconds will not be surpassed.

ACCORDING to a telegram received from New York the Brothers Wright refused to accept Mr. Henry Farman's challenge, because, to use the words put into their mouth, "That is not businesslike." Everyone here who interests himself in aviation regrets the Americans' decision, and no one more than the challenger, who, however, fails to see in what way his pro-

posed match was not sufficiently "businesslike." If he had known the Brothers Wright's business arrangements for Europe he would perhaps have felt less surprise. They have signed a contract with M. Lazare Weiller for the sale of their invention, the price stipulated being £20,000, on condition that the Brothers Wright effect two successive flights of fifty kilometres within an hour each, and in France. It is to be supposed M. Weiller believed when he gave his signature that the working of the Wright patents in the old world would under those circumstances be worth the money he agreed to pay for that privilege, but I have been informed that he would now gladly accept a partner in the venture. As the Brothers Wright will have to come to France to validate their contract, the French aviators and aeronauts do not despair of seeing them and their wonderful machine. They all regret sincerely the accident which happened to them and trust it will not long delay their visit to Europe.

SUMMER seems to have come at last, but the Parisians, who, in that respect, resemble the rest of the world, are never satisfied with the weather. They now find it too hot, and when they



A 20-h.p. Coltman Car at the Summit of the Heights of Abraham Matlock.

Some excitement was caused at Matlock last week, when a motor-car—a 20-h.p. Coltman—made its first appearance at the summit of the Heights of Abraham. The vehicle was driven by Mr. W. Wilson, of Messrs. H. Coltman and Sons, who was accompanied by Dr. Inchley, of Loughborough. In addition 8 cwt. of sand were carried as ballast, the total load, including passengers, being 71 stone. The climb is a notable one owing to the exceedingly steep gradient of the footpath—which is the only means of ascending—and also the very sharp turns.

take a drive into the country in an automobile to get a little fresh air they come home complaining they have been choked with dust. And their complaint is only too well justified, because the motor-car traffic on the main thoroughfares in the vicinity of the French capital, especially on those leading to Saint Germain and Versailles, has become so intense that the task of keeping the roads in repair is well nigh hopeless. In any case the authorities have not succeeded in curing the dust evil, the existence of which has already, since the introduction of horseless vehicles, brought down the price of house property bordering the most frequented suburban highways more than 50 per cent.

MARNEY.

A NEW gear-case to protect the chains of chain-driven motor-cars has just been introduced by Messrs. Grose, Ltd., Northampton.

THE "S.K. SIMPLEX" LIGHT CAR.

A NEW light two-seated car, which was to have made its first appearance in the Irish Trials, is the "S.K. Simplex," of which we are this week able to give some illustrations. The vehicle is being built by the Smeddle-Kennedy

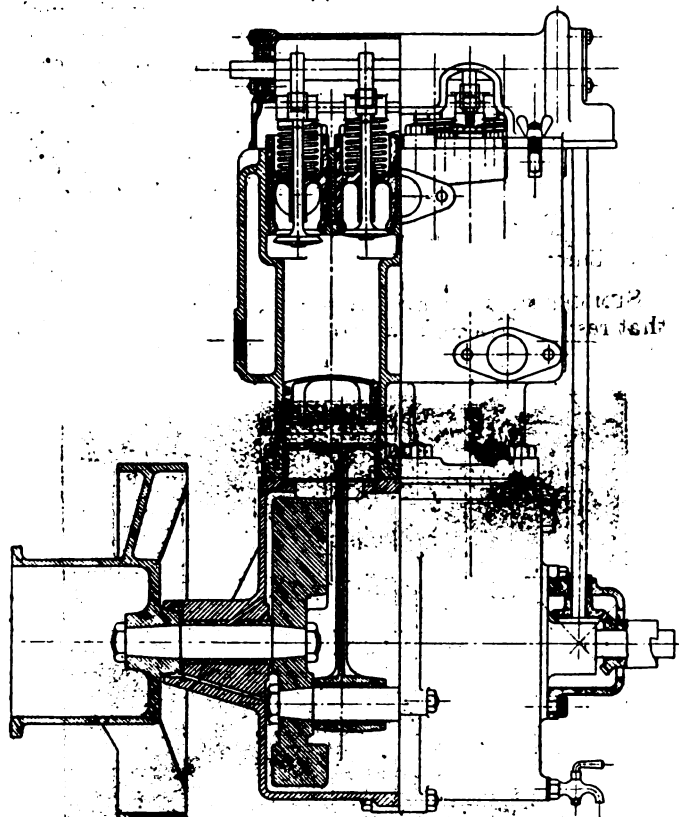


Fig. 1.—Part Sectional Elevation of S.K. Simplex 8-10-h.p. Two-Cylinder Engine.

Motor Company, of St. James's Street, Newcastle-on-Tyne, and, as will be seen from the subjoined description, novel features are to be found both in the motor and transmission.

that it may be instantly removed by slackening the hinged wing nuts. A point of interest is that both pistons are set to rise and fall together, thus giving a steady torque; the difficulty of balancing is got over by employing two heavy internal flywheels in addition to the external one. The water circulation is on the thermo-syphon system, no pump being employed. The cooling effect of the radiator is assisted by a fan formed in the engine flywheel. The ignition is by low tension magneto, thus reducing the wiring on the car to one wire. The igniters are of special design; they only comprise one spring, and have no rocking or swivelling action.

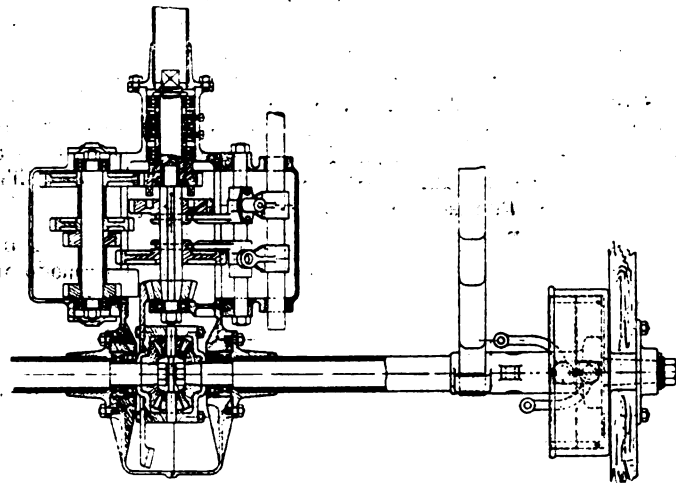


Fig. 2.—Part Sectional Plan of Gear Box and Back Axle of S.K. Simplex Car.

Passing now to the transmission, a clutch of the internal expanding metal-to-metal type is employed; the expansion is effected by a sliding cone, which allows of the use of a very weak clutch spring. The drive is conveyed by a cardan shaft to a combined gear-box and back axle (Fig. 2), which are fitted with ball bearings throughout. The torque is taken through a torque tube on to a ball bearing mounted on the cardan shaft close up to the universal joint. Three speeds and a reverse are controlled through a "gate" type of quadrant. Only a single selecting rod is used to obtain the various speeds. The brakes are of the internal expanding type. The makers prefer to take all braking

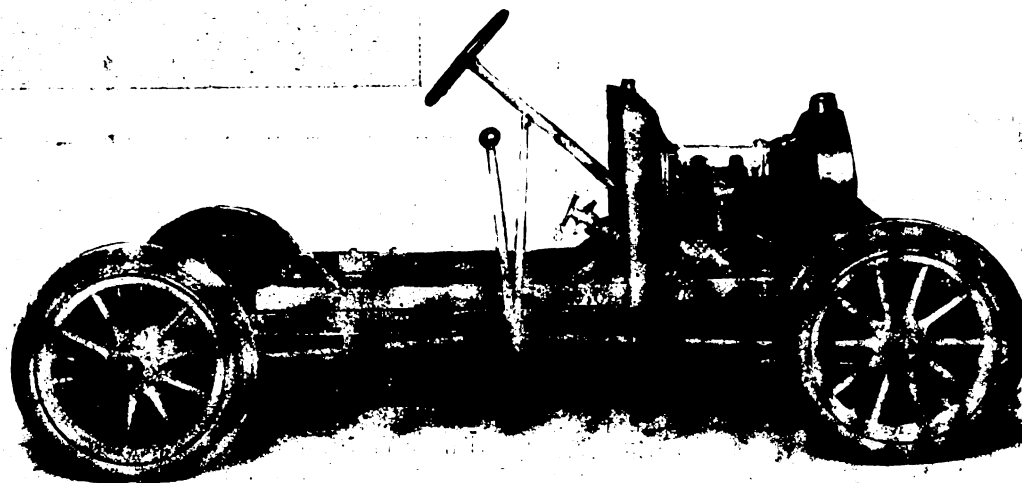


Fig. 3.—Chassis of S.K. Simplex 8-10-h.p. Car.

The motive power is supplied by an 8-10-h.p. twin-cylinder engine, a part sectional view of which is given in Fig. 1. The bore is $3\frac{1}{2}$ in. and the stroke $4\frac{1}{2}$ in.; it will be noticed that all the moving parts are on top of the cylinders; the valves, low tension igniters, &c., being driven through bevels by a vertical shaft. The camshaft, which runs on ball bearings, is enclosed in an aluminium casing, which also carries the valve and igniter tappets; it is attached to the top of the cylinder casting in such a way

strains at the point where they are required—viz., at the road wheels, both the foot and hand brakes working in drums attached to the rear road wheels (see Fig. 2). A single drip lubricator is carried on the dashboard, and as the magneto switch and oiling tap are inter-connected, it is impossible for the driver to start up without turning on the oil. We may add that Rubery-Owen pressed steel frames are employed, and that the wheel base is 7 ft. 6 in. and the track 4 ft. 3 in.

CONTINENTAL NOTES.

Motor-Buses and Collieries.

In order to increase the area from which labour for the mines can be drawn a French coal-mining concern—the Compagnie des Mines d'Ostricourt, of Oignies (Pas de Calais)—has lately acquired two 15-h.p. 13-seated single-deck motor-buses for the conveyance of the miners to and from their homes.

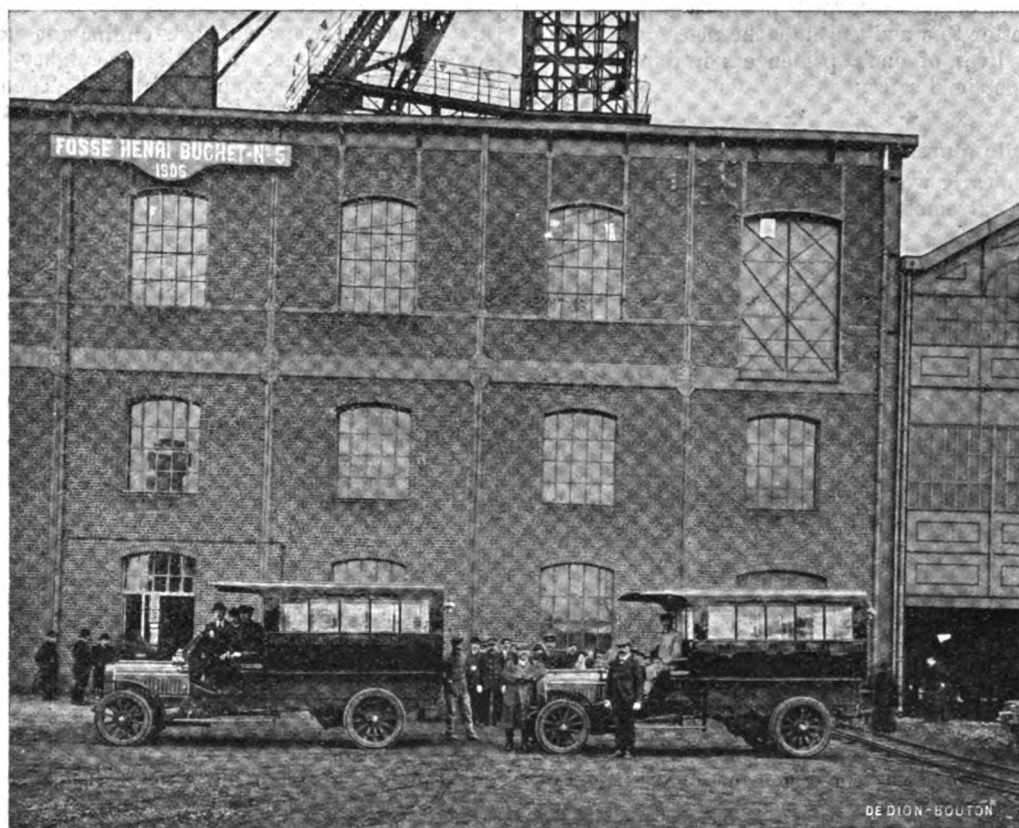
The St. Petersburg-Moscow Race.

No less than twenty-seven entries have been received for the St. Petersburg-Moscow race, which is to be held on the 1st June. The vehicles entered are:—Class 1, three De Dietrichs, two Fiats, a Darracq, a Mercedes, a Benz, an Itala, a Berliet, and an Argus; Class 2, one each Berliet, Nagant, N.A.G., Fiat, Darracq, Mercedes, and S.P.A.; Class 3, a Diatto-Clement and a Humber; Class 4, two Laurin-Klements, a Sizaire-Naudin, a

and Lady Monson (30-h.p. Delahaye), and Colonel J. B. Doncaster, Winchester (12-h.p. Humber).

A Record Run from Paris to Moscow.

A 40-h.p. Lorraine-Dietrich limousine has just been driven from Joinville-le-Pont, near Paris, to Moscow, in record time. Leaving at 9.30 p.m. on Thursday, the 21st inst., the Russian city was reached at 11 a.m. on Monday. The vehicle was driven continuously by Messrs. Sorel and Rougier, folding beds being provided in the interior so that one could sleep while the other was at the wheel. It was hoped that, by running day and night, the distance of about 1,900 miles could be accomplished in 66 hours. Heavy rains and drenched roads were, however, encountered in Germany, while the roads in Russia were also very bad, and three bridges had been carried away, with the result that the time worked out at 85½ hours, which, in view of the conditions, is a wonderful performance.



The two De Dion 15-h.p. Single-Deck Motor-Buses lately put in service by the Compagnie des Mines d'Ostricourt, of Oignies (Pas de Calais), France, for the conveyance of miners to and from their homes.

Werner, and a Loreley; and Class 5, two Lion-Peugeots. The De Dietrich cars are to be driven by Messrs. C. Jarrott, Duray, and Rougier, while Mr. Pope, of Itala Automobiles, Ltd., will be at the wheel of the Itala.

A Swedish Automobile Tour.

The Swedish Automobile Club will next month hold an automobile tour. The start will take place at Malmo on the 18th, and after travelling along the coast of the Cattegat and visiting the famous Trollhatten Waterfalls the trip will terminate at Elfkäro, about 100 miles from Stockholm, on the 23rd; altogether about 1,000 kilometres will be covered.

British Motorists in France.

Among the recent British visitors in France are Mr. W. A. Stephens, London (20-h.p. Renault), Mr. and Mrs. James C. Low, London (40-h.p. Delaunay Belleville), Lady Emily Dyke (40-h.p. Delaunay-Belleville), Sir William Lancaster (20-h.p. Thornycroft), Mr. and Mrs. Duveen, London (35-h.p. Panhard), Lord

Miscellaneous Items.

The Swedish Imperial Automobile Club of Stockholm is taking steps for the formation of a motor volunteer corps in Sweden. —Altogether 149 entries have been received for the Prince Henry of Prussia touring competition, which is to be held in Germany next month. —A combined tour of the members of the German and Austrian Motor Volunteer Corps is to take place from July 27th to 30th. —A De Dietrich motor fire engine has lately been added to the equipment of the fire brigade at Vierzon (Cher), France. —So far only ten entries have been received for the Criterium de Petit Tourisme contest, which is to be held on the Dieppe circuit on August 2nd next, and only fifteen for the Coupe de la Presse event, which is to be run off on August 3rd and 4th. —Prince Antoine d'Orleans Braganca has lately acquired a 60-h.p. De Dietrich car. —“Fakirit” is the name of a new filling for the inner tubes of pneumatic tyres in place of air, which has lately been introduced in Germany. —The police authorities of Hamburg have lately put in service an electrical motor ambulance; it is of the Lohner-Porsche type, and is fitted with a 44-cell battery of 186 ampere hours capacity.

SOME CURRENT TOPICS.

'Ware Trams.

All the main arteries out of London are for the first few miles now encumbered with tram lines, and although the distance these extend has gradually been increased—they go as far as Uxbridge westwards, to mention only one instance—the motorist who wishes to keep clear of accidents is well advised to carefully follow the rule of keeping to one's own side of the road, even if so doing fractionally increases the duration of the journey. Quite recently there have been one or two serious accidents owing to a car being sandwiched between two tram-cars, the driver of the motor vehicle, in endeavouring to pass a tram in front, pulling out to the right, only to find another one rapidly advancing upon him in the opposite direction. That veritable death-trap, Brentford High Street, is one place that I have particularly in mind, where no risks of this kind should be taken, as I learnt by experience some two or three years ago. Fortunately I got safely out of an awkward predicament, but it taught me that it is better to crawl through the place behind a tram than to place the lives of one's passengers in danger, not to speak of one's own personal safety.

Why not an Automobile Museum?

The account of the early work of Herr Carl Benz in a late issue of the *M.C.J.* was extremely interesting. The illustrations



The "Standard" 20-h.p. Car fitted with a special body by Messrs. Friswell, Ltd., for Mr. Leon Vint.

When the hood and glass screen are up the occupants of the car are absolutely enclosed and the car is weatherproof. Mr. Vint uses the car for the purpose of visiting his variety houses throughout the kingdom.

of the first Benz car which accompanied the article, coupled with the picture of an early American automobile in a previous issue, all point to the desirability of the establishment of an automobile museum. Progress in motor-car construction has been so astoundingly rapid that the machine of a decade ago compares with its present-day successor much the same as the first locomotive of Stephenson does with the beautiful engines of to-day. The progress that it required almost a century to compass in the latter field of engineering has been condensed into a period of from ten to twenty years in the case of the motor vehicle, so that it would seem fitting that steps should be taken to preserve the prototypes of the power-driven road vehicle in the manner accorded the locomotives of bygone generations. I should like to see an automobile section established in connection with South Kensington Museum, and am sure that if the movement could only be officially taken in hand, the nucleus of a very interesting collection could be got together. The first Wolseley machine is, I know, still in existence; the last time I saw it, it was lying in a corner of the works at Adderley Park, Birmingham, and no doubt other British manufacturers could furnish an early if not the first example of their productions. The matter is one, however, which should be taken up without delay, for things move so fast nowadays that, within a few years, it is doubtful if many of these early cars will still be in existence. They are equally as venerable as the first locomotives, so highly treasured, and should not be allowed to find their way to the scrapheap unhonoured.

ARCANUM.

A MOTORING NOVEL.



MODERN novelists have the utmost difficulty in keeping the motor-car out of their pages. In some cases the automobile is used to despatch the villain; in others to break down, so that the heroine may speak to the hero without the dismal formality of an introduction. Mr. James Blyth, whose new romance, "The Weaning," has just been published by Mr. Werner Laurie, strikes

an original note in the fact that the car is apparently introduced in order to enable the author to indulge in some moralising on the roadside manners of motorists and the business methods of traders. A motoring party stop at a garage where are "Four-cylinder twenties and forties, six-cylinder thirties, forties, and sixties." The lady driver describes her woes:—"The steering rod is like a piece of chewed string, and the fan got stuck the first time she went out, the engine got hot, and the radiator squirted all over me. I didn't give eighty-five for a jerked-up, tin-kettle, gipsy caravan like this." Then the author grows severe, and the suggestion is made "that to be honest in the motoring or cycle industry is to figure in the 'Gazette'"—a piece of fiction that is out of place, even in a novel. The car itself is as badly treated as the trade, and in eighteen lines, with a full stop in the centre, and another, as a matter of course, at the end, we are told that

"The car vanished in a cloud of foetid dust, which carried its poison across the lovely marshland a full quarter of a mile to leeward. Reeking with too much lubricating oil, foul with the stench of petrol, the modern Juggernaut burnt on its demoniacal course, giving comfort, excitement, keen pleasure, and imminent peril of life, to those it bore, and making the country roads an abomination and a desolation to all others, turning the wayside houses into dusty germ incubators, ruining the gardens, the fruit-beds and trees, even spoiling the hay crops with the foul dust and reek of its passage. Before the altar of self had been raised as a modern substitute for the golden calf by the plutocrats (who find that by honouring their despicable selves they can sacrifice to the golden calf also), the common sense of the nation would have prevented the safety, peace, healthy enjoyment of nature of those who love the country roads and lanes, from being utterly destroyed by the dangers and offence of the flying engines of the few."

The motorist, of course, knows nothing of the perfumed gases which are exhausted into the rural air. He, or rather she, only felt the "kiss of the wind," and no sound other than the "fascinating hum of the noble engines" reached her ears, which are described as "small and transparent," as well becomes one coloured "ripe barley as to her soft hair; small, dainty rose-bud as to her mouth." Speed trials are introduced into the matter, and these afford opportunity for a revel of words in which something of Henley's poetry of speed is brought into vivid and realistic prose. Those pages are the best in the book; but, alas! we soon come upon a description of the scene at the start of the trials, which is written in too superlative a key, and contains one of those general indictments which, as Edmund Burke said, when applied to nations cannot be true. And even the introduction of the word "percentage" in the following quotation scarcely saves the picture:—

In a percentage of the motoring world courtesy, or what used to be known as decent conduct, seems to have become atrophied. As the cars coughed along, edging each other's wings, stopping, going ahead, turning, the manners of some of the motorists (although many ladies were present—indeed, more ladies than men) would have done justice to the crews of a number of herring boats jammed in the harbour mouth, the official would have beaten the harbour master at his own game, the shouting, the stench, the self-contradicting orders, the grunting of the horns, the incessant maddening rumble of a score of engines, were as close an approximation to pandemonium as is possible on this earth.

Anyhow, "all's well that ends well," and the touch of sentimental fever with which the book opens expires in a conventional "happy end" that is justified artistically by the way in which it is brought about.

MAJOR MACGILLICUDDY, of Ballinagurin, Annascaul, Ireland, has lately acquired a 25-h.p. Siddeley shooting brake.

THE Bromyard Rural District Council having withdrawn their opposition to the Frome's Hill climb, the contest will take place on July 10th.

It is being suggested locally that the restriction of the speed of motor-cars which the Surrey County Council is petitioning for in Godalming, Farnham and Haslemere should also be enforced on Hindhead.

AN interesting compilation made by Messrs. W. Preston and Co., of Dublin, showed that 60 per cent. of the competing cars in the Irish Reliability Trial went through the event with Carburine and that 52 per cent. were lubricated with Morganol.

IN connection with the General Assemblies held at St. Giles, Edinburgh, a motor-car has just been seen in the procession from Holyrood Palace for the first time. It belonged to Mr. Alexander Ure, K.C., M.P., the Solicitor-General for Scotland.

ALREADY many of the drivers of the ordinary horse cabs in Lincoln have applied to Messrs. R. M. Wright and Co. for training in motor-cab driving, and with the adoption of 10-12-h.p. Humber vehicles the service inaugurated by the firm should be a private success as well as a public convenience.

FROM the R.A.C. comes a pamphlet dealing with the advantages of associateship and setting forth the various inducements that are offered, including the storage and cleaning of cars at a specially reduced tariff by the Thames Bank Wharf Motor Works, Ltd., 112, Grosvenor Road, Westminster, S.W.

WE learn that Mr. F. Wellington is severing his connection with the Trompenburg Manufacturing Company, of Amsterdam, the makers of the Spyker cars, at the end of June, and that he will be glad to hear, through the *M.C.J.*, of any appointment in which his experience of the motor-car trade can be utilised.

THE Great Central Railway have issued an extensive programme of excursions for Whitsuntide, one commendable feature of their enterprise being frequent day and half-day trips to the beauty spots of Middlesex, Hertfordshire, and Buckinghamshire, some of which were referred to in the article on a run on the 40-h.p. Argyll described in our issue of last week.

FROM Mr. Paul Metz, 12, Bristol Road, Birmingham, comes a sample of the "Knallfix" harmless pistols he has lately introduced for the use of motorists, cyclists, and tourists, to frighten away dogs and tramps, to start races, &c. The cartridge consists of a specially-prepared cork, which is pushed firmly into the open end of the barrel. When the trigger is pulled the cork is fired with a loud explosion, without, it is claimed, danger to anyone, the object of the Knallfix being merely to frighten those dogs which persist in chasing cars and cycles. Mr. Metz states that no licence is required to use the pistol. While it is undoubtedly an effective noise-producing instrument, we are somewhat sceptical as to whether it is likely to become popular, or indeed whether the police will permit its use.

SOME interesting trials of the chain track tractor known as the "Caterpillar" engine took place at Aldershot last week in the presence of the King and Queen and the Prince and Princess of Wales. On the occasion of the King's visit on the 18th inst. the large oil tractor built by Messrs. R. Hornsby and Sons for the War Office was brought from Salisbury Plain, and the smaller petrol tractor from Grantham. Both engines were shown in motion over rough ground, the petrol car having a gun trailer attached. His Majesty complimented Mr. D. Roberts, M.I.Mech.E., upon the ingenuity and useful character of the invention, the principle of which has now been accepted by the Army Service Corps for the work of drawing heavy guns over rough country. The trials before the Prince and Princess of Wales on the 21st inst. occupied half an hour. The small petrol car made several sharp turns, and then proceeded across the sand hills covered with tussocky grass at a rate of eight miles an hour. Returning with its trailer, the vehicle crossed a ditch in the sand 3 ft. 6 in. wide and 4 ft. deep. Meanwhile the heavy tractor was taken over the rough sandy ground, and demonstrated the ease with which it surmounted obstacles and turned while going at full speed at right angles to its path.

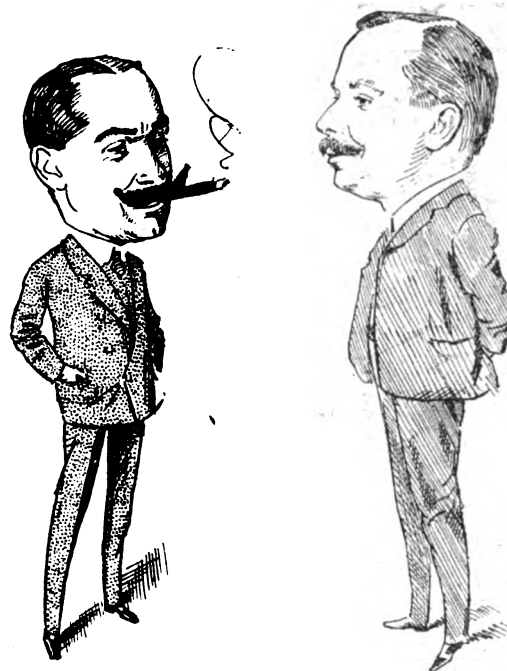
HERE AND THERE.

A MOTOR-CAR has been presented to the New York Society for the Prevention of Cruelty to Animals for use in its ambulance service.

COMPLAINT is being made in India that the Government of the Dependency, in ordering motor-cars required for its officials through the director of stores in England, is not acting quite fairly towards resident importers of automobiles.

MR. J. D. CROSBIE, D.L., Ballyheigue Castle, Ballyheigue, Ireland, has lately purchased a 14-16-h.p. Argyll car from the Tralee Motor Garage, Ltd.

MESSRS. EASTON AND JONES, directors of the Grande Maison d'Automobiles, Ltd., the proprietors of the Motor House, 314-316 and 366-368, Euston Road, London, N.W., are well known in the trade, as well as to private motorists wishing to dispose of, or anxious to purchase, motor-cars. They have just issued a new list of motor accessories and clothing which will be of value to all motorists anxious to complete their equipment for the season. Ignition sundries, lamps, lifting jacks, tool kits, tyres, including the non-slipping "Garantire" grooved tyre, foot



Mr. Percy Easton.

Mr. E. H. Jones.

pumps, rugs, and motor clothing are set forth in these pages with a regard for the pockets of purchasers that should command good business. The burst of fine weather has had a favourable effect upon the car demand as well as the accessory branch of the firm's operations. We are informed that among the cars disposed of at the Motor House last week were the following:—Two 70-h.p. Mercedes, three 45-h.p. 1908 Mercedes, 40-60-h.p. Gobron-Brillie, 80-h.p. Napier, 35-h.p. Mercedes, 45-h.p. 1907 Mercedes, and a 20-30-h.p. Renault.

IN the course of a lecture at a meeting of the Sidcup Literary and Scientific Society last week, Mr. Clayton Beadle said, perhaps the most important discovery in connection with rubber, which turned it from a mere curiosity into something to be useful in a thousand and one ways, was the fact that when rubber was incorporated with sulphur, and raised to a certain temperature, the substances combined and would possess permanent and useful properties. England was one of the pioneer countries in the making of rubber goods, due largely to the discovery of Mackintosh, of Manchester, the firm which gave its name to the mackintosh. Of recent years large numbers of factories had grown up in America, Germany, and Russia, but at present this country was the great market. Elastic webbing was of the purest form of rubber.

THE President of the Republic of Mexico has lately acquired a 65-h.p. Mercedes car.

RECENT purchasers of 25-h.p. Weigel cars include Lord Atkinson and Sir Hugo de Bathe.

THE Edmonton Board of Guardians are making inquiries as to the cost of a motor-ambulance.

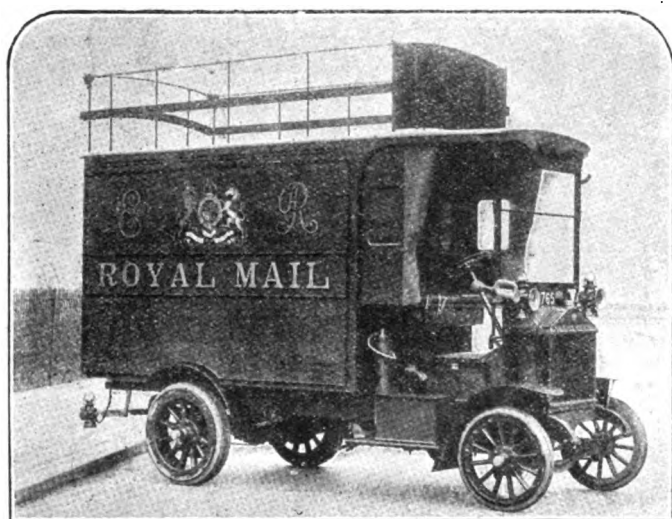
MOTOR horns have lately been heard above the din of meetings in connection with the women's suffrage movement.

HEAVY motor-omnibuses running from Aberayron to Lampeter, and thence to Llandyssul, are said to be causing damage to the roads.

MR. F. R. FRY has entered for the O'Gorman Trophy at Brooklands. The previous entrants were Messrs. S. F. Edge and C. Jarrott.

MESSRS. JOHN HARPER AND SONS have enlarged their motor garage in Perth Street, Blairgowrie, and have also introduced power plant into their workshop to cope with all classes of motor-car repairs.

DURING the past month Messrs. Alley and MacLellan, Ltd., secured orders for seven six-ton Sentinel steam wagons (five of them repeat orders), and one three-tonner, also a repeat order. Two of the six-ton vehicles are for use abroad—one for Rangoon and one for Italy.



The 18-h.p. Siddeley Van which is being used in the Motor Mail Service between London and Aylesbury.

The vehicle, which is supplied by the Wolseley Tool and Motor Car Company, Ltd., leaves Aylesbury at 7.30 each evening, and, calling at Tring, Berkhamsted, Two Waters, Kings Langley, Watford, Stanmore and Edgware to take up, arrives at Mount Pleasant, E.C., just before midnight. Less than half an hour later it starts back again, and, stopping at the same places as on the up journey, reaches Aylesbury just before 5 a.m. The distance run is just over 40 miles each way. The van carries, in addition to the mails, a sorter, whose operations are conducted by acetylene gas light, for which an installation has been fitted. The same driver makes both journeys.

THE Yorkshire Patent Steam Wagon Company report that amongst the contracts they have recently received is a third repeat order from the Norwich Corporation for one of their latest type six-ton steam tipping wagons with interchangeable steel tank and sprinklers for street-watering purposes.

A PUBLIC demonstration was recently given of the utility of the Snercold non-explosive reservoir when attached to receptacles used in the storage or transport of petrol, benzine, &c. We understand that the London Fire Brigade have their petrol receptacles fitted with this safety device, which can be tested at 62, Frith Street, Soho, London, W.

MESSRS. S. F. EDGE, LTD., have sent us a photo of an 80-h.p. six-cylinder Napier car, with side entrance double phaeton body, just supplied to Mr. J. C. Eaton, of Toronto. Mr. Eaton, who previously had a 60-h.p. six-cylinder, and his father before him two 40-h.p. vehicles of the same make, is known in the commercial world throughout the length and breadth of Canada; his chief hobby is motoring, and his private garage is of the most up-to-date description.

A 10-h.p. Alldays motor-car is to be purchased by the L.C.C. for the service of the fire brigade officers.

A MOTOR lifeboat is to be established at the Broughty Ferry Station of the National Lifeboat Institution.

A REVIVAL of the old-fashioned coal-scuttle or poke bonnet is the latest among millinery modes for lady motorists.

AT Alloa, Mr. J. B. White has a garage and motor works in Bedford Place, from which he also lets out motor-cars on hire to visitors.

MESSRS. NICHOLLS, SON & CO. have enlarged their garage in the Union Place, Stonehouse—one of the Three Towns—and will be pleased to render service to motorists in that part of Devon.

MR. F. DENEHEY, of 57 and 58, Lower Baggot Street, Dublin, is holding quarterly auction sales of motor-cars. He has also facilities for motor body building, and renders service to motorists whose cars are under repair by hiring out other motor vehicles by the day or week.

IN the course of a few days the three racers which Weigel Motors, Ltd., have built for the A.C.F. Grand Prix contest will be on view for a couple of days at the premises of Messrs. J. Keele and Co., 72, New Bond Street, London, W., where they will be open to the inspection of visitors.

MOTOR delivery vans are gradually coming into use in Mexico; the Compania El Buen Tono is now using a Mors van for the delivery of cigars, while Messrs. Roves and Co., a leading drapery firm, are employing a 14-20-h.p. Renault vehicle for conveying goods to the residences of purchasers.

VOL. V. of the *Automobiltechnische Bibliothek*, published by Herr M. Krayn's Verlag, of Berlin, W., has just been issued. It is entitled "Die Kugellagerungen," and is from the pen of Herr August Bauschlicher, who deals exhaustively with the subject of ball bearings, their design and application in motor-car construction, and in engineering work generally.

A FIRE which occurred at the Vulcan Motor Works, Southport, on Wednesday of last week, completely destroyed the paint or finishing department. The firemen were, fortunately, able to prevent the flames spreading to the other part of the premises where the motor-cars are stored. Many vehicles were early on dragged into the streets for safety, but a number of cars in a finished state were destroyed.

WE understand that up to quite recently the Post Office has insisted on charging "non-stop" when used in telegrams as two words. Messrs. Drake and Gorham, Ltd., recently took the matter up at headquarters, and have received from the Postmaster General an intimation that in future the expression "non-stop" when so written as a single word will be charged for as one word in an inland telegram.

AT the last meeting of the Brighton Town Council a resolution asking the Watch Committee not to grant any additional licences for vehicles to ply for hire during the ensuing year has been carried by a large majority. This was brought forward in view of the threatened introduction of a large number of motor-cabs. In the course of the discussion it was mentioned that Brighton had already fifty-five licensed motor-vehicles.

A MONTH or so ago, when we described the engines of the Weigel racing cars for the A.C.F. Grand Prix contest, we were unable to give the stroke of the pistons, Mr. Weigel not wishing to make this known at the time. He now writes:—"As there is now no necessity to continue to hide the facts, we have pleasure in permitting you to make the statement that the bore and stroke of the Weigel engines is 155 mm. by 120 mm. This stroke is the shortest on any of the engines in the race, and we hope that the experiment will be justified by the result."

ACCORDING to the Canadian commercial agent at Port of Spain, Trinidad, an opening for motor-cars exists in the island. "This country is especially adapted for motor-cars," he states, "having excellent roads for hundreds of miles. Very few cars have been imported, and those only by people who have been abroad and selected for themselves. The number of persons here who are in a position to drive their own vehicles is comparatively large, and if a handy, reliable, and fairly cheap car were introduced there would be, I think, a good market for them."

Correspondence.

[Letters to the Editor should be addressed to the offices 27-33, Charing Cross Road, London, W.C.]

HANDICAPPING OF MOTOR-CARS.

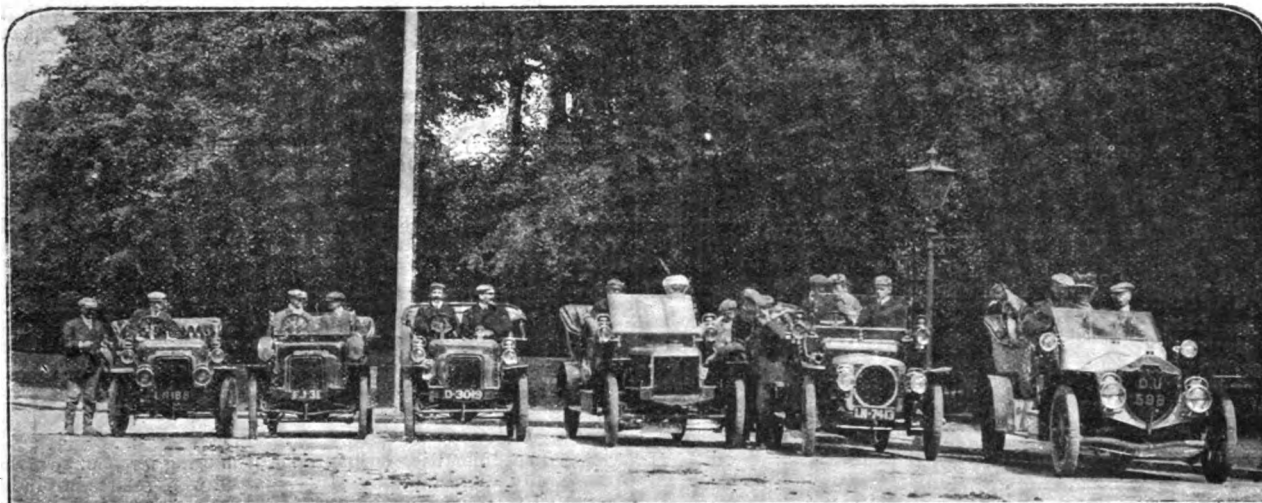
TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—I am particularly pleased to see that the very vexed question of handicapping is being raised. It is perfectly obvious that to all who have given the matter any thought, or who have watched results, that the R.A.C. rating formula in ignoring stroke has made it impossible for cars having short stroke engines to compare favourably from a point of so-called efficiency with cars with long stroke engines. Clearly, therefore, the rating formula should be amended by the R.A.C., so that the stroke be taken into account in its correct proportion. The R.A.C. would be well advised in dealing with this important matter at once; their rating may pass for a simple catalogue comparison, but it is quite unfitted for comparisons of efficiency in competitions.

I quite agree with Mr. Jarrott that much interest is lost by the long delay before the placings are worked out, and this, perhaps, is the biggest argument one can bring against any complicated formula, even if it be necessarily complicated to admit of proper comparison between large and small cars. It appears to me that when competing cars are grouped within reasonably narrow limits of h.p., the question of wind and rolling resistances might well be ignored, especially now that we have fixed body standards. This would leave the very simple calculation of time, weight and h.p. Where, however, there are cars competing ranging from 6 to 60-h.p., as in Club competitions, or where cars are competing for an

owing to the frequent propinquity of the accelerator pedal to the usual brake pedal the mistake of depressing the former instead of the latter may be very easily made, and no doubt the instances of awkward predicaments arising from such errors being made could be largely multiplied by other of your readers who have experience of this type of control. Besides this objection, the ordinary type of accelerator control is open to at least one other, viz., the difficulty of securing a delicately accurate adjustment. The remedy which your correspondent "Harrogate" suggests—to place the accelerator pedal at the minimum distance of four inches to the right of the brake pedal—would be an inconvenient matter to arrange in many instances where separate pedals are employed for the clutch and foot brake, and further it must be remembered that whilst there is certainly a risk of depressing the wrong pedal unintentionally when these are placed closely together, the converse also applies in that when the accelerator pedal may be required for its legitimate purpose of increasing speed, if placed too far away that disadvantage becomes apparent with almost equal force.

In view of the undoubted interest attaching to this matter, which, as one correspondent remarks, "has an important bearing on the general ease of control," I may perhaps be pardoned for drawing attention to the method employed in the Sheffield-Simplex cars. Our system is to unite the functions of the clutch and brake pedal in one, such pedal being placed conveniently for use by the left foot, whilst the control of the throttle is entirely and solely regulated by what may be better described



The Fleet of Rover Cars which took part in the Motor Cycling Club's Competition for the Albert Brown Trophy. The winning car—a 20-h.p. driven by Mr. F. J. Jenkins—is seen at the extreme right.

award open to all classes, it is quite clear that wind and rolling resistance must be considered unless the large cars are seriously handicapped. In such cases, or where the R.A.C. principle be adopted, would it be expecting too much to ask officials (previous to the competitions) to work out the time which each car is expected to make? To do this competitors would have to declare their weight (providing their own ballast to make up their own errors) and their wind areas. Both these could be checked, and knowing, of course, the length and rise of the hill, a simple calculation on each car could be made. It would then be a simple matter to set the actual against the estimated, and so show the winner.

Some clubs show great promptitude in working out placings. I might mention the Notts Club, which announced results immediately at the close of their hill climb, although they were using the R.A.C. formula, while the Midland and Bristol and Gloucester Automobile Clubs posted results within a few minutes of each competitor's arrival at the top of the hill; in the latter two cases, however, a simpler formula than the R.A.C. was used. Hoping that something may come of the discussion.

—Yours truly,

VICTOR RILEY.

THE POSITION OF PEDALS.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—The discussion on the above subject, which has taken place in recent issues of the *M.C.J.*, seems to reveal several weak points in regard to the usual type of accelerator pedal, and emphasises the great desirability of a control system, which ensures certainty of operation and minimises to the utmost possible degree any chances of unintentional operation. Your correspondents seem to agree that

as a foot rest than a pedal, which has a lateral movement and is so placed that the driver's right foot rests naturally and conveniently upon it. These two pedals enable the following driving functions to be carried out:—1, Clutch withdrawn; 2, foot brakes applied; 3, Engine to be used as a brake; 4, Engine to be driven at desired speed; whilst the side-moving pedal which controls the engine, and on which the foot rests easily and naturally, obviates the following disadvantages associated with the popular press-down foot accelerator.

1. The tiring necessity of holding accelerator down when throttle is full open.
2. The tiring necessity of having to hold the foot in a suspended position when varying the throttling, as when driving in traffic.
3. The involuntary operating of foot accelerator caused when travelling over uneven roads by the natural tendency for the foot to press down when bumping over rough places.

With our system no possible confusion can arise, as the driver never requires to remove his right foot from this side-moving pedal, although if he did no confusion could arise, because no amount of downward pressure has any effect on its operation. The first instinct, probably, of any driver on an emergency arising is to depress something—it is owing, on these occasions, to a driver depressing everything that trouble arises. In the case of our car there is only the one pedal to depress, the slightest pressure disengaging the clutch, and further application applying one set of brakes (actuating, by the way, within drums on the rear wheels distinct from the drums on which the hand-applied brakes operate). It will be seen, therefore, that by this arrangement of control we reduce the number of depression-pedals to one, which in combination with our side-moving throttle pedal, as above described, enables

the whole of the operations of control to be performed with the least possible effort of mind or otherwise.

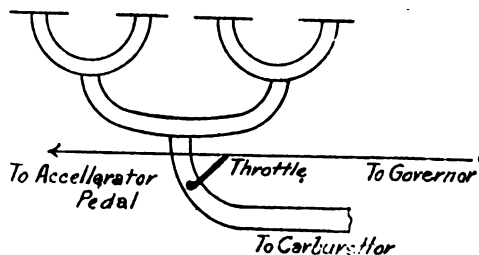
It might be thought that a driver accustomed to the ordinary type of press-down pedal would experience difficulty in becoming accustomed to the side moving type, but this is not our experience in practice, and indeed many users agree that with this side-moving pedal the foot is even more responsive to the brain than is the hand in conjunction with the more usual method of operating the throttle normally by a lever on the steering wheel.—Yours truly,

PERCY RICHARDSON.

AN IGNITION DIFFICULTY.

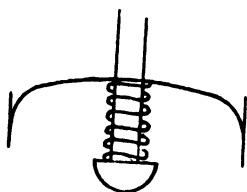
To THE EDITOR OF *The Motor-Car Journal*.

SIR,—In the correspondence section of a recent number of the *M.C.J.* R. Johnson describes a trouble and asks advice. From the description of his trouble I imagine that he experiences it in connection with a 10-12-h.p. Coventry-Humber 1905 type. If I am correct in this assumption I may be able to help him, as I have experienced precisely similar trouble in connection with a car of this type which forms one of the stud of cars of which I am in charge. In the first instance I diagnosed the



trouble on precisely the same lines as yourself in your reply to R. Johnson and took the same steps as suggested, result, as far as remedy went, nil. I next suspected the induction, and constructed and fitted new induction pipes of an entirely different pattern as per rough diagram herewith; result: sweeter running and reduced petrol consumption. The trouble still remained, however, and arose spasmodically as described by your correspondent.

My next experiment was to convert my roller into a wipe contact, drill a hole in lid of commutator, into which I passed a small round-headed pin with strong spring between head of pin and inside of lid (see below), thus securing very firm earth return; in addition to this I have



a small wire connection from one of the nuts on the induction pipe to the lid of the commutator; result: trouble ended, increased power, no missing. Deductions: film of grease in bevel pinions of commutator spindle, possible wear and consequent looseness at this point accounting for poor contact; likewise grease round spindle of roller in roller contact, having contributory tendencies to same result.

I may add that after making the described alteration to the induction pipe I found it necessary not only to use my smallest jet, but to further decrease the size of that.—Yours truly,

SPANNER.

TYRE INFLATION.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—It was stated recently by Mr. S. F. Edge in a paper read before the Midland A.C. at Birmingham that he did not know where to get a tyre made that could be used with a 3,000 lb. car at 45 lb. pressure, and yet not cause heating owing to the bending action at the sides. In making this statement Mr. Edge evidently had in mind only canvas-lined tyres, because it will be abundantly clear from the table given below that there is a tyre which will give him all and even more than he requires.

Assuming that the weight of Mr. Edge's 3,000 lb. car is fairly evenly distributed between the front and back axles, 135 mm. cord tyres would carry the load at 40 lb. pressure, 5 lb. less than Mr. Edge asked for, the equivalent minimum pressures for the same size canvas tyres, quoted from a well-known manufacturer's list, being 100 lb. back and 90 lb. front. A smaller Palmer, the 120 mm., would carry the stipulated load of 750 lb. per wheel at 47 lb. pressure. At the low pressure mentioned there is with this cord tyre no appreciable bending action at the sides, nor any noticeable heating, outstanding

features directly traceable to the special construction of the cord tyre. Let any should think that cord tyres at low pressure would not be fast, it only remains to be said that the greatest distance ever traversed in this or any other country in the space of two hours—189 miles, 615-6 yards—was covered on the Brooklands track, by a car fitted with Palmer cord tyres, run at a lower pressure than had ever previously been attempted in long distance, high speed motor racing.

It is interesting to note how much the larger tyres contribute to comfortable running on account of the lower air pressures necessary. For example, a load of 8 cwt. per wheel, calling for a pressure of 80 lb. per square inch, with a 90 mm. tyre, can be carried on a 135 mm. tyre at 48 lb., the pressures for 100, 105 and 120 mm. tyres being respectively 72, 64 and 56 lb. per square inch.

PALMER CORD TYRE INFLATION TABLE.

| Load per wheel. cwt. | Size of Tyre. | | | | | | Load per wheel. lbs. |
|-------------------------|---|--------|---------|---------|---------|---------|-------------------------|
| | 75 mm. | 90 mm. | 100 mm. | 105 mm. | 120 mm. | 135 mm. | |
| | Inflation pressure in lbs. per square inch. | | | | | | |
| 3 | 40 | 30 | — | — | — | — | 336 |
| 3½ | 45 | 35 | — | — | — | — | 392 |
| 4 | 50 | 40 | 36 | 32 | — | — | 448 |
| 5 | — | 50 | 45 | 40 | 35 | — | 560 |
| 6 | — | 60 | 54 | 48 | 42 | — | 672 |
| 7 | — | 70 | 63 | 56 | 49 | 42 | 784 |
| 8 | — | 80 | 72 | 64 | 56 | 48 | 896 |
| 9 | — | — | 81 | 72 | 63 | 54 | 1,008 |
| 10 | — | — | — | 80 | 70 | 60 | 1,120 |
| 11 | — | — | — | — | 77 | 66 | 1,132 |
| 12 | — | — | — | — | 84 | 72 | 1,344 |
| 13 | — | — | — | — | — | 78 | 1,456 |

The above table shows the pressure required with Palmer tyres for the maximum loads usually specified for the respective sizes by manufacturers of canvas tyres, but as the cord tyre is far stronger and has a much greater load carrying capacity, a supplementary table of pressures for the heavier loads is appended.

PALMER CORD TYRE.

SUPPLEMENTARY INFLATION TABLE FOR HEAVY LOADS.

| Load per wheel. cwt. | Size of Tyre. | | Load per wheel. lbs. |
|-------------------------|---|---------|-------------------------|
| | 120 mm. | 135 mm. | |
| | Inflation pressure in lbs. (per square inch). | | |
| 13 | 91 | — | 1,456 |
| 14 | 98 | 84 | 1,568 |
| 15 | 105 | 90 | 1,680 |
| 16 | — | 96 | 1,792 |
| 17 | — | 102 | 1,904 |
| 18 | — | 108 | 2,016 |
| 19 | — | 114 | 2,128 |
| 20 | — | 120 | 2,240 |

The difficulties encountered in making large size canvas lined tyres are fully appreciated by Mr. Edge and were referred to in his paper, but with the Palmer cord automatic tyre-making machines it is quite a simple undertaking to produce perfectly balanced tyres of seven or eight inches cross section capable of carrying loads at present unthought of in pneumatic tyre construction.—Yours truly,

ERNEST J. MITCHELL.
General Manager, Palmer Tyre, Ltd.

THE RULE OF THE ROAD.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—As there appears to be considerable misconception with regard to the rule of the road—the very existence of which has sometimes been disputed—and as the majority of street accidents occur owing to ignorance of the true facts of the case, may I be permitted to point out that there is a very decided legal rule of the road, clearly laid down by Act of Parliament. This rule is set forth in what is known as the Highways Act of 1835. This, to quote the preamble, "Is an Act to consolidate and amend the Laws relating to Highways." The Act is a most elaborate one, but the portion with which I am concerned is Section LXXVIII. This, after setting forth a number of offences of which a person in charge of a cart or carriage may be guilty—and in order to avoid any misconception I would point out that, owing to the efforts of Mr. E. R. Shipton, in the early days of the Cyclists' Touring Club, the bye-laws relating to cycles were brought under statute law, and a cycle was ruled to be a carriage within the meaning of the Act—the section goes on:—"Or if the driver of any waggon, cart or other carriage whatsoever, or horses, mules, or other beasts of draught or burden, meeting any other waggon, cart, or other carriage, or horses, mules, or other beasts of burden, shall not keep his waggon, cart, or carriage, or horses, mules, or other beasts of burden, on the left or near side of the road; or if any person shall in any manner wilfully prevent any other person from passing him, or any waggon, cart, or other carriage, or horses, mules, or other beasts of burden, under his

care, upon such highway, or by negligence or misbehaviour prevent, hinder, or interrupt the free passage of any person, waggon, cart, or other carriage, or horses, mules, or other beasts of burden, on any highway, or shall not keep his waggon, cart, or other carriage, or horses, mules, or other beasts of burden, on the left or near side of the road, for the purpose of allowing such passage; or if any person riding any horse or beast, or driving any sort of carriage, shall ride or drive the same furiously, so as to endanger the life or limb of any passenger; every person so offending in any of the cases aforesaid, and being convicted of any such offence, either by his own confession, the view of the justice, or by the oath of one or more credible witnesses, before any two justices of the peace, shall, in addition to any civil action to which he may make himself liable, for every such offence forfeit any sum not exceeding five pounds, in case such driver shall not be the owner of such waggon, cart, or other carriage, and in case the offender be the owner of such waggon, cart, or other carriage, then any sum not exceeding ten pounds, and in either of the said cases shall, in default of payment, be committed to the common goal or house of correction, there to be kept to hard labour for any time not exceeding six weeks, unless such forfeiture shall be sooner paid; and every such driver offending in either of the said cases shall and may, by the authority of this Act, with or without any warrant, be apprehended by any person who shall see such offence committed and shall be conveyed before any justice of the peace, to be dealt with according to law; and if any such driver in any of such cases aforesaid shall refuse to discover his name, it shall and may be lawful for the said justice of the peace before whom he shall be taken, or to whom any such complaint shall be made, to commit him to the common goal or house of correction, there to be kept to hard labour for any time not exceeding three months, or to proceed against him for the penalty aforesaid by a description of his person and the offence only, without adding any name or designation, but expressing in the proceedings that he refused to discover his name."

This is the clear rule of the road, and it will be seen that the Act positively authorises the arrest of any person not obeying it and so causing an obstruction, and, further, vests the powers of arrest not only with the police, but with any member of the public. The importance of the matter in these days of great revival in the use of the roads is my excuse for trespassing upon your valuable space.—Yours truly,

C. W. BROWN.
Hon. Sec. Junior Automobile Club.

A SILENCER QUERY.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—Having noticed from time to time answers to enquiries regarding matters in connection with cars, I venture to ask if it is impossible to reduce the noise made by the explosion in cylinder head. My engine is a four-cylinder Aster, and, with the exception of the noise, I have nothing against my car. I have been told that it is impossible to in any way alter it. May I ask if you could suggest anything? The exhaust box, from which there is scarcely any noise to speak of, is fitted at the back of the car. Being of a sensitive nature, this, to me, is very annoying, as I sometimes have the engines running after many of my neighbours are enjoying their night's sleep.—Yours truly,

F. H.

[An engine in which the noise of the explosion can be heard inside the cylinder head with sufficient loudness to prevent the neighbours of "F. H." enjoying their night's sleep must be something of a freak; for, as a rule, the only noise of the explosion that can be heard at any distance is that proceeding from the exhaust box.

We presume "F. H." is not alluding to a "knock," but if this is the cause, it can easily be remedied. A very puzzling noise, and one that sounds as if it is in the cylinder, is sometimes produced by a leaking exhaust flange, and if the leak is under the flange and quite a small hole, it is difficult for an amateur to locate the cause of the noise; perhaps this is the trouble our correspondent is experiencing with his engine.]

A CARBURETTOR QUERY.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—I should be much obliged if you would state what, in your opinion, is the best carburettor (automatic), to fit to a four-cylinder 10-12-h.p. Coventry Humber car (1906 model), in place of the present Longuemare. I propose to have an inlet pipe made with four branches, instead of the present straight one, so it is not requisite that the carburettor should fit the present inlet pipe. A carburettor with an adjustable float would be preferable, as I find that I get considerably more power from Major's Pyramid brand motor spirit than from any of the petroleum spirits or from Bowley's Benzolite, but it is not obtainable everywhere. I have disconnected the butterfly throttle valve at the top of the inlet pipe from the governor, and connected it to the clutch pedal, so that it is closed on withdrawal of the clutch, also to lever above steering wheel and to the accelerator pedal.—Yours truly,

WILFRID A. R. HOARE.

[There are several carburettors that would suit this car if properly tuned up; in fact, the adjustment of a carburettor is the secret of success or failure in a great many instances. The Trier-Martin is a carburettor that lends itself nicely to the requirements indicated by the

querist, and the new Brown and Barlow and the Aster are also capable of giving equally good results. In order to compensate for the different specific gravities of various kinds of spirit, with carburettors in which the level of the jet is not adjustable, it is an easy matter to tune up the carburettor for the lighter spirit used and to weight the float with a little lead washer to adapt it for a heavier variety.]

WET DRIVING SEATS.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—May I suggest another sure preventive from the great danger of wet driving seats? A pair of ordinary oilskin sailor's overalls, cut short at the knees or not, as the driver prefers—I prefer them long. These can be kept rolled up in the tool box or folded up under the driving seat itself until wanted, and take up little room.—Yours truly,

YACHTSMAN.

CARE NECESSARY ON THE BATH ROAD.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—We should like to warn all motorists to be extremely careful not to fall into the clutches of the Brentford magistrates. The following incident speaks for itself. One of our 12-h.p. Duhanot cars was trapped on April 25th last, at Heston, on the Bath road, and the driver summoned for travelling at the rate of thirty-two and a quarter miles per hour. The fine was £8, which in itself was bad enough, but, the driver not having enough money with him, he was locked in a cell till the amount was forthcoming.—Yours truly,

A. J. PINTO LEITE.



The Motor Ambulance recently constructed for the War Office by Messrs. Sidney Straker and Squire, Ltd.

The ambulance is mounted on one of the firm's 16-20-h.p. chassis. Special attention has been paid to the springing, while it will be noticed that the exhaust is taken out through the roof.

THE maker of the "H. D. W." pump gauge perfecter is invited to send his address to a correspondent, "F. J."

REPLYING to "H. R.," the makers of the hood materials exhibited at the Cordingley Show were Messrs. George Johnston and Co., 110, Cannon Street, London, E.C.

THE wheel cap of a Weigel car was found near St. Quinton's Park, London, W., on the 22nd inst. The owner can obtain the same by applying at the Westminster Motor-Car Garage, 17½, Kensington Place, Westminster, S.W.

A BRASS Salisbury tail lamp has been found in the neighbourhood of Hindhead. If the loser will communicate with the secretary of the Automobile Association, Princes' Buildings, Coventry Street, W., every assistance will be afforded him.

THE accumulators from a motor-van belonging to Messrs. J. E. Sharp and Sons, Ealing, have been stolen under circumstances narrated in our Comments. The following is a description of same:—Latest Lithanode pattern, 4 volt, 40 amp., celluloid case, two terminals painted red. In square tin case. Information that will lead to their recovery will be welcomed at Scholefield Road Police Station, N.

THE ALBANY AUTOMOBILE COMPANY, of 106 and 110, Albany Street, London, N.W., are holding their first auction sale at one o'clock on June 4th at their new sale rooms, 23, Augustus Street, N.W. Fifty up-to-date and modern cars will be offered. We may also mention that Mr. George Elkin, formerly of Messrs. Straker and McConnell's and the Motorists' Purchasing Association, Ltd., has been appointed secretary of the Albany Company.

THE MOTOR UNION AT BOURNEMOUTH.

FAVOURED by fine weather and attended by a numerous company of members, the provincial meeting of the Motor Union of Great Britain and Ireland at Bournemouth on Saturday must be regarded as a great success. The proceedings took the familiar form of a business session in the morning, an inter-club gathering in the afternoon, and a dinner in the evening, at which speeches exhorting motorists to become attached to the Motor Union were made.

The Corporation gave the use of the Council Chamber for the General Committee, and Councillor G. S. Bridge, the Mayor, Mr. G. W. Bailey, the Town Clerk, and Mr. C. J. Haydon, hon. sec. of the New Forest A.C. and the Hampshire M.U., welcomed the visitors to the town. Mr. Joynson Hicks, M.P., who was motoring from town, not having arrived, Mr. C. H. Dodd acknowledged the mayoral welcome and the committee then proceeded to business. Those present included Messrs. C. H. Dodd (Maidenhead), G. T. Langridge (Epsom), H. Hamilton Palairret (Chippenham), J. W. Coade (London), Lieut. A. F. G. Tracy (Portsmouth Naval Club), A. McAlpin (Leicester), W. Martin Burnham (London), F. E. Cobb (Brighton), C. W. L. Thisleton (London) Herbert R. Oldfield (Henley-on-Thames), Walter Bourke (Maidenhead), Dr. G. R. Russell Mathews (London), Ballin Hinde (Birmingham, vice-president Midland Club), A. Moresby White (London), L. Beadle (Blackheath), Reginald Hannam (Richmond), R. C. Sharman (Hitchin), Claude Rippon (Oxford), Charles McWhirter (Watford), A. Scrase Dickens (Horsesham, chairman Sussex Club), and Rees Jeffreys, secretary.

Union," and dwelt on the sylvan beauties of the New Forest as among the great attractions to motorists to visit Bournemouth. In addition they had excellent facilities for motoring, both by sea or land. He did not think that as a body they could look for much help from the Legislature or the County Councils. At the last meeting of the Hampshire Council a report was presented dealing with corners and precipitous places. Only twenty-five such places had been scheduled for the whole of that large county. If that line were generally adopted motorists would have to fall back on their own organisations to make the main roads of the country safe and pleasant to strangers.

Response was made by Mr. Joynson Hicks, who referred to the fact that this was the first year of their existence as an entirely independent body. They had a membership of 15,000, an income of £8,000 and accumulated funds of £11,000. They had no hostility to the R.A.C., but the democratic constitution of the M.U. secured that some work could be done by it better than by other organisations. They would try and settle the dust question, discourage dangerous and inconsiderate driving, and also protect themselves from being downtrodden either by Parliament at the top or the Bobby at the bottom.

Mr. A. Moresby White proposed "The New Forest A.C. and the Hampshire M.U.," response being given by Lord Montagu, who referred to the good work done by the local organisation. He did not think Mr. John Burns was likely to produce a bill that would do harm. There must be unity among motorists. If they each supported different policies, the time would come when, apart from the clubs, there must be a general council of automobilists, which could speak for them all. Otherwise they would get no unity, and would thereby lose a great deal of their



The Motor Union Meet at Bournemouth.—The Cars lined up at the Pier entrance.

It was decided to endeavour to obtain certain amendments of the Licensing Bill in the direction of improved hotel accommodation for travellers. The general principle of the Daylight Saving Bill was supported. A scheme for the examination of drivers was initiated, with the object of eliminating that class of driver who is an habitual source of danger to other users of the highway. Next to public safety, one of the chief reasons was the increasing number of requests to recommend drivers, and the Union felt they were not in a position to issue such recommendations without actual investigation of the experience and qualifications of drivers. It was also in view of the growth of public motor services and the number of local authorities wishing to obtain from an expert and responsible body like the Motor Union a certificate of the driver's fitness. Correspondence was reported with the Board of Inland Revenue regarding the further concessions in the use of alcohol duty free as fuel. The Legal Reports Committee reported that during the month 105 applications for information and assistance were dealt with. It was reported that 120 licensing authorities under the Motor Car Act had agreed to distribute with the driver's licence copies of "Rules and Courtesies of the Road," which the Union had compiled, and that 4,000 copies had been prepared for this purpose.

In the afternoon the members of the M.U. and their friends assembled at the pier approach, having been driven in their cars from Under Cliff Drive. About seventy cars were present, and the passengers adjourned to the Pier, where a concert was greatly enjoyed. Subsequently the visitors proceeded to the Winter Gardens, where the New Forest and Hampshire organisation entertained them to tea.

The dinner was held at the Hotel Mont Dore, where Mr. W. Joynson Hicks, M.P., presided. After the loyal toasts had been honoured Col. J. Roberts Thompson, J.P., proposed "The health of the Motor

strength. Speaking on the long-distance police traps, his lordship remarked that having had the honour of being in more than one police trap, he could speak impartially, and preferred the one covering 13 miles to the short one of 220 yards, which the most considerate drivers might fall into. He thought a *modus vivendi* between the two opposing bodies was embodied in the suggestion that only long distance traps should be used generally—except at particular danger spots—and that cars should not be summoned unless exceeding twenty-five miles an hour over the thirteen miles. If round table conferences between chief constables and motor organisations could undertake this and fix twenty to twenty-five miles an hour on open country roads, he thought there was a means of settlement. If it included the abandonment of the trap as a mere means for the acquisition of fines they might relieve Parliament of the necessity for future legislation.

The "Local Authorities of Hampshire" was proposed by Mr. C. H. Dodd, who commended the attitude of the Bournemouth authorities in preliminary warning to motorists. Though there were 700 motorists in the town, police traps had not yet been required. The Mayor of Bournemouth and also the Town Clerk responded.

The Hon. F. E. Guest acknowledged the toast of "The Visitors," and remarked his initiation to motoring consisted of the purchase of the smallest imaginable car, which he helped to push a great part of the 110 miles from London to his home after having followed it nearly 30 ft. through a hedge at a notoriously dangerous corner near Romsey. He agreed in the necessity for combination, to bring about desired reforms. The three large associations had objects in common, and by combining their forces could bring pressure that no political party could stand against.

The toast of "The Chairman" concluded the proceedings.

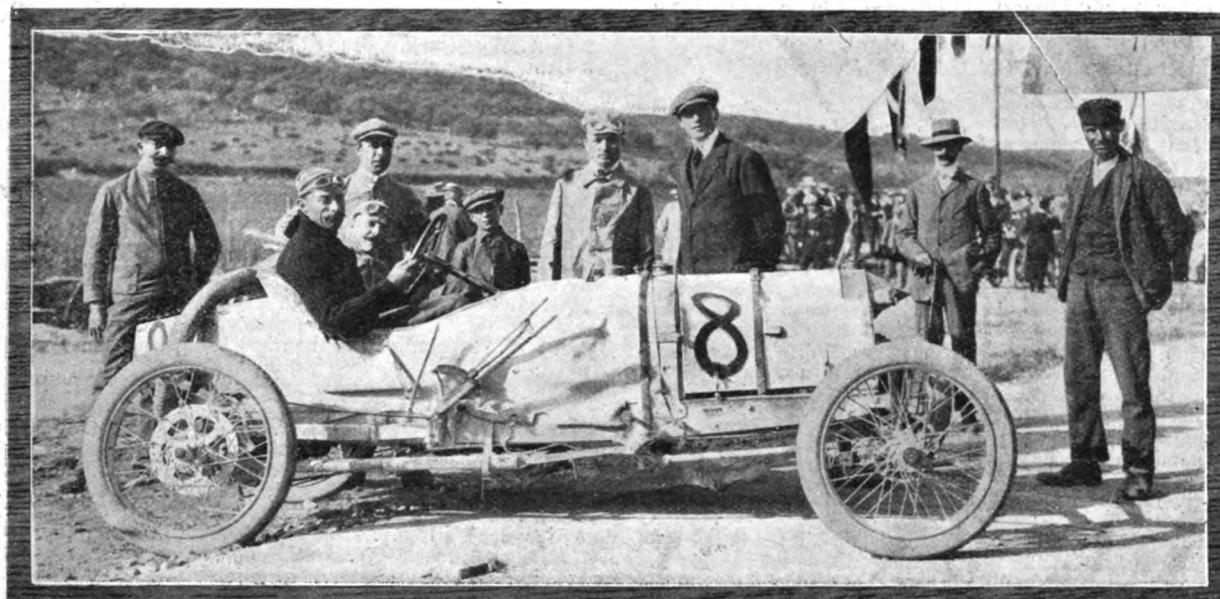
THE WEATHERPROOF CAR.

On all the lines of development along which the evolution of the present-day motor-car has progressed, there is hardly any of greater importance than that which has rendered it to an almost complete degree independent of the elements. So long as the automobile was subject to derangement by rain, flying water and mud, or by changes of temperature, or so long as its mechanism was subject to rapid deterioration through the entrance of dust and grit, self-propelled transportation could not be regarded as an everyday institution, and the motor-car was justly looked upon as distinctively a fair-weather vehicle. The weatherproofing of the motor-car, if so it may be called, has brought it into the field of utilitarian application as has hardly any other line of improvement to which it has been subjected.

Anyone who can remember the machines of the late '90's and of the beginning of this decade will recall the fact that they frequently went out of service as soon as rainy weather and muddy roads were encountered; short-circuited ignition apparatus, stuck inlet valves, water in the carburettor, or stretched auxiliary driving belts, putting them *hors de combat* after a rather brief time. The cars of to-day, on the other hand, can "swash" through mud puddles and plaster themselves with the soil of the region for hours on end, in the midst of pitiless rain or snowstorms, without any serious likelihood of disarrangement.

Probably the principal factor which has tended to bring about this beneficent change is the general adoption of the continuous metal pan under the engine and gear, and indeed the whole mechanical plant from front to rear axle.

lowed, and many private owners and most manufacturers adopted the practice of stretching a tarpaulin covering under the car, so as to cut off the road splash from the mechanism. This arrangement was the precursor of the metal shield. Sparking plug covers, consisting of rubber or porcelain housings enclosing the entire plug, were also brought out. In the standard cars of to-day the entire ignition system is protected by the cast or sheet metal pan beneath it, but matters are so much improved that the ignition equipment would be nearly weatherproof if the shield were not used. The plugs, being located at the top of the engine, are out of the way of the splash, and the distributor, usually carried on a vertical shaft well up toward the top of the hood, is remote from flying road dirt. All wiring is now of special cable, rubber covered, with a protective oil and weatherproof covering, or paper insulated with a protective braid, but the insulation of the conductor is not now depended upon. Primary wires are often run in copper tubing or in interior conduit tubing, and secondary wires are enclosed in fibre, metal, or hard rubber tubing entirely closed against the weather. Where the batteries are used they are carried in a moisture-proof box, usually mounted on the running board and connected by weatherproof leads. In the case of magnetos, not only are they located under the bonnet, and driven by enclosed gears, so that their operation cannot be interfered with by water, but they are, in the best forms, almost completely enclosed, and in many instances protected from water, oil, and dust by an enamel cloth cover. It is a question, remarks Mr. A. L. Clough in an American contemporary, whether the dashboard-mounted coil enjoys quite as good protection from rain as could easily be accorded it. Instances of water entering the coil-box and producing short circuits are by no



M. Sisaire on the Car which he drove in the Targa Florio Voiturette Race in Sicily.

The single-cylinder motor has a bore of 100 mm. and a stroke of 160 mm.; at a speed of 1,800 revolutions it gives close on 18-h.p. M. Sisaire had hard luck in the race; he was leading by nearly half an hour when he unfortunately broke a wheel through a bad skid 10 kilometres from the finish, and had to abandon the race.

Interruption of ignition by the action of muddy water has probably been the cause of more interruptions of service due to weather conditions than anything else. Many of the early horizontal motors were fitted with jump sparking plugs, horizontally inserted into the valve chambers. When the car passed through a puddle dirty water splashed upon them, short-circuiting them and cutting off ignition, if indeed the hot porcelains were not cracked by the cold water and rendered useless. The secondary leads were thoroughly soaked with the dirt-impregnated water, and, as their insulation was usually none too good, they frequently broke down at some point where they were close to an earthed portion of the car. On these motors the contact maker was generally carried on the side of the crank case, driven by the end of the half-time shaft. It was thus exposed to flying mud and water, which finally found access to the mechanism, even if a cover was provided, as was by no means always the case. Not only were electrical difficulties thus developed in the primary circuit, but the bearings of the contact maker were filled with grit and caused to wear out rapidly. As the insulating covering of the wiring was relied upon to prevent escapes—no enclosing tubes being used—and as the wires usually ran in exposed positions along the frame line, short circuits, due to mud, were very common. The magnetos which were sometimes used often became wet, and an armature short circuit resulted, or the belts which were generally used for magneto driving were soaked in water and failed. When frictionally driven from the engine flywheel, mud and water on the frictional surfaces often spoiled their action.

Some horizontal motors came to have sparking plugs inserted vertically from above into the valve chamber, and this reduced the liability of short circuiting. A better location for the contact maker finally fol-

means unknown, and it would seem that a boot of weatherproof fabric, covering the box and the high-tension terminals below it, with an aperture for the switch, would be a good thing in rainy weather.

In many of the old cars, especially those with horizontal engines, the carburettor was mounted very low, and in running during rainy weather became plastered with mud and drenched with dirty water. Water, and oftentimes mud, was sucked into the air-intake, and so much foreign matter might in some instances be drawn through the mixture piping as to cause the inlet valves to stick as well as to clog the throttle mechanism. Water occasionally entered the float chamber through the vent hole or beside the priming needle, and finally lodged in the spray nozzle, giving rise to much trouble. Carburettors are now so protected as never to be exposed to flying mud and water. The air intake is usually a sleeve placed in proximity to the exhaust pipe, so close to it that there is hardly any chance for foreign matter to enter. When not so arranged, air intakes are screened and located in a protected position. The throttle-operating mechanism is all protected by the dust shield. Fine dust in considerable quantities is still drawn in with the entering charge, but mud and water have ceased to be a menace to effective carburation.

(To be concluded.)

THE "Warrior" plug is being supplied to motorists by the Sphinx Manufacturing Company, of Bradford Street, Birmingham. This is suitable for accumulator or high tension magneto ignitions, is easily cleaned, and will fit any engine—points which have greatly contributed to its success.

CLUBS AND ASSOCIATIONS.

MOTOR UNION.

THE Parliamentary Committee has had under consideration a clause in a bill promoted by the Burnley Corporation, empowering that authority to erect sheds, shelters, or waiting-rooms for the accommodation of passengers and tramway servants in the public streets, and is therefore taking steps to endeavour to secure the amendment of the clause, so as to ensure that any such shelters shall be erected upon the pavement.

ADDITIONAL agents appointed by the M.U. are Messrs. Hankey, Gellatley and Co., of Marseilles; Messrs. Hendy and Co., Southampton; and Messrs. Player, Folkestone.

The references made at the April meeting of the General Committee to the advisability of heavy vehicles being fitted with mirrors to enable drivers to see side and rear traffic have resulted in a number of communications being received and considered by the Highways Protection Committee. Evidence is now being collected as to the use of mirrors in the metropolis, and the secretary will be glad to receive information from any users who may not receive the inquiry form.

THE AUTOMOBILE ASSOCIATION.

THE Association is taking strong action with reference to the furious driving of motor-cars, and a sub-committee has been formed to deal with this question. Every case reported by the special patrols on point duty will be carefully investigated, and those members who, having been warned by the Association's official, still persist in causing annoyance to the public will in the general interests of automobilism be called upon to resign.

THE COMMERCIAL MOTOR-USERS' ASSOCIATION.

A MEETING of the executive committee of the Association was held at 1, Albemarle Street, Piccadilly, W., recently, when Messrs. Hicks, Davies and Hunt were appointed solicitors to the Association. The secretary reported the donations that had been made towards the cost of approaching the Local Government Board with respect to the closing of Wark Bridge. The secretary was instructed to write to the chief makers with a view to their making a contribution.

A letter was read from the Secretary of the Royal Automobile Club stating that the Technical Committee approved the suggestion of the Association that the R.A.C. should undertake a series of acceleration tests, extending over one or two days, and in respect of public service vehicles constructed to comply with Metropolitan Police regulations, limited to a maximum of 35-h.p., R.A.C. rating, and to carry a standard double-decked omnibus body, and had appointed a sub-committee to draft the preliminary lines of these tests.

Colonel Crompton reported that he had been appointed Chairman of an Advisory Committee on mechanical transport for the Territorial Army. Messrs. F. C. A. Coventry, S. D. Gilbert and W. G. Lobjoit were appointed a sub-committee to assist Colonel Crompton in preparing the report of the committee.

The secretary reported that Mr. C. A. Elgood had interviewed the engineer of the Metropolitan Water Board with regard to the charges to be made by the Board for water supplies in respect of trade motors. The engineer stated that it had been found impossible to arrive at a general basis for commercial motor vehicles, and it was therefore proposed that each vehicle should be separately inspected and separately assessed, having regard to the amount of water consumed. He also stated that the Board had decided to erect penny-in-the-slot meters in the streets. Messrs. L. G. Oldfield, J. C. Mitchell and S. D. Gilbert were appointed a sub-committee to co-operate with Mr. Elgood in the question of the charges.

CARDIFF.

THE following awards have been made in connection with the recent hill-climbing competition of the Cardiff Motor Club:—

| | CYCLES. | Figure of Merit. |
|----------------------|--------------------|------------------|
| 1. W. Pollard ... | 34-h.p. T.S. ... | 7.72 |
| 2. J. H. Wyndham ... | 2-h.p. Minerva ... | 6.23 |

| | CARS. | Figure of Merit. |
|------------------------|------------------------|------------------|
| 1. E. M. Griffiths ... | 12-14-h.p. De Dion ... | 7.96 |
| 2. H. J. Norton ... | 12-14-h.p. Singer ... | 7.22 |

Winner of Motor Union medal for best figure of merit:—E. M. Griffiths, 12-14-h.p. De Dion car.

HEREFORDSHIRE.

A SPECIAL meeting of the Herefordshire Automobile Club was held on Friday of last week at the Mitre Hotel, Hereford, to consider the question of the hill-climb trials for the Hereford Trophy. Col. Hopton, of Canon Frome Court, presided, and the others present were Mr. F. Cuddon, Mr. Graystone (Hay), Mr. J. H. Hall (Ross), Dr. Herbert Jones, and Messrs. T. A. King, W. E. Langford, F. A. Cuddledale, J. Harley Nott (Leominster), J. Parker, W. Farrar Roberts, W. L. Tittley (Ledbury), J. C. M. Vaughan, and A. Townsend (hon. secretary). Mr. Townsend said he was pleased to inform them that the Mayor of Hereford (Mr. James Mitchell), Mr. Langford and himself went as a deputation to the Bromyard District Council on the subject of the

use of Frome's Hill for the annual reliability trials, and the Council unanimously decided to rescind the resolution passed in February last. That left the club in the position of being able to hold the trials unopposed on Frome's Hill. It was decided that the hill climb trials should be held on Friday, July 10th. Hereford regatta would be held on the Thursday, and the Royal A.C. had selected Saturday, July 11th, for the holding of their second provincial meeting at Hereford.

NOTTINGHAMSHIRE.

ON the private track at Clipstone Drive, near Mansfield, which the Duke of Portland is always ready to place at the service of the Nottinghamshire A.C., an interesting race meeting was held on Saturday afternoon. There was a good entry and a large attendance of the public. Although the rain held off the track was entirely free from dust, an advantage due to the fact that Lieut.-Col. R. L. Birkin, D.S.O., had had 3 tons 12 cwts. of calcium chloride solution applied over the mile and a half of track. Capt. R. K. Bagnall Wild, R.E., was the judge, and Mr. Charles Hardy and Mr. A. R. Atkey were starters. There were three events in the programme, and in the scratch race each competitor was allowed two runs.

The One Mile Handicap from a standing start was won by Dr. Tresidder's 15-h.p. Clement-Talbot in 1 min. 20 sec., a speed of forty-five miles per hour. The result was as follows:—

| Owner. | Car. | Time. | Percentage of efficiency. | M.p.h. |
|--|------|----------|---------------------------|--------|
| 1 Dr. Tresidder's 15-h.p. Clement-Talbot ... | | 1 20 | 65 | 45 |
| 2 C. A. Bird's 40-h.p. Mercedes ... | | 1 17 1-5 | 47.2 | 46.63 |
| 3 Capt. Newsum's 45-h.p. Daimler ... | | 1 4 | 46.9 | 58.23 |
| 4 H. Dennis Bayley's 6-h.p. Rover ... | | 2 9 | 44.6 | 27.90 |
| 5 Charles Hardy's 10-12-h.p. Humber ... | | 2 2 2-5 | 41.4 | 29.36 |
| A. N. Lee's 16-20-h.p. Humber ... | | 1 26 3-5 | 40.5 | 41.50 |
| T. Cuthbert's 8-h.p. Rover ... | | 2 10 | 33.5 | 27.40 |
| Geoffrey Bird's 30-h.p. Ariel-Simplex ... | | 1 19 3-5 | 32 | 45.40 |
| H. Bowden's 40-h.p. Darracq ... | | 1 22 1-5 | 29.7 | 43.90 |

Considerable interest was taken in the competition for the Wilson Challenge Cup, there being no fewer than twenty-two starters, the winner proving to be Mr. Cecil Edge's 40-h.p. Napier, which was driven by Mr. Ross Browne. Over the flying kilometre he attained a speed of 73.64 miles per hour. The gold medal for the fastest time in this event was won by Mr. E. M. C. Instone's 58-h.p. Daimler, which reached the speed of 74.02 miles per hour. The performances of various cars were:—

| Owner. | Car. | Time. | Percentage of efficiency. | M.p.h. |
|---|------|----------|---------------------------|--------|
| 1 Cecil Edge's 40-h.p. Napier ... | | 30 2-5 | 91 | 73.64 |
| 2 Dr. Tresidder's 15-h.p. Clement-Talbot ... | | 39 2-5 | 68.6 | 56.74 |
| 3 Dr. Hogarth's 25-h.p. Clement-Talbot ... | | 48 | 67.9 | 46.57 |
| 4 Dr. Hogarth's 8-h.p. Clyde ... | | 59 4-5 | 67.3 | 37.38 |
| 5 H. Belcher's 15-h.p. Clement-Talbot ... | | 46 3-5 | 60 | 53.22 |
| Geoffrey Bird's 30-h.p. Ariel Simplex ... | | 38 | 56.2 | 58.82 |
| V. Riley's 12-h.p. Riley ... | | 46 3-5 | 50.8 | 47.97 |
| M. Ross Browne's 15-h.p. Mass ... | | 43 1-5 | 49.8 | 51.7 |
| S. Downing's 14-h.p. Alldays ... | | 44 3-5 | 47.1 | 50.12 |
| Capt. Newsum's 45-h.p. Daimler ... | | 31 3-5 | 45.7 | 70.73 |
| H. Belcher's 14-h.p. Siddeley ... | | 53 | 44 | 42.18 |
| E. M. C. Instone's 58-h.p. Daimler ... | | 30 1-5 | 42.8 | 74.02 |
| R. M. Wright's 28-43 h.p. Daimler ... | | 40 3-5 | 40.1 | 55. |
| C. Lock's 20-h.p. Sunbeam ... | | 47 1-5 | 35.1 | 47.36 |
| P. Richardson's 40-h.p. Sheffield Simplex ... | | 37 2-5 | 33.5 | 59.77 |
| C. A. Bird's 40-h.p. Mercedes ... | | 42 4-5 | 33.3 | 52.23 |
| F. Mitchell's 8-h.p. Rover ... | | 1 9 | 31.6 | 32.4 |
| H. Dennis Bayley's 6-h.p. Rover ... | | 1 13 2-5 | 29.5 | 30.45 |
| H. Bowden's 40-h.p. Darracq ... | | 40 4-5 | 29.1 | 54.79 |
| L. Fawcaker's 14-16-h.p. Belsize ... | | 52 | 29 | 42.99 |
| Charles Hardy's 10-12-h.p. Humber ... | | 1 13 1-5 | 25.1 | 30.60 |
| A. N. Lee's 16-20-h.p. Humber ... | | 46 2-5 | 23.2 | 43.17 |

In the Scratch Race there were eight competitors, and F. Newton, driving a 60-h.p. Napier, was credited with 22 2-5 sec. on his second attempt, this working out at 104 miles per hour. Mr. E. M. C. Instone reached ninety miles an hour and Mr. J. C. Wilson on his 45-h.p. Deasy car was also credited with a good performance, as will be seen from the results given below.

| Owner. | Car. | First Run. | Second Run. |
|---|------|------------|-------------|
| 1 Mr. Cecil Edge's 60-h.p. Napier ... | | 21 1-5 | 20 2-5 |
| 2 Mr. E. C. Instone's 58-h.p. Daimler ... | | 26 2-5 | 24 3-5 |
| 3 Mr. J. C. Wilson's 45-h.p. Deasy ... | | 30 3-5 | 25 |
| Mr. P. Huskinson's 38-h.p. Daimler ... | | 27 3-5 | 28 2-5 |
| Mr. E. Lewis's 35-h.p. Deasy ... | | 30 4-5 | 33 3-5 |
| Capt. Newsum's 45-h.p. Daimler ... | | 31 4-5 | — |
| Mr. R. M. Wright's 28-43-h.p. Daimler ... | | 38 1-5 | — |
| Mr. H. Bowden's 40-h.p. Darracq ... | | 40 | — |

Of the three cars winning first position two were fitted with Dunlop tyres.

AERO CLUB.

No fewer than thirty-one aeronautes have entered for the International Balloon contest from the Hurlingham Club grounds to-day (Saturday). The following is the order in which the competitors will start:—

| Balloon. | Pilot. | Nation. |
|--------------------------|--|---------------|
| 1 Le Faune ... | Ernest Zens ... | France |
| 2 Bonn ... | Prof. Milarch ... | Germany |
| 3 Eden ... | E. Boulenger ... | France |
| 4 Luciole ... | Payret Dortail ... | France |
| 5 Quo Vadis ... | A. Schelcher ... | France |
| 6 Icarus ... | Frank H. Butler ... | Great Britain |
| 7 Don Quichotte ... | Ernest Barbotte ... | France |
| 8 Enchantress ... | Ernest Bucknall ... | Great Britain |
| 9 Satellite ... | Viscount Royston ... | Great Britain |
| 10 Venus ... | J. T. C. Moore-Brabazon ... | Great Britain |
| 11 Simoun ... | Count H. d'Oultremont ... | Belgium |
| 12 Le Roitelet ... | A. de la Hault ... | Belgium |
| 13 Leprehaun ... | Hon. Cland Brabazon ... | Great Britain |
| 14 Le Ludion ... | Paul Tissandier ... | France |
| 15 Tschudi ... | — Sticker ... | Germany |
| 16 Nebula ... | Capt. A. H. W. Grubb ... | Great Britain |
| 17 Cognac ... | Victor de Beauclair ... | Switzerland |
| 18 Valkyrie ... | C. F. Pollock ... | Great Britain |
| 19 Abercorn ... | Capt. von Abercon ... | Germany |
| 20 Rolla VI. ... | Etienne Giraud ... | France |
| 21 L'Escapade ... | Count Henry de la Vaux ... | France |
| 22 Lotus ... | Griffith Biewer ... | Great Britain |
| 23 Kokoro ... | Prof. A. K. Huntingdon ... | Great Britain |
| 24 La Mascote ... | John Dunville ... | Great Britain |
| 25 L'Abeille ... | Albert Omer Decugis ... | France |
| 26 Aero Club IV. ... | H. Demoor ... | Belgium |
| 27 L'Albatros ... | A. Leblanc ... | France |
| 28 Corona ... | Hon. C. S. Rolls ... | Great Britain |
| 29 Pegasus ... | Col. J. E. Capper, C.B., R.E. ... | Great Britain |
| 30 Le Nephkys ... | Count de Castillon de Saint-Victor ... | Belgium |
| 31 Emulation du Nord ... | Albert Crombez ... | Belgium |

MOTOR-CYCLING CLUB.

ON Saturday the contest for the Albert Brown trophy was again held under the auspices of the Motor-Cycling Club. This year the course was from Slough, via Henley, to High Wycombe and back, this being traversed until a mileage of 150 was obtained. There were half a dozen starters, the consumption and marks obtained by the four leaders being as follows:—

| | Consumption. | Marks. |
|------------------------------------|--------------|--------|
| | Pts. oz. | |
| F. J. Jenkins, 20-h.p. Rover ... | 36 8 | 1,162 |
| Dr. H. A. Jowett, 8-h.p. Rover ... | 34 9 | 824 |
| J. S. Harwood, 8-h.p. Rover ... | 36 0½ | 794 |
| B. Holland, 12-14-h.p. Singer ... | 59 8 | 427 |

Mr. F. J. Jenkins thus became the winner of the trophy. Dr. Jowett won the event last year, and it is interesting to note that after twelve months' hard work the petrol consumption was the same for the journey as on the former occasion.

The principle underlying the rules is that the trial is a test of reliability and running to schedule time coupled with a calculation on the weight of the car and passengers for petrol consumed. The full complement of passengers or ballast to the equivalent of ten stone per passenger had to be carried, and the competition was confined to British-built cars.

MANCHESTER AND DISTRICT CYCLE TRADES ASSOCIATION.

THE general meeting of this association is being held on Friday, the 29th inst., at the Palatine Hotel, Manchester. In the report to be submitted reference is made to steps which have been taken to amalgamate the different interests in the motor trade of Manchester and district. Following the ordinary meeting an extraordinary general meeting is to be held, at which the directors were to submit a resolution changing the name of the society to the Manchester and District Motor Trades Association, Ltd.

THE AUTO-CYCLE UNION.

The A.C.U., in conjunction with the Newcastle and District Motor Cycle Club, is holding an open hill climb up the Sutton Bank to-day (Saturday). The length of the hill is a shade under one mile, and the average gradient is 1 in 8, portions of it being 1 in 3.96 and 1 in 4.91. It is approached by an S bend, not very sharp, but sharp enough to reduce pace materially, and the road, about two-thirds of the way up, doubles right back upon itself in a rounded V. Immediately this corner is turned the machine strikes a bad piece of 1 in 8.18 and then follow portions varying from 1 in 5.52 to 1 in 23.81.

The end to end run is to be held from July 13th to 18th next. The entries include J. Tassell, Matchless; W. H. Wells, Vindec Special; S. W. Carty, N.S.U.; W. Ridler, Leader; E. Nelson, Rex.

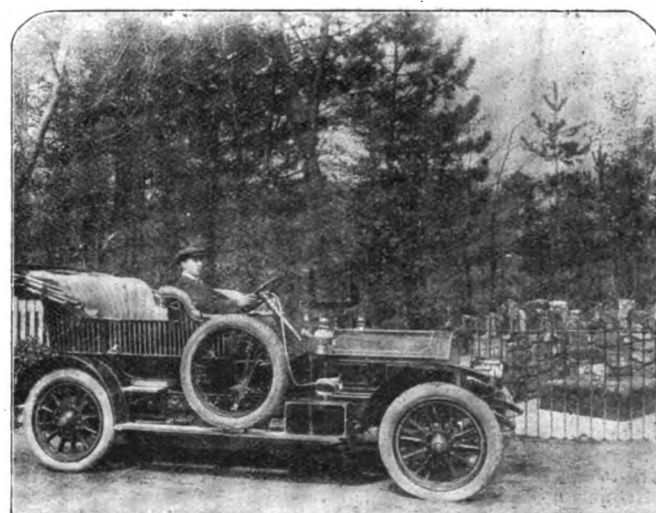
ESSEX COUNTY.

A SUCCESSFUL gymkhana was held by the Essex County A.C. at Braintree, in an enclosure lent by Sir Charles Locock, Bart., at Oaklands, on Saturday. The prize for the best appearance went to Mr. E. J. Boake, 40-h.p. Napier, the obstacle race was won by Mr. Walter Lawrence, 12-16-h.p. Clement-Talbot, the starting and stopping competition went to Mr. Lyndhurst Forge, 12-16-h.p. Vauxhall, and the passenger race was won by Mr. Lawrence, Sir Charles Locock being second. In the hat trimming race Mr. J. Gurney Fowler, 35-h.p. Renault, was first, and Dr. Young, 9-h.p. Singer, next, and in musical chairs the winner was Mr. Boake, Mr. Edward Bryant, 14-h.p. Humber, being second.

KENT.

By the courtesy of Mr. T. Colyer Fergusson the members of the club spent a delightful afternoon on Saturday last going over the ancient "Mote House" at Ightham, dating back some 700 years. Among those present were:—Mr. and Mrs. Booth Hearn, Mr. and Mrs. Wyllie, Mr. and Mrs. Schooling, Col. E. Latter, Mr. and Mrs. Waddington, Mr. and Mrs. Fraser, Dr. and Mrs. Steen, Mr. and Mrs. Batchelor, Mr. and Mrs. White, the Rev. Mr. Wright and Mrs. Wright, Mrs. Kenyon, and the hon. secretary.

Mr. W. T. Chatfield, of 3, Grosvenor Park, Tunbridge Wells, has been awarded the gold medal for mechanical proficiency at the recent R.A.C. examination.



Mr. P. R. Lamb, the travelling representative of Ariel Motors, Ltd., at the wheel of the 30-40-h.p. Ariel.

The photo, which was taken at Oswestry, shows the Old Stone, now railed in, which in years gone by was used as a receptacle for cleansing coins during the plague, which Oswestry struggled to subdue between 800 and 850 years ago. At the time, it is believed, there were several of these hollow stones—one at each entry to the town—and a guardian was placed with each, who demanded the immersion of all coins the farmers, villagers, &c., may have brought with them to purchase food, &c. This one stone is all that remains of Oswestry's precautions of over three centuries ago, and is suitably inscribed by a tablet on the wall as "the Croeswylan Stone," which, however, does not convey any idea of its history or use. As regards the Ariel shown in the illustration, this has now travelled roughly 30,000 miles, and has visited almost every part of Great Britain.

YORKSHIRE.

THE Yorkshire A.C. had a most enjoyable meet at Helmsley on Saturday last, where some 100 members and friends met at the Black Swan Hotel. After tea the party visited Duncombe Hall, the seat of the Earl of Feversham, the Home Terrace, and Rievaulx Abbey. Mr. and Mrs. E. H. Hepper (chairman of the club), Mr. and Mrs. and Miss Penrose Green (vice-president), Mr. G. Scoby-Smith (chairman Cleveland A.C.), Mr. J. Constantine, and Mr. and Mrs. C. P. Wilson (hon. secretary and treasurer) were present.

In connection with the meet, Dr. and Mrs. J. L. Kirk, of the Low Hall, Pickering, entertained the officials of the club to luncheon, which hospitality was much appreciated by those present.

LIVERPOOL.

THE Liverpool Automobile Club and Self-propelled Traffic Association held their first club meet of the season at Rufford Old Hall, near Burscough, lent by Sir Thomas Hesketh, Bart., Vice-President of the Northampton A.C., on the 16th inst., when they were the guests of the chairman, Mr. A. Lyle Rathbone, J.P., C.C., and Mrs. Rathbone, who also extended a cordial invitation to the members of the Cheshire Automobile Club. The weather was very favourable for the occasion and some 200 motorists and their friends attended from both clubs, the cars numbering over forty.

BLANDFORD.

MR. H. F. W. FARQUHARSON is the president of the Blandford and District Automobile Club, which held its opening meet on the 27th inst. at Eastbury Park, Blandford. The club is now in its second year and has a membership of between forty and fifty. It has arranged an interesting series of fixtures for the season, including gymkhanas, hill climbs, and a paper chase. The hon. secretary, Mr. M. J. Curtis, of the Market Place, Blandford, will be pleased to supply information as to its policy to motorists in the district.

LINCOLNSHIRE.

A WELL-ATTENDED meeting of the committee was held at Woodhall Spa. Col. J. S. Ruston was unanimously elected chairman of the committee for the rest of the year and Capt. H. E. Newsom was elected to the vacant place on the committee. The following were elected members of the club:—Col. C. A. Swan, C.M.G., the Hon. Richard Stanhope, Mr. H. V. Hotchin, Rev. R. Meddings, and Major J. H. W. Rennie.

THE Brentford District Council has agreed to comply with the request of the Motor Union to permit the erection of an automatic water-meter for use of motorists passing the town.

THE Scottish A.C. will be represented at the International Road Congress by Comte Louis de Clercq (a vice-president of the club), Mr. J. R. Nisbet, and Mr. Robert Munro.

At the hill-climbing competition held at Carnmoney, near Belfast, by the Ulster centre of the Motor Cycle Union of Ireland, Mr. H. G. Ferguson's 14-16-h.p. Argyll car made the fastest net time.

ROAD REPORTS.

CARMARTHENSHIRE.—A correspondent at Ystradgynlais, R.S.O., writes warning motorists to be wary when travelling from Swansea and Neath to Llandilo in Carmarthenshire. He suggests that notice boards should be set up near the colliery level crossing at Glanamman.

BRENTFORD.—At the last meeting of the Brentford District Council attention was drawn to the excessive speed of motor-cars through the town. It was suggested that either notices should be posted asking drivers to proceed with caution, or that application be made to the Middlesex County Council for an eight-mile speed limit. Several members objected to posting notices, as the cars went too fast for the drivers to read them, and it was finally decided to ask the County Council for a ten-mile limit through Brentford.

CO. DUBLIN.—The County Council of Dublin are applying to the L.G.B. for the prohibition of motor-cars on the road running from Malahide along by the sea to the Velvet Strand at St. Marnock's.

SELBY.—Near the Fryston Park corner, not far from Selby, on the York road, a police trap of a quarter of a mile in length has lately been in frequent operation.

SHEFFIELD.—The Highway Department of Sheffield has made a beginning with its tarspra efforts, and is so far pleased with the results in preventing the dust-clouds. The Manchester road was the first to receive attention.

CHESHIRE.—According to the chairman of the Main Roads Committee of the Cheshire County Council calcium chloride has proved the most efficacious means of allaying the dust in the county.

BREKSHIRE.—There are 375 miles of main roads in the county of Berkshire, of which twenty-seven miles are urban roads repairable by the seven different urban authorities of the county, and the remainder are rural roads repaired by the County Council.

CARDIFF.—At a meeting at Cardiff, Mr. Harpur (city engineer) has presented a report on the question of treating certain of the macadamised street surfaces with a dust palliative. The report stated that Dr. Vachell had complained of the dust nuisance in Park Place when a westerly wind blew, owing to the great quantity of dust rising from the large area of macadamised roads in the neighbourhood of the City Hall, and he had offered to gratuitously supply calcium chloride providing the Corporation applied it on the piece of road in Cathays Park nearest his house. The joint committee responsible for the roads have decided to tar-spray sections of the Newport and Penylan roads.

WANSTEAD.—The measured furlong in the Blake Hall Road, Wanstead—commencing at the end of Wanstead Flats—is in frequent operation at the week-end.

LANCASTER.—Police traps have lately been in almost constant working order at Galgate, in the Burton Road, and at Ellet Grange—all in the vicinity of Lancaster.

BEACONSFIELD.—A police trap was working on Sunday morning on the main London-Oxford road, about a mile on the Oxford side of Beaconsfield.

THE Abec motor-jack has been introduced by the Aston Brass and Engineering Co., Ltd., of Aston Lane, Birmingham, its novel form securing ease and rapidity in lifting.

OWING to want of space, Messrs. Perry, Thornton and Schreiber, Ltd., the British agents for Ford cars, have let their show room, 117, Long Acre, W.C., and have temporarily taken two floors of a large warehouse at 14, Langley Street, London, W.C. The offices of the company will still remain at 118, Long Acre, W.C.

CASES UNDER THE MOTOR CAR ACT.

IMPRISONMENT.

William Jones, motor driver, of Rothchild Road, Acton Green, Chiswick, has been sent to Cambridge Prison by the Norman Cross Bench for a month in default of paying a fine of £10 and £2 15s. 6d. costs, imposed for driving a motor-car to the danger of the public at Water Newton on April 14th.

Harry Bland, chauffeur, has been sent to prison for a month in the second division for being drunk while in charge of a motor-car at Addlestone on the 12th inst. He was also fined £5 and costs for recklessly driving the car on the same date. Bland, while in charge of a car, ran into two boys, fracturing the arm of one and injuring the other. The defence was a total denial of the charge.

JUSTICE WITH DISCRETION.

Dr. R. B. Debenham was summoned at Greenwich for driving a motor-car at a speed exceeding twenty-seven miles an hour at Catford. Defendant said he had been called to a patient who was very ill. Mr. Rose: I think there must be occasions when some people are entitled to go beyond the ordinary speed; or, rather, not entitled, but the fine in their case ought to be merely nominal. I think a doctor's is one of those cases. I cannot take the responsibility of fining you. I think you had better pay the costs of the summons.

EXCEEDING LEGAL LIMIT.

At Midhurst fines of £34 have been inflicted on five motorists who travelled too speedily at Cocking Causeway; on the same day four motorists were fined £29 for motoring at excessive speed on the Bath Road, Hounslow.

Four motorists were fined sums of £5 each at Fareham on the 20th inst. for driving at a dangerous speed at Cosham.

On Saturday a number of motorists were summoned at Grantham for driving motor-cars too speedily on the Great North Road.

At Lancaster on Saturday seven motorists were fined for exceeding the legal limit.

On Saturday six motorists were fined sums of £3 each at Chichester for exceeding the speed limit on the Chichester and Arundel road at Boxgrove.

Edward Gillett was fined £25 at Beaconsfield Petty Sessions, on Tuesday, for exceeding the legal limit at Farnham Royal, on the Bath road. Four other motorists were also summoned on the same occasion.

DISMISSALS.

At the Corwen Police Court on Friday week, Mr. W. H. Procter, a departmental manager for the Daimler Motor Company, Ltd., Coventry, was summoned for driving his motor-car at a speed dangerous to the public at Glyndyfrdwy on April 18th last. Mr. Jordan prosecuted on behalf of the police, and Mr. W. E. Rowcliffe, Manchester, defended. From the evidence of P.C. Morgan Jones, it was alleged that the defendant had covered a measured distance of 330 yards in twenty-five seconds, about twenty-seven miles per hour. The constable stated that in company with P.C. John Jones he stood on a stone at the end of the village, whence they could see the defendant come into view, and timed him down to the Post Office. Cross-examined by Mr. Rowcliffe, he admitted that there was no traffic on the road, that there were very few people about, and that he saw no one in danger. Mr. Rowcliffe stated that he had been to the spot and suggested to the witness that it was quite impossible for two persons to stand on the stone at the same time, and that it was also impossible from this point to see the car the whole of the measured distance. The witness denied this, and thereupon Mr. Rowcliffe offered to convey the magistrates to the spot by motor-car, and eventually suggested that Mr. Jelf Pettitt (the chairman of the North Wales A.C., who was present in court) should make the inspection and be called as an independent witness. This course was agreed to, and accordingly Mr. Pettitt and the Chief Constable went to Glyndyfrdwy to make observations. Subsequently Mr. Pettitt gave the result of his observations. He stated he had stood upon the stone and instructed an open car, having as its passenger the Chief Constable, to run down the hill first. This had been done and he lost sight of it for about 70 yards of the measured distance. A covered car had also run down, and in this case he had been able to keep just the top of the hood of the car in view only. The Chief Constable and himself had endeavoured to stand on the stone at the same time, in the manner in which the police stated they had done, but found that that operation was absolutely impossible. This closed the case for the prosecution. Mr. Rowcliffe then addressed the Bench, commenting upon the unreasonable and unsatisfactory method adopted by the police in timing the car and upon the evidence produced for the prosecution, and contended that it was absolutely impossible at a distance of a quarter of a mile to say exactly when a car approaching passed a certain point, and this was admitted by one of the constables. The summons was dismissed.

The witness of a speedometer has been accepted in the Kingston Police Court. A motorist was the defendant, and the charge was furious driving. The defendant said he was on his guard, because he had been warned of the police "trap" and he was watching his speed indicator. Two other pairs of eyes were also on the indicator, and so there were three witnesses ready to say the speed was not excessive. The only remaining thing was to test the indicator. This was proved to be accurate and the charge was dismissed.

WARNING OF APPROACH.

At Jeddburgh Sheriff Court, Robert Nairn, motor-car driver, Edinburgh, was charged with having, on March 28th, on the public highway in Kelso, driven a motor-car and failed to give audible and sufficient warning of its approach by a bell or other instrument required for that purpose, such warning being necessary, and colliding with a trap. He pleaded not guilty, and was defended by Mr. Anderson, Mr. Sidney Hilton conducting the case for the prosecution. The former stated that the case was unique. There had never been a case of the kind before in Scotland.

The Sheriff retired about half an hour to consider the point, and on returning to the Court said that the section which he had to particularly construe was article 4, sub-section 5, of the Motor Cars Order of 1904, which pointed out that "whenever necessary" the driver shall blow the horn. The legal question he had to decide was what was the construction of the sub-section and what meaning was to be attached to the words whenever necessary. These meant that, whenever in the interest of the safety of passengers and other traffic on the highways it was essential that the approach should be given by the sound of the horn, it should be done, and in this particular case he thought there was no breach of the regulation. He thought the legislature had purposely avoided laying down any hard and fast rule, and purposely introduced the extremely vague words. He dealt with the facts of the case, and said the circumstances indicated that there was no necessity for the chauffeur to sound his horn. There was no evidence to show that there were pedestrians or any traffic in Simon Square to make the chauffeur sound his horn. While there was a duty on the part of a chauffeur, there was also a duty on the part of drivers of horses and vehicles, and it appeared that Elliot was driving with a slack rein and his horse was going in a careless fashion that afternoon, because where the accident occurred was almost just at the corner of Simon Square, and consequently a considerable way from the line which, if Elliot had been driving according to the rule of the road, he would have passed along. The chauffeur had brought his car to a standstill, and it was quite unnecessary to sound his horn. He assailed the accused, but thought the Fiscal was quite right to bring up the case. He thought in many cases, however, motorists would do no harm in sounding their horn.

ON CLOSED ROADS.

In the Perth Sheriff Court, James C. Wright, Dunblane, admitted to Sheriff Sym that on April 27th he drove a motor-lorry along the Broomhall road, between Dunning and Forteviot, the road being closed to motor traffic. The road had only been closed to motor-cars for thirteen days before this offence was committed. The Procurator-Fiscal, Mr. Melville Jameson, said the sign at the entrance to the road was quite distinct, and the driver ought to have been acquainted and ought to have kept a look-out. The Sheriff imposed a fine of 10s.

At Dunblane a motorist has been fined £5 and costs for motoring on the Trossachs road, which is prohibited to motor traffic.

DANGEROUS DRIVING.

Albert Mansfield was summoned at the Barnet Petty Sessions (1) for driving his motor-car to the public danger on Barnet Hill, and (2) for failing to stop when an accident occurred to a governess car. Mr. Staples Firth defended. It appeared that defendant drove down the hill behind the governess car, which followed a hay cart. The governess car pulled out to the off side to pass the cart, and defendant, pulling out to the off to pass the governess car, scraped it. The speed at which he was travelling, he said, was ten to twelve miles an hour. Defendant was fined £5 and costs on the first summons. The second summons was dismissed.

The Haywards Heath magistrates on Monday resumed the hearing of the summons against John Dones, of Maida Vale, for driving a motor-car to the danger of the public at Albourne on March 29th. At the previous hearing Mr. Lawson Lewis, who appeared for the prosecution, described how a car, driven by Mr. Ernest Bowden, came to grief, and its occupants were pitched out and injured. It was alleged that the defendant's car, travelling at forty miles an hour, struck Mr. Bowden's car. Mr. Humphrys said he thought he should be able to prove that a mistake had been made with regard to defendant's car being the car that was responsible for the accident. Defendant went into the witness-box and said that his car came into collision with no other car. He was travelling at a speed of between twenty and thirty miles an hour. In his opinion it was not possible to mistake his car for a yellow car. Defendant remembered sounding his horn and one car drawing to the side of the road—but not on to the grass. That was about five or six miles on the Brighton side of Crawley. It was a landaulet, and he thought the colour was dark blue. Corroborative evidence was given by Reginald Hemming, of London, who was in Mr. Dones's car. Mr. Warren, of Brighton, said he was driving from Crawley to Brighton. At Handcrosses Hill he passed a yellow car and it drove him on to the grass. It was not defendant's car to the best of his belief. The Bench decided to dismiss the case against Mr. Dones and ordered each party to pay his own costs.

OWING to increasing business Messrs. Corry Hurford, Ltd., have extended their establishment at 171, Great Portland Street, London, W., by taking in the adjoining premises. The additional show-room, which is of nearly the same size as their present garage with offices above, is to be devoted to a display of high-class second-hand cars of moderate power, while their old depot will be confined to low-power second-hand vehicles.

COMPANY NEWS.

UNITY MOTOR, ELECTRICAL AND ENGINEERING COMPANY.—£1,000. To acquire business of Unity Motor, Electrical, and General Engineering Works, Orchard Street, Bristol, and to adopt an agreement with A. A. Taylor. 52, Queen Street, Bristol.

MADDOX STREET MOTOR COMPANY, LTD.—Capital £3,000. To adopt an agreement with F. W. Jenkins, and to carry on the business of manufacturers of, and dealers in, motor-cars, motor-car parts, and accessories of all kinds, &c. The first directors are:—W. J. Wright (chairman), and F. W. Jenkins. Registered office: 40, Great James Street, Bedford Row, W.C.

BANNER MOTORS, LTD.—28-30, Redcliff Buiks, Bristol.—Capital £10,000, in £1 shares. Objects, to work under agreement with the Bann Motor Company, Ltd.

CHARRON, LTD.—Mr. Davison Dalziel presided at the first ordinary general meeting of Charron, Ltd., held in London on the 21st inst. The net profits were £73,270, and the chairman said that despite the crisis through which the motor manufacturing industry was passing, he looked for a decided improvement. A new cab has just been submitted to the authorities at Scotland Yard for their approval, and orders for 150 have been received. Apart from that there was a growing demand for the lighter and cheaper form of motor-car, and he believed the production of that type would not only be large but also profitable. The motion for the adoption of the report and balance-sheet was carried, as was also that for the payment on July 1st of an interim dividend at the rate of 7 per cent. per annum on the preferred ordinary shares and an interim distribution of 51. per share on the preferred ordinary shares and 3s. per share on the deferred shares.



Mr. Walter C. White on his 30-h.p. White Car.

This car took first honours in the Harrisburgh (U.S.A.) Endurance Run. Mr. White is at the wheel, and the Official Observer (in the tonneau) is apparently making up his report.

(See page 288 last issue.)

ENFIELD AUTOCAR COMPANY, LTD.—This company has been registered, with a capital of £20,000, to carry on the business of manufacturers and factors of, and dealers in, motor-cars, motors and engines, carriages, wagons, tramcars, omnibuses and locomotives, engineers. No initial public issue. The first directors are E. Tailby and W. Allday.

THE BROOKLANDS TRACK.

The final stage of the Brooklands motor track case has been reached before Mr. Justice Parker. The action was brought by Mr. C. J. David, of Walpole House, and Mr. T. Meares and Miss Meares, of The Summit, Weybridge, against Mr. H. F. Locke King, for an injunction to restrain an alleged nuisance caused by motor racing on the track at Brooklands.

His lordship suggested that defendants had given an undertaking that the private road upon which plaintiffs' premises abut should be discontinued as an entrance to the racecourse for motor traffic.

Mr. Dickens offered an undertaking to erect a barrier cutting off the track from the private road for all traffic except pedestrian and ordinary bicycles, and to put up notices at the top that motor-cars and motor-cycles would not be allowed down the road so long as the course exists.

Mr. Buckmaster said he was willing to accept this provided that defendant undertook not to dedicate the private road to the public so long as the track existed, a course to which Mr. Dickens agreed.

His lordship said that the defendant had substantially failed, and must pay the costs of the action, and there would be an enquiry as to damages.

FORTHCOMING EVENTS.

-4-

MAY.

- 27th-30th.—International Aeronautical Federation, Royal United Service Institution, Whitehall.
- 28th (Th.).—Visit of the Aero Club to Aldershot.
- 30th (Sat.).—Meet of the Herts C.A.C. at Hatfield Park.
Devon and Cornwall A.C. hill climb at Moorshap, Tavistock.
Lancashire A.C. speed judging cont. st.
Open hill climb of the Auto Cycle Union up the Sutton Bank, in conjunction with the Newcastle and District Motor Cycle Club.
A.C. of N. Wales meet at Wygfair, St Asaph.
A.C.U. open hill climb, Sutton Bank, near Thirsk.
Birmingham M.C.C. run to Weston Bank.
Blackheath A.C. reliability run.
Coventry M.C. touring reliability run to Holyhead and back.
Derby and District A.C. speed-judging competition.
Herts C.A.C. meet at Hatfield Park.
Manchester A.C. run to Vale Royal.
N.W. London M.C.C. run to the Whitehorse, Shenley.
Crystal Palace A.C. open flexibility competition.
Worcestershire M.C.C. run to Stourport.
- 31st (Sun.).—Southend M.C. run to Saracen's Head Hotel, Dunmow.
Penalty run of the Southern M.C. to Goring.
The Lincolnshire Motor Cycle Club's open-air service in the Dukeries.
Southern M.C. penalty run to Goring.

JUNE.

- 5th-8th.—London-Edinburgh twenty-four hours' run of the Motor Cycling Club.
- 6th (Sat.).—Brooklands A.R.C.
- 8th (M.).—Cars competing in the International Touring Car Trial will arrive at the "White" depot, Camden Town.
Brooklands A.R.C.
- 9th (Tu.).—Touring competition for Prince Henry of Prussia's prize begins.
- 11th (Th.).—Start of the International Touring Car Trial of the R.A.C.
- 13th (Sat.).—Hill climb of the Notts A.C. at Oakmoor.
Speed Trials of the Linca. A.C. at Grimsthorpe.
N. Middlesex A.C. speed judging competition for the Gamage Cup.
Essex C.A.C. hill climb at Bottledown Hill, Billericay.
- 14th (Sun.).—Monte Carlo hill climb for voiturettes.
Lincolnshire M.C.C. attends morning service at Gayton.
Lunch at Mablethorpe.
- 15th-19th.—Scottish Reliability Trial.
- 17th.—Close of Prince Henry Touring Competition in Germany.
- 18th (Th.).—Meet of the Cambridge A.C. at Hatley Park by invitation of Sir C. Hamilton.
- 20th (Sat.).—Meet of the Hull Auto Cycle Club and the Lincolnshire Motor Cycle Club at Brigg.
Annual Hill Climb of the Bristol and Gloucestershire A.C.
Lunch of the Kent A.C. at Dover.
- 27th (Sat.).—Saltburn beach races.
Baxton meet of the Manchester, Sheffield, and Lincolnshire clubs.
Members of the Cheshire A.C. will participate in the Gymkhana of the Manchester A.C.
Visit of the Essex C.A.C. to Audley End.
Meet of the Kent A.C. at Holwood by permission of the Earl of Derby.
- 28th. (Sun.).—Southend M.C. run to Grand Hotel, Clacton.

JULY.

- The Land's End to John o' Groat's Trial of the Auto C.C. will be held.
- 6th (M.).—Grand Prix A.C.F. (Voiturette section).
- 7th (Tu.).—Grand Prix A.C.F. on the Dieppe Circuit.
- 8th (W.).—Meet of the Cambridge A.C. at Wareley Park by invitation of Col. Duncombe.
- 9th (Th.).—Meet of the Ladies' A.C. at Hanworth Park, Middlesex.
- 11th (S.).—Provincial meet of the R.A.C. at Hereford.
Essex C.A.C. gymkhana at Brentwood.
- 16th (Th.).—Club meet of the Notts A.C. at the Hop Pole, Ollerton.
- 18th (Sat.).—Annual Gymkhana of the Herts C.A.C. at The Grove, Watford, by permission of the president, the Earl of Clarendon.
Gymkhana of the Kent A.C. at Maidstone.
Meet of the Liverpool and Cheshire A.C.'s at Delamere.
New Forest and Dorset A.C.'s joint hill climb.
Hill Climb of the Essex C.A.C.

LIGHTING-UP TIMES—LONDON.

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|--------------|--------------|---------|----------|
| May 30th—9.2 | June 1st—9.4 | 3rd—9.7 | 5th—9.9 |
| " 31st—9.3 | " 2nd—9.6 | 4th—9.8 | 6th—9.10 |

INCORPORATED INSTITUTION OF AUTOMOBILE ENGINEERS.

THE first session of the graduates' section of the Incorporated Institution of Automobile Engineers concluded on the 19th inst. with a lecture by Mr. William Gilchrist on "Coach-springs as applied to the Motor-car." By the courtesy of Messrs. James and Browne, Ltd., the meeting was held at Westcroft Works, Hammersmith, and the chair was taken by Mr. T. B. Browne. Mr. Gilchrist gave a short résumé of the history of coach-springs, which he illustrated by a number of drawings showing the development of coach-springs from the days of the cross-bow to the modern elliptic springs. He also presented a number of very interesting diagrams illustrating the evolution of coach-springs. The discussion was opened by Mr. L. H. Hounsfield. At the close of the proceedings a vote of thanks was accorded to Mr. Gilchrist for his lecture.

AUTOMOBILE ACCIDENTS.

A CHAUFFEUR employed by Viscount Downe gave evidence at the inquest at Kettering on Saturday with reference to the death of his child, Delia Frost, who was killed as the result of a motoring accident. Frost said that the car had been to London for repairs, and he was taking it back to Dingley Hall. His wife and twin children and a nurse girl were riding in the car, but he did not have Lord Downe's permission for them to do so. He did not see a sharp turn at the foot of the hill until it was too late to pull up, and the car dashed through a hedge. He had not travelled that way before, and was quite ignorant of the road. He picked up his child Delia and carried her to a cottage, but she lived only a few minutes. The coroner reprimanded Frost for driving at such a speed on an imperfectly known road. The jury returned a verdict of "Accidental death," and decided to call the attention of the County Council to the spot, at which several accidents had previously occurred.

A SHOCKING accident happened at Hove at midnight on Saturday to a young man named Harold Clifton, the hon. secretary of the Brighton and District Motor-cyclist Club. He was returning home on his motor-cycle, and whilst passing along the drive on the sea front he came into collision with a taxi-cab. A number of people at once went to his assistance, and he was conveyed to the Hove Dispensary, where it was found that his skull was fractured and he was otherwise seriously injured. Death ensued on Sunday afternoon.

BUSINESS NEWS.

By one post last week orders for 650 spare wheels were received by the Stepney Wheel Company, including one for fifty-two wheels for Java.

THE Stepney Wheel Company have taken premises at 168, Great Portland Street, W., which will be opened shortly as London showrooms. The primary object of this step is to facilitate the introduction of the new Stepney flange, for which the company expect an immediate success.

MR. P. B. BERESFORD-HOPE has written to the Mors Company giving particulars of a successful trip on his 28-35-h.p. Mors car. "We did much climbing in the Alps and she behaved splendidly. She is the first car that has crossed the Mont Cenis Pass this year. There was 15 ft. of snow, and though it was cut through, yet it was a most difficult task, and we were warned that it was impossible, but we got through all right."

MESSRS. JAS. THOMSON AND SON, Lady Lawson Street, Edinburgh, have been appointed sole agents for Scotland for the well-known Crypto accumulator charging plants. The firm are also sole Scottish agents for the lathes and machine tools manufactured by Messrs. Drummond Bros., of Guildford.

MR. W. S. COLLIS, of Dublin, writes that he has had his Beeston Humber in use for over a year, having covered some 5,000 miles, and that after expert examination nothing could be found requiring either improvement or repair. He adds that "I have never had any trouble with engine, gear, or differential."

MESSRS. MARTIN, of Bow Bridge, London, E., propose to hold regular monthly auction sales of second-hand commercial motor vehicles. These will be held on the first Thursday of each month at 11.30 a.m., commencing on Thursday next.

THE Isotta-Fraschini car which won the Targa-Floria race was fitted with and run on an Eisemann magneto, for which United Motor Industries, Ltd., are the British agents.

A FULL and interesting description of the new works of Messrs. Hans Renold, Ltd., at Didbury, near Manchester, commenced in the last number of "Engineering." Not only does this give technical information as to the construction of the new works, but it deals with the general question of chain driving as compared with belt driving in a very thorough way.

IN Wells Street, Jermyn Street, W., the Jermyn Street motor hire and repair works of Mr. Nicholas Lechmere are undertaking all kinds of motor repairs.

THE KEMPSHALL TYRE COMPANY OF EUROPE, LTD., 1, Trafalgar Buildings, Northumberland Avenue, London, W.C., have been advertising for 150 pneumatic tyre makers to make the Kempshall pneumatic non-skid rubber tyres in their Manchester works.

THE Motor-Car Journal.

VOL. X.]

LONDON, SATURDAY, JUNE 6, 1908.

[No. 483.]

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COMMENTS.



IT is generally understood in the locality that the intimation of the police to the Bristol and Gloucestershire A.C., that they will proceed against the drivers of any cars ascending the hill in their competition at a speed exceeding twenty miles an hour, was prompted by the speed at which cars have been travelling through the county of late. This has led to the abandonment of the proposed competition, and observant resident motorists are fearful lest the county police, who have hitherto maintained a considerate attitude towards them, may lead to an imitation of Southern measures. Around Cheltenham complaints have lately been very frequent, and suggestions from motorists in the county that visitors on cars should exercise care in travelling through towns and villages will, we hope, secure universal endorsement.

Dust Trials.

FURTHER trials with regard to the raising of dust by motor-cars are to be held on the Brooklands Track by the R.A.C. during the summer. The present intention is to divide the competitors into three classes, viz.:—(a) Makers' standard cars, (b) an inter-club competition for amateurs' cars, and (c) experimental vehicles. With reference to the Inter-club Competition, it is suggested that those organisations which intend to compete should prepare by arranging for a preliminary trial limited to their own members, so that the best cars in the club would be sent to Brooklands for the final test. Each competing club will be allowed two vehicles, and the prizes will be decided on the joint performance, and not on the best individual car. Owing to the vagaries of the weather, we have not heard so much of the dust this year as in some former seasons, but should the present spell of fine weather be protracted, there will doubtless be many reminders that the problem is not yet solved.

Needless Comment.

RUMOUR—which, we need scarcely remind our readers, is sometimes a lying jade—says that "the recent acceptance by Prince Francis of Teck of the position of chairman of the R.A.C. may be the beginning of a development which promises to revolutionise clubland, and may possibly have a marked effect on the hotel and restaurant life of London. The Club has bought the site of the old War Office in Pall Mall. Here a club-house on entirely new lines is to be erected. It will contain all the best features of the hotel de luxe. French styles will be introduced. Its reading-room will take the form of a winter garden. There will be a large number of bedrooms and a bathroom to each. Ample space will be devoted to the restaurant, which will be run on the same lines as the best ones in London. Banquets will be fairly frequent, and private parties will be a daily feature of club life. Members will be allowed to introduce ladies. Supper after a theatre will be a special attraction, for it will be enjoyed in peace, with no cry of "Lights out!" followed by a hasty scramble. One room, and one room only, will be consecrated to the old club life. Its furniture will be

entirely of mahogany and mulberry-coloured leather, its walls will be hung with cobwebs. The number of members will be increased to at least 5,000. The R.A.C. of the future will strike a death blow at the club as we know it to-day. The scheme and plans of the club are being closely watched in the catering world, more especially in view of the present Licensing Bill. It is obvious that in face of recent severe competition any further State-created restrictions must tend towards disaster. It is even possible that in the future some of London's hotels may form themselves into clubs simply from motives of self-protection." And there the rumour ends.

The Reliability of the Modern Car.

THE record of the marks obtained in the Irish Trial for reliability confirms the view we have previously expressed in these columns that the need for trials to prove the ability of cars to undergo tests of endurance is no longer of such importance as was the case a few years ago. Of the fifty-one cars that finished, twenty-four secured the full 850 marks obtainable, viz., the 10-h.p. Royal Starling, the 8-h.p. Rover, the 9-h.p. Adler, the 10-12 h.p. Swift, two 10-12-h.p. Humbers, 14-16-h.p. Argyll, 16-20-h.p. Calthorpe, 18-24-h.p. Swift, 18-22-h.p. C.C.C., 16-20-h.p. Stella, 20-h.p. Beeston-Humber, 20-h.p. Rover, 20-h.p. Cadillac, 15-h.p. Clement-Talbot, 20-h.p. Sunbeam, 25-h.p. Clement-Talbot, 18-24-h.p. Gladiator, 25-30-h.p. Austin, 10-12-h.p. Swift, 20-h.p. Cadillac, 14-22-h.p. Germain, 18-24-h.p. Gladiator, and 24-30-h.p. De Dietrich. Of the others only four were below 830 marks, thus evidencing an uniformity in reliability which is a great testimony to the present excellence of the automobile.

Who Pays?

A CURIOUS point has arisen at Leeds, where a chauffeur in the employ of the Corporation managed to get into a police trap on the Harrogate road at Moortown. This was operated by a couple of constables, who were, like the chauffeur, directly responsible to the Corporation. When the defendant was stopped he explained his official position to the constable, and told him that the car belonged to the Corporation and was engaged on important business for the Waterworks Department. That, however, did not assist his escape. In the police court the prosecution was led by Mr. Bateson, from the Town Clerk's office, who, when asked as to the ultimate persons to pay, suggested that the ratepayers, as employers, might consider themselves called upon to reimburse the chauffeur any costs he incurred in their service.

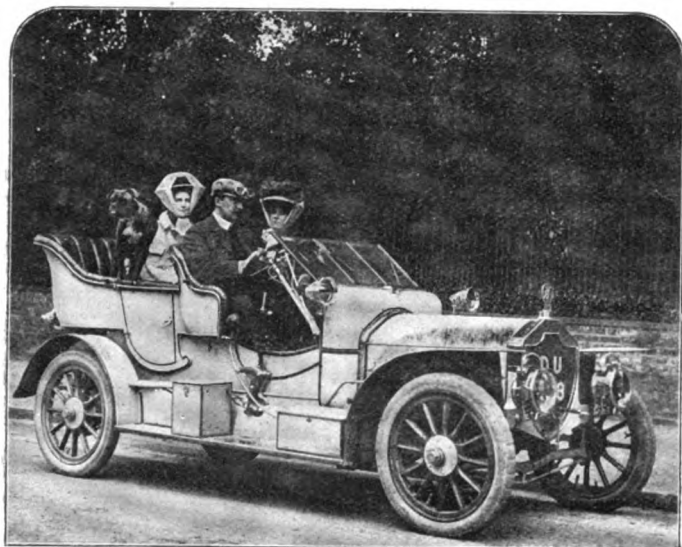
Reflecting Mirrors and the Rule of the Road.

AMONG the accessories which have recently met with a large degree of popularity in motoring circles is the reflecting mirror, which, placed in a suitable position near the driver, enables the latter to see any traffic that may be approaching from the rear. There is no question that the device serves a useful purpose, and it is one that might well find a place on all cars, and indeed on all classes of vehicles. As was pointed out in our Correspondence columns last week, the rule of the road is that drivers shall keep to the left in order

not to obstruct any other vehicles desirous of passing. While there are a few users of the road who seem to delight in holding to the middle of the highway, despite all signals, there are many others who do so unwittingly, owing to the ordinary hooter being often insufficient, on the country road, to give the necessary warning that a more speedy car is approaching and is anxious to pass. The difficulty is one which would be entirely overcome if, as we suggest they should, mirrors were regarded as a standard fitting on all motor-vehicles.

The Danger of Cap Throwing.

IN the course of a case heard the other day at West Hartlepool, in which a lad was charged with throwing his cap at a motor-car, the Chairman of the Bench, Alderman Wilson, remarked upon the danger of such an act, and gave an instance in support of his view. He mentioned that a boy had thrown his headgear at an automobile, with the result that it caught the exhaust pipe and set the vehicle on fire, doing damage to the extent of £500. Doubtless with the advent of fine weather the mischievous instincts of the modern boy will again be a feature of road touring, and motorists will be performing a general service if they take steps to bring such delin-



Mr. F. J. Jenkins at the wheel of the 20-h.p. Rover Car on which he won the Albert Brown Trophy.

quents before the Bench. Kindness is often misplaced when dealing with the gamin's attitude towards the motor-car.

Withholding Subscriptions.

WHILE we do not like the idea of retaliation on good causes, there is much to be said in support of the notion ventilated by Mr. Edmund Sharpe at a meeting of the Lancaster Regatta Committee. The Lancaster police and magistrates have shown little, if any, consideration for motorists. Traps and fines have been as familiar in the county as in a southern area, and things have come to a sorry pass. Few people, other than the police, are regarded as trustworthy in court, and the evidence of motorists is generally ignored or disbelieved. Thus it has come about that Mr. Edmund Sharpe, of Halton Hall, told the meeting referred to that he and other motorists in the district had resolved to take the drastic step of withdrawing subscriptions from all institutions and societies in Lancaster owing to the action of the county magistrates and as a protest against their persecution of motorists. They had no other method of retaliating than by bringing it home to the people of the district in this way. Mr. Turney, a town councillor, said that if a poll of the people of Lancaster was taken 95 per cent. would express similar opinions to those of Mr.

Sharpe. A few years ago a similar policy was advocated in Surrey; it will be interesting to watch the effect of such a plan if carried out, in Lancashire.

The Motor-Bus Again.

QUITE a number of attacks have been made upon the motor-bus, not only by the general public at Mile End, but also by the local authorities in the metropolis. At Stepney the Borough Council on Wednesday had a report from the Works Committee urging the reduction of the speed of such vehicles to ten miles per hour, and similar proposals were also before the Borough Councils of Chelsea and Fulham, whilst the Home Secretary is now making inquiries with regard to the motor-bus traffic in the areas beyond the City of London itself. On Monday, too, the Mayor of Holborn and a deputation from the Borough Council, over which he presides, interviewed the Commissioner of Police with regard to the number of fatal accidents which have lately occurred in Theobalds Road, with the result that Sir Edward Henry promised to have two officers always on patrol near Red Lion Street. At such points where tramcars join with the ordinary traffic of the street special regulations are undoubtedly necessary, and the public authorities have most important duties to consider.

The Touring Car Trial.

ON Whit-Monday the cars which have entered for the International Touring Car Trial will assemble in London; their fuel tanks will be filled on the afternoon of Wednesday next, and a start will be made at 9 a.m. on the Thursday morning for Nottingham. In our issue of April 11th we gave the list of entrants for both this event and also for the Scottish Reliability Trial, which forms a portion of the 2,000 mile pilgrimage upon which the cars will be engaged. Last week we published the itinerary, and it now remains but to hope that the present weather continues to enable something approaching the uniform excellent results of the Irish Trials to be attained. To the depot of the White Company in Carlow Street, Camden Town, N.W., the R.A.C.'s weighbridge, previously used for weighing the Tourist Trophy cars, has been taken from the Isle of Man for the purpose of weighing the cars, and it is of interest to note that the responsibility for seeing that the required number of passengers and amount of ballast are on the car at the time of starting rests with the driver.

Progress.

THE Automobile Club of Canada recently held a great gathering, which serves to emphasise the importance of the automobile movement throughout the world; for among the visitors was the Secretary of the Automobile Club of Buffalo, which claims to be one of the largest clubs in the States, with its 11,000 members. He told of a great motor-car convention to be held in his city in July, at which over 1,000 automobiles will parade the place. Mr. W. Dandurand, the pioneer motorist of Montreal, stated how, nine years ago, when his was the only motor-car in the city, he found the traffic blocked along his line of progress whenever he went out; then there were only seventy cars in New York—events, as well as cars, have moved rapidly since then.

A Police Mistake.

THAT the police are not infallible is a truism accepted by motorists generally, although it has proved somewhat difficult to secure its recognition from those who have had no dealings with the custodians of law and order. The other Saturday Sergeant Waghorn, whose fame is known far beyond the area of his county of operations, called on Mr. German, of Guildford Street, London, W., and served him with a summons alleging that he had exceeded the legal limit on the Brighton road. Mr. German denied all knowledge of the matter, and on the

succeeding Monday Sergeant Waghorn visited him again in company with another officer. Together they inspected the car and came to the conclusion that they had made a mistake. Thereupon they asked Mr. German to return the summons, assuring him that he would hear nothing more of the matter. The incident is interesting as illustrating the possibility of mistaken identity, and as showing that the police, even though armed with stop watches and other instruments of their craft, are not infallible.

The Motor as a Means to Health.

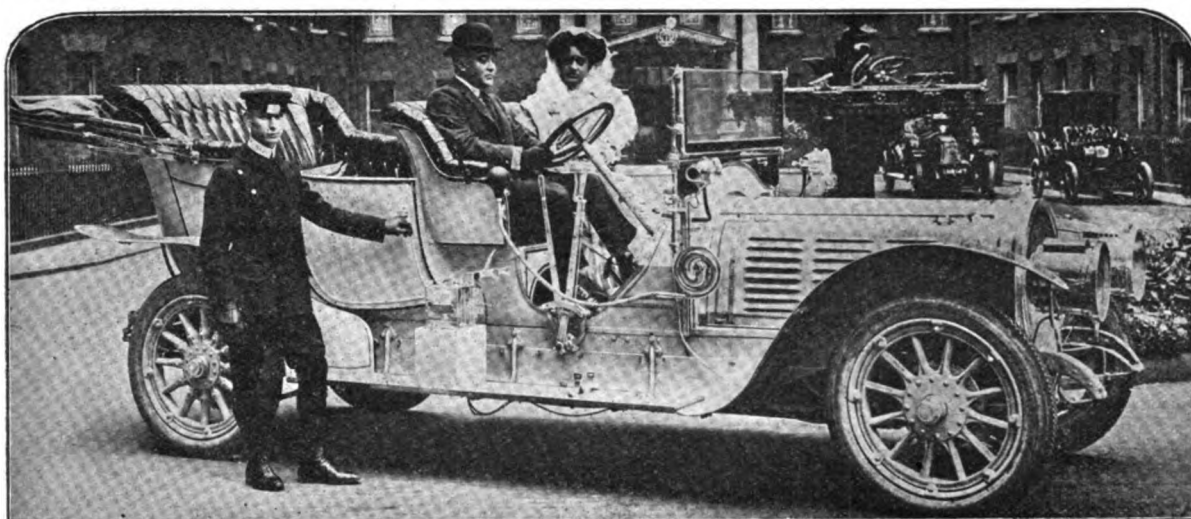
authorities of Battersea have employed tar macadam with such good results that a marked improvement has been noted in the public health statistics. The municipal officers have been watching the effect of tar paving in certain side streets of the borough, particularly those in which epidemic diarrhoea has been prevalent in past summers. In their annual report the Council state that there is no doubt that this paving is of great service

THE value of the motor-car as a direct aid to the enjoyment of good health is generally acknowledged; now its indirect utility is being officially recognised. To obviate the dust that it raises in its passage through their area the sanitary

will be satisfactory for this purpose and for holding down a heavy surface dressing, is a matter for the future to decide. On the whole, however, it seems to be agreed that the surface treatment of roads with tar is more of a palliative than a preventive of the dust nuisance.

Doctors and the Car.

MEDICAL men are among the most enthusiastic section of the automobile community, and so frequently use their cars when on professional errands that they are agitating for preferential treatment with regard to any alterations in motor-car taxation that may be proposed. So far it has been generally employed merely for the conveyance of the doctor, but from the United States we hear of a further adaptation which may be of interest to the many medical men who regularly read our columns. That an automobile and its searchlight equipment may become a very important aid to the country surgeon was proved in the case of Dr. Reid, of Rome, N.Y., who received a hurry-up call from fifteen miles out in the country to attend prepared to operate for appendicitis. Arriving at 6 p.m., after a half-hour ride, it was found that the condition of the patient was very serious, and an operation urgent. In the farm-



H.H. The Maharajah of Cooh Behar at the wheel of his 40-h.p. Six-Cylinder Delaunay-Belleville Car with his eldest daughter. The car, which was supplied by the Burlington Carriage Company, Ltd., who also built the body for the same, is painted French grey, trimmed in red leather and silver-plated mountings.

in the prevention of infection. Out of 35 streets imperviously paved, 10 are in North-West Battersea, and in that district the deaths from summer sickness were less in 1906 (the hottest and driest summer for several years) than in 1905. We trust the investigation will be carefully continued.

Combatting the Dust Nuisance.

SOME results are now to hand of experiments with tar as a dust preventive carried out by the Office of Public Roads in the United States. The road in Massachusetts selected for the purpose is part of the main thoroughfare connecting New York with Boston, and is located about sixteen miles from the centre of the latter city. Thirteen different trials were carried out, four with water gas tar alone, three with coal tar, three with mixtures of water gas tar and coal tar, and three with special tar preparations. Some of the conclusions are of interest. It has been shown that water-gas tar is a satisfactory dust layer and preventive when used in moderate quantities on roads already in fairly good condition. It must necessarily be applied more frequently than the heavier tars, owing to its lack of body. Where extensive repairs have to be made before treatment it has but little value as a binder for the large, loose material, and whether its use even in large quantities

house, as is usual, kerosene oil lamps formed the sole source of illumination—not light enough for conducting a delicate surgical operation. More light was essential, and a piece of rubber tubing was accordingly run from the automobile through the window into the room in which the patient lay. Then, removing one of the gas lamps, it was pressed into service in the improvised operating room. Turning on the gas, lighting the lamp, the resulting illumination permitted the successful carrying out of the operation.

ON Monday, in the House of Commons, Mr. H. Bottomley made a speech on the Budget, in which he asked "why had not a tax on motor-cars been proposed?"

A RECEPTION was held on Thursday at the formal opening of the Trevor Motor School and Information Bureau, 162, Great Portland Street, London, W.

THE list in connection with the Daimler Company's Scholarships is closed, and no further applications can be received for this year's competition. The arrangements for next year have not yet been decided upon.

A REPORT is to be presented to the Senate proposing that no Cambridge undergraduate be allowed to keep a motor-car unless he shall have previously obtained a licence from the senior proctor.

A HOLIDAY TOUR THROUGH THE ENGLISH NORMANDY.

UNDOUBTEDLY a feature of the Easter holidays was the striking popularity of motor touring. I can quite believe the report that over a hundred cars passed through Canterbury in a single hour on Good Friday, as I was one of a party that carried out an enjoyable run that way. The day was a delightful one, and the promise of fine weather must have tempted a number of motorists out, for on the Maidstone and Charing road there seemed a procession of cars. Personally, I should say the feature of the holidays was the number of cars with two-seated bodies. I suspect the fashion is set by Brooklands, for some number were of a racy type with little protection in the way of hoods and screens, and the fashion for the passenger's seat to be lower than the driver's, another racing idea, seemed general. I did not fancy, however, the sporting rig-out of one car that I noticed near Maidstone; the driver and two passengers were each seated on sugar boxes lashed to the chassis. The passenger at the rear sat over the differential and apparently had nothing more than the box to hold on to. It is hardly a standard type of touring body, but the luggage-carrying capacity of a sugar box may be points in its favour, apart from which it is cheap and certainly easily detached, and in these days of trade depression one cannot always pick and choose.

An early start has been made in tarring the Maidstone road, for on the outward bound trip we struck a long and freshly tarred stretch near Maidstone, a caution board at each end warning cyclists to this effect. Mr. Maybury, the county surveyor, promises that, by early summer, the whole of the road down to Folkestone will be tarred, and I think motorists ought to show their appreciation of this enterprising road treatment by patronising Folkestone. Already the road is given as a quiet tip to those in search of a really decent run, with nice scenery and roads, and who want to steer clear of traps. The stretch from Wrotham right into Maidstone is of a billiard-table smoothness, and is far in advance of the Brighton road. There are only a couple of towns *en route*, and a big point about Folkestone is the absence of any trams or buses. It is known as the "English Cannes," and it is really an excellent place. One can go there at any time of the year and find some amusement, which is more than can be truthfully said of many seaside resorts.

We stopped the first night at Margate, and, although it was a brilliant day on Friday, the weather quite changed the following morning. Didn't it blow along the front! The sea was quite choppy, and a nor'easter came right bang off the German Ocean. Up fairly early, we got the car out, oiled up, and filled with petrol and water, and were soon heading for Ramsgate along the tram road. We had our first adventure at Broadstairs, for they had been oiling the rails, and, although our pace was slow, the car executed a double movement and turned round, ending up on the pavement. Fortunately, no harm was done. Turning the narrow road into Broadstairs we had a rather alarming escape from cannoning another car. A stop for refreshments and to buy picture postcards and we were soon running along to Pegwell Bay, the favourite haunt of trippers, but this time we had the road very much to ourselves. The road through Deal and Walmer is excellent, and we made good time over this stretch. The stiff drop into Dover, where the afternoon was spent, was safely made, and after an inland *détour* Folkestone was reached early in the evening. We found plenty to eat and much to interest us, including the harbour, with a couple of cross-Channel steamers lying berthed in it, which made us bemoan our luck that we were not going over to Boulogne for a French tour.

The following morning we left Folkestone by way of Sandgate and Hythe, and soon struck the outskirts of Romney, a district which is by no means as well known as it deserves. The country is immortalised by Ingoldsby, and we found the road to Romney *via* Dymchurch in splendid order. The long straight stretches called for speed, though it is really too interesting a district to pass through rapidly. Old Romney is a

quaint little place, though there is a very sharp turn at the end of the village that calls for care. The road is winding to Brookland, and at its only inn we asked the landlord if there were any traps about, and as he did not seem to quite understand our query, we added, "Motor traps." "Oh, police traps! there's none of them in these parts; why, there's only two policemen for twenty miles round," was his reply. A heavy downpour caused an hour's stay at the inn at Brookland, but, as there was then no prospect of improvement in the weather, we started off again. The rain had ceased, but the wind roared over the marshes. We tacked over to Lydd in the teeth of the wind, and then visited one or two other marshland villages, presently sighting Rye in the distance through the mist.

Rye is a nearer approach to a French village than any other town or village I know of. It is French every bit of it; French in the straight road lined with tall poplars on each side, which leads into it from the marshes. You can see Rye for miles away over the green level lands at first rising like a tall ship on the horizon, then a confusion of towers and gables, cutting the sky line, and at last, when you are quite near, a little tiny town set upon a hill, of red houses with red roofs, of tall, solemn houses, each of a different style, built round a great church, whose high red roofs and tower seem to occupy the picture with a sense of completion and repose. There are fragments of old walls, too, a wooden gabled house, high-pitched stone houses of an older time, the old town walls, which once the sea surrounded; the Ypres gate, in the crevices of whose towers so many weeds have made their habitation. You can see the long levels of rich green grasses extending for miles ahead, the miniature port in the distance, with the masts of the little ships peeping over the houses, and beyond, filling the horizon, the large and spacious Channel, blue and sparkling in the sunshine, with the great ships sailing over it, all as if woven of the stuff of dreams.

Such is Rye in the summer time and fine weather. In the storms and winds of the Easter which has just passed it presented another vision. The great space of level land lay under brooding clouds. The winds that blew in from the Channel tore and beat through the narrow streets and clamoured round the old church tower; sometimes the sand was swept for miles in great blinding storms across the marshes; sometimes the sheets of rain obscured the grey distance. And across the plain at such times there always comes the dull note of disquietude, the note of pain, the sound of the moaning of the restless awakened sea, hungry for the lives of men.

Leaving Rye, we steered along the strand facing the canal to a toll gate, where we were relieved of sixpence. The way then led along a straight road terminating in a very sharp pull to Winchelsea, and through Guestling into Ore, and the long drop into Hastings; the last ten miles from Winchelsea are especially interesting, though much more enjoyable on a fine summer day, when the views are really grand. We stayed the night at Hastings. The return run the following day, *via* Bodiam, Flimwell, and Tunbridge Wells, calls for little comment, apart from the snowstorms and absence of any other traffic save motors and cycles.

Despite the weather the trip was pronounced most enjoyable, and it was certainly bracing. The route outlined is quite sufficient distance for a holiday tour under unfavourable weather, and, apart from the absence of traps, I can recommend Romney and Rye as places well worth a week-end visit.

S. B.

At the Westport Works, Cupar, Fife, Mr. Roland Outhwaite has a motor garage and repair works, from which he also lets cars out on hire.

THE question as to whether owners of motor-cars should contribute towards the cost of repairing the damage on roads occasioned, or alleged to have been caused, by them is to receive the consideration of the Local Government Board. Such, at least, was the reply of the new Parliamentary Under-Secretary, Mr. C. F. G. Masterman, to a question by Mr. J. R. Clynes in the House of Commons a few days ago.

GOSSIP FROM PARIS.

THE Marquis de Dion, the champion of automobilism in the Chamber of Deputies, has already in his portfolio more than a hundred thousand signatures against M. Barthou's obnoxious Automobile Traffic Bill, and before the projected measure comes on for discussion he will certainly have received so many more petitions that if it were necessary to produce them at the tribune he would require an automobile van to carry them to the Palais Bourbon. Fortunately the agitation which followed the presentation of the Minister's bill to Parliament had the desired effect of inducing the Public Works Committee, to which it was referred, to amend the measure in a liberal spirit. It will, therefore, be quite sufficient for the Vice-President of the Automobile Club of France to announce the result of the petitioning to his colleagues of the Chamber. There are still in the French Parliament a few obstinate adversaries of the new means of locomotion who regret the remodelling of M. Barthou's Bill, but the efforts they will doubtlessly make to restore the original text are destined to failure.

THE amended Bill is not perfect, but the driver of an automobile will not, as it was at first proposed, be liable to have his licence withdrawn by a police magistrate or a justice of the peace for the infringement of the regulations concerning the escape of smoke from the exhaust pipe or for a lamp being extinguished, perhaps accidentally or unknown to him. No, to be deprived even for a day of his driver's licence a motorist must have committed a sufficiently serious offence to have entailed his condemnation by the Correctional Police Court. Then the long list of public servants who were to have been empowered to note legally infringements of the traffic laws and regulations is reduced to the engineers of the Ponts et Chaussées and the gendarmes and ordinary police. On the whole, if, as seems likely, the amended Barthou Bill is adopted in its present form, French motorists will not have much to complain of, especially as it is almost certain to be made a stepping-stone towards the complete reform of the highway laws affecting not only horseless but all kinds of vehicles.

BEFORE placing their money on any particular man or machine as the winner of the A.C.F. Grand Prix, run on July 7th, sportsmen should glance at the betting list of the Agents de Change and Coullissiers of the Paris Bourse, who are for the most part fervent motorists. I advise British sportsmen, however, not to pin their faith implicitly on the French boursemen, who are just as liable to error in their predictions on sporting events as they are in their indications concerning the probable rise or fall in the price of speculative securities. Yet their list, even as it now stands six weeks before the event, is interesting. Nazzaro and Théry, who will drive respectively a Fiat and a Brasier car, are the favourites. They stand at 15 to 1. Rigal and Duray (Clement-Bayard and Lorraine Dietrich) come next at 18 to 1. Hemery and Wagner (Benz and Fiat), 19 to 1. Hauvast, Cagno, and Lancia (Clement-Bayard, Itala, and Fiat), 20 to 1. Siz (Renault), 25 to 1. Salzer and Baras (Mercedes and Brasier), 21 to 1. Gabriel and Jenatz (Clement-Bayard and Mors), 30 to 1. None of the other drivers find backers at the present moment at less than 50 to 1, and in some cases nobody will back them at any price.

THE bet made at the dinner given at the Cafe de Paris on March 9th last is already gained! So recently as eleven weeks ago the possibility of flying a kilometre with two persons on an aeroplane was regarded as so problematical that M. Charron wagered 12,000 francs against 6,000 francs put up by Messrs. Archdeacon, Santos Dumont, and Henry Farman that it would not be achieved within twelve months. The telegram I received from M. Archdeacon, dated Ghent, May 30th, told me that, seated beside Henry Farman on his aeroplane, he had covered 1,236 metres, or close on one kilometre and a quarter, and that nothing but the dimensions of the field prevented a much longer flight.

On the same day, at Rome, M. Delagrange remained in the air on his aeroplane no less than a quarter of an hour and 26 sec., thus beating all his former records of time and distance. Any one who only a year ago should have predicted such events would have been dubbed a madman. But those flights have been made here in Europe in the presence of thousands of people, and everyone must admit they are calculated to dispel incredulity in the reported performances of the Brothers Wright in America. All that twelve months ago seemed still to belong to the realm of imagination now appears within reach in a near future.

MR. WILBUR WRIGHT is in Paris, and the French need not be greatly surprised if he should not only accept Farman's challenge, but, after beating him, set to work to win the Michelin prize of £4,000 by flying from Paris to Clermont Ferrand, a distance of 237 miles, as well as the prize of £5,000 for a flight from London to Manchester, a distance of about 180 miles. Then there is the flying machine Mr. Herring is building, and which, if it realises half the expectations of its already celebrated inventor, will throw even the Brothers Wright's aeroplane into the shade. I have within the last few days conversed with quite a number of Frenchmen more or less directly interested in aviation, and I found that much of their former scepticism has given way to confidence in the Brothers Wright's achievements.



The 40-h.p. Lorraine-Dietrich Limousine which was last week driven from Paris to Moscow in record time by Messrs. Sorel and Rougier.

It may be taken for a certainty that if only the American aviators on their machine, together or separately, make their promised public demonstration that they have really solved the problem of equilibrium in the air, they will receive an ovation the cordiality and heartiness of which they will never forget.

MARNEY.

THE new list for 1908 issued by Messrs. Chater Lea, Ltd., of 114-120, Golden Lane, E.C., comes at an opportune moment for those who are overhauling their machines for the coming season. The pages are arranged in such a way as to facilitate reference, the information relating to similar types of accessories being kept together where possible. Every variety of spare part is illustrated, and the Fafnir, Minerva, J.A.P., and the Sarolea engines for motor-cycles also find a place in these pages.

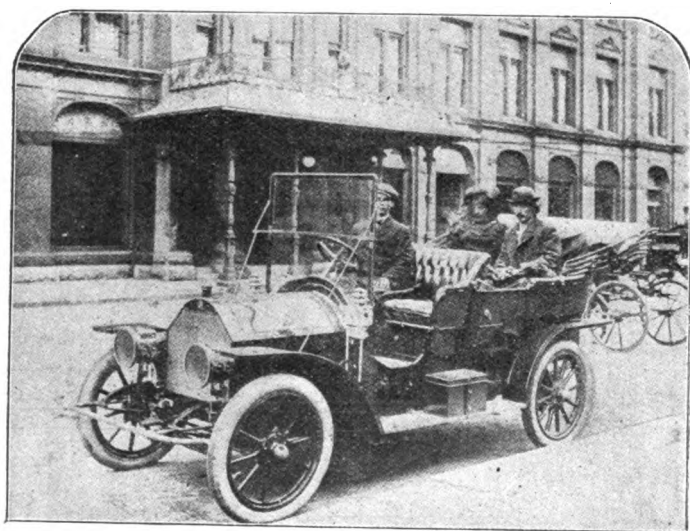
WE have received the first number of the Architectural and Topographical Record issued by the Society of that name, which has been formed to make a survey of objects of architectural and archaeological interest in the British Islands. The work should be of interest to the many motorists who visit places which are beyond the beaten track or the usual line of railway communication. Examples of the exhaustive character of the work are given in the way in which certain parishes in Dorset and Kilkeny are dealt with in the journal before us.

B

NOTES FROM BOURNEMOUTH.

WITH the continuance of sunny skies and balmy air there has been a large influx of motorists into Bournemouth, which, if it ever merited the apt description applied to it by Mr. William Mate as the evergreen valley, does so more particularly at this period of the year. Indeed, Hampshire during the past fortnight has been visited by more devotees of the automobile than ever before. Many of those who came for the recent Motor Union gathering from the more distant parts have made Bournemouth their headquarters whilst making tours into the New Forest, with its ever-changing scenery, or else into Dorset.

THE recent rains have come not only as a blessing to the agriculturists but also to the motorists. The main roads, however, owing to the heavy traffic, are still in a dusty condition, and further showers would be most welcome. Amongst the visitors who have recently garaged at the Imperial, of which Mr. North Brown is the manager, were Mr. F. E. Cobb, Hove (Minerva), Mr. W. M. Burnham, Brixton Hill, London (Dennis), Mr. E. R. Martin, Henstaff Court, Glamorgan (Siddeley), the Rev. T. Knapp, Cranborne (Darracq), and Major Murray, Lymington.



Paderewski, the famous pianist, starting for a motor excursion in Detroit, U.S.A.

THE Whitsuntide attractions in Bournemouth include a fête on an extensive scale, in which one of the principal features will be a motor gymkhana at Boscombe Manor Park, by permission of Lord Abinger, the proceeds being devoted to the building fund of the Royal Boscombe and West Hants Hospital. A distinguished company of motorists is expected to take part, and the gymkhana is held under the patronage of Lord and Lady Abinger, the Countess of Malmesbury, Lady Manners, Lady Meyrick, Lady Alabaster, the Right Hon. Mrs. Robinson, and many other county ladies and gentlemen. Motorists who propose to visit this resort during the holiday will do well to drive with care, as it is rumoured that the police in the county are already preparing themselves for those unsuspecting drivers who exceed the statutory speed limit. The 220 yards "traps" is the area that will be marked out, because certain difficulties are foreseen if the long distance suggested by Major Lang, of the East Sussex Constabulary, were tried in Hampshire. **WESSEX.**

IMPRESSED by the courtesy of the A.A. scouts whom he has met on the road when coaching, Mr. Vanderbilt has just joined the Automobile Association.

TENDERS for the petrol motor fire tender escape for the Dundee Fire Brigade should be delivered to the Town Clerk by noon on Tuesday next.

CONTINENTAL NOTES.

The A.C.F. Grand Prix Race.

The entry list for the light and heavy car races for the A.C.F. Grand Prix, which are to be held on the Dieppe circuit on July 6th and 7th, was finally closed on the 1st inst. In the light car section late entries were a Certus friction-driven car entered by the Certus Company, Ltd., London, and a Demeester, bringing the total number of competitors in this event to sixty-four. As regards the heavy cars the three Mors cars have now been definitely entered, the total being thus increased to forty-nine. France will thus be represented by twenty-four cars, Great Britain by six, Germany by nine, Belgium by three, Italy by six, and the United States by one.

The St. Petersburg-Moscow Race.

The annual motor-car race organised by the Moscow section of the Russian Automobile Club was held on Monday last, the course this year being from the outskirts of St. Petersburg to Moscow. Altogether thirty-two entries were received, these being divided into five categories. The start took place at 1.30 a.m., the powerful cars in which the interest was mainly centred being sent off first. The competing vehicles in this class comprised a Darracq, a Benz, a Fiat, an Argus, a Berliet, an Itala driven by Mr. H. R. Pope, a Mercedes, and three Lorraine-Dietrichs, the drivers being respectively Messrs. C. Jarrott, Duray and Rougier. The contest resulted in a victory for the Benz, which, driven by Hemery, covered the distance of approximately 430 miles in 8 h. 30 min., Demogeot on a Darracq being second in 8 h. 42 min., and Pope (Itala) third. Jarrott was unable to finish owing to a mishap to his car.

British Motorists in France.

The numerous British tourists who may propose to motor from Paris to Normandy will be pleased to learn that they can for the future take the direct road on the right bank of the Seine, passing by Pontoise, Magny-en-Vexin, Thilliers, Ecouis, and Boos, the pavé having been removed since May 1st between Pontoise and Magny. Recent British visitors to France include:—Mr. and Mrs. H. E. Hooper (45-h.p. Mercedes), Mrs. Steward Clerk, Edinburgh (35-h.p. Mercedes), Lady Fitzgerald (35-h.p. Renault), Captain Clyde (50-h.p. Panhard), Lord and Lady Armstrong (30-40-h.p. Mercedes), Mr. and Mrs. Harry Buddison, London (30-h.p. Daimler), Colonel and Mrs. Doncaster (40-h.p. Daimler), Mr. and Mrs. Greatorex, Shrewsbury (18-h.p. Napier), Mrs. Holdsworth, of Westward Ho, Devonshire (58-h.p. Daimler).

Motor Racing in Spain.

Considerable interest was shown in the race for light cars which was held on the 27.8 kilometre circuit near Barcelona on the 28th ult. The event, which was known as the Copa Catalunya, was open for cars with single-cylinder engines up to 100 mm. bore, and weighing (empty) 500 kilogs.; and ditto with two-cylinder motors up to 80 mm. bore, weight 600 kilogs.; and three four-cylinder engines, maximum bore 65 mm., weight 650 kilogs. Nineteen entries were received, and of these fifteen started in the race, which was over a distance of 250 kilometres (nine laps). The winner proved to be Giuppone, who on a Lion-Peugeot covered the 157 miles in 4 h. 23 min., Brousserolles on a De Dion being second in 4 h. 31 min., and Rodriguez on a Lion-Peugeot third in 4 h. 34 min. Six other cars finished—a De Dion, three Lion-Peugeots, a Fouillaron, and a Werner.

The French Industrial Vehicle and Motor-Cab Trials.

The reliability trial of industrial vehicles and motor-cabs, organised by the French Automobile Club, which commenced on May 1st, came to an end on the 31st ult., during which period a distance ranging from 3,035 to 4,006 kilometres, according to class, had been covered. Altogether thirty-six vehicles started in the industrial vehicle section and eleven in the motor-cab class, the numbers finishing being, respectively, twenty-seven and ten, as follows:—Class 1, a Contal tri-car; Class 2, a Pan-

hard; Class 3, a Lorraine-Dietrich, a Panhard and a Brouhot; Class 4, a Peugeot, a De Dion and two Berliets; Class 5, a Vinot-Deguingand, a Panhard, a Saurer and two Berliets; Class 6, a Lorraine-Dietrich, a De Dion, two Bretin-Cohendets, a Saurer and a Berliet; Class 8, a Lorraine-Dietrich, a De Dion, a Peugeot and two Berliets; Class 9, a Lorraine-Dietrich and a Saurer. Motor-cabs: A Bayard-Clement, three Brouhots, a Doriot-Flandrin, a Gladiator, two Brasiers, a Prod'homme de Poorter and a Lethemonnier. The judges are now busily engaged in working out the awards.

The Florio Cup Race.

The Automobile Club of Bologna (Italy) is busily engaged in the organisation of the circuit on which the Florio Cup race will be held on September 6th next. The contest will be held on a 53-kilometre circuit, which takes in Borgo Panigale, Castelfranco, Santa Agata and San Giovanni, and which will have to be covered ten times, making a total of 331 miles. The event is reserved for cars with engines of a bore of 155 mm. in the case of four cylinders, and 127 mm. in the case of six cylinders. Five prizes are offered, comprising the Florio, Salemi, Italian, Estoro and Bologna cups. The A.C. of Bologna has made arrangements

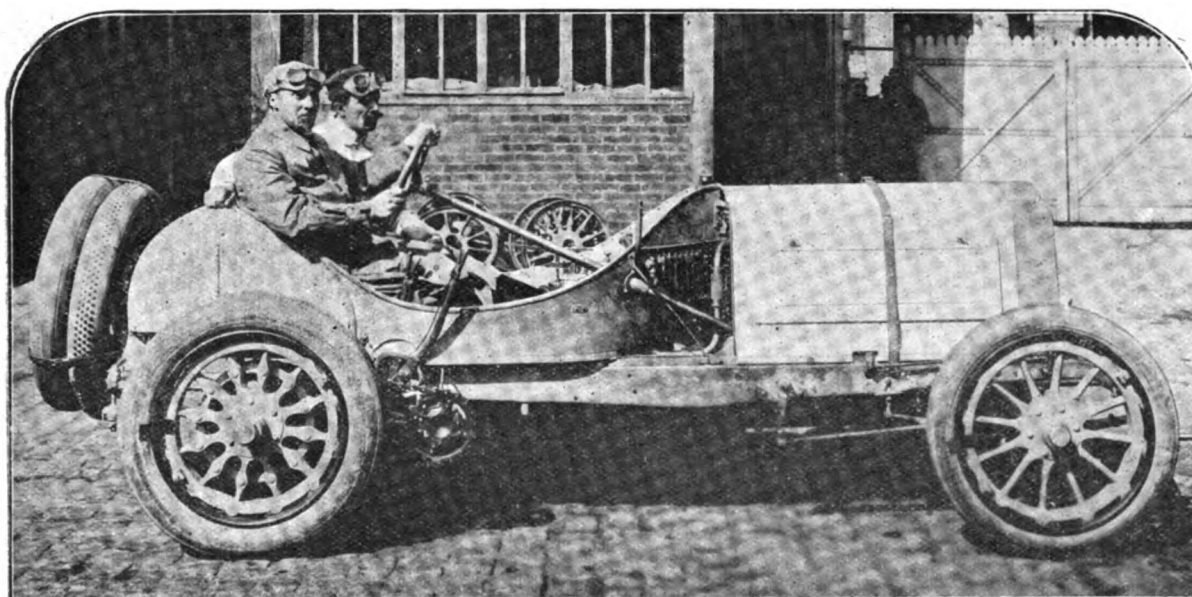
there has been a falling off in the shipments to practically all the leading markets, the decline in the case of England being from £917,520 to £756,400.

Public Services in Austria.

A public motor-car service has just been inaugurated between Pardubitz and Bodhanec on the one hand and between Pardubitz and Holice on the other. Four 35-h.p. single-deck 'buses have been built for the service by Messrs. Laurin and Klement, of Jungbunzlau, Bohemia. A view of the vehicles is given in the accompanying illustration; it will be noticed that one of the 'buses is provided with a two-wheeled trailer, which is to be employed in transporting the products of the many shoe-making establishments in the Pardubitz district.

The Ardennes Circuit Races.

It has been decided by the Sporting Commission of the Belgian Automobile Club that the Circuit des Ardennes race shall be held on the Bastogne circuit on August 12th. Entries at £200 per car will be received up to June 15th, and at double fees to July 30th. The annual Coupe de Liedekerke contest will be held over the same circuit and on the same day, but at an earlier hour.



Jenatzy at the wheel of the Mors Car he will drive in the A.C.F. Grand Prix Race.

to have the entire course perfectly tarred for a width of fifteen feet. The work is to be completely finished by August 29th, so as to give competitors a chance of making themselves acquainted with the circuit.

Motor Cabs in Vienna.

It is reported that the municipal authorities of Vienna have granted a concession to a British firm to operate motor taxi-meter cabs in the Austrian capital for a long term of years. It is expected that the services will be commenced in October next with three to four hundred cabs.

French Motor-car Imports and Exports.

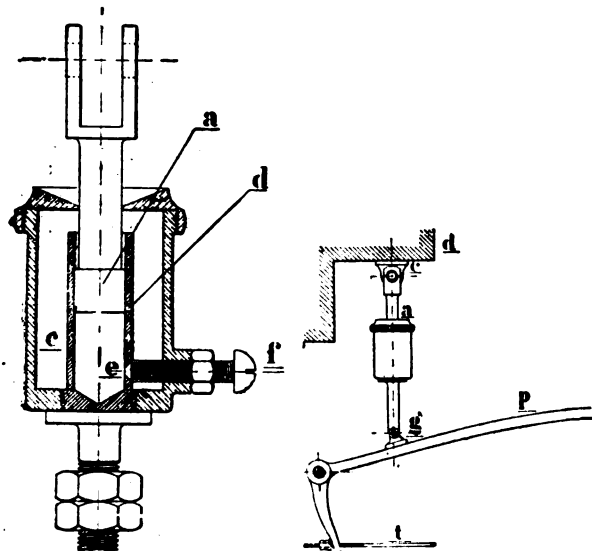
A return just issued shows that the value of the foreign motor-cars and parts imported into France during the four months ending with April last only amounted to £82,760, as compared with £112,280 in the corresponding period of last year. As regards the exportation of French motor-cars and parts, the serious shrinkage which set in at the beginning of the year is still the predominant feature. The aggregate exports during the four months lately ended only totalled £1,675,280, as contrasted with £2,077,520 in the corresponding period of 1907. With the exception of the United States, Spain, and Russia

Miscellaneous Items.

Strang, with the Thomas racing car, on which he will take part in the A.C.F. Grand Prix contest, reached Havre from New York on the 29th ult.—A public motor-car service is about to be started between Laigle and Vermoutieres (Orne) France.—The Automobile Club du Rhone is organising a series of flying kilometre speed trials on the roads between Chers and Anse, for June 21st.—The annual automobile meeting at Ostend is to be held about the middle of July.—Motorists passing through Ville d'Avray, near Paris, will do well to remember that a speed limit of 7½ miles per hour is now being enforced, and that the use of sirens and exhaust cut-outs is forbidden.—The French post and telegraph authorities are at present inviting tenders for the transport of the mails by motor-cars between Pont de l'Arche and Lyon la Foret.—The Mont Cenis hill-climbing competition, which was to have been held on June 14th, has been postponed until the 21st.—The Forezien Automobile Club held a hill-climbing competition near St. Etienne on Sunday last, when the best time of the day (18 min. 31 sec.) was made by M. Deydier on a Cottin-Desgouttes car.—A Syndicat de Defence des Interets Automobiles has just been formed at Nice.—The Belgium State Railway authorities are about to make some experiments with motor-vehicles in connection with their express parcel delivery service in Brussels.

A REMEDY FOR FIERCE CLUTCHES.

WHILE the majority of clutches on modern motor-cars are exceedingly smooth in their action, the main object in nearly all the recent improvements in clutches that have been made has been to obtain a smooth engagement when the engine takes up the load from rest. Skilful drivers never have been wont to complain of the performance of the leather-lined cone clutch in this respect, nor have they habitually failed to obtain good running results with it. Hence it would appear that, in many respects, some device calculated to ensure the same method of engagement by amateurs as is used by the



Figs. 1 and 2.

skilled driver would go a long way toward solving the problem of smooth and progressive clutching of the load, regardless of the type of clutch employed.

One of the most obvious expedients which could possibly be employed in this connection is the use of the plain suction dash-pot for checking the motion of engagement, and ensuring its progression at a stated rate. Such a system has been recently introduced by the firm of Outhenin Chalandre, of Rue de Chartres, Neuilly-sur-Seine, France. It comprises nothing more nor less than a small attachment which may be connected to almost any form of clutch, and which serves merely to check the rate of engagement according to the adjustment of the escape valve upon which its action depends. From the sectional drawing, Fig. 1, it will be seen that the device consists principally of a small cup or shell, c, fitted with a screw top and containing a small cylinder, d, mounted centrally within it in such a way as to leave an annular space within the outer shell, this space being filled with oil. The plunger, a, is connected by means of its forked end with some movable portion of the clutch-actuating mechanism, while the shell is attached permanently to the frame of the car. A small orifice, e, in the side of the inner cylinder permits a certain amount of the fluid contained in the device to circulate as the plunger moves up and down, until the latter closes the opening. Thereafter the flow between the cylinder and the outer space must take place through the small hole, e, which is regulated in area by means of the screw, f, and its lock nut.

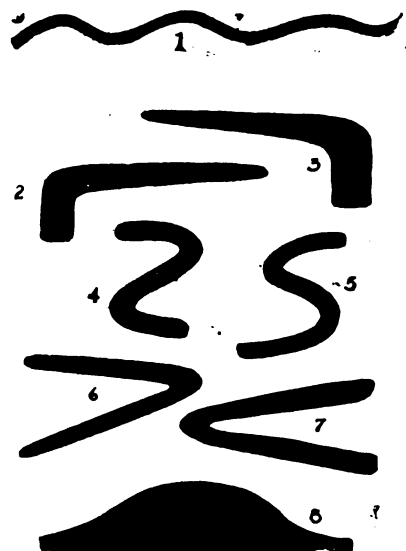
Attached to a clutch of the familiar Panhard type, the arrangement is as shown in Fig. 2, P being the piano-type of pedal, t the actuating arm connected to the collar which disengages the clutch, and l the arm, to which the regulator a is attached by means of its plunger. The shell of the device is mounted on the dashboard of the car, as shown, and is articulated to provide for a certain amount of radial movement.

When the clutch is to be engaged, instead of releasing the pedal gradually, as must be done ordinarily, the operator merely lifts his toe entirely clear of the pedal, permitting the spring to draw in the clutch until the small orifice in the cylinder of the

device has been passed by the plunger, when the resistance to its motion becomes sufficiently great to slow it down to the desired rate. Thereafter, the engagement proceeds at a controlled speed and is rapid or slow, according to the adjustment of the regulating screw. The action is precisely the same as is employed in the ordinary form of hydraulic door check. The acceleration of the car from a condition of rest is thus regulated to a uniform degree, and all starting jolts and shocks eliminated.

SIGNALS FOR ROAD RACES.

THE course on which the recent Briarecliff Trophy race in the United States was held was, judging from the photographs that have reached this country, an extremely dangerous one, and it is, perhaps, very largely due to the very complete system of signals employed that the number of accidents was not considerably larger than it was. In the accompanying sketch are reproduced a few of the signals employed, these being painted on large streamers hung across the road some distance before the places to which they bear reference. In No. 1 the wavy black line is the signal for a meandering wavy course ahead, which admirably indicated the tortuous courses around the lakes, hills, water reservoirs, and streams. No. 2 indicates a 90-deg. or right-angled turn to the right; No. 3 a similar turn to the left. In interpreting all these signs start at the bottom and read upwards. Nos. 4 and 5 are S turns, the first one showing the turn to be first left, then right, followed by a final left; whereas in No. 5 the turn is first right, then left, and lastly right. Signals Nos. 6 and 7 are for turns sharper than right angles, and which can be used down to the most acute hairpin, the only difference in the sign being the size of the angle, which is less according to the acuteness of the turn. No. 6 is a hairpin turn to the left, and No. 7 one to the right. Sign No. 8 signifies a bridge, the graphic nature of it being much in conformity with the general conception of a bridge, so much so that scarcely an amateur seeing this signal for the first time but recognises it. The "Motor Age," to which we are indebted for the illustrations, suggests that the signals might form a



standard for adoption in all important motor races, so that any possibility of confusion as to the interpretation of the signs employed might be avoided.

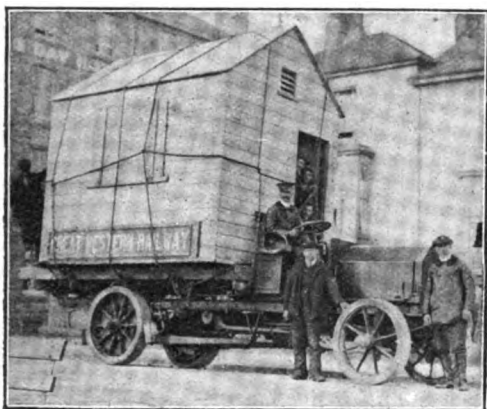
At the Bridge of Allan, Perthshire, Messrs. Menzies Bros. have a garage and motor works well equipped for repair work for cars.

MESSRS. BARTLETT AND SHANKS have removed to 17, Little Kings Street, Camden Town, N.W., where, besides the repairing and overhauling of motor-vehicles, they are making a speciality of the modernising of second-hand cars.

THE UTILITY MOTOR.

CORNWALL, made famous by artists and writers, is brought more accessible by the motor-car. Those who journey thither by automobile find many hills in the county, but none so high as in the neighbouring county of Devon. It has fairly good roads when allowance is made for the fact that the population is somewhat sparse; most of the surface is good. The main artery originally was the Fosseway, crossing the river Tamar from Dartmoor and cutting the Bodmin moors to Marazion.

Not only are privately-owned motor-cars finding their way into Cornwall in increasing numbers, but the railway company



is adding public service vehicles to its equipment for travellers. In fact, the Great Western Railway Company is depending on motor services for many purposes, and by the permission of the editor of the excellent organ of the company, the G.W.R. Magazine, we are able to illustrate a novel use for the motor vehicle that has lately been found between Newlyn and St. Ives.

Newlyn is a little place only a mile away from Penzance, and has received prosperity from its fish and its painters—the former attracted by the nets of the sturdy Cornish fishermen; the latter by the quaint grouping of old cottages and other delightful features of the village. Both Mr. Stanhope Forbes and Mr. Frank Bramley have painted in the place. Penzance is very different to Newlyn, and is the largest town in Cornwall, with a long lineage, for Defoe found it a town “well built and populous,” while earlier writers knew something of its sound foundation.

The illustration shows an exceptional load recently conveyed from Newlyn to St. Ives, a distance of thirteen miles, by the G.W.R. goods motor lorry attached to the Penzance motor depot. The structure was a fish office, which it was required to move from the little village to the little town. The wooden hut is 13 ft. high, 11 ft. 6 in. long, and 8 ft. wide. It was removed complete as it stood with desks, fittings, &c., intact. Practically the only difficulty experienced with the load was in passing the narrow streets of St. Ives, where at one point it was necessary to take down a street lamp in order to avoid a hazardous passage. The incident is interesting as showing the universal utility of the motor.

An engineering firm which has gained considerable prominence in the motor industry is Messrs. Webster and Bennett, Ltd., of the Atlas Works, Coventry, who have for some years devoted special attention to the production of high-class machine tools for use in connection with the construction of automobiles. The firm have sent us a copy of a new sectional catalogue they have just issued, which deals exclusively with vertical boring and turning mills, of which they make a speciality. The list is very complete, the descriptions being accompanied not only by illustrations giving general views of the various machines, but also of some of their applications. Thus one depicts a boring mill being employed in machining up a flywheel, and another in boring the cylinder of a petrol motor.

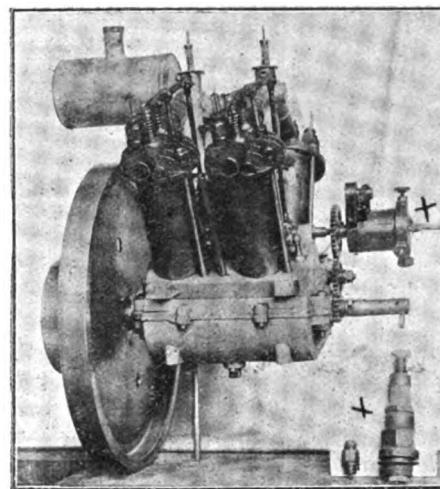
SOME CURRENT TOPICS.

Oil on the Roads.

Even among the ranks of motorists few will, I fancy, be found inclined to disagree with the recent action of the police in prosecuting motor-bus drivers for allowing their vehicles to shed thick black oil on the road. For some time it was a question whether the drivers could be held responsible for the nuisance, but finally it was found that they could be summoned for contravening the bye-laws framed under the Public Health Act, 1891. These being the first cases in the City, merely nominal fines were imposed, the Lord Mayor expressing the opinion that the bus companies were as much responsible as the drivers and that they ought to indemnify the men in respect of the penalties incurred. Most buses are now fitted with trays to catch any escaping oil, and while these have no doubt helped to keep down the nuisance there are still many points at which motor-buses congregate where the road is not merely bespattered with oil, but on which are small pools of thick dirty grease, which is extremely dangerous to pedestrians. It was hoped that the supersession of horses by automobiles would result in rendering our streets cleaner, but, judging from experience, it would seem that the oil-droppings from motor-buses are quite as obnoxious, if not more so, than horse droppings, and it is to be hoped that the action of the police will quickly put a stop to the nuisance.

A Miniature Four-cylinder Engine.

The accompanying illustration depicts what is claimed to be the smallest and lightest four cylinder engine in the world. It was built by Mr. D. Stanger, of Tottenham, for experimental aeroplane work. The motor is of the V type, with steel cylinder $1\frac{1}{2}$ in. bore by $1\frac{1}{2}$ in. stroke, and develops about $1\frac{1}{2}$ h.p. at a speed of 1,300 revs. per minute. The ignition is by single coil and distributor; a float feed double carburettor is fitted; some idea may be gained of the size of the engine by comparing it with an ordinary sparking plug. I learn from Mr. Stanger that the



engine easily drives a two foot diameter propeller (set at an angle of 30 deg.), at 1,300 revs. per minute. The weight of engine complete as illustrated is 8 lbs. ARCANUM.

In addition to their triple-jet carburettor, Messrs. Trier and Martin, Ltd., of New Church Road, Camberwell, S.E., have lately introduced a new synchronized ignition system, which can be used with either a trembler or non-trembler coil—one for each cylinder. The feature of the method is the employment of a low-tension distributor in series with a single positive make-and-break. The chief advantages claimed for the arrangement are that no high-tension distributor is required, and that only one positive make-and-break is employed. Furthermore, by using one coil for each cylinder, total breakdown, due to collapse of coil, is rendered impossible, while, owing to the fact that there is no sparking at the distributor, wear is reduced to a minimum.

AN EXHAUST DEODORISER.

THERE is still a large section of the public who regard motor-buses, motor-cabs, and in fact all automobiles, as evil smelling abominations. While there has been during the past twelve months a considerable diminution in the obnoxious smoke given off by motor vehicles, due to improved methods of lubrication, there are still some machines on the road to which the opprobrious term is not misapplied, while even the best behaved 'bus will at times demonstrate its annoyance at an overdose of lubricating oil by a visible and noisome cloud of smoke. A somewhat novel method of coping with the difficulty, that of deodorising the exhaust by means of the cylinder cooling water, has lately been brought to our notice; it has been worked out by Mr. W. R. C. Wakley and Mr. R. Parsons, and is being introduced by Messrs. Deas and Co., of 15, Gt. Winchester Street, E.C. Referring to the accompanying sketch, which merely shows the arrangement diagrammatically, it will be seen that from the usual silencer D the gases pass to a deodoriser which outwardly resembles in size and shape an ordinary exhaust box. The cooling water, instead of passing directly from the engine cylinder jackets to the radiator, is led into the deodoriser by the pipe F. The latter is provided with a series of holes G, through which the water falls on to gauze screens I, to the rear of which wicks of asbestos or cocoanut fibre, K, are attached. The gases on

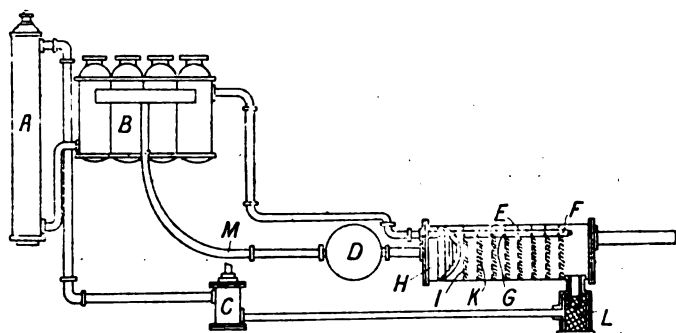


Diagram of the Wakley-Parsons Exhaust Deodorising System.

- | | |
|-----------------------------------|------------------------------|
| A. Radiator. | G. Water outlets in pipe F. |
| B. Engine. | H. Deflecting plates. |
| C. Water circulating pump. | I. Gauze screens. |
| D. Silencer. | K. Asbestos wicks. |
| E. Deodoriser. | L. Filter and clearing sump. |
| F. End of pipe from water jacket. | M. Exhaust pipe. |

entering the deodoriser are "spread" by the deflector H, so that they pass through the whole area of the screens instead of concentrating on one point. The object of the wicks is to arrest any carbon or other pungent matter in the burnt gases, which, owing to the constant stream of water, is washed away into the sump L, a filter preventing any of it being carried back with the water through the pump C. We have not as yet had an opportunity of seeing the deodoriser at work, but it has been tested on one of the London Road Car Company's motor-buses, which, even when purposely over-lubricated, emitted only a white vapour that was quite free from odour. Again, in the case of a Wolseley car, we have seen a letter from the owner, in which he states that even when endeavouring to create a maximum amount of noxious fumes it was found to be possible to hold a sheet of white paper as close to the outlet of the deodoriser as the pressure would allow without any deposit being left on it. The idea is undoubtedly ingenious, and if the deodoriser can be made in such a way that it can be easily adapted to different cars and at a moderate price, it should meet with a ready sale.

THE car which has been built for the A.C.F. Grand Prix race by the E. R. Thomas Motor Company, of Detroit, U.S.A., was shipped to France on the 20th ult. The vehicle is of the company's standard type, with the exception of the bore of the cylinders, which has been increased to 6.1 inches. It is to be driven by Mr. L. Strang, winner of the recent Briarcliff Trophy race, and in its trial runs is stated to have attained a speed of ninety-three miles per hour.

IRISH NOTES.

ON another page we give the class results of the Trial, and also the winners of the medals. It will be seen that gold medals go to the 15-18-h.p. Ford, the 10-12-h.p. Swift (two), the 10-12-h.p. Humber, the 16-20-h.p. Calthorpe, the 15-h.p. Clement-Talbot, the 25-h.p. Clement-Talbot, the 14-22-h.p. Germain (fitted with Hutchinson tyres) and the 48-h.p. Daimler. The latter was driven by Mr. Henshaw, and secured gold medals in both the open and the amateur sections. Silver medals have been awarded to the 15-h.p. Coventry Humber and the 20-24-h.p. Clement-Talbot. The Dunlop cups have been won by the 15-h.p. Talbot and the 48-h.p. Daimler, while the Swift cars have won the Goff challenge cup as a team.

DURING the course of the Trial few places gave such a welcome to the cars as did the city of Limerick, where the police had great difficulty in keeping the street on either side of the motor-cars clear for vehicular traffic. The District Inspector was assisted in preserving something like order by the High Sheriff, Sir Thomas Cleeve, whose firm employ several heavy vehicles in connection with their business, Mr. Ellis Goodbody, and other enthusiastic motorists.

THE first ten cars to finish in the Irish Trial were Dunlop tyre fitted, while fourteen out of the nineteen cars which made non-stop runs throughout the Trial were fitted with the same make of tyre. Six gold medal and one of the silver medal cars were also fitted with Dunlop tyres.

THE three Swift cars in the Trial all accomplished non-stop runs. Special mention may be made of the 10-12-h.p. car driven by Mr. F. E. Carter, which was inadvertently omitted from our list of successes in Class B last week. All these cars were fitted with Castle coils.

THE following cars made the best times in the hill-climb at Ballinaslough Hill, near Newtown Mount Kennedy, on the 27th ult., the results reaching us after we had gone to press with our last issue:—

- CLASS A.—1, 15-18-h.p. Ford, 4 min. 58 sec.; 2, 10-h.p. Royal Starling, 7 min. 52 4-5 sec.; 3, 8-h.p. Imperial Starling, 10 min. 12 sec.
- CLASS B.—1, 10-12-h.p. Swift, 6 min. 10 sec.; 2, 10-12-h.p. Swift, 7 min. 36 3-5 sec.; 3, 15-18-h.p. Ford, 8 min. 7 4-5 sec.
- CLASS C.—1, 12-h.p. Riley, 5 min. 17 2-5 sec.; 2, 10-12-h.p. Humber, 5 min. 25 sec.; 3, 14-16-h.p. Belsize, 6 min. 25 sec.
- CLASS D.—1, 16-20-h.p. Calthorpe, 4 min. 9 sec.; 2, 16-20-h.p. Calthorpe, 4 min. 14 1-5 sec.; 3, 18-24-h.p. Swift, 4 min. 25 sec.
- CLASS E.—1, 15-h.p. Clement-Talbot, 3 min. 11 sec.; 2, 20-h.p. Beeston Humber, 4 min. 8 4-5 sec.; 3, 14-22-h.p. Germain, 5 min. 6 2-5 sec.
- CLASS F.—1, 25-h.p. Clement-Talbot, 2 min. 53 4-5 sec.; 2, 28-h.p. Minerva, 3 min. 40 sec.; 3, 20-h.p. Sunbeam, 4 min. 51 4-5 sec.
- CLASS G.—1, 48-h.p. Daimler, 2 min. 30 2-5 sec.; 2, 40-h.p. Berliet, 3 min. 24 3-5 sec.; 3, 35-45-h.p. Gladiator, 4 min. 2 3-5 sec.
- CLASS H.—60-h.p. Napier, 2 min. 38 sec.

THE 10-12-h.p. Coventry Humber and the 15-h.p. Coventry Humber did exceptionally well in their class. The former and the 20-h.p. Beeston Humber made non-stop runs throughout, and the other 10-12-h.p. Humber only lost a minute through the driver stopping his engine before leaving the garage, a technical error which alone has caused the car to lose its non-stop certificate. The performance of Mr. G. A. Phillips on the 10-12-h.p. Coventry Humber is a triumph for youth, as Mr. Phillips is only nineteen years of age, and this is the first occasion on which he has driven in a Reliability trial. The 20-h.p. Beeston Humber maintained the reputation of this car for non-stops, and it was driven by Mr. Simmons, who has now for three years in succession made absolutely non-stop runs in the Irish Trials on Beeston Humber cars.

WE learn from the Gas Lighting Improvement Co., Limited, manufacturers of the well-known "Carburine" motor spirit, that in the trials the cars winning the Goff and Dunlop Cups, and eight out of ten of the gold medals, were using "Carburine" motor spirit.

TWELVE motor yachts and launches took part in the opening cruise of the Sussex Motor Boat Club on Saturday. A regatta will be held in July.

AFTER watching the ascent of the balloons at Hurlingham last Saturday the Chinese Ambassador drove in Mr. C. I. Thornton's car to the "Hut" at Wisley, where his Excellency enjoyed a hearty tea.

LA SOCIÉTÉ LORRAINE DE DIETRICH AND CIE. have now opened large new showrooms at 5 and 7, Regent Street, Waterloo Place, London, S.W., where a large selection of the latest model Lorraine Dietrich cars can be inspected.

NEAR the main entrance to the Franco-British Exhibition Messrs. Brown and Hughes have an automobile garage, where they also stock petrol and oil as well as undertake repairs. It is situated in the Netherwood Road, Shepherd's Bush, W.

ON Sunday evening the King and Queen motored from Buckingham Palace to Coombe Warren, Kingston Hill, and honoured Lord and Lady de Grey by dining with them at Coombe Court. The King went in his own car and the Queen in her cream-coloured motor-car.

THE annual exhibition of drawings sent in for competition for the prizes offered by the Worshipful Company of Coach Makers and Coach Harness Makers is being held at the Baker Street Carriage Bazaar, London, W. It closes on the 10th inst., but will not be open on Whit Monday.

AMONG the signatories to the requisition to the Lord Mayor of London to call a meeting to direct attention to the "danger, annoyance, and inconvenience" of motor-omnibuses in the City are Lord Northcliffe, Sir Horace Marshall, Major Coates, M.P., and Mr. D. J. Morgan.

CEDRINO, who, driving a Fiat car, won the 100 mile race at the Florida race meeting in March last, and was second in the recent Briarcliff Trophy contest, met with a fatal accident at a track race meeting at Baltimore on the 29th ult. It is reported that a tyre burst at one of the bends, causing the car to turn over, the driver being pitched on his head.

AT the Bath and West of England Agricultural Show, at Dorchester, Messrs. M. H. Tilley and Sons, of that town, undertook the care of the motor-cars of visitors to the Exhibition, in addition to making a display of their interest in motor-car work. Messrs. E. Channon and Sons and Messrs. Northover Bros., also of Dorchester, made similar exhibits.

IN order to gauge the provision to be made for garaging the cars entered for the forthcoming R.A.C., we recently visited the new White building in Camden Town. Calling at Kingly Street, W., which still serves as a showroom for the steam cars known as White, we suggested a run out to the new place by steam car as far more in keeping with the idea than to go to Mornington Crescent on the Hampstead Tube—which station, by the way, is only three or four minutes' walk from Carlow Street, in which the new premises are located. In six minutes an 18-h.p. White car was driven from the showroom, and we were quickly gliding among the traffic until we emerged into Regent's Park, and were quickly taken into Camden Town. The experiment was of no scientific importance, but it demonstrated the readiness with which the White steam car can be prepared for its business—a point that doubtless Earl Russell, whom we saw driving his White steamer through Piccadilly Circus one day last week, would emphasize. The depot and repair works devoted to the assembling and body building for these vehicles is an addition to the motor establishments in London, and Mr. Frederic Coleman wears no look of the depression which is now said to prevail; nor does the arena of the operations which he directs show signs of contraction. The premises have a million feet of floor space; they consist of a four storey building around an open quadrangle, in which cars can be washed and similar work carried out. The stock of spare parts is wonderfully complete and well classified, while the various departments in connection with carriage work are admirably designed and arranged. Evidently the White car people are having a busy season.

HERE AND THERE.

THE Urban Council of Radcliffe, Lancashire, has decided to acquire a petrol motor fire engine, with a pumping capacity of 450 gallons per minute.

THE members of the Motor Club, of Coventry Street, are *ipso facto* members of the Crystal Palace Motor Club, and on the first fireworks night, on Thursday week, the members of the Clubs dined together, and a pleasant evening was spent, Colonel W. J. Bosworth presiding.

FROM Messrs. R. Reynold Jackson and Co., High Street, Notting Hill Gate, London, W., comes a copy of the latest catalogue of the popular Jackson cars. The list gives full particulars and illustrations of the various models, including the two-seater, a dog-cart, a doctor's car, and a phaeton. Several pages at the end are devoted to testimonials of satisfied users of these well-known vehicles.

THE want of a garage for motor repairing and supplies has long been felt in the neighbourhood of Fort Augustus, and it has now been made good by Messrs. Grant Brothers, from Glen Garry, who have opened an establishment there and are letting motor-cars on hire. Hitherto it has been impossible to obtain a motor-car nearer than from Inverness on the one hand, or from Oban on the other.



The 25-30-h.p. Ariel Car which has been entered in Class 5 of the Scottish Reliability and International Touring Car Trials.

The vehicle is entirely a new model, built on the same lines as the 30-40-h.p. and 40-50-h.p. Ariels, the cylinder bore and stroke being respectively 112 mm. and 135 mm. Both dual ignition is fitted, the gear-controlled change-speed gear has four speeds, and the final drive is by a cardan shaft and bevel gear to a live axle of the Ariel standard design. Down-pipe detachable rims are fitted, and Dunlop tyres will be used throughout the trials.

MR. CHARLES IGGLESDEN'S new volume of "A Saunter through Kent with Pen and Pencil" maintains the standard of earlier writings, and deals with the interesting country around Herne and Bloomfield. Much valuable historical information is given in the work and the sketches are well above the average of such publications. To all who motor through that corner of our most south-easterly county the book will be of considerable interest.

FROM Messrs. G. Philip and Son, Ltd., comes one of their Finger-post Strip Maps, compiled by Mr. Gerald Fothergill. The excellent principle on which these maps are arranged has been previously eulogised in our columns; and it is now only necessary to remind readers that the object of this route map is to enable motorists to know before reaching junctions on the highways which turning should be taken, thus avoiding confusion and possible risk of accident on the Brighton road.

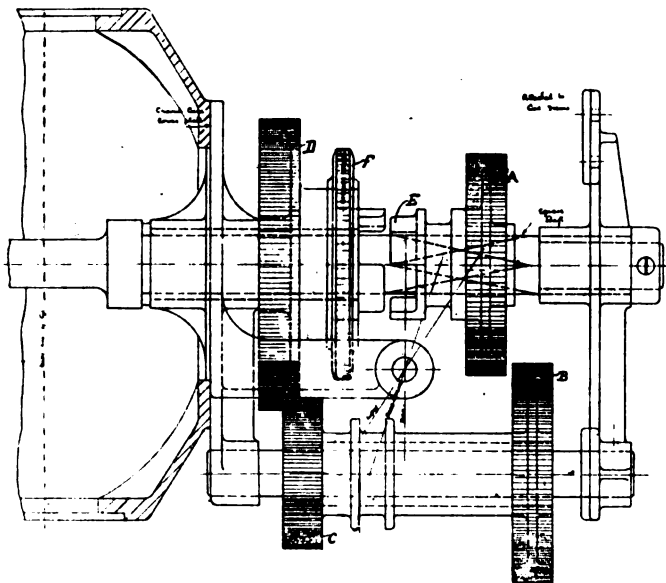
MESSRS. MERRYWEATHER AND SONS have lately supplied a self-propelled cesspool exhauster for use in the higher parts of Epsum. It consists of a steam-wagon, on which is mounted a cylindrical tank of 750 gallons capacity. A vacuum is produced in the tank by means of a steam-ejector, flexible pipes being arranged to connect it with the cesspool, the contents of which are sucked up into the tank. The vehicle is propelled by a double-cylinder vertical steam engine. It is stated that the new vehicle will effect an economy of 80 per cent. in the cost of clearing the cesspools as compared with the older method.

THE net profit on the Eastbourne motor-buses for the past financial year was £560.

AN advertiser in last week's *M.C.J.*, seeking a position as driver-mechanic, added to his qualifications that he would get "married when suited."

IN connection with the note in our last issue under the heading, "Why not an Automobile Museum?" it is interesting to learn that the first chassis built by the Albion Company has found a resting-place in the Glasgow Art Galleries and Museum, at Kelvingrove, Glasgow. This vehicle, which is of the 8-h.p. type, was constructed in 1900, since when it has seen various kinds of service, and has covered fully 40,000 miles.

IN our Correspondence columns there recently appeared a query from a steam car owner with regard to a two-speed and free engine gear suitable for Serpollet vehicles. Such an arrangement is, we find, being made by the Sheppee Motor Company, of Thomas Street, York, and we are able to give herewith a plan drawing of the gear as designed for 6-h.p. cars of the make alluded to. It will be seen that it forms an extension to one side of the engine crank case. The chain wheel F, by which the power is transmitted to the back axle, is formed in one with the pinion D, and normally runs free on the shaft. On a squared portion of the shaft is a pinion A, built up with the jaw-clutch E. On a short parallel shaft at the rear is a movable sleeve carrying two pinions B C. To get the top speed, which



is a direct drive, the pinion A is moved by a lever to the left, bringing the jaw clutch into engagement. The low speed, which is entirely out of gear when the top one is in use, is obtained by sliding pinion A into mesh with B, the drive being then conveyed to the sprocket F through the spur wheels C D. The Sheppee Company inform us that they found a two-speed gear on 6-h.p. Serpollet cars a very great advantage, as it enables the vehicle to be driven out of the very worst of places and up the steepest hills with a minimum of strain on the engine and generator, thereby adding very greatly to their life. Furthermore, by being able to make the engine free, the car is able to be easily pushed by hand when not under steam, and also the engine can be properly warmed up before starting.

A COPY of the 1908 catalogue of "Talbot" cars is to hand from Messrs. Clement-Talbot, Ltd.; this is a very elaborate and complete production, extending as it does to over 100 pages. Full particulars are given of the eight different models, ranging from 8-10-h.p. two-cylinder to 50-60-h.p. four-cylinder, now being turned out, about twenty pages being devoted to a technical description illustrated by line drawings of the main components of the chassis. Other pages of the list deal with the various types of bodies that can be fitted thereto, hints on the care and management of Talbot cars, &c., while a number of full page illustrations give an excellent idea of the extent of the company's large works at Barlby Road, North Kensington, W.

MR. G. W. HOUK will shortly be organising motor-car tours for visitors to the Metropolis.

THE Hon. Sir John Forrest, K.C.M.G., ex-Premier of Western Australia, has placed an order with Messrs. Clement-Talbot, Ltd., for a 25-h.p. Talbot landaulet.

AN ice company in Havana, Cuba, has recently placed in service a 24-h.p. three-ton motor-van for delivering ice. The body of the vehicle is insulated with a layer of cork 1½ in. thick.

THE electro-'bus was honoured the other day, when it was the first public licensed vehicle to be admitted to the Royal Parks. Several electro-buses were engaged to convey a contingent of French sailors from Charing Cross to the Franco-British Exhibition.

MESSRS. SMITH SAVORY, LTD., of Horn Hill, South Lowestoft, have a fully-equipped repair shop, a commodious motor-car garage, and a well-designed jetty for motor-boats, thus being able to offer a triple convenience to the forthcoming motoring events in and near the town.

THE British Motor Boat Club are holding a regatta at Lowestoft to-day (Saturday). The Thames meeting will be held at Nuthalls, Kingston-on-Thames, on the 16th inst., when Admiral Sir William Kennedy, the Commodore, Mr. W. M. Green, and Colonel Bosworth will be present.

THE American Automobile Association has decided to hold the Vanderbilt Cup race on October 24th next on a 28-mile course on Long Island. It is probable that the Automobile Club of America will organise a race under the A.C.F. Grand Prix rules to be held at Savannah, Georgia, in the autumn.

MESSRS. DENNIS BROS., LTD., have sent us a photograph of a 30 cwt. motor-van they have just supplied as a repeat order to the Bradford Dyers' Association. This vehicle is fitted with a Dennis 20-h.p. four-cylinder engine. The covered body is of attractive appearance, the roof being curved, a cabin front being provided for the driver.

FROM Liverpool comes an effective publication setting forth the various departments in the motor activity which Argylls Liverpool, Ltd., conduct from 25, Leese Street. They undertake the free inspection of cars purchased from their establishment, the repair of vehicles by mechanics who have specialised on this type of car, the teaching of drivers, the hiring out of cars for long or short trips, the supply of accessories and spare parts, and, in fact, everything that the motorist desires to secure the ease of his task.

IN addition to their well-known petrol, the British Petroleum Company, Ltd., of 22, Fenchurch Street, E.C., are now devoting attention to the question of reliable motor lubricating oils, and have introduced a series of "Shell" lubricants suitable for all kinds of steam or internal combustion engines, all of which are guaranteed to be perfectly pure and reliable. Altogether seven grades are being marketed, viz.:—No. 1, "High Viscosity Grade" (for use in summer and in warm climates), for the lubrication, through sight-feed or pump-oil, of all air and water-cooled engines; No. 2, "Viscous Grade"; No. 3, "Medium Grade"; No. 4, "Semi-thin Grade"; No. 5, "Thin Grade" (for use in winter); No. 6, "Thick Grade," for bearings, gear, and change-speed case lubrication; and No. 8, "Cylinder Oil," for steam and superheated steam cylinders.

MR. C. G. WRIDGWAY, the present manager of the Peerless Motor Car Company, of New York, is an Englishman who was well known in the motor industry in its early days on this side of the Atlantic. He has just designed a shade for acetylene headlights designed to modify the glare at short range, and yet not interfering with the brilliancy when seen at a distance. It consists of a series of thin horizontal plates extending across the face of the lamp behind the front glass. These plates are dull black on the top, so that upward-cast rays of light are absorbed. The lower side of each plate is silver-plated, thus intensifying the light rays which are thrown below the level of the eye. At a distance of 200 yards from the lamp it is impossible to see any effect of the shade, the same not being visible at this distance. As the distance is decreased, however, the screen comes more and more into effect, so that at close range the blinding glare is entirely eliminated, and the light appears dull.

THE SETTING OF VALVES.

IN several issues of the *M.C.J.* since the beginning of the current year we have devoted considerable space to the question of the setting of the valves of petrol motors, and have published diagrams showing the setting adopted for many of the well-known engines at present on the market. There would seem to be a very great diversity of opinion among engine designers in this country as to the best setting, for hardly any two of those we have given are alike. Judging from the particulars given in our French contemporary, "*Omnia*," which, following the *M.C.J.*'s lead, has got together a very instructive table of the setting of the valves of French petrol engines, there appears to be quite as much variation in this direction in France.

In the hope and belief that it will prove useful to motor engineers and repairers, we have compiled the following table, based on the particulars published both in our own pages and in those of the contemporary above referred to, giving in a succinct form the details of the valve setting of no less than thirty-nine different engines. To repairers who are expected to be *au fait* with all types of cars the table should be especially useful, inasmuch as it will afford a handy means of reference as to the setting recommended by individual makers for their own particular motors.

DETAILS OF THE VALVE SETTING OF PETROL MOTORS.

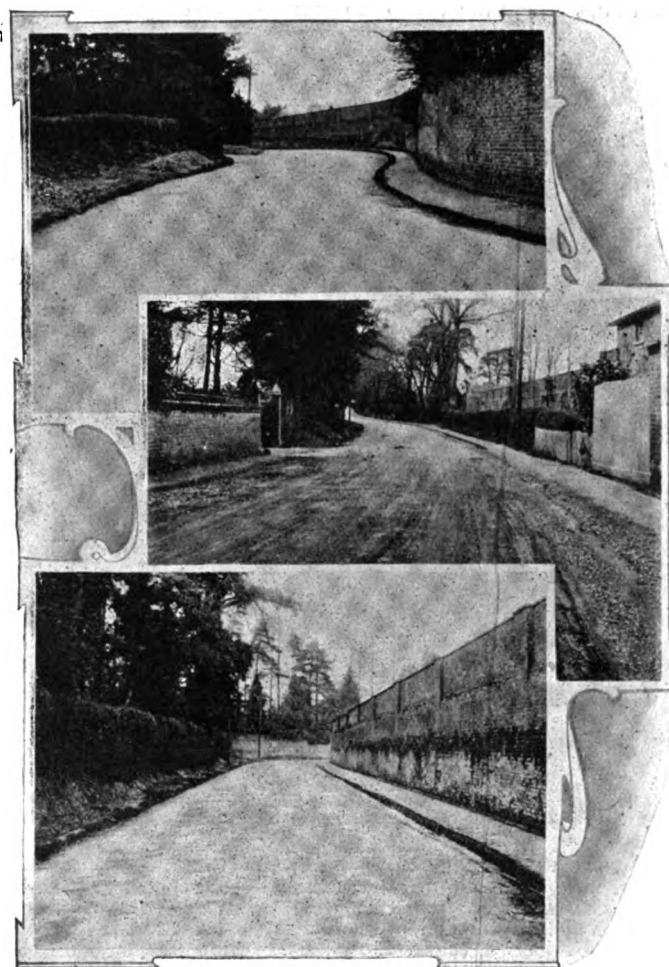
| Motor. | Inlet Valve. | | Exhaust Valve. | |
|-------------------------------------|--------------|-----------------|------------------|-------------|
| | Opens. | Closes. | Opens. | Closes. |
| Albion | 10° late | 20° late | 48° early | 8° late |
| Ariel | 18½° late | 42° late | 45° early | 5° late |
| Aries, 14-18-h.p. .. | 18° late | 44° late | 58° early | 13° late |
| Arrol-Johnston, 24-30-h.p. .. | 20° late | 30° late | 35° early | 5° late |
| Aster (high speed) .. | 4 mm. late | 15 mm. late | 15 mm. early | dead centre |
| Aster (low speed) .. | 1 mm. late | 1 mm. late | 15 mm. early | dead centre |
| Berliet, 22-h.p. .. | 17° late | 38° late | 48° early | 9° late |
| Brasier | 7° late | 25° late | 45° early | dead centre |
| Brookhot, 12-h.p. .. | 20° late | 45° late | 45° early | dead centre |
| Charron, 20-30-h.p. .. | 1° late | dead centre | 44° early | dead centre |
| Chenard-Walcker .. | dead centre | 36° late | 38° early | dead centre |
| Cornilleau-St. Beuve, 20-30-h.p. .. | 20° late | 20° late | 56° early | 6° late |
| Cottin-Desgouttes, 18-22-h.p. .. | 15° late | 30° late | 46° early | 8° late |
| Da'raoq, 10-12-h.p. .. | dead centre | 30° late | 48° early | dead centre |
| Daimler | 15° late | 25° late | 35° early | 5° late |
| Deacy | 10° late | 5° late | 30° early | 5° late |
| Dennis, 28 and 36-h.p. .. | 20° late | 20° late | 40° early | 10° late |
| De Dion, 12-h.p. .. | dead centre | 45° late | 45° early | dead centre |
| Fiat | dead centre | dead centre | 45° early | dead centre |
| Germain | 4° late | 35° late | 44° early | 10° late |
| Gregoire, 10-14-h.p. .. | 5° late | dead centre | 53° early | dead centre |
| Hutchings | 17° late | 33° late | 44° early | 10° late |
| Labor, 20-30-h.p. .. | dead centre | dead centre | 51° 20' early | dead centre |
| Larrad Timer | 17° late | 17° late | 52° early | 22° late |
| Motobloc | 11° late | 11° late | 45° early | 5° late |
| Mutet | 26° late | 21° late | 62° early | 28° late |
| Panhard, 16 and 18-h.p. .. | ½ in. late | ½ to ¾ in. late | ½ to ¾ in. early | ½ in. late |
| Panhard, 24-h.p. .. | ½ in. late | ½ to ¾ in. late | ½ to ¾ in. early | ½ in. late |
| Panhard, 8-h.p. and 10-h.p. .. | automatic | automatic | ½ to ¾ in. early | ½ in. late |
| Pennock, 18-24-h.p. .. | 10° late | 18° late | 58° early | dead centre |
| Rochet-Schneider, 24-h.p. .. | 20° late | 20° late | 40° early | dead centre |
| Renault, 8-h.p. .. | 23° 30' late | 26° late | 32° early | 10° late |
| Rosell, 40-h.p. .. | 2° late | 23° late | 33° early | dead centre |
| Star | dead centre | dead centre | 40° early | dead centre |
| Straker-Squire C.S.B. .. | 20° late | 20° late | 56° early | 6° late |
| Thornycroft | 35° late | 15° late | 41° early | 13° late |
| Vauxhall | 30° late | 24° late | 36° early | 15° late |
| Vinot, 12-16-h.p. .. | 15° late | 15° late | 30° early | dead centre |
| Unic, 20-h.p. .. | 34° late | 40° late | 53° early | 10° late |

At the annual meeting of the County Councils' Association, Lord Belper referred to the increased cost of main roads, and urged that the recommendation of the Royal Commission on Motor Cars as to the up-keep of the roads being made a national service should be taken in hand without delay.

THE second anniversary of the formation of the Northern Automobile Company, Ltd., of the Oak Lane Garage, Manningham, was celebrated on the 24th ult. by the directors inviting the staff, along with their friends, to join them in an outing to Burnsall. A fleet of eight Spyker cars, containing about thirty persons, left the garage shortly after ten a.m., and proceeded *via* Skipton and Cracoe to Burnsall, where dinner was served at the Red Lion Hotel. Afterwards Mr. J. Grange, chairman of the company, in the course of a short speech, stated that the concern was doing well, and attributed this fact to the energies of the manager, Mr. A. House.

TARVIATED ROADS.

AMONG the many suggestions made for securing economy in the construction of roads and the mitigation not only of the dust but also of the mud that arises therefrom, that made by Messrs. Bristowe and Co. has attracted attention from the leading road authorities as securing these desirable results with little trouble. We are able to illustrate some examples of the Tarviated roads near Slough, which, having had considerable motor-car traffic, present excellent examples to those who own and drive automobiles. The upper illustration is that of a road laid just over a year ago at Stoke Green, near Slough; the central picture is that of a water-bound road after a storm, the section of Tarviated road being clearly indicated by the improved appearance beyond that of the forefront of the illustration. The other photograph shows a section of a Tarviated road



photographed after a storm, and the dried-off surface is clearly indicated from the appearance of the roadway.

These results have been obtained by the use of Tarvia, which is an exceedingly cohesive preparation, bituminous in character, made under conditions which ensure uniformity of quality and consistent suitability for all purposes of road-making. It is supplied in fluid form as a preparation viscous, flexible and tenacious when cold; or alternatively as Tarviated granite or hard stone chippings. Tarvia has been used by the Eton Rural District Council, where it has done much to consolidate the road metal and render the roads waterproof. At Batley it has proved satisfactory under the heavy traffic of that Yorkshire town, and the Liversedge Urban District Council, who were the first in the north of England to apply the Gladwell system of road maintenance, used Tarvia as a binding material. Messrs. Bristowe and Company, of 20, Tothill Street, Westminster, S.W., are the manufacturers of this material, and to them we are indebted for the use of the accompanying illustrations.

Correspondence.

[Letters to the Editor should be addressed to the offices 27-33, Charing Cross Road, London, W.C.]

DOCTORS AND URGENT CASES.

TO THE EDITOR OF *The Motor-Car Journal*

SIR,—With regard to doctors and urgent cases, could they not carry on their cars a flag with a red cross on it or some such sign, to prevent their being held up by the police? Of course, even then, there must be a certain speed limit.

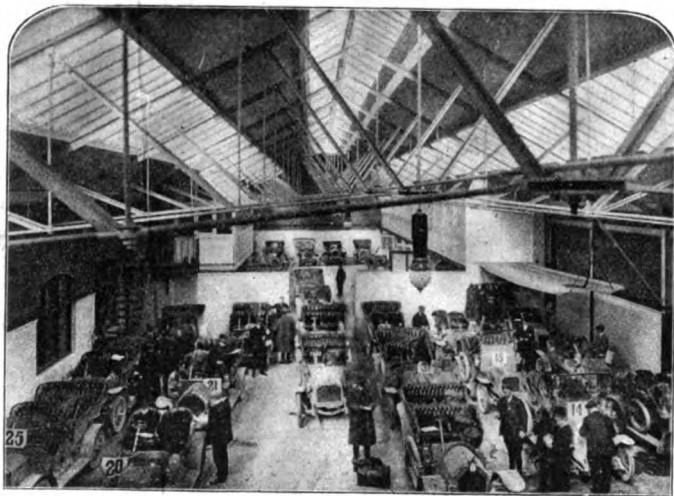
Some time since you had an article in your paper about leakages in petrol pipes. These are worrying faults; but I find if you wrap the affected part round with cotton wool soaked with secotone, then wind insulation tape tightly over same, it then must dry, and it is really excellent. Everybody laughs at me for my odd suggestions and ideas on cars, but they are useful, inexpensive and good. Again, I have a small bicycle lamp fixed at the back of the gear quadrant for dark nights, so as I can see absolutely what I am doing. This is not necessary on all cars, no doubt, but mine is very peculiar, working thus:—Reverse, first gear; neutral, second, third and fourth gears.—Yours truly,

E. M. T.

HILL CLIMBING IN INDIA.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—I noticed in your issue of April 25th that a 10-12-h.p. Humber car had been driven to a height of 4,300 feet above sea level. Excellent as the performance is, I think you will agree that it hardly comes up to a



The Irish Reliability Trials.—The Cars in Messrs. J.E. Ferguson Ltd.'s new Garage.

The photograph only shows the garage. The front portion of the building is taken up with the showrooms and offices. The building has only just been completed, and is situated in the centre of Belfast, close to the City Hall.

climb I made on a 10-12-h.p. two-cylinder Darracq with a five-seated body, last July. I drove the car from Mettapalayem to Ootacamund, nearly 8,000 ft. above the level of the sea. This height is reached in a drive of twenty-six miles, as the first five or six miles are level, and the whole distance is thirty-two miles. The run was done in two hours twenty-five minutes. Ootacamund is reached in the ordinary way by track railway to Coonoor, sixteen miles. This takes about two hours and three-quarters, and then by tonga eleven miles. Coming down it is possible to coast for about twenty-five miles without having the engine running. This hill might appeal to some of our friends at home who are always on the look-out for extraordinary hills, but I think it would find out the capabilities of their cooling arrangements. I hope to go again this year on a car of higher power, and will endeavour to send you some photographs. Trusting this may be of interest to your readers.—Yours truly,

F. ROBINSON-WARD.

SELF STARTING DEVICES.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—In reply to the letter Mr. Burgess wrote to your paper, will you allow me to say that several cars are being driven in Norwich fitted with the Boswell self-starting device (foot). So satisfactory is it that one gentleman, the driver of a Humber, has had his starting handle removed and for the past eleven months has relied entirely on his starter. It is the invention of a non-motorist and is certainly a very wonderful and simple arrangement. It has the further advantage of not requiring any structural alterations to the car. I am so delighted with

its reliability and the ease with which the car can be started from the seat that I have ordered one for my six-cylinder Napier. The cost is about that of one pneumatic cover.—Yours truly,

JOHN GRIFFIN.

SUNDAY MOTORING.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—Your correspondent who recently referred, with evident glee, to the innovation of the Lincolnshire Motor Cycle Club as providing a solution of the Sunday motoring problem, will be surprised to learn that the open-air service which had been announced for last Sunday in the Dukeries was postponed, and that the attendance at the Croft church service was so poor as to elicit a growl in the Club's local organ.—Yours truly,

A RIDER.

SOME FACTS IN THE SELECTION OF MOTOR OILS.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—I hope your correspondent "C. T. W. H." will take my remarks on his letter in your journal of the 23rd ult. in good part. I am sure that he is anxious for the truth. His appeal to the muses proves it no less than his love of beautiful thoughts. Personally, I am ready to learn, and will humbly take any correction. Such a greasy subject as oils does not appeal to my poetic instinct. "Men are four. He who knows not and knows not he knows not—he is a fool, shun him. He who knows not and knows he knows not—he is simple; teach him. He who knows and knows not he knows—he is asleep; wake him. He who knows, and knows he knows—he is wise; follow him." (Arabic proverb.)

In the first place I take it that a water-cooled petrol or gas engine is comparatively a cold engine. For some years steam practice has, I think, wrongly influenced our choice of oils, and hence, even at the present day, most petrol engines are run on heavy oils, causing a considerable loss of engine power. I possess two cars, one having the ordinary type of four-cylinder vertical engine, the other a single-cylinder horizontal motor; the latter car has been in use about five years. After about two years' running I happened one day, some distance from home, to run out of oil, through carelessness. The oil then in use cost 4s. 6d. per gal., and was strongly recommended by the people from whom I purchased the car. In the village where I was stranded no motor oils were to be had, and, in desperation, I bought half a dozen small tins of thin cycle oil from a cycle repairer and emptied them into the oil box supplying the engine. What a marvellous change! the engine became quite lively, and the increase in power was so marked that I felt that I had made a little discovery. I purchased more of the oil and had a careful analysis made; I also, as a check, analyzed it myself. It was entirely mineral oil, and so light that on fractional distillation more than half of it came off at 180 deg. F. The difference in the running of the engine was so marked that I would not return to the old oil.

On mentioning the matter to some of my expert friends, I was warned that I should have serious wear, especially on the cylinder and piston surfaces, so I proceeded cautiously and for several months made careful periodical examinations of the piston and cylinder. Finding them with beautifully polished surfaces, I decided to go on, and have done so ever since. Last year I had the car overhauled, and, without saying anything to the man sent to do the work, he came to me and said: "What have you been doing with your engine?" I asked what was the matter. He replied: "Have you been cleaning the engine?" I said "No." "Well," said he, "I have never seen a piston and cylinder in such a beautiful condition. I generally have to chip out a lot of cokey stuff. There is nothing in the compression space and the surfaces are like glass."

I was pleased. After five years, in which I estimated the car has run over 30,000 miles, the compression is perfect. The valves have never been ground in during this time and they are perfectly tight, and from the analysis I concluded that in bulk the oil would be very cheap, and so it proved. I bought twenty-five gallons at 1s. per gallon. The price has since gone to 1s. 4d. per gallon. On further inquiry I found that the manufacturers made a still thinner oil, but more carefully manufactured, at 2s. per gallon; it looks lighter in colour and brighter, but I have not analyzed this particular oil. I rather prefer it, but two of my friends, with similar cars, prefer the cheaper oil, as it does not leak so much from their crank cases and bearings. I, however, have no trouble from this. Three similar cars are, through me, running on these cheap oils, and their owners have given me their thanks, not for the cheapness, but because of the greater power and easy running of the engines. So much for these facts.

Now, I must mention that these engines have white metal bearings, also the connecting rod has white metal in the gudgeon and crank-head bearings. This is important in relation to what I am going to say:—Those who have studied the problems of lubrication will recall the difficulties met with in the early trials of mineral oils in place of

animal and vegetable oils in marine engineering. The change was desired for three reasons, cheapness, and particularly the action of fatty acids on the metals, and gumming, but for actual lubrication no mineral oil could ever compare with sperm, tallow, or vegetable oils on large surfaces. I have run many dynamos with oils of every procurable viscosity; nothing ever approached sperm for cool running, and especially on white metal. Apart from mere viscosity, the power of a lubricant to spread rapidly is all-important, and some engines having slide valves with large surfaces had dry spots when lubricated with purely mineral oils, and it was absolutely necessary to add some tallow to flash over the surfaces. It is instructive to note how tallow oil will run over a hot plate in comparison with heavy mineral oils.

It must be remembered that cylinders and pistons in petrol engines have large surfaces moving at great velocity, and that it is necessary to have a lubricant that will completely spread all over these surfaces. A heavy oil in a cold cylinder cannot do this, and, as I remarked before, a petrol engine is, comparatively, a cold engine. In a properly cooled engine the working piston and cylinder surfaces probably are considerably under 212 deg. F. Then what reason have we to insist, as "C. T. H. W." does, that an oil must not lose 2 per cent. in weight at 300 deg. F.? Apart from want of spreading power, any viscosity more than required to keep the surfaces apart at their temperature and weight means loss in power. The tests for oils given by "C. T. W. H." are doubtless excellent for choosing oils of a particular character, but my point is that such oils are not those we want for water-cooled cylinders and pistons, though excellent for certain kinds of bearings.

With regard to my car with vertical four-cylinder engine I found the same beneficial effect with the cylinders and pistons, but the bearings, not having white metal (they are bronze) required something a little heavier, and as they are supplied from the same box as supplies the cylinders, I made a regrettable compromise by mixing. I may mention that I witnessed workshop tests of a 30-h.p. four-cylinder engine in which a mysterious scrunching knock occurred several times per minute. All the engines of this type had the knock which completely puzzled the makers. I diagnosed the trouble as simply occasional dry spots on the pistons from insufficient spreading of the oil. It is easy to suppose that an oil having some easily evaporated portions would tend by partial evaporation to cause spreading mechanically. This must not be confounded with the peculiar spreading power of animal oils, in spite of their much higher flash points. We do not, however, want fatty acids in our engines if we can help it, and the cold petrol cylinder can be admirably suited with purely mineral oils. Price is not the question as regards efficiency; in my opinion, anything over 2s. per gallon is money thrown away. I have said nothing about air-cooled engines, they are well catered for.

There is a clerical error in your report of Mr. G. H. Baillie's interesting paper. The oxygen has been left out of the formulae of ethyl and methyl alcohols; they should, of course, be C_2H_6O and CH_4O respectively. Criticism of this, to me, most interesting paper is very tempting, but, I fear, would be too technical for most readers.

Under the head of "Some Current Topics," by "Arcanum," damage by self-ignition is referred to. I do not think the explanation by Mr. J. S. Critchley is the correct one. It would not be possible to ignite petrol vapour by a hot exhaust pipe unless it was at a temperature of quite a bright red heat. If your readers will try to ignite petrol in a saucer by a well-drawn cigarette or cigar they will be surprised to find that it cannot be done. Flame, electric sparks or bright incandescence will do it, not ordinary red heat. I think the explanation as follows: a weak mixture burns slowly, and after ignition in the cylinder combustion is still going on in the residual exhaust gases in the cylinder during suction of the next incoming charge, which becomes ignited and fires the petrol or its vapour in or near the carburettor. This is the so-called popping in the carburettor and is very dangerous should there be any leakage of petrol about.—Yours truly,

VERITAS PREVALEBIT.

REPAIRING A LEAKY RADIATOR.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—I should be obliged if you could give me some directions for repairing a leak in my radiator, which is of the honeycomb type. The leak is a slight one, and I believe that it is possible sometimes to repair such a leak without taking down the radiator and soldering it. Can a repair be effected by running some solution through the water systems.—Yours truly,

F. R. WALKER.

[A honeycomb radiator is a very difficult job for an amateur to tackle the repair of, and it is one of those things that tinkering with in any shape or form is most unwise. Attempts to repair internally by solutions is a makeshift way of dealing with the matter that can only lead to dissatisfaction sooner or later. If the radiator is leaking at some point due to a blow, it should be taken down and soldered carefully by someone who is an adept at handling an iron; but if the radiator is springing leaks generally (through no specific ill-treatment) the best thing to do, and the cheapest in the end, is to send it to some reputable firm of radiator makers, and have it rebuilt. The Coventry Motor Fittings Company, for instance, would put a radiator right in a proper manner and without delay. For temporary repairs of honeycomb radiators there are some little fittings sold that are screwed through the tube adjacent to the leak and which hold a pad of leather or rubber

close up against the damaged part and so render it water-tight. Owners of cars with honeycomb radiators should never be without some of these handy appliances.]

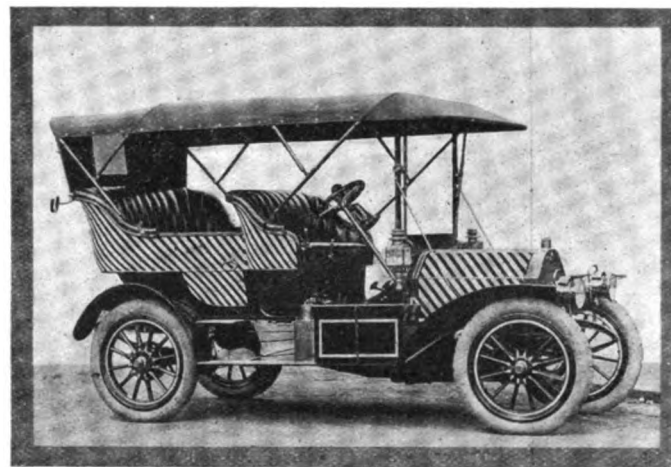
A CARBURETTOR TROUBLE.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—I have an 8-h.p. small motor-car; it has a Longuemare carburettor. The fault I have is that I have to adjust the air and gas; there are two small handles, one for gas, one for air, and one can never get the proper adjustment. Is there any improvement that can be effected on the present carburettor, or could you advise me any way how to remedy the difficulty?—Yours truly,

SIMPLETON.

[The old type Longuemare carburettors such as our correspondent finds difficulty with are certainly ticklish to adjust and to keep right for varying speeds. Sometimes the shifting of the gas throttle disturbs the air sleeve by causing the latter to rotate slightly with it, for the two sleeves are concentric and are a "working fit" together, and in consequence are apt to stick occasionally. Besides this, there is no doubt that the opening and closing of the throttle (independent of any accompanying and unintentional movement of the air sleeve) does *ipso facto* interfere somewhat with the mixture. The best plan is to purchase a more modern type of carburettor, but failing this, "Simpleton" might try fixing the throttle at its best working position for full power, and then fit another throttle remote from the carburettor and close up to the cylinder. At the same time a spring loaded valve to admit auxiliary air, placed in some convenient position on the induction pipe, will no doubt help matters considerably.]



The Star 12-h.p. Live Axle Car just completed and dispatched by the Star Engineering Company to the order of their agent in Singapore, for a Chinese Mandarin.

THE RULE OF THE ROAD.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—I was much interested in Mr. C. W. Brown's letter in the last issue of the *M.C.J.* with regard to the rule of the road. As an owner of a small car I have always endeavoured to adhere to it as far as possible, and make a point of giving way when I become aware that a faster car is approaching from the rear and which is anxious to pass. There is one practice on the part of owners of speedy cars to which I should like to draw attention, especially as it is fraught with danger. I was out driving last week end, and on two occasions, just as I had pulled out to pass cyclists, a fast car came up without any warning and passed me very closely on my right. As the road was not a very wide one this meant that the driver of the speedy vehicle had pulled over to his wrong side of the road. With all due regard to the rule of the road, I do not feel it incumbent for me, if the way is clear ahead, to pull up behind a cyclist to allow another car travelling in the same direction to pass, nor do I think the driver of the latter should attempt to do so in such a case.—Yours truly,

SURBITONIAN.

THE Star Engineering Company write:—"It having come to our knowledge that a report is being circulated of the scarcity of work in Wolverhampton with firms connected with the making and production of motor-cars, we should like to inform you that, however much this report may be true with regard to other firms in the town, it does not affect us, as we are at the present moment busier than we have ever been, and there is every prospect of the work getting heavier still, as orders continue to come in fast."

THE WEATHERPROOF CAR.

(Concluded from page 303.)

THE earlier engines were commonly fixed with exposed cam shaft gears, and these were rapidly worn out and caused to run very noisily by the mud with which they were covered. Dirt was likely to work in around the cam and crank shaft and wear out the bearings. Now cam shaft and auxiliary driving gears are usually completely enclosed in cases in which lubricant is carried. The housing of these gears is most important, for the reason that, even with a good shield under the motor, considerable dust is drawn in through the radiator by the fan action, and the first thing it settles upon is the timing gears. Many of the motors used in the earlier cars were fitted with automatic inlet valves. When these valves were used in horizontal engines they were very much exposed to splashing mud. The fouling of the valve stems and springs with mud would often prevent their seating, and, after a few back explosions, the motor would stop. Mud entering the valve stem guides or rocker arm pivots of mechanically-operated valves has caused a great deal of unnecessary wear, resulting in faulty timing and an abnormal amount of noise. A good dust-pan construction prevents

are very generally provided with compression grease cups, or at least with spring-closed oil retainers, which exclude dirt. Operating linkages of all kinds, the steering connections and distance rods were among the parts referred to. Many of these parts are now protected, like the engine, by the dust shield.

As regards the change speed gears, those of the planetary type were upon many of the earlier cars imperfectly encased, as were also their operating rods, and consequently wear was very rapid, due to the entrance of grit. Such gears are now quite commonly enclosed in an extension of the engine crank case, which is dust-tight, and where not so located are of better design and protected by an under-cover. The sliding gear transmission was always fully enclosed, even in its earliest forms, and never was very susceptible to disarrangement from mud and water. Its operating mechanism was, however, frequently imperfect in this regard, a rod sliding through the wall of the gear-box effecting the gear changes. Any grit which collected upon this rod was likely to be carried into the box, and to wear not only the bearings of the rod, but the gear shaft bearings. The shield, unknown on the older cars, is now universally extended so as to include the gear-box.

Perhaps the most striking contrast between old and new methods as regards "mud-proofing" may be observed in the final drive to the



The French Industrial Vehicle Trials.—Some of the Vehicles on the Hill at Bonnières.

this evil in great measure, but even in good modern cars there is some mud and considerable dust carried in by the fan action. In a recently-designed engine easily removable covers are arranged to fit tightly over the valve stems, springs, and push rods.

Engine cooling systems are not very seriously affected by splashing mud and water. Radiators may get fairly well clogged with mud, and if the mud is of a clayey nature it may bake into the meshes of a honeycomb radiator. Of course, this affects the radiator's capacity very seriously. Perhaps a location for the radiator just to the rear of the engine, as practised on one or two foreign makes of cars, will be found to possess an advantage in this direction, which is of considerable importance. The under-hung tubular finned type of radiator does not foul with mud as badly as might be expected, possibly on account of the absence of the fan action. Pump troubles were frequent with the old cars, which often had belts, chains, or friction drives. The pumps of modern cars being driven by enclosed gears and protected by the shield hood are not thus subject to disablement.

While engine lubrication was never very prone to disarrangement by road splash, there were on the earlier cars a large number of uncovered oil holes in various parts of the mechanism, which became filled with mud if the car were used in wet weather. The next application of the oil can to these oil holes washed in the grit, and a very rapid deterioration of the parts ensued. In modern cars these parts

back axle. Single chain drive to a live rear axle was very general on early American cars, and manufacturers made no pretence of protecting the chains and sprockets. There were even examples of differential gears entirely unenclosed. Occasionally an owner arranged some sort of a makeshift chain cover of tarpaulin, but this was very exceptional. The wear of chains was very rapid, even though they were frequently cleaned and lubricated. With the adoption of the shaft drive, which has since become so general, the final transmission has become practically mudproof, and the rate of wear in this part of the mechanism has been reduced to a minimum. The early shaft drives employed universal joints, which were almost completely exposed to the weather, but these have now been replaced by joints carrying their own nearly complete spherical casings, and even these are often further protected by means of tight leather boots filled with lubricant. In the single chain drive there was generally a chance for grit to work into the axle casing and differential on each side of the sprocket. In the bevel gear drive there is a continuous tight metal sleeve reaching from each wheel and including the differential bevel gears, and sometimes extending forward uninterruptedly to the change gear box.

In the present-day touring car it is to be found a continuous protective shield connecting the widely flaring guards and the running board, which intervenes between them, with the body itself and the shield, which completely underlies it.

THE IRISH RELIABILITY TRIAL.

THE results of the Irish Automobile Club's Reliability Trial have been announced as follows, fifty marks being the maximum for hill climbs and the speed test. G.M. indicates Gold Medal, S.M. Silver Medal, and W. withdrawn:—

SECTION I.—OPEN.

CLASS A.—PRICE NOT EXCEEDING £150.

| Name of Car. | Reliability. | Hollywood Hill. | Ballinasloe Hill. | Rosbeigh Speed Test. | Total Marks obtained. |
|--------------------------|--------------|-----------------|-------------------|----------------------|-----------------------|
| 6-h.p. Rover | — | 24.95 | — | 24.81 | W. |
| 8-h.p. Phoenix | — | 29.90 | — | 32.81 | W. |
| 8-h.p. Imperial Starling | 830 | 23.96 | 24.35 | 29.64 | 907.95 |
| 10-h.p. Royal Starling | 850 | 31.33 | 31.51 | 35.02 | 947.86 |
| 10-h.p. Royal Starling | — | 34.95 | — | 39.08 | W. |
| 15-18-h.p. Ford, G.M. | 846 | 50.00 | 50.00 | 50.00 | 996 |

CLASS B.—PRICE EXCEEDING £150, BUT NOT EXCEEDING £250. TWO SEATS.

| | | | | | |
|------------------------|-----|-------|-------|-------|--------|
| 8-h.p. Rover | 850 | 29.69 | 29.20 | 29.66 | 938.55 |
| 8-10-h.p. Rover | — | 28.74 | — | — | W. |
| 9-10-h.p. Cadillac | 834 | 30.00 | 37.60 | 33.62 | 935.22 |
| 9-h.p. Adler | 850 | 29.98 | 32.29 | 26.47 | 938.74 |
| 10-12-h.p. Chambers | 739 | 26.34 | 33.69 | 34.34 | 833.37 |
| 10-12-h.p. Swift, G.M. | 848 | 44.67 | 50.00 | 36.47 | 979.14 |
| 10-12-h.p. Swift | 850 | 34.53 | 40.51 | 34.86 | 959.90 |
| 15-18-h.p. Ford | — | 50.00 | 37.93 | 50.00 | W. |
| 15-20-h.p. Buick | — | 37.44 | — | — | W. |

CLASS C.—PRICE EXCEEDING £150, BUT NOT EXCEEDING £250. FOUR SEATS.

| | | | | | |
|-------------------------|-----|-------|-------|-------|--------|
| 10-12-h.p. Humber | 850 | 34.29 | 34.55 | 35.86 | 954.70 |
| 10-12-h.p. Humber, G.M. | 850 | 50.00 | 48.83 | 44.32 | 993.15 |
| 12-h.p. Riley | 843 | 45.74 | 50.00 | 47.61 | 986.35 |
| 10-12-h.p. Chambers | 845 | 33.66 | 31.98 | 35.66 | 943.20 |
| 10-12-h.p. Chambers | 782 | 29.10 | 25.80 | 29.14 | 866.04 |
| 10-h.p. Cadillac | 847 | 26.14 | 25.83 | 32.70 | 931.67 |
| 14-16-h.p. Belsize | 838 | 44.96 | 41.22 | 50.00 | 974.18 |

CLASS D.—PRICE EXCEEDING £250, BUT NOT EXCEEDING £350.

| | | | | | |
|----------------------------|-----|-------|---------------|-------|--------|
| 12-14-h.p. Gladiator | — | — | Disqualified. | — | — |
| 15-h.p. Humber | — | 49.89 | — | 45.92 | W. |
| 14-16-h.p. Argyll | 850 | 43.45 | 45.64 | 46.99 | 986.08 |
| 14-16-h.p. Darracq | 843 | 36.03 | 25.26 | 39.11 | 943.40 |
| 16-h.p. Bell | 826 | 37.32 | 42.78 | 40.45 | 946.55 |
| 16-20-h.p. Calthorpe | 797 | 46.85 | 45.97 | 50.00 | 939.82 |
| 16-20-h.p. Calthorpe | 850 | 41.48 | 50.00 | 47.18 | 988.66 |
| 16-20-h.p. Calthorpe, G.M. | 846 | 50.00 | 48.98 | 48.38 | 993.36 |
| 18-24-h.p. Swift | 850 | 42.91 | 46.98 | 43.58 | 983.47 |

CLASS E.—PRICE EXCEEDING £350, BUT NOT EXCEEDING £450.

| | | | | | |
|------------------------------|-----|-------|-------|-------|--------|
| 18-22-h.p. C.C.C. | 850 | 36.08 | 29.55 | 39.37 | 955.00 |
| 15-h.p. Clement-Talbot | — | 50.00 | — | 41.54 | W. |
| 14-16-h.p. Berliet | 844 | 29.45 | 30.53 | 32.89 | 937.87 |
| 16-20-h.p. Stella | 850 | 31.57 | 27.41 | 38.50 | 947.48 |
| 20-h.p. Scout | 844 | 30.29 | 18.72 | 28.65 | 921.66 |
| 20-h.p. Beeston Humber | 850 | 40.13 | 38.38 | 39.21 | 967.72 |
| 20-h.p. Rover | 850 | 30.47 | 28.75 | 31.98 | 941.20 |
| 20-h.p. Cadillac | 850 | 29.35 | 31.13 | 36.95 | 947.43 |
| 15-h.p. Clement-Talbot, G.M. | 850 | 50.00 | 50.00 | 50.00 | 1,000 |

CLASS F.—PRICE EXCEEDING £450, BUT NOT EXCEEDING £550.

| | | | | | |
|------------------------------|-----|-------|-------|-------|--------|
| 20-h.p. Sunbeam | 850 | 28.17 | 29.78 | 36.06 | 944.01 |
| 25-h.p. Clement-Talbot, G.M. | 850 | 50.00 | 50.00 | 50.00 | 1,000 |
| 25-35-h.p. Darracq | 846 | 33.00 | 16.06 | 43.83 | 938.89 |
| 28-h.p. Minerva | — | 40.39 | — | — | W. |
| 22-h.p. Berliet | — | 27.49 | — | — | W. |
| 18-24-h.p. Gladiator | 850 | 32.17 | 21.29 | 41.45 | 944.91 |

CLASS G.—PRICE EXCEEDING £550, BUT NOT EXCEEDING £700.

| | | | | | |
|-----------------------|-----|-------|-------|-------|--------|
| 48-h.p. Daimler, G.M. | 847 | 50.00 | 50.00 | 50.00 | 997.00 |
| 35-45-h.p. Gladiator | 847 | 23.85 | 31.00 | 41.53 | 943.38 |
| 40-h.p. Berliet | 849 | 31.62 | 36.75 | 36.71 | 953.08 |
| 25-30-h.p. Austin | 850 | 28.05 | 26.39 | 34.77 | 939.21 |

CLASS H.—PRICE EXCEEDING £700.

| | | | | | |
|----------------|-----|-------|-------|-------|--------|
| 60-h.p. Napier | 835 | 50.00 | 50.00 | 50.00 | 985.00 |
|----------------|-----|-------|-------|-------|--------|

SECTION II.—LIMITED.

CLASS B.—PRICE EXCEEDING £150, BUT NOT EXCEEDING £200.

| | | | | | |
|------------------------|-----|-------|-------|-------|--------|
| 8-10-h.p. Rover | — | 41.61 | — | — | W. |
| 10-12-h.p. Swift, G.M. | 850 | 50.00 | 50.00 | 50.00 | 1,000 |
| 8-10-h.p. Darracq | — | 12.12 | — | — | W. |
| 8-h.p. Rover | 844 | 43.63 | 46.36 | 46.57 | 980.56 |

CLASS C.—PRICE EXCEEDING £150, BUT NOT EXCEEDING £250. FOUR SEATS.

| | | | | | |
|------------------|---|-------|---|---|----|
| 12-18-h.p. Riley | — | 50.00 | — | — | W. |
|------------------|---|-------|---|---|----|

CLASS D.—PRICE EXCEEDING £250, BUT NOT EXCEEDING £350.

| | | | | | |
|-------------------------------|-----|-------|-------|-------|--------|
| 14-16-h.p. Argyll | 847 | 50.00 | 40.23 | 46.92 | 984.15 |
| 15-h.p. Coventry Humber, S.M. | 848 | 48.07 | 50.00 | 50.00 | 996.07 |

CLASS E.—PRICE EXCEEDING £350, BUT NOT EXCEEDING £450.

| | | | | | |
|--------------------------|-----|-------|-------|-------|--------|
| 20-h.p. Cadillac | 850 | 44.65 | 49.03 | 50.00 | 994.58 |
| 14-22-h.p. Germain, G.M. | 850 | 50.00 | 50.00 | 49.81 | 999.81 |
| 12-14-h.p. De Dion | — | 40.74 | — | — | W. |
| 16-20-h.p. Argyll | 848 | 36.62 | 38.07 | 44.73 | 967.42 |

CLASS F.—PRICE EXCEEDING £450, BUT NOT EXCEEDING £550.

| | | | | | |
|---------------------------------|-----|-------|-------|-------|--------|
| 18-24-h.p. Gladiator | 850 | 43.82 | 37.92 | 50.00 | 981.74 |
| 20-24-h.p. Clement-Talbot, S.M. | 849 | 50.00 | 50.00 | 45.94 | 994.94 |

CLASS G.—PRICE EXCEEDING £550, BUT NOT EXCEEDING £700.

| | | | | | |
|------------------------|-----|-------|-------|-------|--------|
| 48-h.p. Daimler, G.M. | 847 | 50.00 | 50.00 | 50.00 | 997.00 |
| 24-30-h.p. De Dietrich | 850 | 28.11 | 26.00 | 31.36 | 935.47 |
| 48-h.p. Daimler | — | 47.14 | — | — | W. |

TEAM COMPETITION.

FOR THE GOFF CHALLENGE CUP.

| Name. | Reliability. | Marks. | Total. |
|----------------------|--------------|--------|--------|
| 10-12-h.p. Swift | — | 848 | — |
| 10-12-h.p. Swift | — | 850 | 2,548 |
| 18-24-h.p. Swift | — | 850 | — |
| 9-10-h.p. Cadillac | — | 834 | — |
| 10-h.p. Cadillac | — | 847 | 2,531 |
| 20-h.p. Cadillac | — | 850 | — |
| 16-20-h.p. Calthorpe | — | 797 | — |
| 16-20-h.p. Calthorpe | — | 850 | 2,493 |
| 16-20-h.p. Calthorpe | — | 846 | — |
| 10-12-h.p. Chambers | — | 739 | — |
| 10-12-h.p. Chambers | — | 845 | 2,366 |
| 10-12-h.p. Chambers | — | 782 | — |

200-GUINEA DUNLOP CUP.

For the car entered in the open section securing the highest aggregate marks, the hill climbs and speed test being calculated on a formula basis, the order of placing was as follows:—

| Class. | Marks. |
|---|--------|
| Winner ... E ... 15-h.p. Clement-Talbot | 992.51 |
| 2nd ... F ... 25-h.p. Clement-Talbot | 986.49 |
| 3rd ... G ... 48-h.p. Daimler | 970.55 |
| 4th ... H ... 60-h.p. Napier | 968.85 |
| 5th ... D ... 16-20-h.p. Calthorpe | 956.66 |
| 6th ... C ... 10-12-h.p. Humber | 944.73 |
| 7th ... B ... 10-12-h.p. Swift | 930.82 |
| 8th ... A ... 15-18-h.p. Ford | 922.31 |

The 100-guinea Dunlop Cup Competition for the Limited Section resulted as follows:—

| Class. | Marks. |
|---------------------------------------|--------|
| Winner ... G ... 48-h.p. Daimler | 997.00 |
| 2nd ... F ... 20-h.p. Clement-Talbot | 973.33 |
| 3rd ... E ... 14-22-h.p. Germain | 963.07 |
| 4th ... B ... 10-12-h.p. Swift | 934.98 |
| 5th ... D ... 15-h.p. Coventry Humber | 929.69 |

ROAD REPORTS.

DARLINGTON.—Between the Monument in North Gate and Russell Street, Darlington, is a distance of 286 yards which the police have measured and over which they have frequently timed motorists.

BARNET.—The county council of Hertford is applying to the L.G.B. for a restriction of the speed of motor-cars in that portion of the Great North Road situated in the urban district of Barnet and some other roadways in the locality. Objections should be lodged before Tuesday next, the 9th inst.

SHERBURN.—At the last meeting of the Sherburn Rural District Council, Mr. Francis Ware, hon. secretary of the North Yorkshire A.C., wrote to the effect that he understood from the Clerk to the East Riding County Council that the Rural Council raised no objection to a proposed alteration at Spittal Corner, Staxton, on the road from Malton to Scarborough, provided that any cost was not to be a charge on their funds. Lord Londesborough had undertaken to give all the necessary land free of charge if the expense of widening the road could be defrayed from other sources. If the corner of the road were widened off, and the fence set back, it would add very greatly to the safety of the road and the comfort of those using it. The cost of carrying out the work was estimated at £60 or £70. Both the Yorkshire Automobile Club and the East Riding County Council were prepared to contribute towards the cost if the Rural Council would share the expense. This proposition was declined.

AYLESBURY.—The County Surveyor, Mr. R. J. Thomas, states that the London and Bath road is being "Tarmac'd" from Colnbrook to Langley. Special caution should be exercised when driving through the narrow village of Well End, on the Bourne End and Marlow road.]

THE rapid progress of the Rudge-Whitworth detachable wheel in the esteem of private owners of the better class of motor-cars is well borne out by the fact that His Highness Prince Ranjitsinhji, Jam of Nawanganar, has recently given the Lanchester Company instructions to equip his fifth Lanchester car with these wheels.

CLUBS AND ASSOCIATIONS.

ROYAL.

AN advantage of the R.A.C. system of handicapping is demonstrated by the fact that at the recent hill-climb at Cat Hill, near Southgate, promoted by the North Middlesex A.C., the results were announced to the competitors fifteen minutes after the last car had completed the course.

MOTOR UNION.

MR. ROWLAND WINN, of Leeds, has been appointed to the list of Motor Union consulting engineers.

The number of individual members of the M.U. on the 31st ult. was 4,593 as compared with 3,553 on the same date in 1907.

Harrogate has been suggested as the place for the July provincial meet, and the Oxford and District A.C. has offered to assist the Union in every possible way for the September gathering.

MOTOR CLUB.

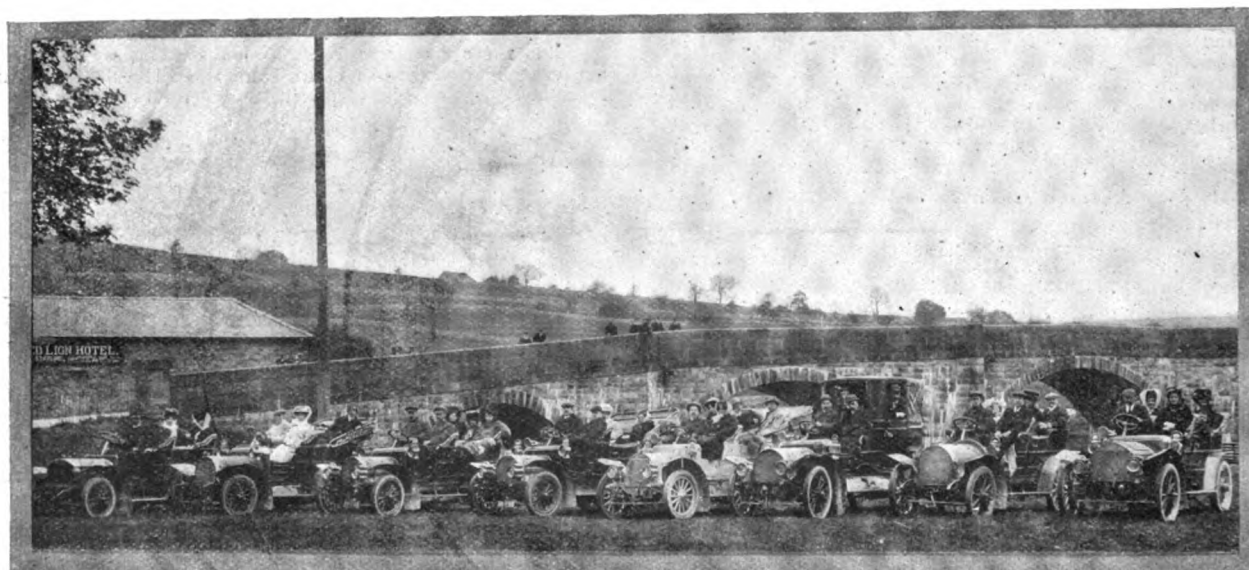
THE Committee of the Motor Club, Coventry Street, London, W., have made special arrangements with the committee of the Phyllis Court, in connection with their visitors' enclosure at the Henley Regatta on July 1st to 3rd. There is a large paddock for motor-cars, and the secretary will be pleased to send particulars of the excellent arrangements made for the convenience and entertainment of the members of the club.

which has a very fine minstrels' gallery, then, by way of the armoury, they visited all the rooms of interest in the mansion. The members and their friends also explored the gardens and grounds, and many passed an amusing half-hour in the intricacies of the well-kept maze. Then a move was made to the cars again, and, headed by Mr. Young's car, a tour of the whole park was made, involving a drive of some nine or ten miles and passing en route the vineries, the peacocks, and Queen Elizabeth's oak.

When this delightful journey was completed a move was made to the Red Lion Hotel, where, by the kindness of Mr. S. Saker, the chairman of the county club, and Mrs. Saker, every member of each club had been invited to tea. In the banqueting room of this old-fashioned hostelry 110 members and friends assembled (seventy-five H.C.A.C. and thirty-five N.H.A.C.), and Mr. and Mrs. Saker's hospitality was very much appreciated, and elicited a very cordial expression of thanks.

LANCASHIRE.

A SPEED-JUDGING competition was held by the Lancashire Automobile Club on Saturday, on the main road from Preston to Blackpool. There were thirty entries, and the course was about five miles long. Mr. A. Birtwistle, the secretary of the club, acted as judge. The results were:—1, Mr. Herbert Lonsdale, of Blackpool, on a 28-35-h.p. F.I.A.T., three seconds off scheduled time; 2, Mr. W. Huck, of Leyland (9-h.p. Darracq), thirteen seconds off; 3, Mr. Havelock Lonsdale, of Accrington (30-40-h.p. Daimler), thirty-three seconds off; 4, Miss L. Nuttall, Accrington (18-h.p. White steam car), forty seconds off.



The Staff and Friends of the Northern Automobile Company, Ltd., Manningham, Bradford, at Burnshall.

THE AUTO-CYCLE UNION.

THE annual hill-climbing competition of the Auto-cycle Union was held at Sutton Bank, near Thirsk, on Saturday, in charming weather. The facts that the hill is one of the worst in the kingdom, having portions 1 in 5.8 and 1 in 3.96, and that it contains an elbow bend, drew a large crowd of spectators. There were forty-nine entries, and the results were as follow:—

Light Weights: R. C. Bell (Motoreve), the only starter, failed to reach the top. Single-cylinders, not exceeding 82 mm. bore: 1, R. M. Brice (Brown); 2, F. Scrivener (Rex); 3, S. W. Carty (N.S.U.). Single-cylinders, not exceeding 85 mm. bore: 1, G. Marshall (Triumph) 2, Brice; 3, W. G. M'Minnies (Triumph). Twin-cylinders, not exceeding 75 mm. bore each: 1, O. C. Godfrey (Rex); 2, F. Applebee, jun. (Rex); 3, F. W. Applebee (Rex). Twin-cylinders, not exceeding 85 mm. bore each: 1, Godfrey; 2, Applebee, jun.; 3, Scrivener. Class open to all the foregoing: 1, Godfrey; 2, Applebee, jun.; 3, Marshall. Variable gears: 1, G. Raper (N.S.U.); 2, C. A. Palmer (Rex); 3, W. Milnes (Phelon and Moore). Passenger machines: R. B. Smith (N.S.U.)

HERTFORDSHIRE.

A MOST successful inter-club meet took place on Saturday last, when the Hertfordshire C.A.C. invited the members of the North Herts. A.C. to join them at Hatfield. The forty cars met outside the main entrance gates to Hatfield Park, and they proceeded through the Park to the house, Lord Salisbury having accorded the Hertfordshire C.A.C. the privilege of seeing over his historic residence in addition to driving through the park. The visitors then assembled in the Marble Hall, which contains some very valuable tapestries and paintings, and

HUDDERSFIELD.

ON Saturday the annual hill-climbing competition under the auspices of the Huddersfield branch of the Yorkshire Automobile Club took place on a stretch of wide road, a mile and 48 yards long, leading from Meltham to Isle of Skye. There were four classes—Class A, for cars of 8-h.p. and under, two entries; Class B, cars of over 8-h.p. and not exceeding 18-h.p., eleven entries and nine competitors; Class C, over 18-h.p. and not exceeding 30-h.p., ten entries and eight competitors; and Class D, over 30-h.p., four entries and two competitors. The competition was on a handicap basis, and was not decided till late in the evening, when the following results were announced by the president and referee, Mr. W. H. Jessop:—

Class A: 1, A. H. Young, 6-h.p. Gladiator (78.8); 2, T. E. Dyson, 6-h.p. De Dion (50.3).

Class B: 1, T. H. Kaye, 10-h.p. Alldays (97.1); 2, R. H. Hartley, 12-h.p. De Dion (88.8).

Class C: 1, J. H. Crowther, 14-16-h.p. Argyll (93.6); 2, G. A. Crowther, 14-16-h.p. Argyll (87.4).

Class D: 1, A. Farnell (Bradford), 30-h.p. Daimler (97.9); 2, P. S. Crowther, 43-h.p. Napier (86.5).

LINCOLNSHIRE MOTOR-CYCLE CLUB.

THE Shades, Spilsby, East Lincolnshire, long popular with cyclists and motorists, was on Saturday the rendezvous of the Lincolnshire Motor-Cycle Club, and there was a very representative muster. On Monday the reliability trial on two routes, one taking in Grantham, Stamford, Spalding, Holbeach, and Boston, and the other taking in Spilsby, Grimsby, Scunthorpe and Gainsboro', will be held.

CRYSTAL PALACE.

TWELVE cars only entered for the Open Flexibility competition of the Crystal Palace A.C. on Saturday last. This was limited to touring cars as defined by the "Touring Car Standards" formulated by the Society of Motor Manufacturers and Traders and adopted by the R.A.C. At 8.30 a.m. the competitors had a flying half mile speed test on the Brookland track, when the following speeds were attained:—

| | M.p.h. | | M.p.h. |
|--------------------------|--------|--------------------------|--------|
| 60-h.p. Napier | 69.5 | 15.9-h.p. Vinot | 38.54 |
| 35.7-h.p. Dennis | 51.3 | 13.9-h.p. De Dion | 37.1 |
| 38.2-h.p. Belsize | 44.67 | 7.96-h.p. De Dion | 35.22 |
| 22-h.p. Vinot | 40.27 | — Duhanot | 35.02 |
| 8.9-h.p. Sizaire | 39.74 | | |

Then the cars proceeded through Ripley and Guildford over Hog's Back, through Farnham and Hindhead to Petersfield, where luncheon was taken at the Red Lion Hotel. The journey was one of 42½ miles, which was made up to 84½ miles by returning *via* Midhurst, Haslemere, Hindhead, Milford, Godalming and Guildford to the White Lion Hotel at Cobham.

Fortunately the weather and roads were equally good despite a shower in the afternoon. Many bends and several narrow roads, where stops for traffic were practically inevitable, made the route particularly well adapted for the purposes of such a trial. Unfortunately the Belsize lost 200 marks through a heated bearing caused by a broken lubricating pipe. The maximum marks attainable in each class was 1,250, and the results were as follows:—

| Class. | Make. | Flexibility. | Speed. | Total Marks. |
|--------|-----------------------|--------------|---------|--------------|
| 1 ... | 8.9-h.p. Sizaire ... | 790 ... | 250 ... | 1,040 |
| 1 ... | 7.96-h.p. De Dion ... | 750 ... | 160 ... | 910 |
| 2 ... | 15.9-h.p. Vinot ... | 771 ... | 250 ... | 1,021 |
| 2 ... | 13.9-h.p. De Dion ... | 784 ... | 220 ... | 1,004 |
| 3 ... | 22-h.p. Vinot ... | 914 ... | 250 ... | 1,164 |
| 4 ... | 35.7-h.p. Dennis ... | 951 ... | 250 ... | 1,201 |
| 4 ... | 38.2-h.p. Belsize ... | 667 ... | 120 ... | 787 |
| 5 ... | 60-h.p. Napier ... | 1,000 ... | 250 ... | 1,250 |

The drivers of the various vehicles engaged were Messrs. G. F. Scantlebury, W. V. Jolly, H. Ramolay, J. W. Stocks, N. Doherty, Gordon Usmar, R. Downing, P. Runciman and F. G. Cundy.

MANCHESTER.

THE Manchester Automobile Club held a meet on Saturday, when, by permission of Mr. Robert Dempster, they visited Vale Royal, near Hartford. Over forty motor-cars travelled from various quarters of Manchester and district. The foliage, freshened by a morning shower, was seen to great advantage, and the bright, sunny afternoon made tea on the lawn most enjoyable. Opportunity was afforded of inspecting the collection of big game hunting trophies of Lord Delamere.

SCARBOROUGH AND DISTRICT.

THE Scarborough and District Motor Club on Wednesday, last week, held a competition at Sherburn, which consisted of locating faults in the electrical parts of the machines, purposely made by the judges, Mr. R. W. Ringrose and Mr. J. W. F. Tranmer. Mr. Chas. Pugh was the winner of the first prize, very smartly getting away in four minutes, Mr. Fred Robson winning the second prize in twenty minutes. The prizes were given respectively by Mr. J. S. Atkinson and by the secretary.

COVENTRY MOTOR.

ON Saturday North Wales was invaded by motor-cars, and much interest was taken in the reliability run of the Coventry Motor Club from Coventry to Holyhead, in which there were thirty-one participants. The route was *via* Shrewsbury to Llangollen, where lunch was partaken of, and thence to Menai Bridge for tea, Holyhead being reached about 6 p.m. The run was a fast one, and the first arrival was that of Miss Hind, who reached the terminus at 5.43 p.m., having started at 7 a.m. Mr. K. Starley arrived at 5.49 p.m., and the last car arrived at 7.30. The club started on the homeward journey at seven o'clock on Sunday morning.

AERO CLUB.

THE International balloon race on Saturday was from Hurlingham to Burchetts Green Inn, near Maidenhead, a motorist being despatched along the Bath road with a flag to mark the goal as soon as it was decided by the judges. None of the balloons got nearer than 1,900 yards of goal. Of the others, one failed to start, two came down early on account of lack of ballast, and the rest finished anywhere within a radius of eight miles, Mr. C. F. Pollock (Valkyrie) and Mr. Griffith Brewer (Lotus) descending about a mile from the winning post. Some difficulty also arose in regard to awarding third prize, as the third, fourth, fifth, and sixth balloons to descend came down in Waltham St. Lawrence, at about equal distance from the winning post, and it was requisite to take measurements to decide which was the nearest to the goal.

Mr. H. E. Perrin, secretary of the Aero Club, on Monday made an official inspection of the places at which the balloons alighted after taking part in the contest on Saturday. The distance at which ea

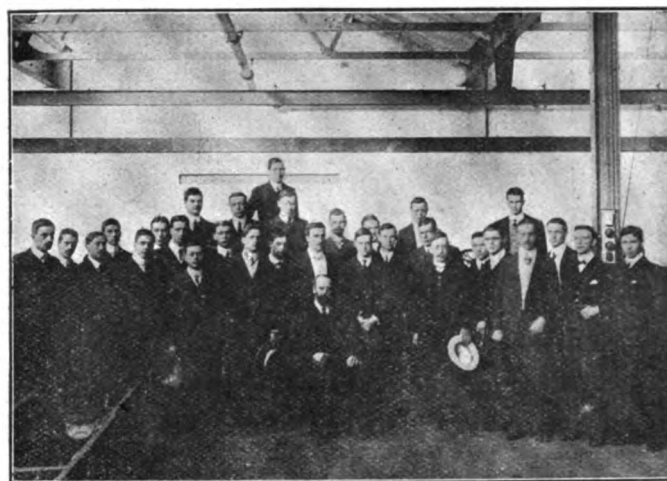
competitor descended from the spot selected as the winning post at Burchetts Green Inn, Maidenhead, was measured, the following official result being declared:—

| | Nationality. | Yards from Goal. |
|--------------------------------|--------------|------------------|
| 1. Mr. Griffiths Brewer | Britain ... | 1,966 |
| 2. Mr. C. F. Pollock | Britain ... | 2,166 |
| 3. M. G. Geerts | Belgium ... | 5,533 |
| 4. Mr. Frank Butler | Britain ... | 6,425 |
| 5. Hon. Claude Brabazon | Britain ... | 6,683 |

The special prize of £80 presented by the Royal Automobile Club to the foreign competitor who did best in the contest was therefore won by M. G. Geerts.

THE INSTITUTION OF AUTOMOBILE ENGINEERS.

A VISIT to the Clement-Talbot Motor Works at North Kensington was made last week by the graduates from the Incorporated Institution of Automobile Engineers. Under the guidance of Mr. Garrard, the works manager, and his assistants, a complete tour of inspection round the various shops was made. Much time was spent in the machine department, where the visitors were particularly interested in the fine and up-to-date machinery, and inspected very closely the automatic machines which handle some of the largest work. Much surprise was expressed on learning that many of these machines are left entirely to themselves once the job is set up, and are not touched until a bell rings to indicate to the attendant that the work is finished. Passing on to the erecting shop, the party came upon the two cars that are being prepared for the Two Thousand miles trials, and it was explained that this was the first time the Talbot Company had ever built special cars for competition work, all their previous successes having been made on standard pattern vehicles. After the remaining shops had been



visited, the party retired to one of the spacious reception rooms in the office building, where Mr. Garrard gave a short address, and stated that he would be pleased to reply to any questions asked. Many of the graduates took advantage of the opportunity, and although many of the questions touched on metallurgical subjects, the principal one debated was the remarkable efficiency of the Talbot engine. No objection was made to discussing every detail that led up to this, and the discussion was highly interesting and instructive to all present. At the conclusion a hearty vote of thanks was passed to Mr. Garrard and his assistants for the kind attention they had shown during the afternoon. The photo reproduced herewith was taken in the works before the party left, Mr. Garrard, the works manager and designer of the Talbot cars, being seen seated in the centre.

COMMERCIAL MOTOR USERS' ASSOCIATION.

THIS Association is organising two competitions for drivers of commercial motor vehicles, to be held in Manchester and London on July 18th and October 3rd respectively. Those in the employ of firms in Birmingham and the north thereof will be eligible for the Manchester competition and those south of Birmingham for that in London. For each competition fifteen prizes will be awarded, and particulars of the scheme may be obtained on application to the Secretary, 1, Albemarle Street, London, W.

SOUTHERN.

THIS club held the second of its speed-judging contests on Saturday last, starting from its country headquarters at the Glyn Arms, Ewell, the course including Epsom and Leatherhead *en route*. The competitors drew lots for their respective speeds, and the penalties were 6d. per mile in error, with a maximum of 2s. The results were as follows:—1, Mr. and Mrs. Guttridge (12-h.p. Gladiator); 2, Mr. Brodie and friend (tandem motor-cycle); 3, Mr. and Mrs. Holt, tri-car; 4, Mr. G. Aldington; 5, Mr. and Mrs. Jones; 6, Mr. Davies; 7, Mr. Abellott;

8. Mr. Pole. The competition arrangements were in the hands of Mr. A. W. Holt, hon. sports sec., and Mr. A. Vicars officiated as time-keeper.

WOLVERHAMPTON.

THE Hill-climbing Competition to be held on Coalport Hill, near Ironbridge (Salop) by the Wolverhampton and District A.C. will take place on July 11th, not July 4th, as was stated in the preliminary announcement. Alderman John Marston, J.P., will be judge and Mr. T. T. Mills chairman of the committee responsible for the arrangements. The R.A.C. formula will be used for handicapping and entries will close on the 1st prox., but will be received up to the following Saturday at double fees. Entry forms may be obtained from the hon. secretary at Royal London Buildings, Wolverhampton.

THE MOTOR-CYCLING CLUB.

THE list of entries for the M.C.C. London to Edinburgh twenty-four hours' run, the Schulte cup and the M.C.C. challenge cup competition, has now closed with the record number of about 130 entrants, of which between 90 and 100 are motor-bicycles.

The start of the run northward will take place at 10 p.m. on the evening of Friday, the 5th inst., near the Old Gatehouse at the top of Highgate Hill, London, W.

place on July 25th. Entries should reach Mr. F. H. Cerrito, at the Grand Hotel, Birmingham, not later than July 20th.

ON Saturday the members of the Kent A.C. were most hospitably entertained by Mr. and Mrs. J. S. Darwen at their residence, Combe Lea, Bickley.

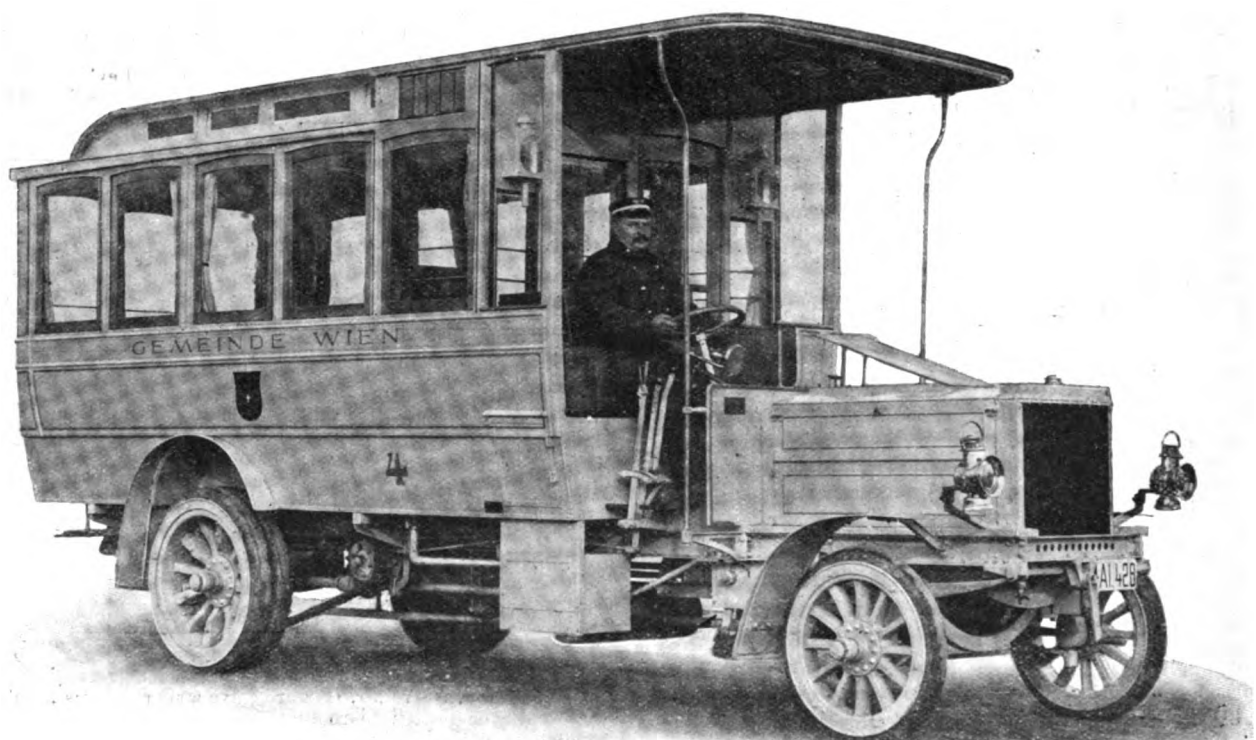
THE Blandford and District A.C. held their postponed opening meet for the season recently in Eastbury Park, the residence of their president, Mr. H. F. W. Farquharson.

As we intimated last week was likely to be the case, the Manchester and District Motor and Cycle Trades' Association has now taken the reference to the cycle trade from its title.

THE Automobile Club of North Wales has now a total membership of 128 members, of whom forty-four are in the county of Carnarvon, twenty-seven in Denbigh, twenty-three in Anglesey, eleven in Flintshire, five in Merioneth, three in Montgomery and fifteen outside the Principality.

ALLEGED PERJURY BY A CHAUFFEUR.

SENTENCE of six months' imprisonment with hard labour was passed by the Common Serjeant at the Old Bailey on Monday on Herbert H. Price, of South Tottenham, who was found guilty of committing perjury. Proceedings were taken against the owner of a car, which nearly knocked down a policeman, and Price, as a witness, swore he was not out with the car at the time, but that it was locked up in the garage at South Kensington.



The Single-Deck Motor-Bus lately put in Service in Vienna.

[Allgemeine Automobil Zeitung.]

MID-STAFFORDSHIRE.

THERE were twelve cars competing in the hill climb of the Mid-Staffordshire A.C. at Stile Cope, Rugeley. The hill is about two miles out of the town and the measured distance was just over 1,200 yards, with a gradient of one in twelve. The first three cars were Mr. A. G. Harley-Jones's 15-20-h.p. Clément-Talbot, Mr. A. C. Wenger's 18-22-h.p. Humber, and Mr. W. H. Ryley's 22-h.p. Standard.

MOTOR-CYCLE UNION OF IRELAND.

THE members of the Dublin centre of the Motor-Cycle Union opened their competitive season on Saturday last with the first of a series of speed trials at Portmarnock.

Two Miles Members' Handicap (run over an out-and-home course).—C. E. Murphy (84-86 mm. Triumph), 25 sec. start, 1; S. Findlater (85-76 mm. J.A.P.), 30 sec., 2; P. H. Gurse (75-76 mm. Peugeot), 61 sec., 3. Winner's time, 3 min. 35-3-5 sec.

Twenty Miles Open Handicap (run over a mile out-and-home course).—S. Findlater (85-76 mm. J.A.P.), 3 min., 1; C. E. Murphy (80-86 mm. Triumph), 4 min., 2; B. Dunphy (85-71 mm. J.A.P.), 4 min., 3. Winner's time, 36 min. 20-3-5 sec.

THE open hill climb of the Midland Automobile Club at Shelsley Walsh, Worcestershire, by permission of Mr. M. C. Taylor, will take

ton. Following this, the owner caused inquiries to be made, and the fact was discovered that, quite unknown to him, Price had taken the car out, and, with three or four persons, had a midnight ride to Hampton Court. The jury strongly recommended Price to mercy on the ground that he did not appreciate the gravity of the offence. An appeal was intimated.

THE motor garage at the Royal Counties Agricultural Society's Show at Southampton is under the direction of the Parsons Motor Company, Ltd., of that town.

FROM the Coventry Chain Company, Ltd., comes a number of illustrations of the large new works they have lately completed in Coventry. The buildings are of the single storey type, and are well lighted. Altogether they appear to be well adapted for the purpose of manufacturing motor-car and cycle chains, the plant being throughout of an up-to-date character.

SOME little time ago Ariel Motors, Ltd., despatched a 30-40-h.p. Ariel car to Lisbon. The owner of the vehicle, Senor Joao da Fonseca Cruz, has now written to the builders expressing his delight with the general finish and power of the car. He states "The engine is running well, the car having gone to the palace at Cintra on top speed without changing gear. The road is a series of hills, and it is difficult to get there unless negotiated on second and third speeds."

CASES UNDER THE MOTOR CAR ACT.

DISMISSAL OF AN APPEAL.

In the King's Bench the case of *Jessop v. Clarke* came before the Lord Chief Justice and Justices Darling and Sutton, sitting as a Divisional Court, on appeal by A. L. Jessop, from a conviction by the justices of the Parts of Kesteven, Lincolnshire, for the alleged driving of a motor-car at an excessive speed, namely, more than twenty miles an hour, contrary to the provisions of Section 9 (1), of the Motor Car Act, 1903.

The evidence given before the justices was by P.C. Grist, who proved that on February 5th, on the Great North Road, about the seventh milestone from Grantham in the direction of Newark, a car marked AL511 passed him at eight minutes past two o'clock in the afternoon, going in the direction of Newark. He took the time by his watch, which had been set with that of P.C. Benson. Benson also gave evidence that at the tenth milestone from Grantham, in the direction of Newark, seeing a motor-car with the same markings approaching from the direction of Grantham at what he considered an excessive speed, he stopped the car at 13½ minutes past two o'clock p.m. by his watch. This witness told the appellant that he thought he was exceeding the speed limit, but that if, after he had compared the time with that of the other constable, it should appear that the defendant had not exceeded the speed limit over the three miles between himself and P.C. Grist, he (the appellant, would hear nothing further about it.

The appellant did not call any evidence, and did not deny that he drove the car in question at the time and place referred to, but he claimed on the following grounds, that he could not be convicted:—(1) That there was no corroboration as to speed, and that under Section 9 (1) of the Motor Car Act, 1903, he could not be convicted merely on the opinion of the witness as to the rate of speed; (2) that he was not warned of the intended prosecution at the time the alleged offence was committed, as required by Section 9 (2) of the Act; and (3) that it had not been proved that any notice of the intended prosecution had been sent to him, or to the owner of the car, as entered on the register in pursuance of Section 9 (2) of the Act. The justices, however, were of opinion that the evidence proved that the defendant's car covered the three miles between the two constables at an average speed exceeding 20 miles per hour. They also considered that the appellant had been previously warned of the intended prosecution, and they accordingly convicted him, and fined him £5 and costs. Mr. Horace Ivory, K.C., in support of the appeal, said he abandoned the first point raised before the magistrates as a reason why they could not convict, but he insisted that the conviction ought to be quashed upon the ground that there was no warning at the time of the offence that the appellant would be prosecuted.

The Lord Chief Justice, however, held that the statement of the police-constable that if it appeared that he had not exceeded the speed limit, he would hear no more of the matter, was a sufficient warning, and, therefore, the appeal must be dismissed. The other judges concurred, and the appeal was accordingly dismissed, with costs.

EXCEEDING LEGAL LIMIT.

Half-a-dozen cases against motorists for travelling too rapidly through the police traps at Ellel Grange, near Galgate, at Conder Green, and on a road north of Lancaster, were heard at Lancaster on Saturday, and fines ranging from £5 to £10 each were imposed.

Sixteen cases against motorists were heard at the Horsham Petty Sessional Court on Saturday. Fines amounting to £31 10s. plus costs were inflicted. All the cases of exceeding the legal limit were declared proven; two in connection with rear lights being dismissed.

On Monday five motorists were fined an aggregate sum of more than £30 at Arundel, for exceeding the legal limit in the parish of Houghton.

At Lewes Petty Sessions, on Tuesday, seven motorists were fined sums ranging from £2 to £8 for exceeding the legal limit in Polegate, and the vicinity.

DISMISSAL.

A matter of minutes engaged the attention of the Hull Stipendiary Magistrate in connection with a summons against a driver employed by Mr. Farr, manager of the Hull Parcels Express Company, for driving a motor-car on the Beverley road on the evening of April 27th without a light after the stipulated lighting up time, viz., 8.14. Mr. Farr, on behalf of the defendant, admitted that the car was being driven at 8.25, but contended that the Hull time was eleven minutes behind that of Greenwich, and produced a special calendar to that effect prepared by a Manchester cycling firm.

There was considerable discussion, the result being that the Stipendiary Magistrate dismissed the summons, and expressed his approval of the calendar, one of which Mr. Farr promised to supply to the court.

A TRIO OF SUMMONSES.

The Hillcrest Oil Company, Limited, of Parsonage Road, Bradford, were summoned on the 19th ult. at the Bradford City Court for three offences under the Motor-cars (Use and Construction) Order, 1904, namely, failing to cause to be painted on a trailer attached to a motor-car, the weight of the trailer unladen; permitting a motor-car to be used without two efficient independent brakes; and permitting a motor-car to be used for drawing another vehicle without carrying on the latter a person competent to apply the brakes attached.

Mr. Sydney Newmann, who appeared for the defendants, pleaded guilty to the first charge, but contended with regard to the other two

that the order under which the proceedings were taken did not apply to motor-cars of over three tons in weight, the weight of the vehicle in this case—a steam lorry—being 4 tons 19 cwt., and that a second efficient brake was obtained by the use of the reversing gear.

George Clixby, works manager for the Yorkshire Patent Steam Wagon Company, Ltd., of Leeds, the builders of the lorry, said that the reversing gear would bring the vehicle to a standstill on the steepest gradient in England, and was so simple in operation that it became a frequent source of complaint that drivers relied on it to the exclusion of the block brake, which got rusted up through disuse.

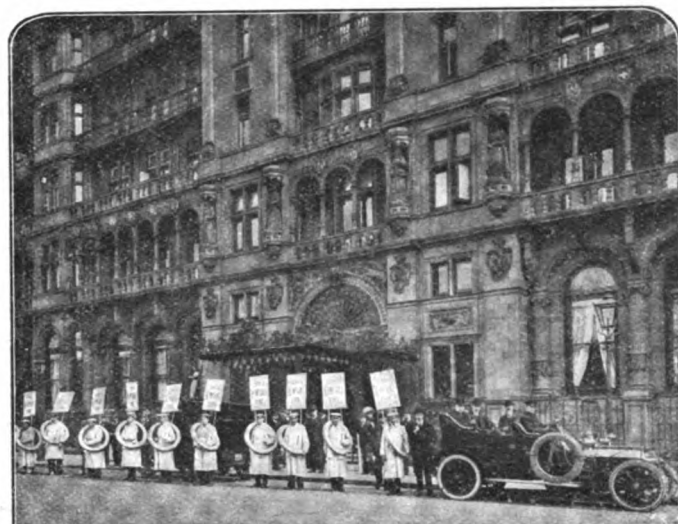
Mr. H. R. Watling, who prosecuted, in reply to Mr. Newmann's contention with regard to the application of the order, said that the Motor Car Act of 1903 gave the Local Government Board power to increase the weight of cars to which the Motor-cars (Use and Construction) Order applied, and the weight has been increased to five tons by the Heavy Motor-car Order of 1904. With regard to the reversing gear, he submitted that that was not a brake within the meaning of the order, which required two independent brakes acting on the wheels.

The case was adjourned until the 22nd ult., in order that the point of law involved might be considered by the magistrates' clerk. At the adjourned hearing the magistrates announced that they had decided that all the offences alleged had been committed, and that a fine of 10s., with 7s. costs, would be imposed in each of the three cases.

INTERNATIONAL "FOUR-INCH" RACE FOR THE TOURIST TROPHY.

THE following entries have been received for this race which will be held in the Isle of Man, probably at the end of September:—

1. 25-6-h.p. Rover, Mr. J. K. Starley (holder of trophy).



The above illustration depicts the novel method of bringing the Kempshall non-skid tyre before the notice of the public which has been adopted by the Kempshall Tyre Company of Europe, Ltd.

2. 25-6-h.p. Napier, Mr. S. F. Edge.
3. 25-6 h.p. Arrol-Johnston, Mr. Ernest A. Rosenheim.
4. 25-6-h.p. Arrol-Johnston, Mr. Ernest A. Rosenheim.
5. 25-6-h.p. Rover, Mr. Harry Smith.

The entrance fee is £35 per car. Entries at this fee will be received up to July 1st, 1908, after which date the fee will be increased to £45. The entry list will be closed on August 1st, at 12 noon. The entrance fee will be returned in full if no race be held, but will not otherwise be returnable.

THE Lion-Peugeot car which won the Targa-Florio voiturette race was fitted with and ran on an Eisemann magneto, for which United Motor Industries, Ltd., are the British agents.

MESSRS. BROWN BROTHERS, LTD., send an interesting booklet dealing with the Gabriel horn illustrated and described in the *M.C.J.* of April 18th. The horn can now be heard at their West End show-rooms 15, Newman Street, Oxford Street, W.

THE Ara vulcanizing device will execute an average repair to cover or tube in about five minutes. It can be obtained from the Ara Material Patents and Manufacturing Corporation, 350, Chancery Lane, London. W.C., or seen at the demonstrating depot, 100, Long Acre, London, W.C.

FROM M. F. Gebert, 31, Boulevard Magenta, Paris, comes a copy of the 1908 edition of the *Annuaire I.V.A. de l'Industrie Velocipedique et Automobile en France*. This is a very useful work for all having dealings with our neighbours across the Channel, as it gives the names and addresses of the makers and agents of motor-cars, motors, automobile components, cycles, &c., throughout France. The book extends to close upon 900 pages and is arranged for convenient reference.

FORTHCOMING EVENTS.

JUNE.

- 6th-8th.—London-Edinburgh twenty-four hours' run of the Motor Cycling Club.
 6th (Sat.).—Brooklands A.R.C.
 8th (M.).—Cars competing in the International Touring Car Trial will arrive at the "White" depot, Camden Town.
 Brooklands A.R.C.
 9th (Tu.).—Touring competition for Prince Henry of Prussia's prize begins.
 10th (W.).—Gymkhana of the Dorset A.C. at Wimborne.
 11th (Th.).—Start of the International Touring Car Trial of the R.A.C.
 13th (Sat.).—Hill climb of the Notts A.C. at Oakmoor.
 Speed Trials of the Lincs. A.C. at Grimsthorpe.
 N. Middlesex A.C. speed judging competition for the Gamage Cup.
 Essex C.A.C. hill climb at Bottledown Hill, Billericay.
 14th (Sun.).—Lincolnshire M.C.C. attends morning service at Gayton.
 Lunch at Mablethorpe.
 15th-19th.—Scottish Reliability Trial.
 17th.—Close of Prince Henry Touring Competition in Germany.
 18th (Th.).—Meet of the Cambridge A.C. at Hatley Park by invitation of Sir C. Hamilton.
 20th (Sat.).—Meet of the Hull Auto Cycle Club and the Lincolnshire Motor Cycle Club at Brigg.
 Annual Hill Climb of the Bristol and Gloucestershire A.C.
 Lunch of the Kent A.C. at Dover.
 Herts C.A.C.'s climb for cars at Aston Hill.
 26th (F.).—Welsh A.C. reliability trial for motor-cycles.
 27th (Sat.).—Saltburn beach races.
 Buxton meet of the Manchester, Sheffield, and Lincolnshire clubs.
 Members of the Cheshire A.C. will participate in the Gymkhana of the Manchester A.C.
 Visit of the Essex C.A.C. to Audley End.
 Meet of the Kent A.C. at Holwood by permission of the Earl of Derby.
 28th. (Sun.).—Southend M.C. run to Grand Hotel, Clacton.

LIGHTING-UP TIMES—LONDON.

| | | | |
|---------------|----------|-----------|-----------|
| June 6th—9.10 | 8th—9.12 | 10th—9.13 | 12th—9.14 |
| " 7th—9.11 | 9th—9.12 | 11th—9.13 | 13th—9.15 |

AUTOMOBILE ACCIDENTS.

At the inquest at Hove touching the death of Mr. Harold Clifton, whose death from injuries caused while riding a motor-cycle, by coming into collision with a taxi-cab, was recorded in our columns last week, a verdict of accidental death was returned, and the jury exonerated the driver of the taxi-cab from all blame.

ON Sunday morning two motor-cars collided in Church Street, Seaford. As his Honour Judge Scully and Mrs. Scully were being driven up Church Street in their motor-car and approaching the turning, another car, driven by its owner, turned out of the Eastbourne road in Church Street, and the cars collided. Both vehicles were damaged, though fortunately the occupants escaped with only a shaking.

ON Sunday afternoon three gentlemen and a lady were conveyed to Devonshire Hospital, Buxton, all injured, as the result of a motor accident. The car was turning a sharp corner at Crongetone, near Buxton, when the steering gear is said to have broken, and the car dashed into a hillside. The vehicle was completely wrecked, and the four occupants and the chauffeur were thrown in all directions. Another car was produced, and the injured were conveyed to Buxton.

THE City Coroner of Hereford has held an inquest respecting the death of Joseph Griffiths, who was killed by a motor-car owned by Sir John Cotterell, and driven by Andrew Hamilton. Mr. J. S. Blanckensee, solicitor, of London, represented the owner of the car. Among the evidence was that of the chauffeur, who said when he got to Stretton Sugwas, Griffiths ran right across the road in front of the car, apparently making for a horse and cart which were standing near. When he was partly across he seemed to turn or step back again in front of the car. Had he not turned he might probably have reached the other side of the road in safety. He (the chauffeur) had slowed down because he thought the horse might bolt. A verdict of "Accidental death" was returned.

AN inquest was held at Greenwich, on Tuesday, on John Noon, a carman, of Fulham, who died from fracture of the skull caused by being run into by a motor-car at Blackheath. It appears that Noon was driving his van, and the motor-car was going in the same direction as he was, towards London. All the witnesses agreed that the van suddenly turned into Hyde Vale, a thoroughfare leading off Blackheath, and that the deceased man in doing so gave no signal of his intention to turn off. The chauffeur did all he could to avoid an accident, but the car caught the end of the van, with the result that Noon was thrown off on to his head. The jury returned a verdict of "Accidental death," exonerating the chauffeur from blame.

THE WHITSUN MEET AT BROOKLANDS.

FOR the meeting to be held to-day (Saturday) at Weybridge, the Brooklands A.R.C. have received the following entries:—

Match for £250 a side, between Mr. S. F. Edge's 25.6-h.p. Napier and Mr. Oscar Cüpper's 25.6-h.p. Metallurgique car.

Match for £250 a side, between Mr. S. F. Edge's 40-h.p. Napier and Mr. Oscar Cüpper's 40-h.p. Metallurgique car.

Second All-comers' Handicap.—H. G. Nalder, 35.7-h.p. Berliet; F. R. Fry, 76-h.p. Mercedes; G. C. G. Moss, 27.2-h.p. Arrol-Johnston; P. D. Stirling, 35.7-h.p. Berliet; J. W. Stocks, 25.6-h.p. De Dion; G. Russell-Miller, 22.4-h.p. de la Buire; S. F. Edge "Vicaroy" Napier; S. F. Edge, "Medusa" Napier; F. N. Lloyd, 23.1-h.p. Clement-Talbot; D. Pigot, 35.7-h.p. Berliet; E. de Wilton, 76-h.p. Mercedes; J. L. Bromfield, 62.5-h.p. Darracq; Clement Hobson, 27.9-h.p. Nagant Hobson.

Second Limit Stakes (to be run in two heats and a final).—H. G. Nalder, 35.7-h.p. Berliet; G. C. G. Moss, 27.2-h.p. Arrol-Johnston; D. Pigot, 35.7-h.p. Berliet; J. Keele, 41.9-h.p. Weigel; J. W. Stocks, 25.6-h.p. De Dion; Sir Duncan Hay, Bt., 41.9-h.p. Daimler; J. E. Hutton, 25.6-h.p. Hutton; B. S. Millard, 8.9-h.p. Sizaire; W. Oates, 22.4-h.p. Clement; J. Keele, 53.6-h.p. Darracq; Sir George Abercromby, Bt., 58.1-h.p. F.I.A.T.; E. de Wilton, 76-h.p. Mercedes; Clement Hobson, 27.9-h.p. Nagant Hobson; W. M. Letts, 8.9-h.p. Sizaire; John L. Poole, 22.5-h.p. Buick.

90-h.p. Sweepstakes.—F. R. Fry, 76-h.p. Mercedes; E. de Wilton, 62.5-h.p. Darracq; J. E. Hutton, 76-h.p. Mercedes; Warwick J. Wright, 89.5-h.p. Darracq; S. F. Edge, 90-h.p. Napier.

For Monday's meeting entries have been received as follows:—

Match for £250 a side, between Mr. S. F. Edge's 20-h.p. Napier and Mr. D'Arcy Baker's 90-h.p. F.I.A.T.

Training Plate (for the Grand Prix racing cars).—Four 58.1-h.p. Austin cars entered by Mr. H. Austin.

Household Brigade Cup.—Mr. J. Bullough (Coldstream), 44.5-h.p. Junior; Mr. G. C. G. Moss (Grenadiers), 27.2-h.p. Arrol-Johnston; Sir G. Abercromby, Bart. (Scots), 58.1-h.p. F.I.A.T.; Mr. D. C. Bingham (Coldstreams), 8.9-h.p. Sizaire; Mr. T. R. Clutterbuck (Coldstreams), 35.7-h.p. F.I.A.T.

Fifth 26 h.p. Race.—J. W. Stocks, 25.6-h.p. De Dion; S. F. Edge, "Firefly" Napier; S. F. Edge, "Medusa" Napier; J. E. Hutton, 25.6-h.p. Hutton; O. Cüpper, 25.6-h.p. Metallurgique.

President's Cup (Handicap for Private Competitors), to be run in two heats and a final.—A. van Hoboken, 71.7-h.p. Mercedes; O. L. Bickford, 22.4-h.p. Ford; H. G. Nalder, 35.7-h.p. Berliet; T. Faulkner, 24.3-h.p. Mercedes; H. Musker, 44.5-h.p. Daimler; G. Duveen, 34.5-h.p. Mercedes; J. Bullough, 44.5-h.p. Junior; Sir Duncan Hay, Bart., 41.9-h.p. Daimler; G. C. G. Moss, 27.9-h.p. Arrol-Johnston; G. M. Kenyon, 25.8-h.p. Minerva; O. S. Thompson, 36.1-h.p. Austin; P. D. Stirling, 35.7-h.p. Berliet; Colonel T. Cowper-Essex, 8.9-h.p. Sizaire; G. Russell-Miller, 22.4-h.p. de la Buire; Captain J. C. Tattersall, 25.8-h.p. Metallurgique; A. G. Fentiman, 31.1-h.p. M.P.; W. Whiteway, 21.4-h.p. Calthorpe; G. Bliss, 41-h.p. Vinot; Sir George Abercromby, Bart., 58.1-h.p. F.I.A.T.; C. L. Woodward, 24.8-h.p. Renault; Clement Hobson, 27.9-h.p. Nagant Hobson; Clement Hobson, 48.6-h.p. Brasier.

BUSINESS NEWS.

THE winning car in the Targa Florio race, like all other Isotta Fraschini's, was fitted with Renold chains.

THE JUNIOR AND OTAV CAR COMPANY, LTD., have secured the sole concession for the United Kingdom of the Junior and O.T.A.V. cars, which are manufactured at Milan and Turin. The new concern have opened a depot at 117, Long Acre, London, W.C., where owners of either of these vehicles can procure all spare parts, and the assistance of skilled engineers from the Italian works.

MESSRS. LEGROS AND KNOWLES, LTD., have recently completed a 35-h.p. Iris chassis for Mr. H. Perronet Sells, to the specification of Messrs. O'Gorman and Coxens-Hardy, who required that the petrol consumption, with full load equivalent to a 7 cwt. body, fuel, oil, spares, driver and full complement of seven persons, should not be less than fifteen miles per gallon, should climb Kensington Park Road at a speed not exceeding eight miles per hour on top gear, and do 45 miles per hour on the flat. The engineers also specified that not more than 2 per cent. of carbon monoxide by volume should be present in the exhaust gases and also not more than 10 per cent. of the total heat of combustion should have been exceeded in the form of unburnt gases. The test was to be over not less than 150 miles. In respect to this chassis the engineers reported as follows:—"We are glad to say that the petrol consumption and exhaust gas analysis are extraordinarily good. The percentage by volume of CO is 1.5 and the efficiency of combustion works out at 96 per cent. Only 4 per cent. of the carbon is incompletely burnt and 4.4 per cent. of the hydrogen. The gross ton-miles per gallon works out at 50.3, the consumption being one gallon per twenty-five miles." The net weight of the chassis unloaded, but in working order, with four gallons of petrol, five gallons of water, and about two gallons of oil in the crank chamber, and with the normal quantity of oil in the back axle and gear-box, was subsequently ascertained to be 1 ton 1 cwt. 2 qrs. The samples of exhaust gas were taken with the engine under full load up the hill between Westerham and Edenbridge. The actual speed on Kensington Park Road on the top gear was six miles per hour and the maximum on the flat sixty miles per hour.

THE Motor-Car Journal.

VOL. X.]

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COMMENTS.



AN Irish motorist draws attention to police activity in Dublin, and to an aspect of their policy with regard to automobiles which has not previously occurred in the city on the Liffey. This is regarded as the consequence of a recent accident in Phoenix Park, by which a motor-cyclist collided with a pedestrian, inflicting considerable injury. The registration number of the machine was observed, but when the police endeavoured to trace its whereabouts it was discovered that the vehicle had changed hands several times and that the licence had not been renewed by subsequent holders. The result of this was that practically all the available police force of Dublin were engaged one day last week at certain points in the outlying suburbs stopping motor-cyclists with a view to the examination of their licences. It is probable that similar action will shortly be taken towards the owners of motor-cars, and we would emphasise, for the benefit of readers on both sides of the Irish Sea, the fact that when a car changes hands attention should be paid to the matter of re-registration or transfer of the number without delay.

Tyres and the Trials.

RECENTLY we referred to the negotiations upon which the Scottish A.C. had entered with a view to preventing the displays along the line of route of the forthcoming Trial such as spoiled the landscape on the last occasion. When we wrote a few weeks ago the hope of combined action was clouded by the disinclination of one firm to forego its rights and privileges. We are glad, however, to have now received official intimation that the half-dozen motor tyre firms who have been most prominently identified with this landscape publicity in previous years have agreed that they will not show at any point within sight of the cars any form of advertisement along the route. This arrangement will not be operative so far as the towns and cities of Glasgow, Aberdeen, Inverness, Pitlochry, and Oban are concerned, nor does it relate to the permanent hoardings at present used by any of the companies. It is satisfactory, however, that this general agreement has been arrived at, and probably the tyre companies themselves will be the first to appreciate the economy of the arrangement.

Hotels and their Customers.

THE proprietors and managers of hotels on the main and other roads of the country may, perhaps, be usefully warned against the folly of regarding all motorists as millionaires, and welcoming them as lambs to be fleeced. Now that the motor touring season may fairly be said to have commenced, they will be well advised in recognising the necessity of fair and equitable terms to those who own cars. Several complaints have been made from time to time as to the exalted views which many managers have of the capacity of those who journey by motor-car to pay exorbitant amounts for ordinary attention. Though this may be profitable on one or two occasions, the

practice of such hotels gets bruited abroad, and ultimately may lead to a decrease in the attendance of customers. Since writing the foregoing lines we are officially informed by the Motor Union that 1s. per night is their recognised charge for garage accommodation, and that the free standing of cars while the motorists are having meals is a condition of their recommendation to members.

Motor Patents.

THE report of the Comptroller General of Patents, Designs and Trade Marks, which has just been issued, shows that there was a falling off of about 1,000 applications for patents in 1907 as compared with 1906. The number of readers who used the excellent Library at the Patent Office was 148,198—an increase of over 4,000—the largest number recorded in one year. This is a feature of the work of the Office which should have greater publicity amongst the students of the various educational institutes in and about the Metropolis. With regard to patents in the automobile industry, the Comptroller remarks:—"The great inventive activity in connection with the motor-car industry, which has produced such a large number of applications for patents in recent years, now shows signs of falling off. Judging from the titles only, the number of inventions relating to motor road vehicles during the year 1907, although still large, has decreased nearly 35 per cent. from that of the previous year. Great attention has been given to devices for making the wheels, hubs, and rims readily detachable, and there are still a considerable number of inventions for preventing side-slipping or skidding, although the total number for the year is less than that for the last quarter of 1896."

Rivalry in Good Work.

THE rivalry between the various organisations concerned with motoring in being of service to the movement should conduce to the exposure of many grievances that have hitherto been but inadequately brought to public notice. Both the R.A.C. and the M.U. are apparently watching every development likely to prove of interest to their members as well as to the general body of motorists, while the A.A. continues its policy of safeguarding the interest of those who travel. Within the last few days the Piccadilly association has entered into communication with the cycling organisations as to the practice of cyclists running together in large numbers and causing serious obstruction to other users of the roads. Where such is done, it is noticed that the members of the cycling clubs often refuse to give way to automobiles, or, for the matter of that, to other traffic either overtaking or meeting them. It is to be hoped that the influence of the C.T.C. and the N.C.U. will be brought to bear to prevent the continuance of a practice which is associated with a risk that may ultimately prove fatal. The M.U. is also taking up the question of the exemption of motorists from other countries, who are visiting England for only a few days, from liability to the carriage tax. This matter has previously been ventilated by the Irish A.C. and also in our own columns. Now that the Union has its chairman in Parliament, it may be able to carry the issue a step nearer success, and this is rendered all the more probable by the general feeling of inter-

national goodwill which has had so many testimonies during the present year. The latest development of the A.A. is in connection with the leading hotels in towns and villages throughout the country, by which they are linked with the existing road organisation so as to add to the complete assistance they are able to render to motorists. Elsewhere we give the details of this latest enterprise of the youngest of the motoring societies.

A Colonial Premier at Wolverhampton.

ON Tuesday the Hon. Tom Price, the working man Premier of South Australia, left England after a three months' holiday in the Old Country, from which he went more than twenty years ago. While here he has visited many of the leading industrial districts, and one of his latest provincial visits was to Wolverhampton, where he made a tour of inspection of many factories and works in the town. Throughout his stay in the Midland centre he had a 16-h.p. Star landaulet. In the photograph Mr. Price is seen by the side of Mr. W. Bullock (wearing a straw hat), the chairman of the Wolverhampton Chamber of Commerce, and on the front seat beside the driver is Mr. W. D.



The Hon. Thomas Price, Premier of South Australia, at Wolverhampton.

Ponder, M.P. for Adelaide. Both the visitors from the Colonies were conducted over the Star Works, in which they were much interested.

Motor-car Imports and Exports.

ANOTHER quiet month has to be recorded as regards the imports of foreign motor-cars and parts into this country, the returns for May showing a decrease, as compared with the corresponding month of 1907, of no less than £16,921. Of complete cars only 340 were imported during the month, of the value of £121,128. The number of chassis imported was 289, valued at £106,280, while parts were responsible for £150,286, giving a combined total for May of only £377,704, as against £394,268 in the corresponding month of last year. The gross imports of cars (1,931 in number), chassis (1,267), and parts during the first five months of the current year amounted to only £1,759,920, as contrasted with £2,086,890 in the corresponding period a year ago. Turning now to the section relating to the exports of British automobile productions, these also show a slight decrease—from, in the aggregate, £91,581 in May, 1907, to £86,527 last month. Altogether 144 complete cars (£25,870) and 15 chassis (£5,147) were despatched from this country in May, as well as parts to the extent of £25,510. The gross shipments during the five months ending with May are returned at £496,026, which contrasts with £499,666 in the similar period of last year.

Cambridge and the Car.

WITH reference to the brief mention made last week as to the use of motor-cars by undergraduates at Cambridge, we understand that the matter has been considered by the Proctorial Syndicate at Cambridge owing to the many complaints they have received of reckless and inconsiderate driving. They propose that no one *in statu pupillari* shall keep or use a motor-car unless he shall have got permission from a proctor, and that this permission shall not be granted unless a description of the car shall have been given to the proctors and permission also granted by the college. They also recommend that motor-cars should not be used on Sundays, a prohibition that already exists in the case of horse-drawn vehicles. Recommendations are made to the Senate embodying these views.

A New Policy in the North.

AT the annual meeting of the North Eastern Automobile Association some discussion took place on the recent decision of magistrates at Hexham and Darlington, who had expressed a view that certain arbitrary speeds, lower than the legal speed limit, were all that could be allowed for stretches of road where police traps have been placed. It was felt that any such arbitrary speed, having no reference to the amount of traffic or number of persons on the road at the time, was most unfair, and the committee was asked to look further into the matter and take such steps as were thought advisable. We hope the Association, which by its comprehensive constitution is well able to look after the interests of motorists in its particular corner of England, will succeed in preventing an apparent suggestion to get behind the intentions of Parliament without consultation with the Local Government Board.

Horses and Motor-Cars.

THAT motorists are not the foes of the horse is well known, and the fact that the new chairman of the Royal Automobile Club is to preside at the Richmond Horse Show need occasion no surprise. In connection with the equine position in this country it is lamented in one of the leading journals that the Royal Commission on Horse Breeding is becoming apathetic, and that England is being left without an adequate supply of horses for defensive purposes. There was a large deficiency in the number of horses bred last year in comparison to the year before, there will be a further diminution this year, and probably a still greater one next, with the probability that the numbers required by the bus and tram companies will decrease, and a likely drop in the demand from the brewers owing to the favour with which they are regarding motor traction. Thus many farmers have every inclination to go out of horse-breeding altogether.

Another Appeal to Motorists.

RECENTLY we were asked by one of the South-western automobile clubs to urge upon motorists the necessity of driving with proper care through some of the villages in its area, as the police had threatened to adopt the methods of more South-easterly counties if such practices were repeated. Now we have a communication from the Derby and District A.C., which has had its attention drawn to the complaints of inconsiderate driving that have occurred in the Matlock district. There is reason to believe that unless motorists generally, when passing through the Peak district, do not exercise more care several applications for restricted speed limits are likely to ensue, and thus the majority will be harassed because of the delinquencies of the minority. There is no doubt that around Matlock, Bakewell, Buxton and other delightful resorts in Derbyshire, the sharp turns and many cross roads at the bottom of hills necessitate not only vigilance on the part of drivers, but also a considerable slackening of speed, if motoring is to be a safe and

enjoyable pastime. Doubtless the police will recognise the public spirit of the Derbyshire Club in urging attention to this matter by motorists throughout the country, and the authorities should not be hasty in taking action which—like that on the Brighton road—would prove inimical to the interests of many of the traders upon whose prosperity so much depends.

The "Motor-Car Journal" Deposit System.

FOR the convenience of the readers of the *M.C.J.* we have decided to introduce, in connection with our Small Advertisement Section, the Deposit System. The intending buyer forwards to the office of the *M.C.J.*, 27-33, Charing Cross Road, London, W.C., the amount of the purchase money of any article sent by a seller on approval, stating for whom and for what it is intended. The receipt of the deposit will be notified to both parties. Cheques must be made payable to Cordingley and Co.; time will, however, be saved if notes or postal orders are sent. Upon the intimation of the acceptance of the goods the money is

up were being distributed over the fields beyond the possibility of collection. Consequently the audience were treated to an extempore address, a feat for which we have no doubt, paradoxical as it may seem, the Bishop was well prepared. Now that motor-cars are fitted with pockets of every description for all kinds of accessories, there will doubtless be an increasing tendency for public speakers to prepare their addresses when motoring, so that the warning of the Bishop of Blackburn comes at an opportune moment.

Motor-Buses v. Tramcars.

THE coming of the motor-bus and the undoubted popularity which it has quickly gained, is causing considerable worry to those responsible for the maintenance of the municipal tramway systems of the eastern suburbs of London. As we have previously shown, the service of motor-buses now running from the City to Seven Kings obviates changing into no fewer than five different sets of trams. Under the circumstances



The St. Petersburg-Moscow Race.—Hemery on the winning Benz Car at the Cathedral of St. Peter, Moscow.

forwarded to the seller. If no sale is made the amount deposited is returned. In either case we deduct a fee of $1\frac{1}{2}$ per cent. (3d. in the £, minimum 1s.) on the amount deposited, to cover expenses of booking, postages, &c. In making use of the Deposit System, it is understood that—(1) Articles sent on approval are not to be retained more than three days, unless by arrangement between the parties; (2) Carriage is to be paid by the buyer, except the article is returned, when each party pays one way; (3) The risk of damage in transit is the seller's.

Public Men and the Car.

Now that Bishops, Cabinet Ministers, and public men generally are making use of the motor-car to get to various meetings, we may sound a note of warning based on the experience of Bishop Thornton, of Blackburn. He had an unfortunate experience the other night when motoring from Blackburn to Morecambe. The Bishop was looking over the notes of his sermon while the car was going at a good pace "when it was thought that the police were not in sight." Unfortunately the papers were blown from his hand, and before the chauffeur could pull

it is small wonder that the ratepayers are showing a preference for the vehicle that carries them to their destination without unnecessary inconvenience, and that the officials of the tramways department are wondering what to do to prevent the diversion of custom now going on. At Ilford the matter has assumed sufficient importance to cause quite a plethora of letters in the local Press, and some of the ministers have gone so far as to advise their congregations to give a preference to the trams on the grounds that they belong to the municipality, and should, therefore, be supported by the ratepayers. The facts, however, that motor-bus fares are cheaper than those of the trams, and that they are able to effect a substantial saving in time, are likely to have more weight even than pastoral declamations.

THE United Motor Industries, Ltd., of Poland Street, London, W., have lately introduced a little device which will be useful to all motorists whose cars are fitted with Eise-mann high-tension magnetos. It is a double-ended spanner, about $2\frac{1}{4}$ in. long, having one open end to fit the various hexagonally-shaped lock nuts on the make-and-break plate of the magneto.

REMINISCENCES OF A TRIP FROM CAPE TOWN TO JOHANNESBURG.

It is just over two years ago that we started from Cape Town with the hope of accomplishing a successful tour to Johannesburg. The day was just breaking as we quietly ran down Adderley Street and turned off along the Sir Lowry Road. We intended to reach Matjesfontein or Laingsburg the first day, but unexpected occurrences prevented our object being achieved. Everything went well for about the first fifty miles, when we came to fork roads; we considered our choice and took the left-hand road. After proceeding a little way we met an ox-wagon and enquired of the driver if we were right for Villersdorp. We received a reply in the affirmative, so off we went again and almost immediately commenced to climb a mountain pass, which I believe is known as the White Elephant. It was quite a new road and very good, but on reaching the other side it suddenly ceased, and continued only as an ordinary Cape cart track, which is generally two deep ruts, the crown of the road being so high in places that it touches the axles.

After a while we came to a small river, and on reaching the centre the car dropped into a hole and the bump caused my foot to slightly withdraw the clutch; the water rushing in behind prevented it from engaging again, so there was nothing for it but to get out and rig up the tackle we carried for emergencies of this sort. This consisted of block and fall, log line and a large crowbar. The latter driven into the bank and tackle rigged up, the two of us then proceeded to pull for all we were worth; we could make very little headway, however, so lightened the car by taking out the baggage and spare petrol, consisting of five ten-gallon cans. We were then successful, but pulling on a wet and sandy rope makes one's hands rather sore. We loaded up again and proceeded, but had not travelled very far when the ruts got so deep that the car stuck with the axles and flywheel riding on the crown. I then decided to give up the track and run across the veldt. The car had to be reversed to a suitable place to get out of the ruts, and it was not until after several attempts that this was done. The travelling was better, and we were just congratulating ourselves, when the car suddenly sunk down in a bog.

After several unsuccessful attempts to get it out, we went off in search of help, and eventually came to a Boer farm, where we made our trouble known through a little girl, who was the only one who could speak English. The farmer turned out with two of his Kaffir boys to help us the best he could, and after levering under the back axle with a large piece of timber and our tackle rigged up in front we managed to get the car on firm ground again. We then retired to the farm for something to eat, as we had not broken fast since five o'clock that morning, and it was then five o'clock in the afternoon.

After bidding farewell to our host we took to the road once more, which improved greatly after a few miles, and we ran through Villersdorp and on to Worcester without further trouble, arriving there about 10.30, with several leaves broken in one of the back springs. For the first day's run we had covered only 110 miles, and with troubles that were not very encouraging.

The next morning we had the broken leaves replaced with new ones, and an extra leaf added to the other spring. This prevented us from getting away till past four o'clock in the afternoon, so we decided to make Touws River our destination for the day, a distance of about fifty miles. The first incident we had occurred whilst climbing Hex Mountain; we suddenly came to a water sluit, round a sharp bend, and before we could

slacken speed we dropped into it with a bang. On reaching the top we discovered that one of the portmanteaus was missing, so concluded it had jumped off when we dropped in the sluit. We consequently turned round and went down again with the hope that the bag had remained on the road, and not gone over the side and into the valley. We found it, and after strapping it on securely we had to go very nearly to the bottom before finding a suitable place to turn round.

Reaching the top again, we lit our lamps and pursued our course, which were tracks we could hardly discern in the sand at night. At this point we were entering the Great Karroo Desert. After several miles we could see the reflection of the lights of Touws River over to our right, but had evidently missed the right track, as we could not discover one leading in that direction, so we kept straight on, and eventually reached Matjesfontein at 12.30, with Worcester eighty miles behind us.

We started at 9 o'clock the following morning, and had good travelling to Laingsburg, where we called at the station for the petrol which had been sent on ahead. Then we proceeded to Prince Albert Road and Fraserberg Road. In places we had very loose and heavy sand to go through, but the car regularly churned its way along. After travelling several hours through barren stretches of desert it was quite a welcome sight to see a living person, black or white. We arrived at Beaufort West that evening in good time for dinner, having covered 150 miles, being the first good day's run since leaving Cape Town.

We visited the local blacksmith the next morning to have some additional leaves fitted to strengthen the back springs. We got away about 3.30 in the afternoon, and had the misfortune to take the wrong road directly on leaving the town. We proceeded about ten miles before discovering our mistake, and were informed that we would have to return to Beaufort West, but happened to meet a farmer who showed us a short cut through an ostrich farm. The road was very good, and several times we were racing with ostriches, then we would suddenly surprise a herd of springbok, which would rush off towards a kopje close by. We presently struck the railway and

ran alongside of it for some little way pacing with a train, until we had to pull up to cross the line. On reaching the other side we joined the road that we should have taken at first. We had not proceeded far when a deep water sluit confronted us. It was shaped like a V, and I was afraid the front springs would stick in the opposite bank before the car had finished descending, but fortunately it just cleared. We then did good running till we came to Salt River, which was quite dry, with very heavy sand in the bed, and a steep slanting shelf to get out by on the opposite bank. I ploughed across the bed and made a run at it, but the steering wheels would not answer very well in the sand, and I got too near the edge to be pleasant, so had to gently run down backwarks and have another try. I ran a little higher this time but still too near the edge. However, on the third time I succeeded in reaching the top. After that we had fairly good running to Three Sisters Station, and after encountering a good deal of heavy sand we reached a farm where we enquired the way. The occupier gave us an enthusiastic welcome, and said he had been on the look-out for us, as he had read in the papers of our intended trip, and expected we would pass that way. He invited us to stay the night, but we declined with thanks, as we were determined to reach Victoria West that evening.

F. C.

(To be concluded.)



Dragging the Car out of the River near Richmond Road Station on the way to Johannesburg.

GOSSIP FROM PARIS.

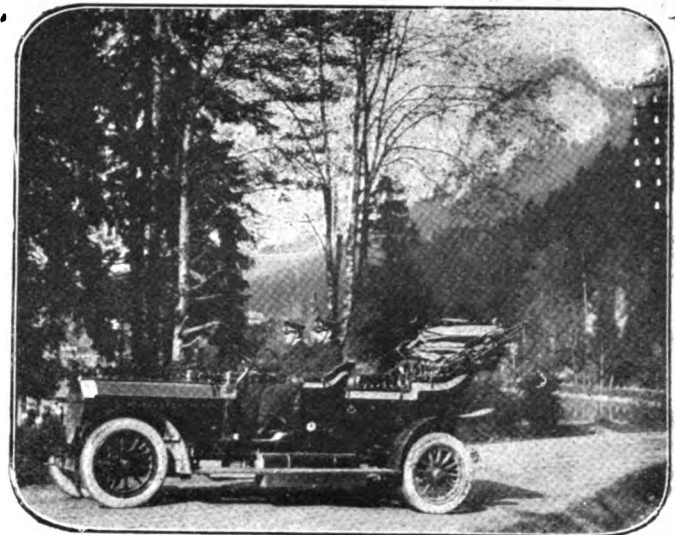
IN the semi-scientific world surrounding the automobile industry there is at the present moment a veritable mania for calculating the horse-power of the motors which will figure in the Grand Prix and the consequent chances of the various cars of winning the race. It originated in the new regulation limiting the bore of the four cylinders to 155 mm., and leaving the length of the piston stroke to the choice of the makers. The other day I showed a big packet of those calculations to a driver who will pilot one of the racing cars over the Dieppe circuit on July 7th. On seeing the conflicting results of the calculations he said, "Science is a very fine thing, and the results of mathematical calculations are naturally irrefutable. But in such automobile matters I find the 'proof of the pudding is in the eating.'" Most of the theorists have demonstrated to their own complete satisfaction that almost all this year's racing cars are able to beat Nazzaro's time of 6 h. 46 min. 33 sec. in 1907, but my sporting friend advised me not to bet on the unerring results of a mathematical problem when it was a question of motors. As I never bet on automobile races I shall surely follow his counsel, but I cannot resist the temptation of giving the result of the carefully-worked-out calculations, occupying a column in the "Auto." The horse-power of the cars competing in the Grand Prix is shown to vary between 103-h.p. and 133-h.p. Adopting 125-h.p. as the average of the forty-nine cars, it is demonstrated mathematically that their speed should be 159 kilometres an hour on the level, and that the Clement-Bayard car, with its 133-h.p. motor, should travel at the formidable speed of 165, or at least 164 kilometres an hour. Of course the corners and hills on the Dieppe circuit must reduce this very considerably, but, after taking everything into account, the calculator declares that last year's time should be reduced by about 12 min.

WHO has not lost his temper and felt inclined to use strong language when driving along a shady road, especially in the evening? I confess I have frequently. Almost every time I go out towards sunset to get a little fresh air, my drive through the woods of Boulogne, Saint Cloud, and Ville d'Avray is spoiled by the myriads of insects which fly into one's eyes, mouth, and nose, to say nothing of their getting down one's neck. For ladies while motoring the insects are in summer a veritable torment. They get into their hair and into the folds of their costumes. With a closed automobile it is even worse than with an open car. If the front glass is put down for a moment the carriage is full of the objectionable midges. One of my friends to whom I spoke of this great drawback to motoring in the evening gave me a really good tip. He has a country house, and after business hours drives back to it every evening in his closed carriage. Until quite recently he had to keep the front glass hermetically closed, or to suffer the invasion of swarms of insects of all sorts. But a week ago he had a wire gauze screen adapted to his vehicle. It slides up and down at will, replacing the front glass. He tells me it is effectual against the insects and lets in the fresh air. It does not intercept the view sufficiently to inconvenience the driver, who in my friend's car is seated behind the wire gauze screen, which can, of course, be adapted with equal advantage to an open vehicle. Those who suffer from the insect plague while motoring will do well to try this simple and inexpensive remedy, which is not patented.

M. ARCHDEACON, who spent the best part of a week at Ghent with Mr. Henry Farman, has returned to Paris. He is delighted with his stay in Belgium and with his aerial trip of close on one kilometre and a quarter, by which he, Henry Farman, and Santos Dumont gained their bet with M. Charron that an aeroplane carrying the driver and at least one passenger would fly a kilometre before the expiration of twelve months. The wager was made last March, and it was won on May 30th. M. Archdeacon regards his flight sitting beside Mr. Farman as most important. It was the practical demonstration that for the future it will be possible for the few existing aviators who, with

endless experiments and numerous mishaps, learned the art of flying, to take apprentices on their aeroplanes to teach them the manner of managing flying machines. That he told me was, in his opinion, the interesting point established by his flight with Mr. Henry Farman. As to the sensations he experienced while in the air, the most remarkable was that of safety. He knew that his pilot was as prudent as he was experienced and skilful. Yet when he mounted beside him he felt a slight qualm, which lasted as long as the machine was rolling on the ground. But immediately it left the earth and was in its ethereal element it glided so smoothly and answered the will of the pilot with such docility that all sentiment of danger vanished. M. Archdeacon declared he would never forget the pleasurable sensation of riding in the air for the first time on an aeroplane. It was absolutely different from that of being carried up from the earth in the car of a balloon. In the latter case a man feels himself at the mercy of the element in which he is floating like a soap bubble, whereas in the former case he is conscious of having vanquished it.

M. DE LA HAULT, a Belgian gentleman of considerable renown, is constructing an ornithoptère, or flying machine, with beating wings. He is convinced it will outdo all that the Wrights, Delagrange, and Henry Farman have accomplished already, or will ever achieve with their present machines. With



The 60-h.p. Six-Cylinder Napier, supplied to Mr. F. C. Brandauer, of Munich, Bavaria.

The photograph was taken on the Kesselberg, near the Kochel-See, the road being part of the route that was followed in last year's Herkomer Touring Trophy Competition.

his ornithoptère there will, he affirms, be no need to roll along the ground to attain the velocity necessary to rise into the air, and the descent will be equally easy and safe. The turning in the air will, moreover, offer no difficulty or danger. M. Archdeacon was sorry the building of the machine was not sufficiently advanced to permit of his examining it while he was in Belgium. But it is evident the description given him by M. de La Hault failed to inspire him with confidence. Indeed, he bet M. de La Hault 2,000 francs that no ornithoptère (flying machine with beating wings) would within the next twelve months maintain itself in the air ten seconds.

MARNEY.

A BANQUET which was held at the French Automobile Club on Sunday in connection with the decennial celebrations of the Aero Club has had a startling sequel, the majority of the guests having been seized with severe pains, due, it is stated, to the duck which formed part of the menu. M. Georges Tampier, the well-known timekeeper, succumbed on Monday after great suffering, and it has been ascertained that death was due to poisoning. Ten others, including the Marquis de Dion, are still dangerously ill.

MOTORING IN SIAM.

TO the average reader Siam will be better known as the land of the White Elephant than of the motor-car. But, while the White Elephant is emblazoned on flags and very nearly everything else in the country, and the sacred white elephants are still housed in the palace stables, the motor-car is seen everywhere in the capital, and motor-boats ply in ever increasing numbers on the rivers and countless canals throughout the country. There are now in Bangkok over three hundred cars in constant use, and it was therefore by no means surprising that H.M. King Chulalongkorn, who is himself an ardent motorist, should issue invitations to the more prominent of the motor-car owners for an automobile meet and a little run round some of the suburbs. This took place on May 3rd, when, pursuant to His Majesty's invitation, eighty-seven cars, of all sizes and makes, from a 45-h.p. Brasier to the smallest run-about, assembled at the Summer Palace. Here they drew up in two rows, and the King drove between to inspect them, after which he led the way for a little twelve-mile spin, and then back to the Palace, where the guests were entertained to tea in the

THE TOURING CAR TRIAL.

ON Monday forty-six of the fifty-one cars entered for the 2,000 miles International Touring Car Trial assembled at the White Company's Depot in Carlow Street, Camden Town, London, N.W. On Tuesday and Wednesday they were weighed as ready for the road; measurements were also taken to ascertain whether they conformed to the Table of Touring Car Standards, and yesterday (Thursday) they left for Nottingham, where they were garaged on the premises of Messrs. Atkey and Co., Limited; to-day (Friday) they are journeying to Newcastle-on-Tyne, where they will be staged on the grounds of the Royal Agricultural Society, and on Saturday they will reach Glasgow for the Scottish part of the Trial, which commences on Monday.

From the list of entrants published in our issue of April 11th there will be five non-starters, the following having failed to put in an appearance on Monday, viz.: Class D, the 15.9-h.p. Star; Class H, 38.4-h.p. Napier; Class K, 48.6-h.p. Sheffield Simplex, and Class L, 60-h.p. Napier and 59.5-h.p. Mercedes. The three



A Motor-car Meet at Bangkok, Siam.

The cars awaiting the arrival of the King on the Boulevard leading to the Summer Palace. The Siamese officer walking up the middle with a camera is Phya Sri Sahathep, the Vice-Minister of the Interior.

gardens. His Majesty went round amongst his visitors all smiles, and bestowing amusing nicknames (in Siamese) on the cars—the "Flying Elephant" and the "Coffee Grinder" being fair samples.

Each of the owners was invited to dip into a kind of lucky-bag for tickets entitling him to a souvenir of the occasion presented by the King, these taking the form of acetylene head-lamps, horns, wallets of tools, and similar articles of use to the motorist. The assemblage was a decidedly polyglot one, and the cars included representatives of Great Britain, France, Germany, Belgium, Denmark, Italy, Holland, Austria, and the United States, the two first leading in point of both numbers and quality. All but one were petrol driven, and about half were owned by Siamese nobles and others, some fifteen Princes of the Blood Royal being present, including the Crown Prince, while cars from the Royal garage were at the disposal of the various foreign diplomats. Of course, the whole populace turned out to see the procession, and seemed to enjoy it hugely.

WM. W. FEGEN.

Zedels and the 18-h.p. Thornycroft arrived after noon, but being present before 2 p.m. were admitted into the garage on paying a fine.

At least a couple of cars that were originally entered for the Scottish Trial as well as the 2,000 mile event have scratched from the former, their entrants realising that they would be at a disadvantage as compared with the vehicles entered for the shorter test only. One interesting point of difference is that those engaged only in the Scottish Trial will be allowed ten minutes for oiling up at the start every day, while only one minute is the allowance for those going right through the 2,000 miles.

Twenty-five per cent. of the cars are fitted with wire wheels; other features will be detailed in subsequent reports.

We learn that the bridge at Allargue Hotel, Corgarf, Strathdon, popularly known as Cockbridge, is at present under repair, and that the whole road from Strathdon to Tomintoul, on the Scottish route, is not available for traffic. It is expected that it will be the middle of July before the road is again open for traffic.

NOTES FROM BATH.

THE name of Bath conjures up memories of a long and glorious past, and it must still be regarded as one of England's foremost inland health resorts. Its history dates back to the Roman era, and the fame of its thermal springs is world-wide. The Corporation of this ancient borough, fully alive to the responsibility resting upon them of keeping the city in the forefront of British spas, are shortly to have presented to them a report from the Bath Chamber of Commerce, in which suggestions will be contained for the further popularisation of the city. The Pump Rooms and the Roman Promenade Annexe are the centres of attraction during the season, though both places are open daily all the year round, the one for the drinking of the waters, the other for the visiting and inspection of the unique Roman remains, including the great Roman bath. But the Chamber of Commerce has for a long period felt that it is now time that a more "forward policy" should be adopted, and that something in the nature of a kursaal scheme—thus following the example set by Harrogate and Brighton—should be taken in hand.

AT present Bath is not so full of visitors, the beautiful weather which we have had of late having sent away many people who find Bath too relaxing during the summer months. But, while this is so, the number of motorists who pass through the city is surprising, many staying several nights at the principal hotels, and then continuing their journey. There are several garages admirably adapted for the storage as well as the repair of cars. The Pulteney Garage, in connection with the Pulteney Hotel, is claimed to be one of the best in the West of England, a sum of £2,000 having been spent on its erection. Among the cars that have been sheltered in this garage are those of his Honour Judge Gwynne Jones, County Court Judge for the Bath circuit, who now drives a 28-h.p. Delaunay-Belleville, and Lord De Blaquiere, a resident of the city, who drives a Talbot. Another important garage is that belonging to the Bath Garage and Motor Co. (Fuller's), Ltd.; it is centrally situated, and is very spacious.

AMONG some of the principal motorists who have recently visited Bath are the Marquis of Bath, who possesses a Daimler, Sir John Thursby, on a fine 40-h.p. Leon Bollée, and Sir John Millar (Westbury) on a Napier. Lord Ludlow on his Daimler has also passed through, and Lord Roberts, who is a frequent visitor, his sister, Mrs. Sherston, having resided here for many years, has stabled his Napier car at the Bath Motor Garage. Visitors to the York House Hotel are also numerous, and many devotees of motoring stay there. Only a few days ago a party of officers from North Camp, Aldershot, arrived by motor-car, making the Empire Hotel their headquarters.

AS a sign of the times it may be mentioned that one local firm of tradesmen have acquired a petrol motor delivery van which is now in daily use. No doubt other firms will follow suit. The majority of the members of the medical profession now use motor-cars in connection with their work, several having dispensed with what is almost now regarded as old-fashioned—a carriage and pair of horses.

SOMERSET.

THE Saltash District Council has given motorists some acceptable concessions in connection with the steam chain ferry across the Tamar, between Saltash and Passage Inn, St. Budeaux (Devonshire), on the road from Callington and Launceston. Hitherto the return charges for motor-cars have been 1s. 6d. for two seats, and 2s. 6d. for four seats or more, the return having to be made the same day. The charges have now been fixed as follows:—Car not exceeding 10½ ft. over all, 1s. 6d.; 12½ ft., 2s.; 16 ft., 2s. 6d.; exceeding 16 ft. over all, 3s.; motor omnibus, 5s. The return portion of the ticket is in each case available for seven days.

CONTINENTAL NOTES.

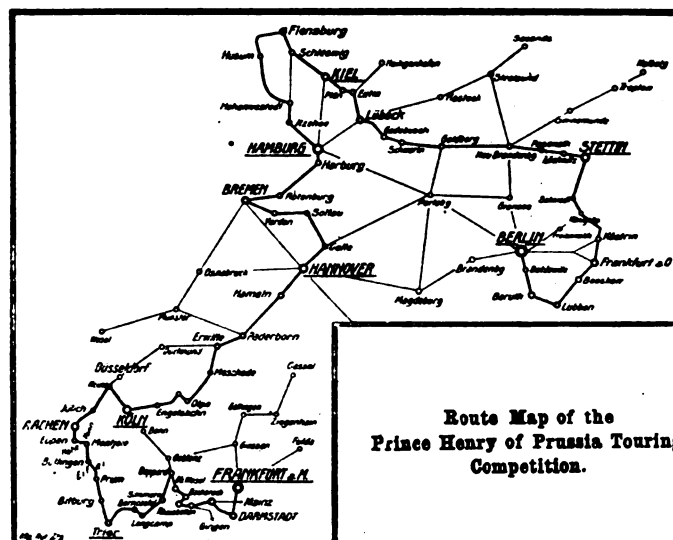
The A.C.F. Grand Prix Races.

The ballot for the order of starting in the A.C.F. Grand Prix races on July 6th and 7th took place in Paris last week. In that for the heavy car section the first place was taken by an Austin car, so that to Great Britain falls the honour of leading off in this great international event. The starting order for the forty-nine competitors is as follows:—

| Nos. | Car. | Nos. | Cars. |
|---------------|-------------------|----------------|----------------|
| 1, 18, 34 ... | Austin | 10, 27, 43 ... | Opel |
| 2, 19, 35 ... | Mercedes | 11, 28, 44 ... | Clement-Bayard |
| 3, 20, 36 ... | Motobloc | 12, 29, 45 ... | Itala |
| 4, 21, 37 ... | Renault | 13, 30, 46 ... | Weigel |
| 5, 22, 38 ... | Lorraine-Dietrich | 14, 31, 47 ... | Mors |
| 6, 23, 39 ... | Benz | 15 ... | Thomas |
| 7, 24, 40 ... | Fiat | 16, 32, 48 ... | Panhard |
| 8, 25, 41 ... | Brasier | 17, 33, 49 ... | Germain |
| 9, 26, 42 ... | Porthos | | |

The Prince Henry of Prussia Touring Competition.

The "great event" of the 1908 season in Germany—the Prince Henry of Prussia Touring Competition—commenced on Monday with the weighing-in of the cars at Berlin, when of the 149 vehicles entered 130 duly put in an appearance. The only British representative is a 45-h.p. six-cylinder Napier, which is



Route Map of the
Prince Henry of Prussia Touring
Competition.

being driven by Miss Dorothy Levitt. The programme is as follows:—June 9th, Berlin-Stettin, 309 kilometres; June 10th, Stettin-Kiel, 392 kilometres; June 11th, rest; June 12th, Kiel-Hamburg, 335 kilometres, and a speed trial on the level near Nienjahn; June 13th, rest; June 14th, Hamburg-Hanover, 314 kilometres; June 15th, Hanover-Cologne, 330 kilometres; June 16th, Cologne-Treves, 253 kilometres; June 17th, Treves-Frankfort-am-Main, 282 kilometres; and a hill-climbing competition between Steeg and Rheinbollen.

The Vanderbilt Cup Race.

The rules of the Vanderbilt Cup race which is being organised by the American Automobile Association not being in accordance with those adopted at the International Congress at Ostend, the Automobile Club of France has resolved to disqualify from its events any make of car which participates in the race if the present regulations are maintained. It is anticipated that a similar course will be adopted by all the national clubs affiliated to the International Congress.

British Motorists in France.

Recent British motoring visitors to France include Colonel and Mrs. W. Hunter, of London (36-h.p. Daimler), Sir William Lancaster (50-h.p. Thornycroft), Lady Holland (50-h.p. Itala), Mr. Wright (60 h.p. Napier), Mr. W. Hill (40-h.p. Daimler), Mrs. Clutterbuck and Mrs. Holland Hilbert, of Watford (30-h.p.

Renault), Mr. and Mrs. Van Gruisen, of Liverpool (40-h.p. Weigel).

The French Industrial Vehicle Trials.

The results of the competition of industrial motor vehicles and motor-cabs held last month by the Automobile Club of France were announced at a banquet given at the A.C.F. clubhouse in Paris last week to celebrate the successful conclusion of the event. The winners in each category are as follows:—

| Class. | For | Winner. | Co-efficient. |
|--------|--|---------------------|---------------|
| 2. | Vehicles for loads 201-900 kilog. ... | Panhard ... | 9.91 |
| 3. | Vehicles for loads 901-1,500 kilog. ... | De Dion ... | 6.11 |
| 4. | Vehicles for loads 1,501-2,000 kilog. ... | Peugeot ... | 14.20 |
| 5. | Vehicles for loads 2,001-3,000 kilog. ... | Saurer ... | 8.01 |
| 6. | Vehicles for loads over 3,000 kilog. ... | Saurer ... | 5.77 |
| 8. | Public service vehicles for 6-10 passengers ... | Erliet ... | 11.49 |
| 9. | Public service vehicles for over 10 passengers ... | Saurer ... | 7.45 |
| - | Motor-cabs ... | Doriot Flandrin ... | 3.33 |

The object of art, valued at £320, offered by the French Ministry of War, is awarded to the De Dion vehicle, No. 2, category 6; the silver gilt medal of the Ministry of Commerce to the Saurer,

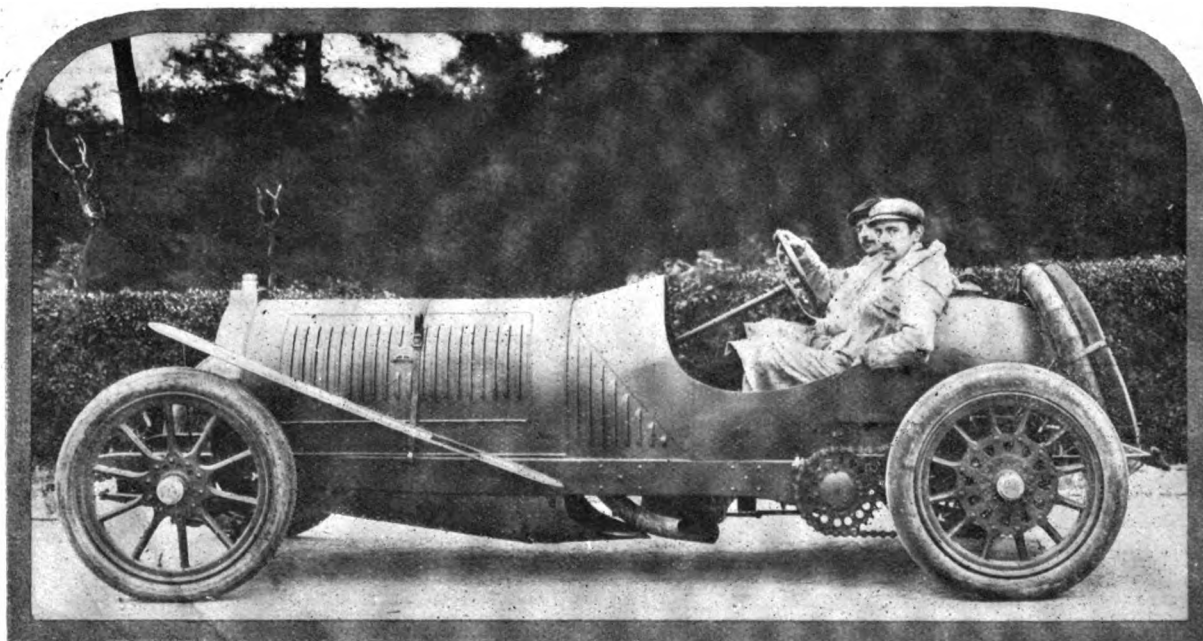
next. The event, which will be held on a circuit taking in Compiègne, Pierrefonds, and Crepuy-en-Valois, is open for single-cylinder cars up to 100 mm. bore, two-cylinder cars up to 78 mm. bore, and four-cylinder cars up to 62 mm. bore. The first day will be devoted to an eliminating contest, the final being decided on September 13th.

German Motor-Car Imports and Exports.

It is not only France that is experiencing a quieter state of affairs as regards the imports and exports of motor-cars. It is the same in Germany, where the imports of pleasure and industrial motor vehicles and chassis during the three months ending with March last only attained a value of £141,700, as compared with £234,900 in the first quarter of 1907. During the same periods the value of the similar exports from Germany declined from £220,650 to £138,850.

Belgian Motor-car Imports and Exports.

The value of the foreign motor-cars and parts imported into Belgium during the four months ending with April last amounted to £49,619, as compared with £51,299 in the corresponding period of last year. On the other hand, there has been



Perpere at the wheel of the Germain Car he will drive in the A.C.F. Grand Prix contest.

M. Emile Perpere is the chief tester of the Germain Company; he is well known on the Continent as a skilful and brilliant driver, and has successfully driven Germain Cars in many competitions. The vehicle is fitted with a four-cylinder engine, 155 mm. bore by 153 mm. stroke; the power developed is stated to be 110-h.p. A new departure in connection with these vehicles is the adoption of side chain transmission.

No. 26, Class 6; the gold medal of the Ministry of Agriculture for the best vehicle using alcohol as fuel throughout the trial to the Brouhot, No. 23, category 3; and the silver medal of the Automobile Club of France to the Lorraine Dietrich, No 4, Class 9.

Touring in France.

The French Automobile Club has just issued the ninth edition of its "Annuaire de Route," which is an indispensable aid to motorists touring in France. Extended by the addition of about seventy pages and 150 new plans of towns, the work gives most of the main routes in France and on the Continent, and information regarding hotels, repairers, telegraphs, and railways in every town and village in France, and all the important and more or less important places of the principal European countries. One chapter deals fully with the Customs duties and motor traffic regulations.

The Coupe des Voiturettes.

The "Auto" of Paris has decided to hold the annual contest for the Coupe des Voiturettes on September 11th and 13th

an increase in the exports of Belgian motor-cars and parts—from £117,074 in the first four months of 1907 to £149,370 in the similar period of the current year.

A Light Car Race in Normandy.

The Etoile Sportive Caennaise is organising a race for light cars to be held early in August. The event, which is to be known as the Coupe de Normandie, will be held on a 67-kilometre circuit, taking in Caen, Bayeux, and Tilly-sur-Seules, this having to be covered four times.

Miscellaneous Items.

Mr. D. M. Weigel was practising on the Dieppe circuit last week-end.—The annual hill-climbing competition on the Val-Suzon hill, near Dijon, organised by the Automobile Club-Bourguignon, is to be held on the 28th inst.—Owing to the paucity of entries, the Automobile Club of France has decided to postpone until next year the Coupe de la Presse event, which was to have been held on the Dieppe circuit on August 3rd and 4th next.—It is reported that a race for six-cylinder cars is to be organised in connection with the Ardennes meeting in August.

It seems to have escaped general observation that the late Sir Redvers Buller was a member of the general council of the R.A.C.

MR. W. BLUES, of the motor garage at Pitlochry, will again be the local agent in connection with the stay of the cars in the Scottish Reliability Trial at that pleasant resort.

THE *agent de police* with his white baton is now a common if unlikely figure at the junctions of many crowded streets in Paris, and as far as his services go they are fairly efficient, though not yet up to the London standard.

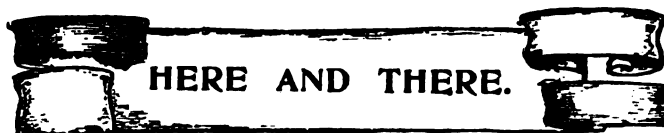
AMONG the orders recently secured by the Daimler Company are a 58-h.p. chassis for the Right Hon. the Earl of Plymouth and a 30-h.p. car for the Right Hon. Lord Bernard Gordon Lennox, the latter having been secured through Mr. H. J. Lloyd, of York.

IN furtherance of its policy of adopting standard forms of construction wherever these may be consistently used, the American Association of Licensed Automobile Manufacturers has drawn up specifications for standard sizes of yoke and eye-rod ends. This is the third formal set of standards adopted by the Association, the first being that for screws, nuts, and bolts, while the second was a standard sparking plug.

WE regret to learn that Mr. Walter C. White, who is well known on both sides of the Atlantic in connection with the White steam car, has suffered a compound fracture of the right leg at a hill-climbing contest at Cincinnati. Towards the close of the day the spectators had come upon the course at the end of the half-mile on the hill, and Mr. White, in avoiding them, struck a turn in the road and was thrown from the car.

A MONTH or so ago Messrs. Easton and Melville, Ltd., of 85, Shaftesbury Avenue, London, W.C., sent us a sample tin of Ilo motor lubricating oil, which is specially blended for them by Messrs. W. B. Dick and Co., Ltd. The new lubricant, which has quickly secured a large measure of popularity among motorists, appears to fully bear out in practice the many claims made for it in the way of freedom from charring and clogging the valves, as during the time we have been using Ilo none of these troubles have been experienced, while the engine has never run better than it is doing at the present time—a sufficient indication that it is being well lubricated. Ilo is being made in three grades—heavy, medium and light, the latter being intended for use in winter.

THE North Wales Cyclists' and Motorists' Guide, published by Mr. T. Throup, of Bradford, has in previous years been favourably noticed in our columns. The new edition just to hand maintains the early reputation, and should be of considerable service to northern motorists as well as to those from other districts who wish to enjoy the beauties of North Wales, Cheshire, Shropshire, and the pleasant resorts in propinquity. In addition to mileages between important centres the road surface is described and gradients given. Where tolls exist, as they do over the bridge at Penrhyn, the charges are also recorded.



THE Mayor of Accrington (Alderman T. E. Higham) has placed an order with Messrs. Atkinson for a 35-h.p. Daimler live axle car.

THE North London Garage, of Corsica Street, Highbury, London, N., is now specialising on the tuning up of motor-cycles for hill-climbs and club competitions.

IN St. Michael's Lane, Headingley, Leeds, the Headingley Motor and Engineering Company, Ltd., have a large and well-equipped motor-house and repair works.

THE Thornton Engineering Company, Ltd., of Belle Vue, Bradford, whose garage is open by night as well as by day, have been appointed official repairers to the R.A.C.

THE Automobile Club of America has decided to organize and conduct each year the following events:—(1) The International Road Race for "The Grand Prize of the Automobile Club of America," under the rules of the International Association of Recognised Automobile Clubs as may be adopted each year; (2) an international stock car race for the Briarcliff Trophy; (3) a long-distance touring car contest; and (4) a hill-climbing contest.

THE annual exhibition of drawings sent in for competition for the prizes offered by the Worshipful Company of Coachmakers and Coach Harness Makers at the Baker Street Carriage Bazaar produced some excellent work in connection with designs for automobiles. Mr. W. Hutchings, of Coventry, won the first prize, and Mr. C. D. Morgan, of Liverpool, the second for drawings of a motor phaeton to carry two on the driver's seat and one on a small seat behind. For the working drawings of a side-entrance motor-car body, to carry two persons in the front, three on the hind principal seat, and two on moveable or folding seats, the first prize was won by Mr. E. W. Jones, of Bath, Mr. Morgan being second in this class.



The Premier Car which recently made a non-stop engine run of 4,906 miles.

This record was made on the wet and muddy roads of Connecticut, under the official observation of the Bridgeport (Conn.) Automobile Club. The secretary of the club officially started the engine, and from that time the car, which was built by the Premier Motor Manufacturing Company, of Indianapolis, U.S.A., continued to run until it had made over twenty round trips from Bridgeport to New York. The party then started to cover the State of Connecticut, and kept on until the grand total of nearly 5,000 miles was covered before the accidental breaking of a terminal off a battery wire brought the noteworthy experiment to an end.

MR. MAHER-LOUGHNAN, the chairman of the Killarney Urban District Council and the proprietor of the Royal Victoria Hotel at the Lakes, is a motorist, his favourite car being the Argyll.

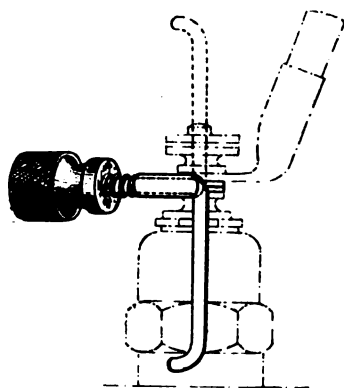
UNDER the title "The Economy of Motoring," Messrs. Burgess and Harvey, Ltd., of 463, Oxford Street, London, W., have issued an interesting pamphlet describing their facilities for undertaking motor-car repairs of all kinds, and their plan of dealing with vehicles that are sent to them suffering from loss of power or other ills to which automobiles are subject. Briefly the method is for the car to be taken for a run on the road by the tester, who has with him a testing card on which he has to enter the general condition of the vehicle. From this card a full explanatory report is sent to the owner as to the condition and what the firm advise. Should the car show general wear, they recommend an overhaul, and request an opportunity of submitting an estimate. Upon receiving the consent of the owner of the car they dismantle the principal wearing parts and submit a detailed estimate, fully explanatory, so that it is left to the owner to say what part or whether the whole of the estimate shall be carried out.

MOTOR-LAUNCH racing is now a recognised feature of the sports on the Clyde.

MR. VERNON ABBOTT'S motor garage at Surbiton is well equipped for motor repair work.

It is hoped to hold the International "Four-Inch" race for the Tourist Trophy in the Isle of Man during the week beginning with September 21st.

WE illustrate herewith an ingenious yet simple sparking plug cut-out which has lately been put on the market by Mr. R. Tingey, of the Regent Hotel Garage, Leamington Spa. The



arrangement is intended to be fitted permanently to each of the sparking plugs of a petrol engine of any number of cylinders. As will be seen from the sketch, it consists of an L-shaped wire rod carried in a small bracket in such a way that it can, by means of the insulated handle, be turned round through an angle of 180 deg. The bracket is supported on the upper end of the central rod of the plug below the high-tension wire connection. When not in use the end of the cut-out is turned upwards, as shown in dotted lines. When it is desired to test the ignition the current in any cylinder is short circuited by turning the cut-out through a semi-circle, and bringing the end in contact with the metal part of the plug. By means of the device the usual method of testing by holding down the tremblers of the coils is rendered unnecessary, and any possibility of breaking down the insulation of the latter or fusing of the platinum points is obviated; further, in the case of multi-cylinder engines with single trembler coil and high-tension distributor, as well as with many magnetos, the new cut-out, which is being put on the market at a cheap rate, is a great time-saver, being always ready for use.

THE mails from Aylesbury are now brought to London by motor-van, leaving the town at 7.30 p.m., and calling at Tring, Berkhamsted, King's Langley, Watford, Stanmore, and Edgware, getting to Mount Pleasant just before midnight. The return to Aylesbury is made during the night.

MR. W. CHRISTY has lately added to his already extensive garage in Limerick, so that it is now approached from no fewer than four streets, namely, those designated as George, Glentworth, Mallow and Catherine. The workshops are well adapted to be of service to motorists travelling that way.

It is announced that the Franklin Manufacturing Company of Syracuse, U.S.A., the makers of the Franklin cars, have perfected an alcohol motor, which shows as high a degree of efficiency as one using petrol, and that without the expedient of employing a very high compression, as has usually been found necessary. It also has the further advantage of being equally economical in the use of fuel, a consumption of as low as 1.05 pounds per brake horsepower hour having been achieved.

CONVENIENTLY situated in the Windsor Road, Holloway, near where the Seven Sisters Road runs into the Holloway Road and not far from the new tube railway station, the repair establishment of Messrs. Hurst and Middleton is well able to be of assistance to motorists in North London in particular and the northern suburbs in general. Calling there a few days ago we found Mr. Middleton, who has now the sole control of the firm, superintending the repair of an engine of somewhat intricate design which had previously been sent to other repairers who had been unable to make the necessary parts to complete the job. Well staffed with capable mechanics, the establishment, which has a good selection of modern machine tools, is able to undertake any class of motor work and to execute it with despatch. Mr. Middleton is also placing his services at the disposal of commercial firms owning motor delivery vans, and will undertake their overhaul with a view to keeping them up to running pitch.

MR. GEORGE PENMAN has a motor-car garage and repair shop in Caledonia Place, Dumfries.

A MOTOR ferry boat is being obtained by the Aberdeen Harbour Commissioners to ply within the harbour.

THE Kildare County Council had, up to Tuesday, issued 286 motor-car registration numbers. The number of drivers' licences granted is 545.

MESSRS. C. C. PATERSON AND CO., 137, Upper Hill Street, Liverpool, are about to put on the road a double-decked Pullman motor-omnibus for private touring parties.

THE Cuckfield Urban District Council has appointed a committee to investigate the effect of the surface drainage from the tar-painted roads on the water in the local ponds.

As the result of a car running out of petrol on the Spittal of Glenshee the other day, the hotel there, which is many miles from any supply depot, has now arranged to keep a small stock of spirit for the convenience of motorists.

COL. D. A. KINLOCH, of 52, Cornhill, London, E.C., has introduced into his Lloyd's motor-car policy a clause under which 25 per cent. to 30 per cent. of the premium paid is returned when no claim is made on the underwriters during the year.

WHEN the French sailors visited London the other week they were given a jaunt on a fleet of electro-buses, which enabled them to see a good many sights in the minimum of time at their disposal. Similarly on the occasion of the recent visit of the American fleet to the cities of California automobiles were the medium of transportation, the entertainment committee selecting the White car for the purpose, its advantages in the parade work for which it was generally required having led to its selection.

AMONG the novel fittings recently placed on the American market is the Triumph spring repairer. The illustrations reproduced herewith show the object of the new device so clearly that no description is necessary. The repairer is made of forged steel, is 16½ in. long, and very light in weight.

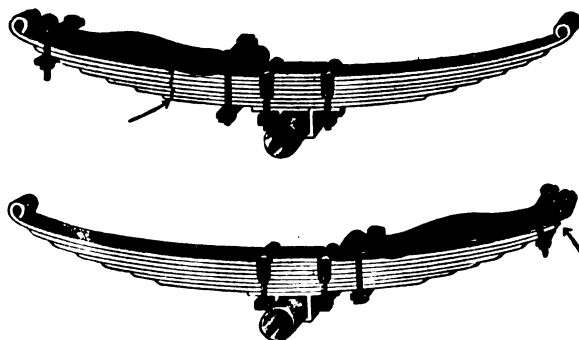


Fig. 1.—Two Applications of the Device.

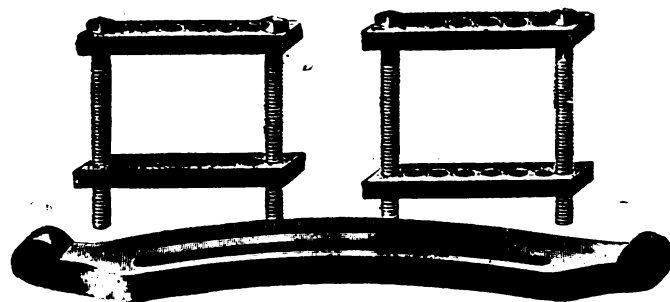


Fig. 2.—View of Spring Repairing Set.

It is provided with adjustable clamps, by means of which it can be applied to any part of the defective spring within from three to five minutes, and without in any way interfering with the operation of the springs. The device is handled by the Excelsior Supply Co., Randolph Street, Chicago.

A NOVEL form of bonnet for petrol motor-cars has recently been patented by Mr. G. H. Jones, of Ilbury House, Deddington, Oxfordshire. It is constructed of flexible material, and arranged to be rolled up on spring rollers when access to the engine is required.

JOTTINGS FROM A MOTORIST'S NOTEBOOK.

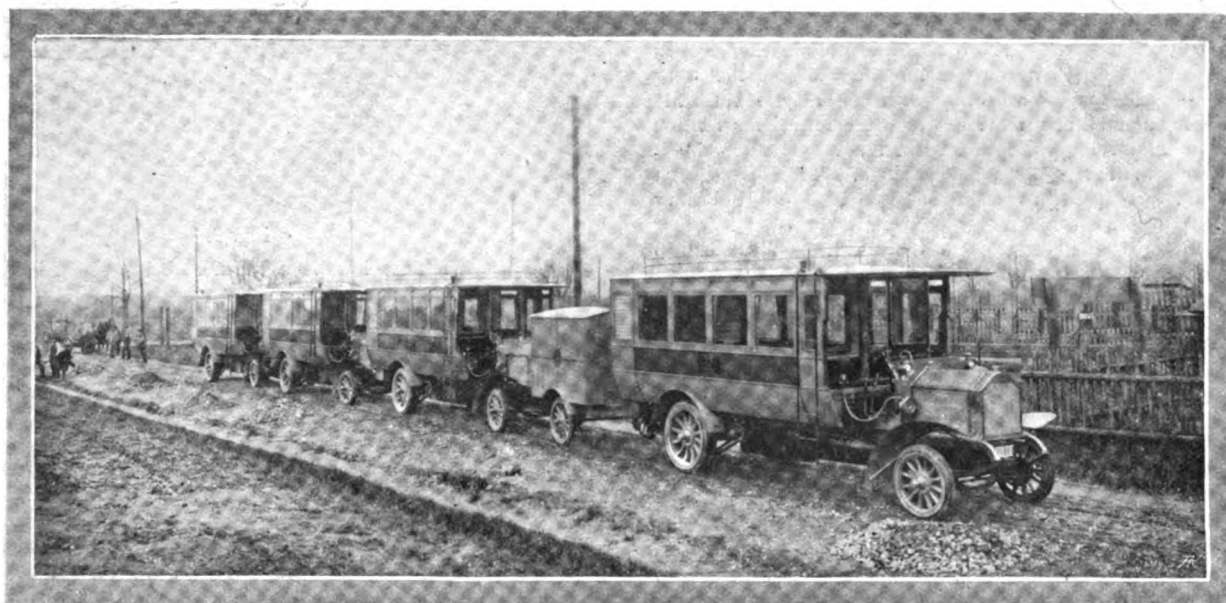
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IGNITION torts are without doubt the most common cause of trouble and roadside stoppage, and the majority of them are due to short circuits caused by defective insulation, the result of friction or wear. Prevention is better than cure, so I suggest encasing each electric lead in gas rubber tubing, and in addition bringing all the accumulator leads into a 2 in. lead pipe, one end of which is brought through the battery box and then burred over; the other extremity can be fixed by a strip of brass and two screws to the dashboard. Numbering the wires, or rather tubes with wires in them, prior to pushing them through the lead pipe obviates confusion, or the tubes can be coloured, different colours being used for each destination. Red fibre tubes can also be employed, but personally I prefer gas rubber tubing with lead outside. I adopted this plan on a two-cylinder car three years ago, and since then I have been free from ignition disorders.

I strongly advocate the use of high-tension 15 mm. thick tinned copper wire for both the high and low tension connections.

Little strainer washers are sold that can be fitted at the point where the petrol enters the mixing chamber, and even though gauze funnels are provided in the petrol tank, these should be used. Through the neglect to do so only the other day a friend was "hung up," and he unfortunately had some trouble in getting at the jet, and when he did it was found to be blocked, which would not have happened if a washer had been fitted. Where used, however, even the washers need occasional cleaning. With gravity-fed carburettors there is occasionally on a hill not enough spirit in the tank to reach the pipe that supplies the carburettor; if so, and more petrol is not at hand, the fable of the stork and the water in the narrow mouthed pitcher may suggest a cure for the trouble. Pick up and clean some small stones, big enough to pass through the mouth of the petrol tank, but not so small as to enter the petrol pipe, then drop them into the tank until the petrol lever is high enough to reach the pipe. Another method is to pump air with the tyre pump into the tank, and the petrol is, of course, then pressure fed; to do this the plug of the tank must be tapped to take a nipple for the pump connection. It is better, however, to always carry a spare tin of petrol.

A fierce clutch is unpleasant, and in addition can do a great



The four Laurin-Klement Motor-Buses lately put in service between Pardubitz, Bodhanec and Holitz, Austria.
(Allgemeine Automobil Zeitung.)

It may be dearer, but it seems to last for ever and therefore is much cheaper in the long run. The ends when stripped of the insulation can be divided into two bundles and then twisted into a loop, or some form of terminal may be used. The eyelet is one of the best; it consists of a double ring of copper, between which the wires are placed, and then the two parts are pinched or knocked together, a solid end resulting, with a central hole that can be slipped over the coil, accumulator or other terminal.

On some cars the carburettor needs "tickling" before the engine will start, and occasionally the opening of the bonnet means taking off a lamp. A simple carburettor agitator is soon made. Put a stout split pin through the top of the stem of the carburettor needle valve, and make a cut in a piece of sheet tin. To the end facing the cut attach a rod or piece of wire, which can be brought outside the bonnet. To the split end hinge a bit of tin an inch long; with this folded up, place the cut through the stem of the needle valve, underneath the split pin, then, when a pull is given to the tin by the wire or rod, the folded part pushes against the cover of the carburettor, and the other piece against the split pin, and so the needle valve is lifted and the carburettor flooded. This arrangement, though it takes rather long to describe, can be made in a few minutes, and from experience I know that it answers well.

Usually in leather-faced friction clutches, which I still believe want a lot of beating, the trouble is due to a little irregularity on the leather surface. Spinning in the lathe is the cure. If the clutch is then still too quick in taking up its grip, the treatment is to remove the male portion; on its circumference, at equal distances apart, file three recesses, each about an inch long and an eighth of an inch deep. Into these grooves slip in similar sized pieces of watch spring and then replace the leather. The springs will cause a slight bulging, which is gradually overcome as the clutch engages, all fierceness or jerky motion being thus obviated.

Occasionally the paint of the mud guards or body of a car gets damaged, and if it is slight the owner may wish to be his own painter. In such a case I can strongly recommend Velure, which is a Japan paint and does not need varnishing. Recently a milk cart attempted to pass me on the wrong side, and in doing so coiled up my near mud guard and scraped the paint off the back panel. It was not convenient to send the car to the coach-builder, so I straightened the mud guard with a hammer and a bit of lead, and, after well sand-papering, applied Velure with a varnish brush, well crossed. The result was so satisfactory that I can strongly recommend it to all fellow motorists.

C. T. W. H.

MOTORING ACCESSORIES.

An Electric Cigar Lighter.

We illustrate in Fig. 1 a useful little accessory which has recently been introduced by Messrs. Ward and Goldstone, Springfield Lane, Salford, Manchester. It takes the form of an electric cigar lighter, which can be fitted in any suitable position on a motor-car, the flexible cord being attached to the ignition or lighting accumulator. By pressing a button the burner of the device is heated to a white heat, and on releasing the button the current automatically switches off. The arrangement is a very neat one, and, being low in price, should find a ready sale among motorists owing to the advantage of having a cigar lighter which will not blow out and is always ready for use.

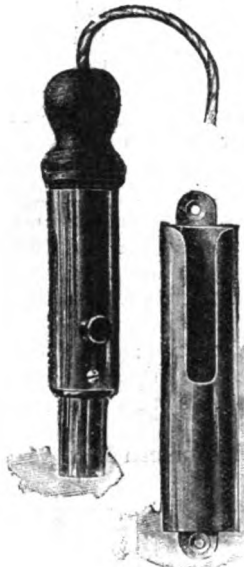


Fig. 1.

The same firm are also supplying some useful sets of motor-car side and tail lamps, especially adapted for electrical illumination.

Maxfield's Auto Tyre Inflator.

Now that the hot weather is upon us devices intended to ease the work of dealing with motor tyres naturally

receive an increasing amount of attention. In this connection attention may be drawn to the mechanical tyre inflator made by Messrs. Maxfield and Co., Victoria Road, Aston, Birmingham. A full description with illustration of this apparatus was given in the *M.C.J.* of February 22nd last, so that we need only mention that it consists of an air compressor driven by friction direct from the flywheel of the motor, and actuated by a small lever from the dashboard.

A small space just under the footboard, opposite the flywheel, can in most cases be found, where the inflator can be attached to the sub or main frame direct, or by interposing a small stiff bracket. The apparatus itself is bolted to the bracket by a swing back, so that the friction wheel can be brought into contact with the periphery of the flywheel of the motor by means of a flexible cable attached to a lever fixed in any convenient position near the driver that gives a direct pull to the cable. All that it is necessary to do is to attach the tube from the air chamber to the tyre to be inflated, start up the engine and bring the friction wheel, by means of the lever provided, into contact with the motor flywheel. A 10 ft. length of flexible tubing with connections is supplied with the inflator, which weighs only 5 lb. complete; its dimensions are very small, viz., 7 in. high by 4 in. by 4 in. In addition to inflating tyres, the device can also be used for operating pneumatic jacks and raising the pressure in fuel tanks. The firm inform us that they are experiencing a growing demand for the apparatus, not only in this country, but on the continent and in the colonies.

The "De Fornier" Non-Skid.

In a recent issue we illustrated the motor-van used by the Paris authorities. The tyres of this are fitted with the "De Fornier" protector, for which Mr. W. J. Mayer, of 27, Chapel Place, Brompton Road, London, S.W., is the licensee in this country. This device is composed of a protective envelope of chrome leather, completely covering the pneumatic tyre, and of an extra leather band round the tread, to which are fitted hand-riveted metal non-slipping studs. Each of the two metal circles of forged iron (one on each side of the protector) is divided into six sections, joined by screw bolts, to secure constant tension. They are of smaller diameter than the rim and felloe of the wheel, and being entirely independent, the protector cannot separate therefrom should the tyre become deflated. The "De Fornier" protector is easy of attachment and detachment, and is being well appreciated in this country. We learn that the Plymouth Fire Brigade committee has just decided to have the tyres of their motor fire-engine fitted with this device.

The Bowden Auxiliary Air Inlet.

In a recent issue we referred to the record performance of Mr. J. Elliott Young in the Hertfordshire A.C. consumption trial. On a car and take course the driver, E. Spillett, of his 10-12-h.p. Argyll car drove 43.6 miles on one gallon of spirit, thus beating his previous best, which was 40 miles per gallon. That was officially certified last September in

the course of a trial under R.A.C. observation. This economical and efficient driving was secured with the help of the Bowden Auxiliary Air Inlet, as we learned when calling at Baldwin's Gardens, Gray's Inn Road, Holborn, W.C., the other morning. This air inlet is of a cylindrical form and is pierced with a number of air-holes as well as being curved at the base to fit the shape of the inlet pipe. A plunger is fitted within the body in such a way as to close the holes when in the normal position. By means of the Bowden wire mechanism this is drawn upwards so as to gradually uncover the holes when more air is required. Many cars, otherwise of excellent type, have an insufficient air supply—a defect fully remedied by this device of the E. M. Bowden's Patents Syndicate, Ltd. The operation is very simple, all the necessary adjustment being controlled by the No. 21 lever through a length of the Bowden wire mechanism. As the lever is placed at any point conveniently handy to the driver the mixture can be regulated while travelling, thus providing for the varying conditions of road temperature, &c., as they occur. Efficiency in power and economy in consumption are thus secured, as was abundantly proved in the trial of the Hertfordshire Club already referred to.

A New Motor Horn.

We illustrate in Fig. 2 a novel type of motor alarm, known as the "Serpent," which has lately been put on the market by Messrs. Brown

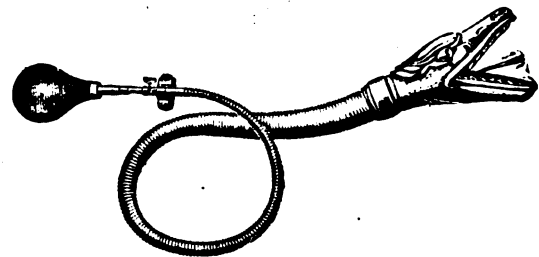


Fig. 2.

Bros., Ltd. The flexible tube of the horn being tapered, the volume of sound is, it is claimed, considerably increased.

If desired, it can be supplied with ordinary trumpet in place of the serpent's head.

Another useful device recently introduced by Messrs. Brown Bros. Ltd., is the "Neptune" wheel setter or alignment gauge (Fig. 3) for chain-driven motor-cars. The instrument has been designed for the purpose of testing the accuracy of the centres of the two driving wheels with the sprockets, correct alignment being most essential to good running, as well as to prevent undue strain on the tyres. The setter

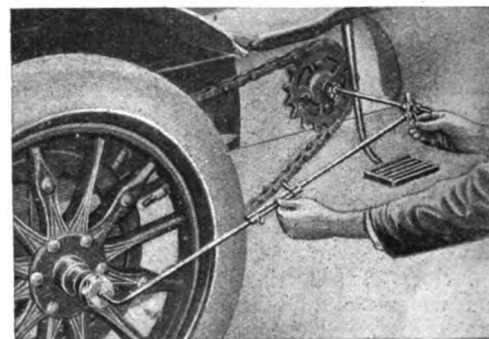


Fig. 3.

can be easily drawn out to the required length, and then locked by the thumb screws on the slide, the short point being applied to the centre of the hub, and the long point to the centre of the sprocket; any small adjustment can then be made by the long point, as it easily slides either way. Having got the correct centres of one hub and sprocket, try the other side, when the difference in centres will be correctly given, and the adjustment made accordingly. The standard gauge centres up to 3 ft., but a longer one can be supplied if necessary.

MESSRS. HANS RENOLD, LTD., Manchester, the well-known manufacturers of motor and cycle chains, have sent us a copy of a very interesting and instructive pamphlet they have just issued, giving comparative results of a series of tests of live shaft and machine tool driving by chains and belts. The figures show a remarkable efficiency in favour of the first named. Users of power will find much valuable information in the booklet, a copy of which will be sent on application.

Correspondence.

[Letters to the Editor should be addressed to the offices, 27-33, Charing Cross Road, London, W.C.]

PROTECTION FROM LIGHTNING.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—As the experience I underwent in the thunderstorm of Thursday last week may easily befall others, I write to ask whether the subject of the safeguarding of motor-cars from lightning has been considered generally, and to ask the opinion of experts as to the best means of protection.

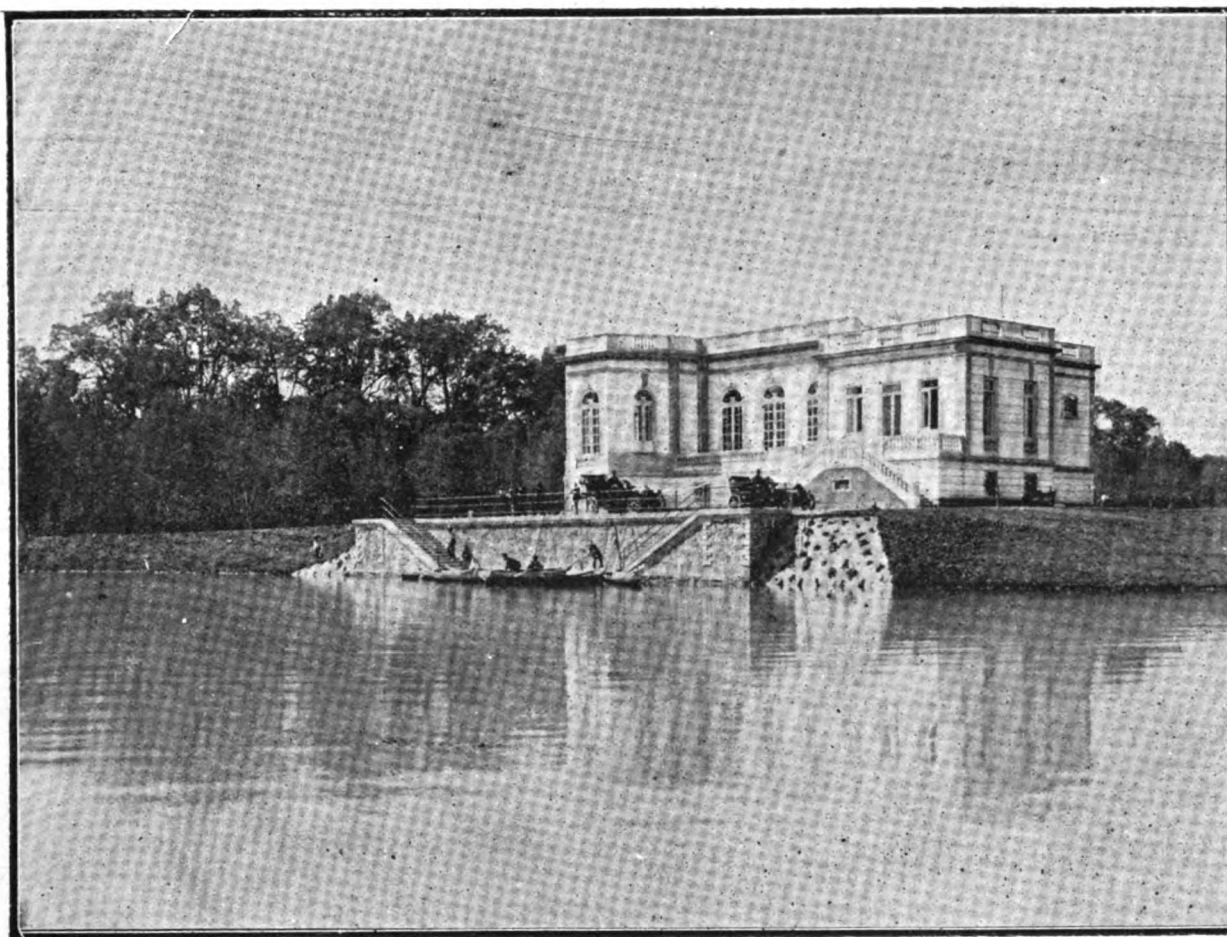
We were suddenly caught in the very centre of the thunderstorm on the exposed top, or plateau, of an exceedingly high hill in the neighbourhood of Ashdown Forest, in Sussex; there was no shelter of any kind possible, and I can hardly imagine a more dangerous position than that in which we unexpectedly found ourselves. One flash was blinding,

this desirable effect? If cars are to be vehicles of utility as well as of pleasure the call for this is great.—Yours truly,
JOHN DARLINGTON.

SOME FACTS IN THE SELECTION OF MOTOR OILS.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—I was very much interested in the letter on the above subject by "Veritas Prevalabit" in the last issue of the *M.C.J.* After reading his experience of using ordinary cycle oil in the engines of his cars, I mean to give the same a trial on my own machine, not so much on account of the reduced cost as because of the better running he has obtained. Just, however, as there are motor oils and motor



The New Club House of the Automobile Club of Mexico.

The building, which has been specially erected for the purpose, is beautifully situated on the margin of the lake on the north side of Chapultepec Park. Rowing boats and a library are at the service of the members, and outdoor sports will be held periodically. A project to add a garage to the premises is now under consideration. [El Automovil en Mexico.]

followed by a smell of burning, and three out of the party of four got out of the car. We lay down on the ground by a little heap of hay, and it was like one imagines it must feel to be in the midst of bursting shells or bombs. We could almost feel the storm touching us. When it was over the car would not go properly, and we found that the insulating wires had evidently been struck by the lightning and the rubber was melted as if it had been in a furnace; moreover, we carried three accumulators, and the two spare ones had been completely discharged by the lightning.

Motor trips of extended length are now becoming increasingly common, and anyone may run into a thunderstorm in a particularly dangerous place. What do your correspondents advise as the best method of protection for a car, which undoubtedly has an attraction to the lightning and which in elevated or exposed situations is more likely than not to form a target for the electric current? I take it that the ground is the safest, if not the driest place, in a position of extreme danger such as we found ourselves in; one feels, however, that some means should be found to make the car itself lightning-proof and the proper shelter in such emergency. Has anything been found to have

oils, so, I presume, there are different grades of cycle lubricants on the market, and I should, therefore, be glad if your correspondent would state the brand he is using and with which he has obtained such good results.—Yours truly,

R. F. H.

COURTESY ON THE ROAD.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—A few weeks ago my car was nearly overturned, having to suddenly avoid an enormous horse drawn vehicle which was pulled right across the road without a moment's warning on the part of the driver.

The man's language, on being remonstrated with, was of the vilest character. I, therefore, on my return to town, asked the Automobile Association to take it up, and am pleased to say that they have heard from the employers of the driver, who have written as follows:—

"We are in receipt of your letter of yesterday, and can assure you that we are extremely sorry for the unpleasantness and danger the gentleman on whose behalf you are writing was put to by any employee of ours,

especially his rudeness when spoken to about it. We have now discharged the man and shall never take him on again, and trust that your client will accept this apology from yours respectfully, Dudley and Co."

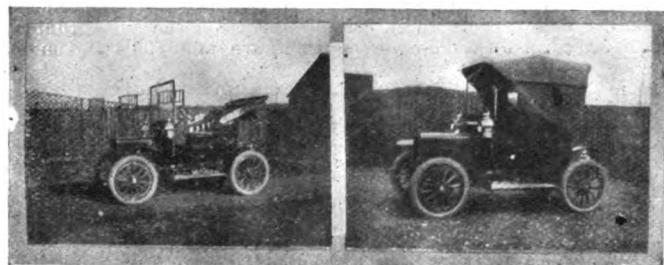
I think you will agree that every credit is due to the Automobile Association for having secured this satisfactory result, and also a certain amount of credit is due to Messrs. Dudley and Co. for the extremely just and unbiased view they took of the matter.—Yours truly,

COLIN DEFRIES.

THE ROVER CARS.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—I enclose two photos of my 6-h.p. Rover car for reproduction in the *M.C.J.*, as you sometimes illustrate private owners' cars. The picture with the hood up was taken to show the side pieces with the



talc windows in them. I find the car has a good reserve of power—it will easily, with two persons, ascend Red Hill, near Uxbridge, with the second speed in gear. The car is quite as fast on the level as any I should wish for. I have no financial interest in the trade, and the Rover Company do not know I am writing this letter.—Yours truly,

CECIL JACKSON.

A FIRST EXPERIENCE OF MOTORING IN INDIA.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—Whilst stopping at Pondicherry, my friend A . . . proposed one morning to take me out in his car to Cuddalore, some eighteen miles, and on to Porto Novo, another sixteen miles. We started away about 10 o'clock, and, as the car could do its twenty-five miles per hour on a good road, we expected to be back for tea. For the first seven miles we went well, although the roads were rather bad, until our native chauffeur informed us in a happy tone of voice "Puncture, Hogaya Sab," and we found one of our back tyres down. A half-hour was lost in replacing the inner tube by a spare one—we carried three—and we got into Cuddalore about 11.45. Making a stoppage of half an hour there, we proceeded on our journey some six miles along a charmingly pretty road, when we again heard "Puncture, Hogaya Sab," and the same tyre was found flat. Half an hour saw us again started, only to find out this other inner tube leaking, and the tyre not holding up. At this stopping place we were close to a native village, and we were soon surrounded by a large crowd of admiring natives of all ages, who were deeply interested in our operations.

Being now very hungry, both of us not having had anything since early morning, we badly wanted our tiffin, it being nearly 2 p.m.; but, not feeling inclined to eat it under the eyes of such a public, we went on for a mile or so with our slack tyre, and, having got clear of the village, sat down on the roadside and ate it, whilst the man did the patching of two of the tubes. Unfortunately the solution he had was old, and the patching did not hold under the heated tyres, for one gave out after a run of four miles, the other, however, held and took us into Porto Novo at about 5 p.m. We left on our homeward journey at 6.40, surrounded by a yelling crowd of natives, some of whom narrowly escaped sudden death as they ran alongside the car whilst it threaded its way through the narrow streets. Once out in the open we ran at full speed, and we were confidently hoping to get into Pondicherry for dinner, when the well-known "Puncture, Hogaya Sab," came from the back of the car, and we stopped again some half-way to Cuddalore with no more solution and nothing to repair the tyres. Our chauffeur rose to the situation, and he found his way to the nearest farm and bought a lot of hay, and proceeded to fill up the outer tube with this twisted and packed in as tight as possible. This of course reduced the speed, the car refusing the fourth speed, so it had to be driven on the third, using much more petrol. Every few miles we had to stop and repack owing to the hay getting crushed to powder, and we reached Cuddalore railway station about 10 p.m. This was too late for dinner, so we had to content ourselves with biscuits and a drink. After stuffing in more hay into our poor old tyre and filling up with water, &c., we resumed our journey about 10.30 p.m. to do the last eighteen miles. The acetylene lamps had by this time exhausted themselves, and we only had the oil lamps to steer by, and had one or two narrow shaves of getting into nullabs and ditches. Things progressed slowly, the hay gave out and more had to be procured, and about 2.30 a.m. the car came to a standstill about six miles from home for want of petrol. After some trouble we managed to get hold of a single bullock cart, and we two basely deserted the car, leaving it on the roadside with the chauffeur in charge,

and arrived at my friend's house at 5.15 a.m. utterly worn out and glad to get to sleep and dream of punctures. We sent back petrol and a new inner tube, which brought the car in at 11.30 a.m.

My advice to those who go motoring in India is, be sure and have on board plenty of petrol, several good inner tubes, good solution, and a good stock of provisions.—Yours truly,

TRAVELLER.

A MAGNETO TROUBLE.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—I have an old Albion car, with low tension magneto, which at times refuses to start. I have traced the cause to the magneto ignition apparatus. I have cleaned it thoroughly well with but little better results, although at times it will start a little easier than others. It works all right after the engine is started. Will the magneto require re-magnetising? If so, how can I do it, or where would I get it done?—Yours truly,

WARLEY.

[The probable cause of the difficulty that "Warley" is experiencing is due to the magnets having become so weak as not to give sufficient induction through the armature to obtain a good starting spark. As it is inadvisable for him to attempt to re-magnetise them himself, we recommend that he should dismantle the magnets and send them to the Albion Motor Co., who will promptly put his magnets into good order again. It is at the same time possible that the trouble may be due to the insulation of the live spindles of the plugs having become defective through incrustation with soot between the layers of the mica. These plugs could also be done up by the above-mentioned firm. He should also see that the wires leading from the armature to the plugs are all in thorough order and that they are not being short-circuited against any portion of the mechanism.]

THE HORSE-POWER OF MOTOR-CABS.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—Some discussion appears to be taking place in France as to the most suitable size of engine for use in motor-cabs. The majority of the vehicles in use are of the Renault 8-9-h.p. twin-cylinder type, but many of the others, especially the later ones, are fitted with four-cylinder engines of greater power. It is being urged against these that they are much more costly, not only as regards fuel but also from the point of view of tyres and mechanical upkeep, and it is being urged that a cab



Mr. F. H. Sanderson amidst the Derbyshire Hills on the "Sheffield Simplex" Six-cylinder Car of which he has just taken possession.

with a single-cylinder engine of 8-h.p. is sufficient to meet all the requirements of the public and at the same time to allow of the service being worked on a remunerative basis.—Yours truly,

R. B. N.

MESSRS. MARKHAM AND PRANCE, of 143, Strand, London, W.C., send a leaflet showing the great scope of their work in advising and supplying pleasure cars, motor-boats and commercial vehicles. They undertake to overhaul and tune up any of these automobiles and also to conduct test and trial runs.

RACING AT BROOKLANDS.

EXPERIENCE has taught the Brooklands management many things, and the Whitsuntide meeting has seen the addition of several improvements that will tend towards popularising the track. A new stand in the members' enclosure; the adaptation of the aeroplane shed to the purpose of refreshment; the improvement of the mileage boards and a general smartness in keeping to the published times of the races helped to give a swing to Saturday's proceedings which was lacking at earlier meetings. In the paddock there was a bustle and a brightness that, fortunately, was not dissipated by the weather, and it needed but a larger crowd in the space devoted to the general public to cheer the hearts of the management.

One pleasing innovation was a fulfilment of an interesting anticipatory hope expressed in these columns a few weeks ago, and the starting of races in full view on the finishing line added to the zest with which the races were followed. Several Napiers appeared with their new designations, the Meteor being in the 90 h.p. class, the Firefly in the 26-h.p. category and others included the St. George, Viceroy and Medusa. These were the only cars on the track which had followed the suggestion made by Mr. Colin Defries, whose named Porthos was not, however, a starter on this occasion.

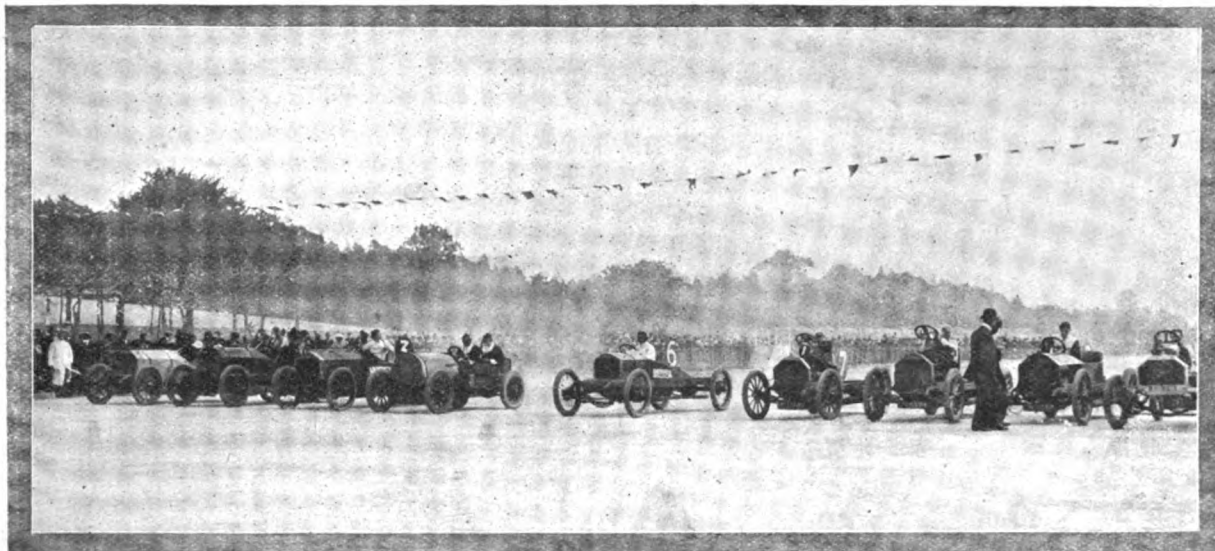
The first race started on the finishing line, and was over a course of $5\frac{1}{4}$ miles. This was the second All Comers' Handicap Sweepstakes of 2 sovs. each, the handicapping being on time instead of distance—a method which increased the interest, as all cars had to travel the same distance. This resulted as follows:—1, P. D. Stirling's 35.7-h.p. Berliet (start 1 min. 10 sec.); 2, E. de Wilton's 76-h.p. Mercedes (12 sec.);

Napier Firefly; the latter drove the 25.6-h.p. Metallurgique. Newton was first away and gradually increased his lead at every lap during the 13 $\frac{1}{2}$ miles until he won by considerably more than the length of the finishing straight. The magneto on the Metallurgique was burnt out early in the race. The average speed of the winner was 76 $\frac{1}{2}$ m.p.h.

There was a thrilling moment at the start of the race between the Napier and the Metallurgique in the 40-h.p. standard class, Copper getting away from Draper on the St. George in fine style, and leading for a mile, when the latter strode into first place and increased his advantage every time of passing the fork, until at the fourth turn Copper ran down the straight. Thus Draper finished alone, his speed being 85 miles per hour over the distance of 16 $\frac{1}{2}$ miles.

For the 90-h.p. stakes over a five mile course there were three contestants in one of the best races of the day, resulting as follows:—1, F. Newton on Napier Meteor; 2, D. Resta on F. R. Fry's Mercedes, and C. Lane on W. J. Wright's Darracq. Resta was first away, but Newton caught him in the first mile, and eventually won by 250 yards at a speed of 91 miles per hour, a fine performance seeing that it was from a standing start.

The second of the Whitsuntide meetings, which was held on Monday, was attended by the largest crowd that has so far been seen at Brooklands, the great race between the Napier and Fiat giants being undoubtedly the attraction. The programme opened with the first heat of the $5\frac{1}{4}$ mile handicap for private competitors for a cup presented by the Earl of Lonsdale, the president of the B.A.R.C. Ten cars faced the starter, in full view of the spectators. The pace was not so fast as the second heat, a speed of only 59 miles per hour being attained. Mr. G. Bliss, 41-h.p. Vinot, was first; Sir Duncan Hay, 41.9-h.p. Daimler, second; Mr. T.



Racing at Brooklands.—The Start of the Second All-comers' Handicap Sweepstakes.

3, H. G. Nalder's 37.7-h.p. Berliet (1 min. 20 sec.). The winner's speed was 71 $\frac{1}{2}$ miles per hour, he being 200 yards in front of the second. The latter beat the Berliet at the post. The order of finishing of the other competitors was G. C. G. Moss's 27.2-h.p. Arrol-Johnston; S. F. Edge's Napier Medusa; D. Pigot's 35.7-h.p. Berliet; G. Russell Miller's 22.4-h.p. De la Buire; S. F. Edge's Napier Viceroy; J. W. Stook's 25.6-h.p. De Dion; J. L. Bromfield's 62.5-h.p. Weir and F. R. Fry's 76-h.p. Mercedes, driven by Resta. One of the inlet valve stems of the latter car, which started at scratch, seized up during the race.

The Second Limit Stakes of 10 sovs. each produced a novelty as the average speed of the cars had to be less than 50 m.p.h., thus opening up possibility of objection on account of exceeding the regulation limit. In the first heat J. W. Stocks, E. de Wilton, and W. Oates, the latter on a 22.4-h.p. Clement, were first, second, and third respectively, but were disqualified for exceeding the limit, and the first three placed were Sir G. Abercromby (58.1-h.p. Fiat), who travelled at 49 $\frac{1}{2}$ m.p.h., H. G. Nalder (35.7-h.p. Berliet), and C. Hobson (27.9-h.p. Nagant-Hobson). In this heat C. Bianchi also drove a 8.9-h.p. Sizaire. Again in the second heat the first two—G. C. G. Moss (27.2-h.p. Arrol-Johnston) and D. Pigot (35.7-h.p. Berliet) exceeded the limit, so that the placed cars were J. Keale (41-h.p. Weigel) at 49 $\frac{1}{2}$ m.p.h., Sir D. Hay (41.9-h.p. Daimler), and G. Wright (53.6-h.p. Darracq). There also ran E. Ashley (22.5-h.p. Buick), J. E. Hutton (25.6-h.p. Hutton, this being a new four-cylinder live axle car made at the Napier works for Messrs. J. E. Hutton), and B. S. Millard (8.9-h.p. Sizaire).

In the final heat C. Hobson and H. G. Nalder, who actually came in second and third, were disqualified, and the result was—1, Sir G. Abercromby at 50 m.p.h.; 2, J. Keale; 3, Sir D. Hay.

Great interest was evoked in the match for £500 between Mr. S. F. Edge as challenger and Mr. O. Copper as acceptor in the 26-h.p. Standard class. The former was represented by F. Newton on the

Fankner, 24.8-h.p. Mercedes, third; Mr. G. C. G. Moss, 27.2-h.p. Arrol-Johnston, fourth; and Mr. C. Russell-Miller, 22.4-h.p. La Buire, fifth. The second heat brought out a field of nine competitors, and a hotly-contested race ensued, as may be judged from the fact that the winner's speed was 71 miles per hour. The result was: Mr. O. S. Thompson, 36.1-h.p. Austin, first; Mr. A. G. Walker, 35.7-h.p. Berliet, second; Mr. G. Duveen, 34.5-h.p. Mercedes, third, and Mr. C. Hobson's 27.9-h.p. Nagant-Hobson, which he has named "Not so Dusty," fourth. All the foregoing took part in the final, which was run off as the fourth event. Mr. H. G. Nalder, 35.7-h.p. Berliet, with 25 sec. start, proved the winner, at 73 miles per hour; Mr. G. Bliss, 41-h.p. Vinot, 1 min. 9 sec. start, second; and Mr. G. C. G. Moss, 27.2-h.p. Arrol-Johnston, 1 min. 20 sec. start, third.

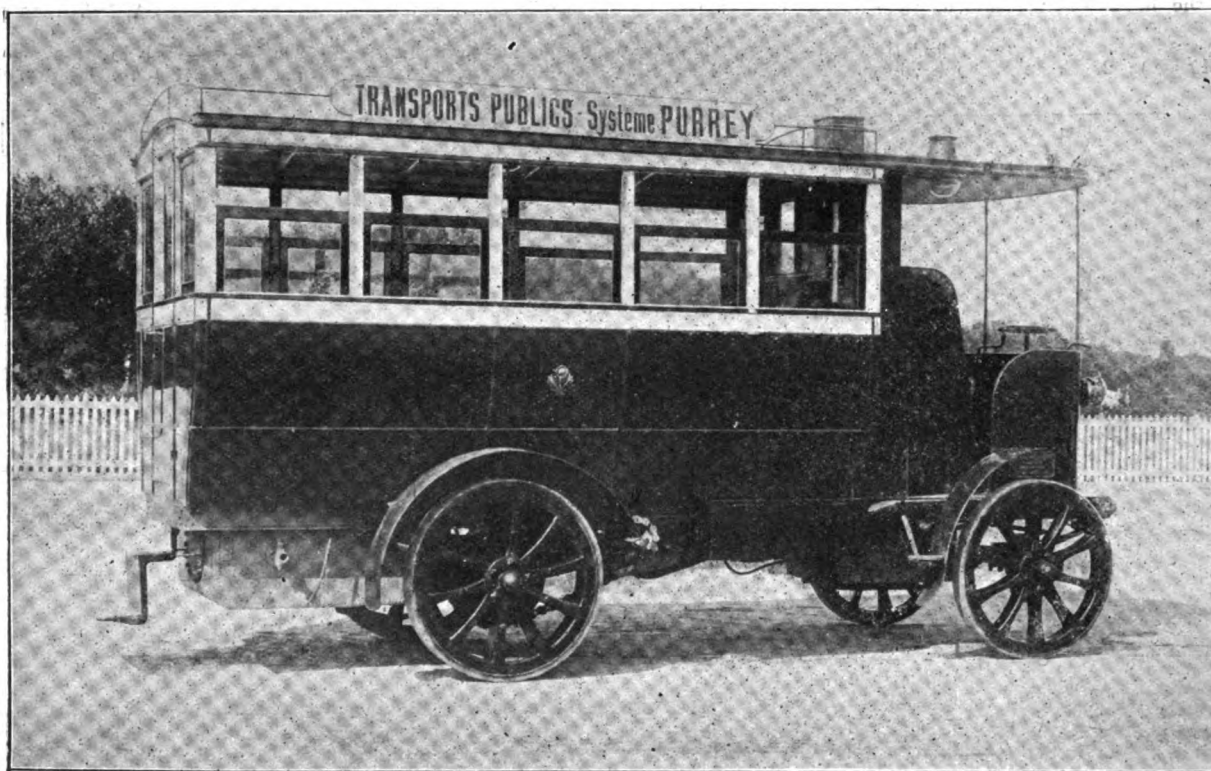
There was quite a flutter of excitement as the two racing monsters, the 90-h.p. green painted Napier, Samson, with F. Newton at the wheel, and the fiery-red coloured 89-h.p. Fiat, with Nazzaro on the driving seat, were slowly pushed on the track for the great event of the year, the £500 match between Mr. S. F. Edge and Mr. D'Arcy Baker. After a slow run along the level in front of the paddock as a sort of parade for the benefit of the spectators, the two cars took their place on the starting line, which was located near the junction of the banking and finishing straight, ready for the 27 $\frac{1}{4}$ mile struggle. Newton was the first away, and at the end of the initial lap had secured a good lead. Nazzaro, who took the banking very high up, however, quickly began to improve his running and on the railway side commenced to appreciably overhaul his rival, this continuing until, when the fork has been passed three times, he actually forged ahead of Newton. When the latter came in sight from behind the banking, to the consternation of those who had looked upon England as being the victor, it was seen that he was pulling up. There was a hasty rush to meet him, as by the aid of a dozen attendants he and his

car were pushed back into the enclosure. On being questioned as to the cause of his retiring, Newton merely pointed to the bonnet, which gave an indication that it was due to trouble with the engine, from the base chamber of which oil was leaking. It was later officially stated that the stoppage was caused by one of the engine bearings firing. In the meantime Nazzaro continued to reel off lap after lap at a terrible pace, one lap, indeed, being covered at the enormous speed of 111½ miles per hour, while his average for the whole run was 94½ miles. Although the race was robbed of much of its interest owing to the Napier retiring, never has there been such excitement at Brooklands as ruled when Nazzaro, cool as the proverbial cucumber, dismounted from the victorious Fiat, after setting up a new record for the track.

The fifth 26-h.p. race over a distance of 16½ miles, for cars of a cylinder dimension of 64 or under, brought out a field of five cars. Mr. J. W. Stocks, 25.6-h.p. De Dion; Mr. J. E. Hutton, 25.6 h.p. Hutton; Mr. O. Cüpper, 25.6-h.p. Metallurgique; and the two Napiers, Firefly and Medusa, driven respectively by F. Newton and J. Blackburn. The contest quickly resolved itself into a keen struggle between Newton and Cüpper, the latter's Metallurgique being in excellent running order, and striving hard to have its revenge on its victor of the previous Saturday. At one time Cüpper led, but only for a moment or so. The excitement was intense as Newton (Napier) crossed the finishing line barely a length

THE STORAGE OF PETROL.

A CASE of importance to the motor-car trade has been heard at Brighton, when the British Petroleum Company were summoned by the Brighton Corporation for keeping 1,654 gallons of petroleum at the Dog Kennels, Hollingdean Road, on April 21st, when they were licensed for only 500 gallons. Mr. C. N. T. Jeffreys (Deputy Town Clerk) prosecuted for the Corporation. He stated that the company, a short time ago, made application to increase the storage from 500 gallons to 1,000 gallons. This was refused. The company then wrote to the Town Clerk asking for a temporary licence for 2,000 gallons to take them over Easter. This application was also refused. Easter then intervened when the offences for which these summonses were taken out were committed. He might say that since Easter the company had applied for permission to store 750 gallons of petrol—250 more than they were licensed for—and that that application was now under the consideration of the Watch Committee. On April 18th the Chief Inspector under the Petroleum Act visited the premises and saw the representative of the company. Upon making an inspection he found 966 gallons of petrol—466 in excess of the amount for which they were licensed. On the 21st he again visited the premises and found 1,654 gallons of petrol. It was only fair to state that later in the day on April 2nd the local manager called upon the



The Purrey Single-Deck Steam 'Bus, of which several are now in service in various parts of France.

La France Automobile.

in front of Cüpper (Metallurgique). Hutton was third, Stocks fourth, and Blackburn fifth. The speed attained was 75½ miles per hour.

There were five starters in the 5½ mile handicap for the Household Brigade cup, which was won by Mr. G. C. G. Moss, 27.2-h.p. Arrol-Johnston, 1 min. 6 sec. start, Mr. J. Bullough 44.5-h.p. Junior (2 sec.) being second, and Mr. T. R. Clutterbuck, 35.7-h.p. Fiat (42 sec.) third.

The last event of the day was the training plate event for six-cylinder Austin cars built for the forthcoming A.C.F. Grand Prix. The start was on the finishing line and the course over two inner laps, two complete tyres having to be changed on each car at the end of the first lap. Only three cars turned out driven respectively by Mes-srs. J. T. C. Moore-Brabazon, D. Resta and Warwick J. Wright. Resta was first away, and the smart manner in which he and his assistant changed the two tyres—in 2 min. 17 sec.—made him an easy winner, Warwick Wright being second and Moore-Brabazon third.

MR. J. LYONS SAMPSON, M.I.M.E., who has been identified with automobile competitions in this country from the pioneer days, is now undertaking consulting work. He has established himself at 274, Oxford Street, London, W.

THE new price list of the Calmon Abestos Rubber Works, Ltd., 1, 2, and 3, Trinity Place, Tower Hill, London, E.C., comes to hand, showing the various motor tyres made by this firm. These are guaranteed for 3,500 miles. Material reductions have been made in price, despite which the quality is well maintained.

inspector and said that at least 900 gallons of petrol had been ordered by customers and would be taken away during the day.

Mr. Gates, on behalf of the company, said he pleaded guilty, but he had arrived at that decision only with difficulty. In the first place every possible precaution was taken to avoid danger, and the other conditions of the licence had all been faithfully adhered to. None of this trouble would have arisen except for the difficulty of the Easter season. An enormous number of motors came to Brighton, and the Shell spirit in which the company dealt much demanded by motorists. So that the spirit should not be kept upon the premises longer than necessary the company put on motor lorries and kept them going day and night to keep the spirit in circulation. The petrol was properly kept and remained in the store only a few hours. The Clerk said that according to the Act there must be a forfeiture of the petroleum if the case were proved.

Mr. Gates said that it was stated in the Act that there must be a forfeiture, and that as a penalty was additional to the forfeiture, no penalty could be imposed if there was no forfeiture. And as the petrol had been all consumed, there could be no forfeiture. He thought that the prosecution might agree to a withdrawal of the case upon payment of the costs. The magistrates decided that there must be a conviction; and the Chairman said that so far as there could be a forfeiture there must be a forfeiture. The company would, in addition, be fined £5 in respect of each day, with costs.

The fine and costs amounted altogether to £10 17s.

CLUBS AND ASSOCIATIONS.

ROYAL.

ON Wednesday, the 3rd inst., H.S.H. Prince Francis of Teck occupied the chair for the first time, and the new members elected brought the total membership up to 3,556. The clubs and associations now included in the scheme of the club's operations number ninety, with 14,149 members.

At the monthly meeting of the General Committee on the 4th inst. it was reported that Professor Hubert von Herkomer, R.A., had promised to model a design and make the dies for the new medal for award by the committee in connection with the events organised by local clubs. It was decided to enrol individual associates after July 1st at the half subscription of half a guinea to cover association to the end of the year.

Examinations have just been held at the Naval Motor School, Portsmouth, and at the Royal Marine Artillery Depot at Eastney.

Earl Russell, at the last meeting of the R.A.C. committee, tendered his resignation, which was accepted with great regret by his colleagues, whose feelings were voiced by the Hon. A. Stanley.

MOTOR UNION.

MOTOR UNION road signs have recently been supplied to the Romsey Corporation, the clerk to the justices at Longton (Staffordshire), and also the Rural Council of Farnham. An application for a sign indicating a dangerous corner has also been received from the Welsh A.C. at the request of a meeting of residents of Lalleston, where the road is only 16 ft. wide in places and there is no side walk.

THE AUTOMOBILE ASSOCIATION.

AT last week's executive committee meeting 374 new members were elected, amongst the most prominent being:—The Bishop of London, Viscount Villiers, Earl of Crewe, the Maharajah of Kooch Behar, Lord Revelstoke, Lord Hothfield, H.H. Abdulla Khan, General Sir Henry Rundle, Count Gleichen, Mr. A. G. Vanderbilt, Sir George Bullough, Sir Ralph Neville, and the Hon. Evelyn Hibbard.

Progress was reported upon the work of the Committee of Public Safety, which in the short space of time it has been established has dealt with several matters vitally affecting this important question. The work of training a special corps is proceeding with all speed, and their appearance on a few of the most important main roads may be looked for at an early date.

The latest development of the A.A. is in connection with the leading hotels in towns and villages throughout the kingdom. In the entrance hall of each hotel on the list will shortly be seen a board by means of which information concerning the roads will be communicated to members. A locked door in the centre of the board will protect the reports from interference by unauthorised persons. Ten thousand keys are being made and numbered, and they will be issued to members in the same way as car badges but without charge. The A.A. agents will assist in the new scheme and the patrol organisation will also play an important part. Road reports, messages to members, notices of belongings lost or found, and much other useful information will by means of these bulletin boards be at the disposal of members.

In order to ensure the efficient working of the scheme, honorary district inspectors are being appointed in all parts of the country, each member supervising the A.A. agents and hotels within the radius of twenty to thirty miles, and reporting at intervals to the A.A. headquarters, Princes Buildings, Coventry Street, London, W.

NORTH-EASTERN AUTOMOBILE ASSOCIATION.

THE membership of this comprehensive northern organisation was 617 at the close of the last financial year, the total assets amounting to £388. The annual report which was presented at the meeting held on Thursday of last week showed that financial assistance had been given in several legal cases and that the question of the protection of members from interference on open stretches of roads is again having the attention of the committee for the present season. The business office of the association is at Sun Buildings, Collingwood Street, Newcastle, and the committee mentioned their contributions towards the re-building of the Whalton and Belsay Bridges as a new departure.

At the annual meeting held at the County Hotel, Newcastle-on-Tyne, on the 4th inst., the following gentlemen were re-elected as officials for the current year:—President, Sir Lindsay Wood, Bart. Vice-presidents, Marquess of Londonderry, Earl of Durham, Viscount Ridley, Lord Barnard, Lord Allendale, and Sir A. Noble, Bart. Chairman, Major H. Streatfeild, J.P., Tyhone Hall, Sunderland. Hon. sec. and treasurer, Mr. J. E. Hodgkin, Shelley, Darlington. Hon. solicitor, Mr. J. A. Williamson, Prudential Buildings, Newcastle. Hon. auditor, Mr. F. C. Sqaunce.

The proposals of the committee that the rules should be altered to allow of better representation of affiliated clubs were adopted, the result being that in future the general committee will consist of the following:—1. The elected officials as above. 2. President or chairman and secretary of each affiliated club. 3. One representative for each twenty-five members of each affiliated club, two for fifty, and so on. 4. One representative for each twenty-five individual members of the

association who are direct members of the association and not affiliated through clubs.

The question of affiliation was discussed and the recommendations of the committee adopted. These include the linking of the association to the R.A.C., and the affiliation to the M.U. of the whole of the car-owning members of the N.E.A.A. and the direct association to the A.C.U. of all motor-cyclist members.

BROOKLANDS.

IN consequence of recent litigation, the secretary is instructed by the committee to inform members: (1) That the entrance to the motor course hitherto used will be closed to motor-cars and motor-cycles on and after Tuesday last. The entrance for motor-cars and motor-cycles will, in future, be from the Byfleet road, about a quarter of a mile nearer to Weybridge than the present entrance to the members' car enclosure. This new entrance will be in use on all days other than race-days. (2) Until further notice, the motor course will be closed on Sundays, both for motor-cars and foot passengers. (3) Foot passengers approaching the motor course, both on race days and non-race days, will continue to use the present approaches. (4) For the purpose of carrying out the necessary alterations as regards access, the motor course has been closed during the last few days.

MOTOR CYCLING CLUB.

THERE were no fewer than 134 entries and 128 starters in the London to Edinburgh run of the Motor Cycling Club. They started from the Old Gate House Hotel at Highgate after 10 p.m. on the night of Friday, the 5th inst., Mr. F. T. Bidlake sending them forth. They were preceded by Messrs. R. H. Head and Arthur Chandler, on a 40-h.p.



Mr. G. A. Phillips driving the 10-12-h.p. Coventry Humber Car which won the Gold Medal in Class C in the Irish Reliability Trials.

Mr. Phillips is the son of Mr. Walter Phillips, the well-known Coventry manager of Humber, Ltd., and this is the first occasion on which he has driven a car in a trial.

Crosseley, who verified the watches at the various controls during the night.

All who reached Edinburgh within 22 hours were entitled to a gold medal. The return journey in connection with the Schulte Cup resulted in the following riders completing the trip of 800 miles:—Messrs. S. G. Frost, E. Gwynne, C. H. Crole-Rees, A. S. Phillips, O. L. Summers, R. O. Clark, H. P. Brasley, J. Winslow, O. C. Godfrey, E. V. Fielder, C. W. Brown, J. Platt-Betts, and Miss A. E. Wood.

The records had not been fully checked at the time of going to press, but meanwhile the Motor Cycling Club can be congratulated on its very successful event.

HERTFORDSHIRE.

INSTEAD of the meet of the Hertfordshire C.A.C. to-day (Saturday), taking place at Medmenham, it will be held at The "Compleat Angler" Hotel, Marlow, where tea will be taken on the riverside lawn, 4.30 to 6 p.m.

The run is 24 miles from Watford to Marlow, by way of Rickmansworth, Denham, Gerrard's Cross, Beaconsfield, Woburn Green, and Bourne End (level crossing).

COVENTRY.

THE awards in connection with the Coventry Motor Club's twelve hours' run to Holyhead were made known at a meeting held last week at the residence of the hon. treasurer, Mr. E. J. Hardy, 18, St. Nicholas Street, Coventry.

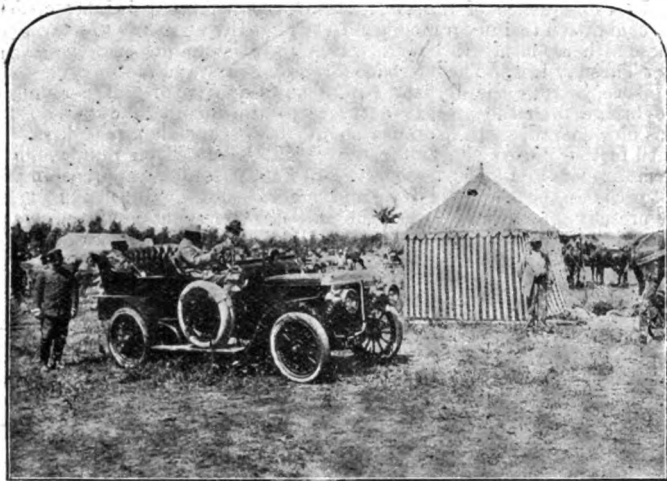
In addition to certificates, which will be presented to those who completed the ride in thirteen hours, a medal and two prizes will be presented at the annual dinner to the following competitors who adhered closest to a mean average speed of nineteen miles an hour:—S. F.

Riley, 12-h.p. Riley—bad marks, 17; J. K. Starley, 20-h.p. Rover—bad marks, 17, dead heat; W. Williamson, 13-16-h.p. Remo—bad marks, 17½.

Of the motor-cyclists A. B. Jepson (3½-h.p. Triumph) was first, and J. V. Pugh (3½-h.p. Lloyd) second, with 18½ and 19½ marks respectively.

WELSH.

THE trial held on Thursday of last week by the Welsh A.C. at Philadelphia Hill, in Carmarthenshire, was a great success. There were fourteen starters, the timekeeping being in the hands of Mr. Webber,



6 The Marquis de Villamarta on his recently acquired 42-h.p. Daimler Car at the fair of Jerez de la Frontera, a small town about eight miles from Cadiz, Spain.

Mr. James Livingston, J.P., was the judge, and Mr. T. H. Jones, the starter. Each car was allowed three attempts on the hill, the distance being about 1,300 yards with a varying gradient. The positions of the cars on each run were as follows, the times being those beyond that of the fastest car:—

| | 1st Round. | 2nd Round. | 3rd Round. |
|---|------------|------------|------------|
| | fastest | fastest | fastest |
| | m. sec. | m. sec. | m. sec. |
| 1. Capt. Hughes-Morgan's 48-h.p. Daimler... | 0 19 4.5 | 0 19 | 0 22 3.5 |
| 2. Capt. Hughes-Morgan's Weigel | 0 23 4.5 | 0 17 | 0 21 3.5 |
| 3. T. J. Williams's Daimler | 0 41 3.5 | 0 41 4.5 | 0 38 1.5 |
| 4. E. Leeder's Simms Welbeck | | | |
| 5. B. W. Valentin's Beeston-Humber | 0 53 4.5 | 0 52 2.5 | 0 50 3.5 |
| 6. T. D. Drummond's Belsize | 1 10 3.5 | 1 3 2.5 | 0 59 |
| 7. T. J. Williams's De Dion | 1 24 | 1 21 2.5 | 1 25 |
| 8. W. Morris's Darracq | 1 29 3.5 | 1 38 4.5 | 1 44 4.5 |
| 9. A. A. Jones's Argyll | 1 36 | 1 41 1.5 | 1 29 4.5 |
| 10. E. E. Sutton's Darracq | 1 55 1.5 | 1 53 1.5 | 1 50 4.5 |
| 11. H. G. Davies's De Dion | 1 57 | 2 0 4.5 | 1 48 2.5 |
| 12. H. S. Thomas's Argyll | 2 15 1.5 | 1 18 | — |
| 13. Col. Williams's Humber | 2 34 4.5 | 2 2 | 1 23 |
| 14. A. J. Burn's Siddeley | 3 53 2.5 | 3 51 4.5 | 4 5 3.5 |

CYCLE AND MOTOR TRADES BENEVOLENT FUND.

At the June meeting of the Executive Committee Mr. F. Lanchester was in the chair. A balance of £439 was reported to the credit of the current account at the bank.

Seven relief cases were dealt with, cheques being drawn in three of the cases, and one being left to the Emergency Committee to give pecuniary relief after making a few further enquiries. It was reported that a special general meeting will be called for the dissolution of the Midland centre as such, and for the formation of a Birmingham centre. It was suggested that for the present, at any rate, it would be well that Wolverhampton be incorporated with Birmingham. With reference to the third annual banquet it was mentioned that Mr. Albert Eadie had consented to take the chair.

LADIES'.

THE members of the Ladies' A.C. have been invited again this year by the committee of the Grosvenor Club to become honorary members of that club for the Royal Henley and Olympic Regattas, and as such to visit the Grosvenor River Club's enclosure on the 1st, 2nd and 3rd July for the Royal Regatta, and on the 28th of that month and following days for the Olympic Regatta.

For the convenience of members of this club who may motor to Henley, the committee of the Grosvenor Club have arranged for a man to be in charge of the car enclosure. Each member will be given a ticket when her car enters, and this ticket will have to be produced when the car is required.

BRITISH MOTOR-BOAT CLUB.

THE annual Thames and up river meet of this club will be held on Tuesday next, and in connection with the event there will be a motor-car run to Kingston from the headquarters in Coventry Street, London, starting at 2 p.m.

The B.M.B.C. London to Cowes race is fixed for the 20th inst., and in addition to the entries from club members several boats from the Essex Motor Boat Club are expected.

ABERDEENSHIRE.

A MEETING of motorists was held at Echt the other evening for the purpose of forming a motor-car club for Aberdeenshire. Mr. McRae, Dun Echt, was called to the chair, and moved that an auto-motor club be formed for Aberdeenshire, to be called the Aberdeenshire Auto-motor Club. This was unanimously agreed to.

Mr. Milne, Comers, Midmar, was elected hon. president of the club, and Mr. McRae president. Mr. Donald, Post Office, Sauchen, was elected secretary and treasurer. The following committee was also elected:—Messrs. McRae, Springfield, Dun Echt; Grassick, Craigievar; J. G. Gray, Echt; W. Cooper and J. Shewan, East Culfossie, Echt; J. McCaulay, Cluny; J. Gordon, Greentree, Echt; J. Craig, Kintore; J. Milne, jun., Comers; G. Sangster, Skene; J. Hunter, Echt; and R. Donald, Sauchen. Mr. J. Milne, Comers, Midmar; Rev. J. D. Sinclair, East U.F. Church Manse, Sauchen; Dr. Lawson, Dun Echt; and Mr. J. Grant, Schoolhouse, Midmar, were elected honorary members.

Over twenty gentlemen have already joined the club. At the close of the meeting a hearty vote of thanks was awarded Mr. McRae for presiding.

ON the 27th inst. the Essex Motor Club will have a motor-car outing for crippled children in Epping Forest.

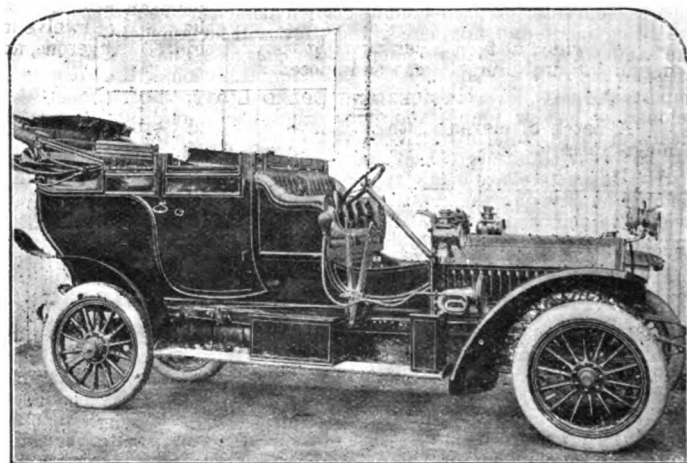
THE committee of the Hertfordshire A.C. suggests that the club badge should be worn at all future club events.

A LARGE number of motorists were at Lowestoft during Whitsun for the race meeting of the British Motor Boat Club.

THE Yorkshire Speed Trials will this year take place on the 27th inst., the headquarters being at Alexandra Hotel, Saltburn. There will be six events, arranged under the R.A.C. h.p. rating.

THE Lincolnshire A.C. will, by permission of Lieut.-Col. J. S. Ruston, J.P., hold a gymkhana in the grounds of Monk's Manor, Lincoln, on July 1st, in aid of the funds of the Lincoln County Hospital.

THERE were seven entrants for the hill climb of the Cambridge University Motor Cycle Club. With this contest was combined a reliability and petrol consumption test, the winner proving to be Mr. E. D. Dickson on his 5-h.p. Vindec machine.



The Dennis 35-h.p. Landulet which has just been supplied to the Grand Duke Michael of Russia.

This is the third repeat order Messrs. Dennis have received from His Imperial Highness, who, during the run he took on it last week, expressed his delight at the extreme quietness and flexibility of the new model.

THE Daimler Company have just delivered a 42-h.p. car to Sir Samuel Scott, Bart., M.P., of Westbury Manor, Brackley, Northants. The vehicle is of the "Frome" limousine type, painted black with fine white lines and upholstered in drab cloth.

MR. F. SOUTAR, of Annfield, Carnoustie, N.B., who has had a 15-h.p. Coventry Humber in regular use since February of last year, reports that he has never had to stop on account of any mechanical troubles, and gets twenty miles to the gallon. "The commutator is as good as when new, and the carburettor has but once been opened, only to find it quite clean and not requiring anything done to it. The gear wheels and back axle bearings show no signs of wear. The engine valves have never been re-ground and the compression is still good."

CASES UNDER THE MOTOR CAR ACT.

A LADY'S AGE AND A DRIVER'S LICENCE.

A singular prosecution under the Motor Car Act has been heard at Penrith, when Miss Marjorie Cowper, of Penrith, was charged with applying for a motor-car licence while she was under seventeen years of age, and accordingly disqualified.

Mr. C. W. Allan Hodgson, The Courts, Carlisle, who laid the information, said Miss Cowper was charged under Section 3 of the Motor Car Act. She sent in an application form, which he received at Carlisle on May 11th. Question 3 on the form asked if the applicant was under seventeen years of age, and the reply was "No." He had doubts as to the age of the applicant, and he obtained a birth certificate, which showed her to be four or five months under the required age.

The Bench inflicted a fine of 10s. and costs.

AN APPEAL PREVENTED.

Mr. Horlick, who was fined 20s., with 13s. costs, at Oxford, for driving a motor-car to the common danger, and whose application that the fine should be increased to 21s., so that he could appeal, was refused by the magistrates, applied to a King's Bench Divisional Court, London, for a rule for a *certiorari* for the purpose of quashing the conviction.

Mr. Marshall Hall, K.C., his counsel, said the application was made on the ground that the magistrates' clerk and deputy-clerk not only examined the witnesses from carefully prepared proofs, but cross-examined the defendant's witnesses in a hostile manner.

Mr. Justice Bigham said the Court had agreed to refuse the rule. It appeared to him that the questions put were those which the magistrates might have put themselves both in chief and in cross-examination, and he could not help thinking that they had authorised the clerk to put those questions. As to the refusal to increase the fine, he was told it was the practice of magistrates to allow fines to be increased for the purposes of appeal. That might be so, but it struck him as very odd, because it was a practice which had the effect of defeating the Act of Parliament. Mr. Justice Phillimore agreed, and the rule was accordingly refused.

ALLEGED DANGEROUS DRIVING.

At the Reading Police Court, Mr. Joseph Jacques, of The Firs, Bassett, Hants., has been charged with driving his car in a dangerous manner on the night of April 14th. The proceedings were taken in regard to a collision between a motor-car and a cyclist, which resulted in the death of the latter. The coroner's jury returned a verdict of "Accidental death," but expressed an opinion that the speed of the motorist was too fast. Several witnesses were called, who stated that defendant was proceeding at about thirteen miles an hour. The Rev. A. Gunn, who was in the car at the time, said Mr. Jacques was a very careful driver, that he was not proceeding beyond twelve miles an hour, and that the accident was unavoidable. The chairman said defendant had made an admission that he was driving at the speed of twelve miles an hour, which at ten o'clock at night they considered dangerous, and a fine of £20, including costs, was imposed.

EXCEEDING SPEED LIMIT.

A batch of eleven motorists have appeared before the Hailsham magistrates for exceeding the speed limit over a distance of ten miles between Uckfield and Horsebridge during the Easter holidays. All cars which had made an average of twenty-five miles per hour were noted and the drivers summoned, fines of £5 and upwards being inflicted in all cases. Mr. Rowland Harker, who defended some of the defendants, pointed out that in the long distance "Controls" the motorists were not stopped and did not hear of the intended prosecutions until some time later, a fact which placed them at a great disadvantage in securing evidence. In one case the defendant's barrister cross-examined the police as to the driver, and the four officers concerned admitted that they could not identify the defendant.

ROAD REPORTS.

SCOTLAND.—Timing operations have been reported from Helensburgh, Pitlochry to Killiecrankie, Stirling, Dunblane, Blairgowrie, Arbroath, and Crieff.

SCARBOROUGH.—Caution is necessary in the neighbourhood of Peasholme Hill, near Scarborough, where police vigilance has lately been conspicuous.

MELKSHAM.—Police watchfulness has been persistent on the road to Bath, and also to Devizes from this Wiltshire town.

BERKSHIRE.—In the county of Berkshire the following police traps have been brought to our notice during the last few days:—1, Walgrave Road, Twyford; 2, near the Hare Hatch, Bath Road, Twyford; 3, Prospect Park, Bath Road, Reading; 4, through Twyford; and 5, Wokingham.

THE police have a trap working at Hungerford on the Bath road, and several motorists were caught on Saturday.

KINGSTON.—An important step in the agitation for the widening of Kingston Bridge has just been taken by the Joint Committee representing the County Councils of Middlesex and Surrey, who have resolved to recommend their respective councils to promote a bill in Parliament empowering them to reconstruct the bridge or widen it to 55 ft. between

the parapets, provided that the scheme is supported by the authorities interested.

DENBIGH.—On Monday the regulations with regard to the imposition of a ten mile limit in various parts of the Urban district of Llanrwst came into operation.

COLCHESTER.—Motorists going from Witham into Colchester should beware of a police trap at Lexden.

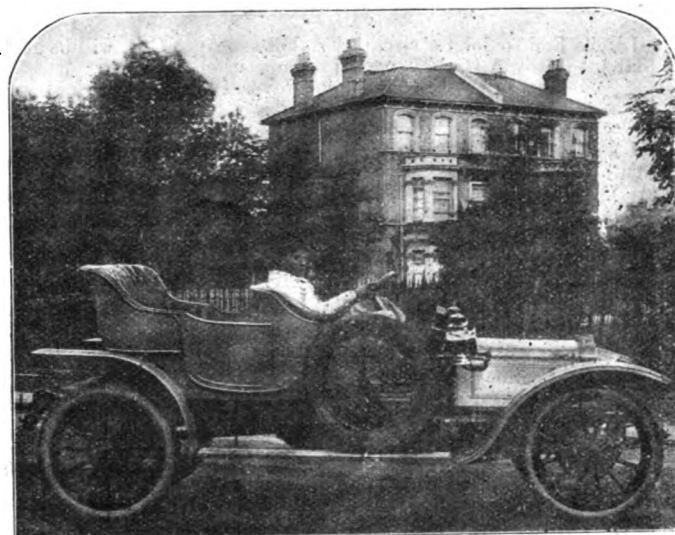
JEDBURGH.—At a Jedburgh District Committee, a communication from the County Road Board stated that they had refused to agree to the desire of Hawick and Kelso districts to limit the speed of motor-cars to ten miles in certain villages, but resolved to put up signals in villages and near schools in the county.

DUBLIN.—By instructions of the Commissioner of Public Works the superintendent of the Phoenix Park has provided two of his employees with stop-watches, and placed them at the extreme ends of a measured distance for the purpose of timing motor-cars in the park.

OTLEY.—The police of Otley (Yorkshire) are now indulging in police traps. They caught five motorists therein the other day.

AUTOMOBILE ACCIDENTS.

WHILE motoring from London to Ipswich on Saturday, Mr. Heaton Armstrong, M.P., Mrs. Heaton Armstrong, and several members of the family had an alarming experience, the car in which they were travelling catching fire and being very extensively damaged. The rear part of the car burst into flames when the party were about twenty miles from Ipswich. Mr. Armstrong was driving at the time, and when he stopped the engine the flames shot up through the flooring, which had evidently been burning for some time. The rear part of the car was



The Irish Reliability Trials.—The 15-h.p. Talbot which won the 200-guinea Dunlop Cup.

occupied by the ladies, and the woodwork which surrounded their seats quickly burnt through. Fortunately, the ladies sprang out before their clothing caught fire. Although the prompt assistance rendered by villagers saved the car from total destruction, it was considerably damaged. Mr. Armstrong's chauffeur was rather severely burnt on the hands, but largely by his energy more serious damage was prevented.

A MOTOR-CAR travelling from the direction of St. Albans towards Dunstable collided at a bend in the road near Redbourn with a lacourer, of Redbourn, who was cycling. Struck full in the face by the body of the car, he was killed on the spot. Swerving violently in an attempt to avoid the collision, the car knocked down a second cyclist, a man named Jabez Frost, who was conveyed to St. Albans Hospital suffering from shock and bruises. The chauffeur of the car, which was upon a trial run, was detained by the police.

OWING to the rapid growth of their business, Ariel Motors, Ltd., have taken further premises at 322A, Camberwell New Road, London, S.E., where repairs, adjustments, &c., to all makes of vehicles can be promptly attended to by skilled mechanics. The establishment has been specially built to suit the requirements of motor-car manufacturers, and is complete in every detail for the prompt repair and garaging of cars. There is accommodation for 100 vehicles; the flooring, which is concreted, comprises 11,000 square feet. The section for private cars is fitted with lock-up doors for the safe storage of vehicles. The cleaning facilities are exceptionally good, and in this connection we may mention that the main drain is fitted with a petrol separator which prevents the spirit running into the drains, and thus avoids all risk of fire. Another point is that cars can be driven in at the main entrance and out at the rear, which will obviate trouble in manoeuvring cars.

FORTHCOMING EVENTS.

JUNE.

- 13th (Sat.).—Hill climb of the Notts A.C. at Oakamoor.
Speed Trials of the Lines. A.C. at Grimsthorpe.
N. Middlesex A.C. speed judging competition for the Gamage Cup.
Essex C.A.C. hill climb at Bottledown Hill, Billericay.
- 14th (Sun.).—Lincolnshire M.C.C. attends morning service at Gayton.
Lunch at Mablethorpe.
- 15th-19th.—Scottish Reliability Trial.
- 17th.—Close of Prince Henry Touring Competition in Germany.
- 18th (Th.).—Meet of the Cambridge A.C. at Hatley Park by invitation of Sir C. Hamilton.
- 20th (Sat.).—Meet of the Hull Auto Cycle Club and the Lincolnshire Motor Cycle Club at Brigg.
Annual Hill Climb of the Bristol and Gloucestershire A.C.
Lunch of the Kent A.C. at Dover.
Herts C.A.C.'s climb for cars at Aston Hill.
- 26th (F.).—Welsh A.C. reliability trial for motor-cycles.
- 27th (Sat.).—Saltburn beach races.
Baxton meet of the Manchester, Sheffield, and Lincolnshire clubs.
Members of the Cheshire A.C. will participate in the Gymkhana of the Manchester A.C.
Visit of the Essex C.A.C. to Audley End.
Meet of the Kent A.C. at Holwood by permission of the Earl of Derby.
- 28th (Sun.).—Southend M.C. run to Grand Hotel, Clacton.

JULY.

- The Land's End to John o' Groat's Trial of the Auto C.C. will be held.
- 4th (Sat.).—Derby A.C. challenge cup competition.
Meet of the Kent A.C. at Gravesend.
Brooklands A.R.C. meet.
Cheshire A.C. gymkhana.
- 6th (M.).—Grand Prix A.C.F. (Voiturette section).
- 7th (Tu.).—Grand Prix A.C.F. on the Dieppe Circuit.
- 8th (W.).—Meet of the Cambridge A.C. at Waresley Park by invitation of Col. Duncumbe.
- 9th (Th.).—Meet of the Ladies' A.C. at Hanworth Park, Middlesex.
- 10th (F.).—Start of tour of motor factories in the Midland by the I.I.A.E.
Welsh A.C. motor-car reliability trials.
- 11th (S.).—Provincial meet of the R.A.C. at Hereford.
Essex C.A.C. gymkhana at Brentwood.
Essex M.C. gymkhana at High Beech.
Leicester A.C. hill climb at Kettleby.
- 16th (Th.).—Club meet of the Notts A.C. at the Hop Pole, Ollerton.
- 18th (Sat.).—Annual Gymkhana of the Herts C.A.C. at The Grove, Watford, by permission of the president, the Earl of Clarendon.
Gymkhana of the Kent A.C. at Maidstone.
Meet of the Liverpool and Cheshire A.C.'s at Delamere.
New Forest and Dorset A.C.'s joint hill climb.
Hill Climb of the Essex C.A.C.
- 20th (M.).—Entries close for the O'Gorman trophy.
- 23rd (Th.).—Gymkhana of the Cambridge A.C. at Chippenham Park.
Hill climbing competition of the Hull and East Riding A.C.C.
- 25th (Sat.).—Petrol Consumption Tests of the Motor Cycling Club.
Annual Open Hill Climb of the Midland A.C. at Shelsley Walsh.
Committee meeting of the Kent A.C. at Herne Bay.
Motor Union Provincial meet.
Cheshire A.C. hill climb.
Leicester A.C. gymkhana.
Lancashire A.C. open hill climb.
- 26th (Sun.).—Southend M.C. run to Coach and Horses, Quendon.

AUGUST.

- 1st (Sat.).—Brooklands A.R.C. meeting.
- 2nd-3rd.—Newcastle and District M.C.C. reliability.
- 3rd (M.).—Brooklands A.R.C. meet.
- 8th (Sat.).—Visit of the Kent A.C. to Brasted Chart.
- 12th (W.).—A.C. of Belgium—Circuit des Ardennes and the Liedekerke Cup race.
- 22nd (Sat.).—Annual race meeting of the W.A.C.
Invitation of Sir D. Salomons to the Kent A.C. to visit Tunbridge Wells.
- 23rd (Sun.).—A. C. du Rhone Mont Pilat trial.
- 29th (Sat.).—Meet of the Lincolnshire Motor Club at Lincoln.
Mont Ventoux hill climb of the A.C. Vauclousien.
- 30th (Sun.).—Southend M.C. run to Great White Horse Hotel, Ipswich.

LIGHTING-UP TIMES—LONDON.

| | | | |
|----------------|-------------|-------------|-------------|
| June 13th—9.15 | 15th—9.16 | 17th—9.18 | 19th—9.19 |
| " 14th—9.16 | " 16th—9.17 | " 18th—9.18 | " 20th—9.19 |

COMPANY NEWS.

AUSTIN'S COUNTY MOTOR WORKS.—£5,000. Agreement with J. W. Austin. None. County Motor Works, New London Road, Chelmsford.

HUMPHRIS PATENT GEAR AND ENGINEERING COMPANY.—£100,000. Agreement with Humphris Engineering Synlicate, Ltd., for the acquisition of certain patents and rights. 4, Albany Courtyard, Piccadilly, W.

LONDON AND PARIS EXCHANGE MOTOR AGENCY.—£50,000. No initial public issue.

ROWLAND HILL AND SONS.—This company has been registered, with a capital of £15,000, to acquire the business of engineer, iron, brass, and aluminium founder carried on by Rowland Hill at King Street, Coventry, and to carry on the same.

SWIFTSURE MOTORS, LTD.—£500. To carry on at Clacton-on-Sea or elsewhere the business of omnibus, cab, van, motor-car, and motor-boat proprietors. Registered office, 52, Station Road, Clacton-on-Sea.

BUSINESS NEWS.

THE Beeston Humber car which ran with a non-stop record throughout the Irish Reliability Trial was fitted with the Eisemann magneto, for which the United Motor Industries, Ltd., are the sole British agents.

GRE-SOLVENT is a standard emollient to remove grease and stains from the hands of motorists. It is supplied by Messrs. Beanland, Perkins and Co., of Leeds.

AT the commencement of the Irish Reliability Trial seventeen cars were supplied with Shell motor spirit, but there were twenty-three finishers on it, owing to it having replaced other motor spirits during the progress of the event.

THE motor lamps of the Attwood Manufacturing Company, of Amesbury Moss, U.S.A., are being introduced to British motorists by Mr. A. MacPhail, 33, Rosslyn Hill, Hampstead, N.W.

THE Governor of Jamaica has, we learn, just bought a Humber car.

FROM the Kempshall Tyre Company of Europe, Ltd., comes a copy of an attractive show-card dealing with the Kempshall non-skid motor tyres, which they have just issued. One of the show-cards will be sent by the firm to any motor-car agent undertaking to exhibit the same.

THROUGHOUT the whole Irish trial the 48-h.p. Daimler only lost three marks, scoring 997 out of a possible 1,000, and winning two gold medals.

IN consequence of the regretted death of Mr. C. I. Steiner, of Houndsditch, London, E.C., the business will be carried on under the management of his two sons, Mr. Oscar Steiner and Mr. Erwin Steiner, both of whom have had many years' experience in the motor trade. In order to meet the requirements of the growing business, they have taken new premises at 58, Great Eastern Street, E.C.

FIREPROOF motor houses are being built of rusticated concrete blocks by Messrs. Hodkin and Jones, Ltd., of Queen's Road, Sheffield.

THE COVENTRY CHAIN COMPANY, LTD., have an exhibit in the Machinery Building of the Franco-British Exhibition, similar to that which obtained a gold medal for excellence of workmanship at the recent International Exhibition in Milan.

ON Wednesday the London and Paris Exchange, Ltd., Motor Agency held an auction sale of motor-cars, tyres and accessories. They have lately opened an accessories department at their show-rooms at 55, Shaftesbury Avenue, London, W.C.

TO CORRESPONDENTS.

All communications intended for insertion in this Journal or relating to editorial matters should be addressed to THE EDITORIAL DEPARTMENT, MOTOR-CAR JOURNAL, 27-33, Charing Cross Road, London, W.C., and must be written on one side of the paper only. Letters must in all cases be accompanied by the name and address of the writer, as no notice will be taken of anonymous communications.

To insure insertion communications and contributions must be in the Editor's hands by Tuesday forenoon of the week in which the same are intended to appear. Disappointment may be caused by non-compliance with this rule, and to avoid this earlier receipt, if possible, is necessary.

Photographers, both professional and amateur, are invited to send photographs of current events or of motoring scenes and incidents. The fee, if any, required for reproduction should be stated in each case, otherwise no liability will be accepted.

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THE Motor-Car Journal.

VOL. X.]

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COMMENTS.



AT the meeting of the Brooklands A.R.C. on July 4th the programme will include 26-h.p., 40-h.p., 60-h.p., and 90-h.p. races; an all-comers' handicap, the Grand Handicap Sweepstakes for cars belonging to the 60-h.p. and 90-h.p. classes; the July trophy for private competitors, the Small car stakes for cars with a cylinder dimension of 24 or under, and the Ladies' Bracelet Handicap. This latter is an innovation, as hitherto no lady has been allowed to participate in an event on the Track. Now the fair motorists are to have a handicap all to themselves over a distance of three miles. The entries of cars exceeding 21-h.p. by R.A.C. rating may be refused at the direction of the executive club. Should there be sufficient entries to warrant the race being held, it should give new interest to the next meet at Brooklands.

A Proposed New Speed Limit.

THOSE owners of horse-drawn vehicles, users of tramcars, and other persons who have been complaining of the speed of motor vehicles, will read with interest the provisions of the Bill which Mr. B. S. Straus introduced into the House of Commons on Monday, the draft of which we are able to publish on another page, and which will be before Parliament again next week. Mr. Straus represents the constituency of Mile End, where stones and other missiles have lately been hurled at the heads of the drivers of motor-buses, so that probably he has heard local views—conveyed, we hope, in less forcible manner—on the subject of vehicular traffic. Anyhow his measure, which has received the “backing” of several Metropolitan M.P.’s, as well as a few from the country, has no special animus against those who motor. It would restrain the speed of all forms of quick travel, and its object is “to secure the safety of pedestrians and other persons lawfully using the highways.” Under this heading the motorist who journeys carefully along the road may claim protection from the Mile End coster, whose use of the road is not confined to his own side, and the Essex carter, who sleepily allows his horse to find his way to market in the early hours of the morning. Even the poor motor-bus driver will have legislative, if not physical, protection from the onslaughts of the infuriated constituents of Mr. Straus.

Is the Open Country Exempt?

THERE are some good definitions in a measure which bears evidence of hurried preparation. A “populous place” is one where there are continuous human habitations on either or both sides of a thoroughfare for not less than a quarter of a mile, and “dangerous crossings” are to be suitably indicated on both sides of the road. We agree that in crowded places like Ludgate Circus or some of the streets in the vicinity of the Bank of England, a speed of 10 m.p.h. should not be exceeded, and that at such a crossing as the notorious Theobalds Road corner no vehicle should, or does, travel at more than six miles an hour. Apparently the idea of Mr. Straus is to abolish the speed limit in the open country 440 yards beyond a row of houses, and there allow the pedestrian, baker’s boy, or motor-car

driver to test his speed without legal hindrance, for while speed is restricted in the two conditions mentioned, nothing is said about those long stretches of road where the police now hide to catch the speedy motorist. Apparently all such roads are exempted from the operation of the Bill of Mr. Straus.

Careless Pedestrians.

WITH regard to the checking of the speed of vehicles at dangerous corners, which Mr. Straus suggests should be plainly indicated, there is much to be said, especially in streets so congested with traffic and used by pedestrians as are those of the Metropolis. Mr. D. J. Morgan, who is a City man and a motorist, has rightly told an interviewer this week that pedestrians generally are careless in crossing busy streets. Many step off the kerb without a glance from side to side. They seem to think that traffic should avoid them, and not they traffic. Hansom-cabs and horsed omnibuses pull up in time to save nonchalant wayfarers, but the motor-car or omnibus, even with its efficient brakes, is often travelling too fast to do so. The foot-passenger must, for his own safety, learn to keep his wits about him when essaying a difficult crossing. No restrictions can safeguard those who wander into the road blind to dangers or preoccupied. It must be admitted, adds this keen and sensible critic, in fairness to the motor drivers, that many accidents are caused by want of care in crossing roads or alighting from moving vehicles.

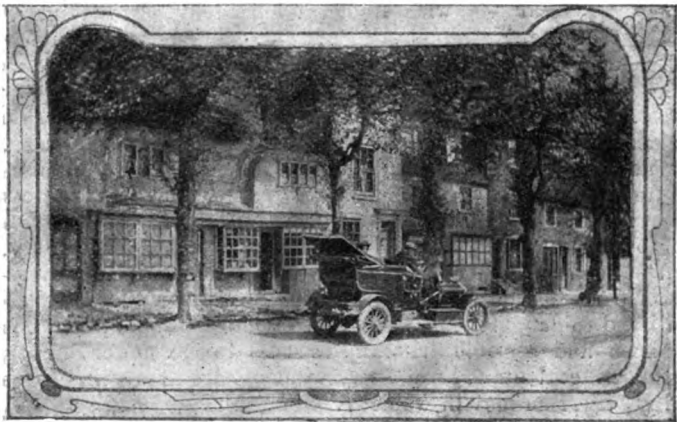
The Earl of Derby.

THE late Earl of Derby, whose death took place on Sunday last, was a great friend of motoring, and on several occasions entertained great parties of motorists at Knowsley, while as president of the Self-Propelled Traffic Association he did much to foster the movement in its early days. The Hon. Arthur Stanley, M.P., who was the predecessor of Mr. C. D. Rose as the chairman of the R.A.C., is his son, and to him the whole motoring community will tender sincere condolence on the loss his family have sustained. The death of the late earl will cause the succession of Mr. Stanley to the Upper House, where motorists are well represented by several gentlemen who have taken great interest in the movement.

Main Roads in North Wales.

WITH a view to helping those who are more or less unacquainted with North Wales, and who propose touring in the district, it will perhaps be of service to take a general survey and specify the main roads along which it is advisable to travel in order to avoid severely graded and bad-surfaced roads. According to Mr. T. Throup, whose “Guide” gives him authority in the matter, it is first of all important to understand that practically the whole of the coast road between Chester and Aberystwyth, as far as Pwllheli, is distinctly good for both grade and surface. To complete the circle it is only necessary to add that there is also a capital road between Chester, Welshpool, Newtown and Aberystwyth. The one good road which passes through this circle is that from Shrewsbury and Llangollen to Bangor and Holyhead. Entering North Wales from the

extreme south-east the only practicable road follows the windings of the upper reaches of the Wye until, at Llangurig, it strikes into the equally good and equally interesting road from Welshpool, Llangollen, and Shrewsbury, which here trends towards Plynlimmon and the sea. Between Llangurig and Aberystwyth there are long stretches of rising and falling ground, but the gradients never get below 1 in 16, and the surface has recently been greatly improved. Between Aberystwyth and Llanidloes there is no commendable road to the north-west, but those shown on the map from Newtown and Welshpool to Dinas Mawddwy and Machynlleth are quite satisfactory. It should be remembered, however, that the gradients between Dinas Mawddwy and Dolgelly are very severe. Proceeding northwards with our survey, all the inland routes between Dolgelly and the Holyhead Road present steep gradients and rough surfaces until the Penrhynduedraeth and Portmadoc district is reached, from whence fairly good and direct roads, but with a number of rather stiff hills, lead *via* Beddgelert to Carnarvon on the west, and Bettws-y-Coed and Llangollen to the north. To complete the survey, a fairly good road links Rhyl and Llangollen by way of Denbigh, Ruthin, and Corwen. There are several good roads between Chester and Rhyl.



Touring in Kent.—Ancient Houses at Lenham, an old-world village on the Folkestone road.

Cars v. Railway.

DOUBTLESS the advance of the motor-car has had some influence in bringing together some of the railway companies into working arrangements. Not only has it been a factor against the companies in long distance journeys, but it will tend to restrain the growth of the holiday traffic, many people who were wont to go to the country by train for their vacation now journeying thither by automobile. There is something delightfully free in being independent of the railway time table, and able to tour around without having to suit one's convenience to the perverse punctuality of the train. The railway companies will have to face the situation, and doubtless their associative working is a first step towards effecting economies which will enable them to retain a hold of the greater portion of their ordinary traffic.

A Prohibition Point.

IN the issue of their Orders prohibiting motor-cars from passing along certain roads, the Local Government Boards of England, Scotland and Ireland must allow some latitude, if they do not wish to do injustice to some residents who are already motorists. A curious case has arisen in the Emerald Isle, which Sir Horace Plunkett and his associates should keep to the fore. The coast road between Malahide and Portmarnock has been closed to motor-cars by order of the L.G.B.—a circumstance that is extremely unfortunate for those residents thereon who own motor-cars, and who are now debarred from

driving straight up to their homes on their cars. Representations are being made by the Irish Automobile Club on the subject urging that they should be exempt from the Order. This is an extremely reasonable suggestion to make, and we trust it will appeal to the official mind. Happily, there have been few places from which automobiles are prohibited, but where such action has been taken—in the interests of the safety of motoring strangers as well as of the public—those acquainted with the district and who live along the roads might well be excepted.

The Unauthorised Use of Cars.

THOSE who own motor-cars should guard against their unauthorised use, for, as a general rule, the accidents that are attended with serious consequences generally occur when the chauffeur is delighting his own friends with the luxury of his employer's car. This is a circumstance that has often been noted, and yet it continues. We would urge upon owners the necessity of seeing that their automobiles are not taken out without permission. The case at the Brentford Police Court, when the chauffeur of the Hon. Ivor Guest, M.P., was fined £35 and prohibited from driving a car for three years, should be a warning to others who are in the habit of giving rides to their companions. Practices such as that must be put down with a firm hand.

Inquiry at Crawley.

THOSE familiar with the West Sussex area will be interested in a Local Government Board inquiry which took place on Friday of last week at Crawley into an application by the local authorities for the limitation of motor-car speed to ten miles an hour within certain portions of the road in the parishes of Ifield and Crawley. Mr. Rees Jeffreys appeared for the Motor Union, the R.A.C. and the Sussex County Automobile Club, the chairman of which, Mr. A. Scrase-Dickins, was with him during the inquiry. At the commencement of the sitting Mr. Jeffreys said that on behalf of those he represented he was prepared to withdraw his opposition to an Order, but was not able to agree to a ten miles limit from the level crossing to the top of Goff's Hill. Thus he conceded five-sixths of what was being asked by the local authorities, and the representative of the County Council called local councillors to give their views on the suggestion. Apparently the way in which motorists thus officially met the proposal for the limit favourably impressed those present, and the county councillor for the division admitted that he had always considered it rather unnecessary to have the limit as proposed on Goff's Hill. Mr. Scrase-Dickins suggested that if a notice board were put up at the level crossing directing to London along the Springfield road, motorists would thus escape the traffic, and not have to cross the line and go through the main road to Crawley. The Local Government Board inspector, Mr. Willis, then made an official tour of the roads in question, and he will report in due course.

Fine or Prison.

WHEN a London magistrate is of the opinion that a fine of five guineas in lieu of the maximum penalty is all that is necessary in fining a motorist for alleged dangerous driving, we do not quite understand Mr. Chiozza-Money's request that legislation should be introduced to secure that such offences should be punished by imprisonment without the option of a fine. Yet such was the object of the question he, as M.P. for North Paddington, put to Mr. Burns in the House of Commons a day or two ago. In reply, the President of the Local Government Board said, whether any alteration should be made in the law as regards penalties for the offence of driving a motor-car in a manner dangerous to the public is a matter which would receive consideration, but he did not think that he could promise to introduce legislation to the effect suggested. It did not seem to him that it would be reasonable to inflict the penalty of imprisonment without the option of a fine in all cases of that

kind, and Mr. Burns pointed out that in the particular case referred to the magistrate did not think it right even to impose the maximum fine allowed by the Motor Car Act. Hence the suggestion that M.P.'s might well leave such subjects alone.

Historical Motor-Cars.

FREQUENTLY have we urged the importance of securing, ere it is too late, an adequate representation of the early types of motor vehicles for exhibition in a national institution. In a very few years such a collection will have considerable interest for the general public as well as for those engaged in the industry. Apparently the idea is commending itself to manufacturers as well as to those responsible for some of the prominent provincial institutions, and we learn that the first chassis which the Albion Motor Company built has found a resting place in the Kelvingrove Art Galleries of Glasgow. This vehicle is of the 8-h.p. type, and was built in 1900 at the Albion Works, which were then at Finnieston Street. It was used for giving demonstration runs to clients, and after it had got past that stage it was fitted with a small van body, and utilised for the transit of goods in connection with the works. It has run in all fully 40,000 miles.

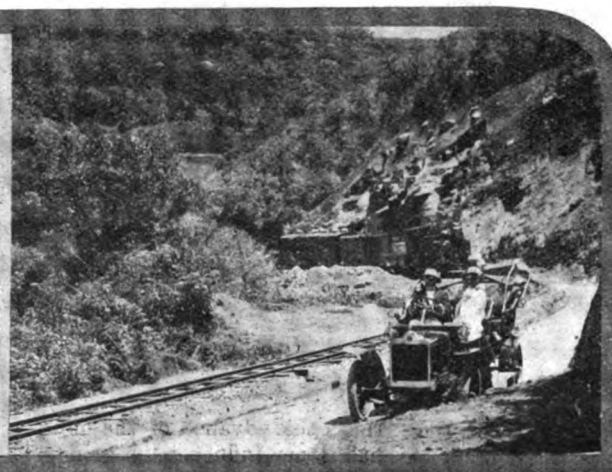
For South Africa it is now generally understood that larger wheels are necessary, to allow the vehicle to more readily pass over the rough roads. The article above referred to sets forth very clearly the points which need attention as regards motor vehicles intended for service in Australia. Our Colonial trade is rapidly assuming important dimensions, and it is to be trusted that the suggestions which are advanced will not go unheeded.

Water for Motor Cars.

THE engineer to the Metropolitan Water Board has completed his designs for the proposed water posts for the supply of water to motor vehicles, and the matter will have the consideration of the responsible authorities at the earliest possible opportunity. We understand that the Commercial Motor Users' Association has suggested that the Board should place one of these posts in a prominent position in London, such as at Hyde Park Corner, in which case the Association would be prepared to bear the cost of the water used for at least one year. This is a matter which has been brought prominently before the various local authorities by the "Industrial Motor Review," which in the last and also the current issue devotes considerable space to urging upon the Metropolitan Water Board the neces-



A View near Colombo.



Near Neu Eyrallia.

[Mr. C. Friswell.]

Photos by)

MOTORING IN CEYLON.

Garages near Railway Stations.

Now that many residents of the suburbs of the great towns and cities are becoming motorists there should be a good opening for firms owning garages in the vicinity of railway stations. Then these enthusiastic motorists could drive themselves down to the station, leave their cars in charge of some reliable person, and return to their homes by automobile at night. Those residents of the purlieus of the towns who drive themselves would certainly welcome such provision, which could be arranged on terms of monthly or longer contracts. There are many such openings all over the country, and those who cater with some enterprise should reap a good reward.

Motor-cars for Australia.

ELSEWHERE in the present issue we give a condensation of a lengthy article which appeared in the "Sydney Morning Herald," which should be carefully perused by all British motor-car manufacturers and agents. Attention has frequently been drawn to the fact that the conditions under which motor vehicles are operated differ in different countries, and that cars which are suitable for and give unbounded satisfaction in Great Britain may prove not merely unsuitable abroad, but give such poor results as to endanger the reputation of the maker.

sity of making ample provision for the supply of water to automobiles when on the road.

Roads in Essex.

AMONG county surveyors Mr. P. J. Sheldon, who is responsible for about 800 miles of roads in Essex, is well known as one of the first of the local government officials to use a motor-car in the course of his work. He has just reported that ordinary automobiles do no damage to the road, but that the armoured tyres on large cars are by no means so innocuous, the expenditure on road repairs having risen some £4,000, partially from the latter cause. He has put up nearly 700 warning posts at a cost of about £1 each, whilst the average receipts for motor-car registration are about £100 a year. Up to Lady Day 1,282 motor-cars and 1,687 motor-cycles had been registered and 10,799 driving licences issued. With regard to dangerous hills, there are only two in the county—namely, Market Hill at Maldon and another at Leigh-on-Sea.

ON Wednesday, in the 2,000-miles Trial, there will be a run of 162 miles to bring the cars to Church Stretton. On the Thursday the journey will be made to Brooklands by way of Worcester, Oxford, Henley (tea at the Red Lion Hotel), Maidenhead, and Windsor, and on Friday and Saturday there will be speed trials on the track.

REMINISCENCES OF A TRIP FROM CAPE TOWN TO JOHANNESBURG.

(Concluded from page 334.)

AFTER wishing him a hearty good night, we proceeded to plough our way through very heavy sand for several miles; the car seemed to know what was expected of it and forged its way at a good speed. Then we came to fork roads, and, after a little consultation, took the right hand one, and after travelling about six miles discovered it only led up to a large block-house and burnt-out farm, so had to retrace our steps and take the other road. Without further incidents we



A River Stoppage near Villersdorp.

arrived at Victoria West at 1.30 in the morning, the distance covered being about 100 miles.

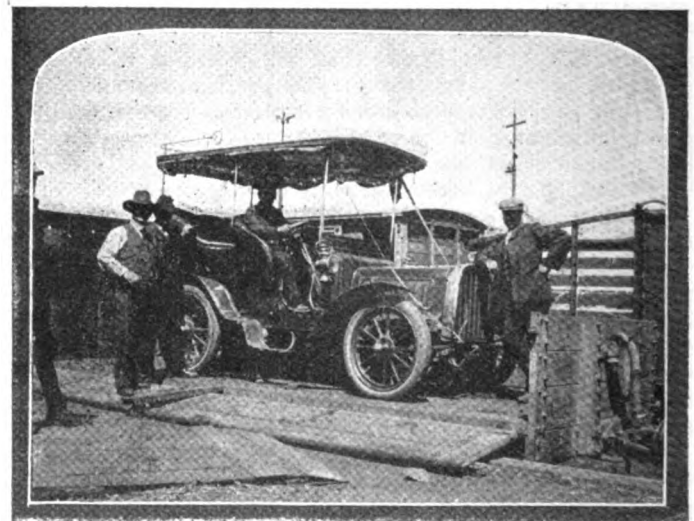
We had mapped out our road from Victoria West to Kimberley via Bristown and Hopetown, but we were advised to follow the transport road along by the railway to Deaar and Kimberley, but, as this route had fallen out of use a great deal, we found it very bad travelling, and so turned off to the left at Deaar and went by Bristown and Hopetown. We left Victoria West on a Sunday morning and arrived just before mid-day at Richmond Road Station. Here we had a river to cross, and on reaching the middle stuck fast in the mud, so our tackle was once more called into requisition. After about an hour's delay we made another start, and had not proceeded far when one of the wheels in the gear-box split in half. I had had this happen previously, so carried a spare one for emergencies. Down came the bottom half of the gear-box, and the broken wheel was replaced without much trouble, although it caused a delay of two and a half hours. We then proceeded with the hope that that would be the last trouble for the day. As far as mechanical troubles were concerned it was so, but after dark we had difficulty in following the route, and at last had to engage a Kaffir to act as guide. It was well we did so, as we would never have been able to follow the right track, and our guide was completely lost at one spot and had to call in the services of another Kaffir at a farm close by. At last we saw the reflection of Deaar, and our guide told us we had a good road all the way now, so we dispensed with his services, not at all envying him his walk of eight miles back to his hut. With rejoicing feelings we entered Deaar at 9.30, having covered about 100 miles during the day.

Next morning we decided to give up following the railway, and struck across country to Bristown. Petrol was not to be had at Deaar, and, as our supply was running short, we telegraphed to Kimberley to have some sent on to Orange River Station. On reaching Bristown, however, we discovered that the local cycle agent had a store of it, so, after taking in a fresh supply and enjoying a good lunch, we felt much relieved and re-started on our journey with renewed hope. For the rest of the day we had

good travelling, and in parts we were doing our forty-five miles an hour over hard backed sand that was like a billiard table, but had to keep a sharp look-out for dry water sluits which were hardly discernible in the sand. At one time we pulled up at a Boer farm to inquire if we were on the right road, and the distance to the next town. You generally get the reply to the distance by so many hours' travelling, they can very rarely give it in miles. They informed us that we had a river to cross a few miles further on, and they were of opinion that it would be too deep for us to ford, and offered to accompany us to give any assistance required. We accepted their offer, and, after waiting whilst they harnessed up their mules, we made a start for the river. The first sight we got of it gave us the impression that our tackle would once more be required for service. We put in our first speed and gently entered the water, which gradually crept higher and higher, till it was only a few inches from the footboards. We were just wondering if it was going to get much deeper when we noticed the water receding, and presently were climbing the steep sandy bank of the river and waving a farewell to the Boer farmer. Eventually we reached a place called Strydenberg, where we decided to stop the night, the journey for the day being about eighty miles.

We started at 6.30 the next morning with intentions of putting in a good day's run, but took six miles of wrong road for a start and arrived back at Strydenberg with a broken front spring. After having it patched up we got safely away and reached Hopetown about 1.30, after encountering a great deal of heavy sand. While we were at lunch the car was left in the hands of the local blacksmith to do the best he could in the short time to strengthen the broken spring. We left about a couple of hours later, and had good travelling, passing by Belmont, Gras Pan and Honeynest Kloof to Modder River, which was to be the destination for that day. We intended to cross the river the next morning, as it was then dark, but to our dismay we discovered that the only hotel was on the opposite side, so we chanced it, and, with local advice as to the shallowest course to take, we got through without any trouble. We covered that day about 125 miles.

Kimberley was only twenty-two miles off, and we ran there the next morning, passing by that disastrous battlefield, Magersfontein. We were not far from the Transvaal, and our hopes were running high with the expectation of reaching Johannesburg. We started away from Kimberley after lunch, and had just passed Barkly, a distance of about twenty-eight miles, when, travelling



Entraining the Car at Johannesburg for the return to Cape Town.

over a piece of rough road, crack went one of the back springs, very nearly every leaf of which had broken in half at the centre. The local blacksmith could not do anything for us, so we had to slowly return to Kimberley, where they worked all night and made us a new spring. Ten o'clock next morning we made another

start, and made fairly good running to Forteen Streams, just after leaving which a peculiar noise struck my ears. I listened intently to the engine to learn if that was the cause, when we suddenly discovered it was proceeding from a herd of oxen, which were charging down on us. I immediately opened the throttle wide, and, being on a fairly good piece of road, soon got away from them; they were evidently offended at the sight of a bright red automobile.

We reached Christiana without further incident, having arrived ninety miles nearer our goal.

We were on the road again by seven o'clock next morning and had rather had travelling to Blomhof. The road improved somewhat after that, and we made good time through Wolmaran Stad and on to Klerksdorp. At one time after dark we missed the track, and while we were hunting for it with one of the side lamps a number of Kaffir girls came running up from some kraals we had just passed, and in their excited curiosity started a sort of dance round the car, which appeared very weird in the reflection of a grass fire, a little way off on the other side of the railway. We succeeded in getting hold of one and tried to make her understand we had lost the track; she suddenly started gesticulating and pointing off to the right, so we took the hint and very soon struck the lost trail. We had arrived within a

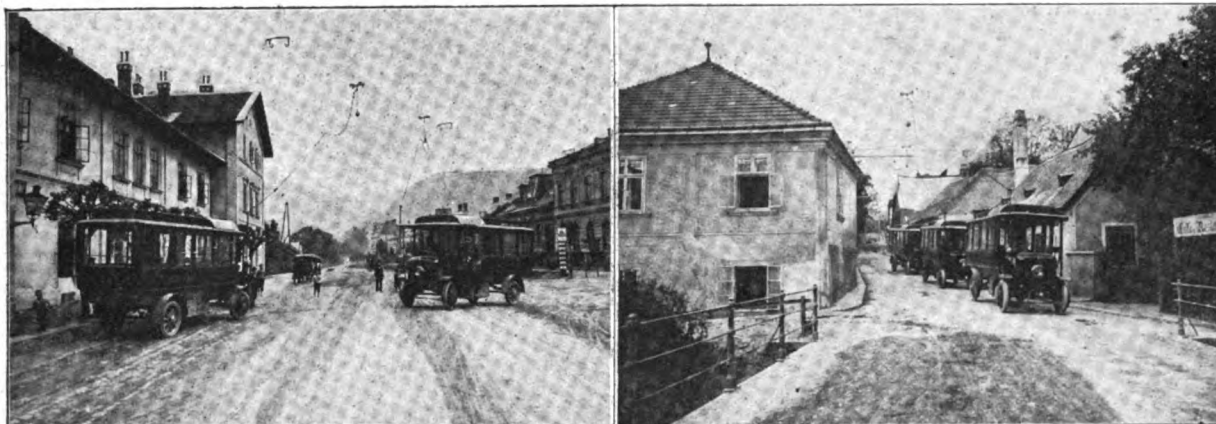
SOME CURRENT TOPICS.

Carrying Spare Covers.

In modern side-entrance cars no difficulty is experienced in carrying one or more spare outer covers, for even if sufficient drawer space is not available they can readily be carried either at the side or rear of the vehicle. In the case of old rear-entrance cars, however, the problem is not of such easy solution, and in many cases the spares have to be carried in the tonneau, to the discomfort of the passengers. Owners of live-axle cars will be interested in the somewhat novel method of carrying a spare tyre that I came across the other day. It was well wrapped in canvas and laid horizontally on the back axle casing, the forward end being supported on the rear portion of the cardan shaft sleeve. The cover, which was securely attached at three points, was in this way not only carried without taking up any useful space, but its presence was hardly discernible.

A Motor-car Chassis as a Power Plant.

Pictures have frequently appeared in some of the American motor-car papers depicting motor-cars being used to furnish the power for small saw-mills, water-raising pumps, &c. It was not



A Public Service in Austria.

The above illustrations are reproduced from snapshots taken on the route of the public service which has recently been inaugurated between Kloostenberg and Weidling, a distance of about three miles. The electrical vehicles, which were built by the Austrian-Daimler Company, take their current from an overhead conductor similarly to electric tramcars. (Allgemeine Automobil Zeitung.)

few miles of Potchefstroom, and were travelling over a rocky piece of ground, dodging the large ones, when suddenly one appeared right in front of us; there was not time to stop or dodge, so we held our breath and let it slide under us. There was a sharp shock and sparks flew from under the car—we had struck it. The engine still kept running, and, as we had only a few miles to reach Potchefstroom, we did not stop to investigate then, and arrived without any trouble.

The next morning I found the only damage done was a scored flywheel and slightly bent crankshaft, which did not cause any trouble on the finishing day's run, a distance of ninety miles, which was covered without hitch. We had taken 10½ days to reach Johannesburg, and had covered about 1,100 miles. Our greatest trouble was broken springs, which caused us to lose quite three days during the run.

I should recommend anyone contemplating a trip of this sort to do so with a light but powerful car, and built fairly high from the ground. The car on which I accomplished this run was a 24-28-h.p. Pope Toledo.

F. C.

MR. L. H. HOUNSFIELD is the examiner for 1908-9 in connection with the City and Guilds of London examinations in motor-car engineering. Messrs. P. M. Baker (Wolverhampton), C. B. Mercer (Liverpool), J. L. Milligan (Luton), C. E. Simms (Birmingham), W. Hemingway, C. E. Larard, A. Marsden, D. G. Snodgrass, and H. J. Spooner (London), have been registered as qualified teachers in motor-car technology.

until the other day, however, that I had an opportunity of witnessing such an installation—temporary, of course—in this country. It will be remembered that Weigel Motors, Ltd., lately removed their works from Goswell Road, London, E.C., to Olaf Street, Shepherd's Bush, and, in order that manufacturing operations should not be hampered by waiting for the erection of the works' engine, a 40-h.p. Weigel chassis was called into requisition. This was fixed in a suitable position on the machine shop floor below one of the lines of shafting. The cardan shaft was disconnected, and in place of the brake drum at the rear of the gear-box a belt pulley was fixed. The only other alteration made was the fixing of a long pipe to the silencer, so that the exhaust gases can be emitted directly into the open air. When I visited the works recently the novel power plant was working quite smoothly, as it has done, so Mr. Weigel informed me, for over a month.

Water Splashes.

The Motor Union has, I am glad to notice, adopted the suggestion recently made in this column with regard to the erection of warning signs on the approach to water splashes across the road, for, at the last meeting, it was resolved that one should be put up near a water splash between North Elmham and East Dereham, Norfolk. Now that a commencement has been made, I hope that the Union will see its way to similarly deal with the water splashes previously pointed out, and with one in the Milton country, near Chalfont St. Giles, to which a correspondent has since drawn my attention.

ARCANUM.

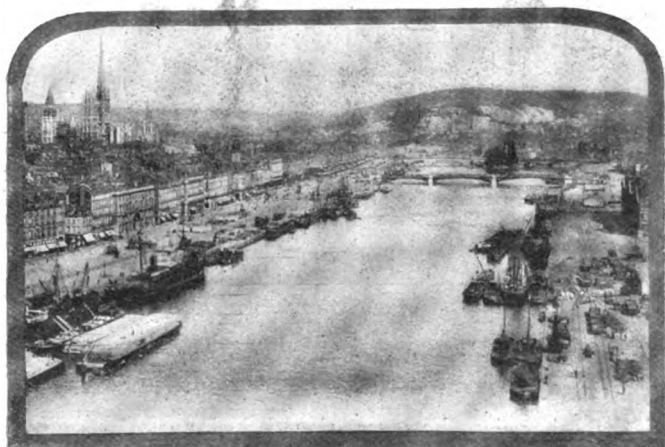
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GOSSIP FROM PARIS.

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I DO not know what the foreign drivers in the Grand Prix will say to it, but even their French competitors are far from being pleased with the decision not to reopen the Dieppe circuit as usual for preliminary trials before the great race. Most of the French drivers had tried the course before it was closed against the racing cars, but very few of them had in their hands the new machines they will pilot on July 7th. Not more than half-a-dozen of the twenty-five foreign drivers had an opportunity of trying the circuit, and will now have to content themselves with examining the road in an ordinary touring vehicle, which is a very different thing to speeding over it in a racing car. It was, it seems, the departmental and local authorities, who met under the presidency of the Prefect, that proposed the prohibition, which was, however, agreed to by M. de Vogue in the name of the Sporting Committee of French Automobile Club. The chief reason invoked for refusing to allow the racing cars on the circuit before the contest was not convincing. It consisted in the declaration that the main reason for permitting the preliminary trials last year having been to ascertain how much *essence* would be required by the racing cars having disappeared with the suppression of the consumption regulation, it was unnecessary to reopen the circuit.

ALL sorts of stories of the fabulous speed attained by the new French racing cars continue to be circulated in the auto-



Touring in France.—A General View of Rouen.

mobile sporting world. If one-tenth of them were really true the spectators on the Dieppe grand stands having good touring cars at their disposal might expect to get back to Paris in time for five o'clock tea. One of the best of the stories I have heard is that of a driver who wanted to ascertain exactly at what speed he could go. Being a prudent man, he took with him three friends. When he reached the long-deserted level stretch of road he had selected for his trial, he invited his companions to get out of the car and posted them at a kilometre's distance from one another. They were to take his time, and, with the object of avoiding any possible accident, it was agreed they would display a pocket-handkerchief on a stick to warn him of any vehicle on the road. After taking these precautions the prudent driver started at full speed. He covered the stretch two or three times with vertiginous speed, but suddenly became conscious of the disappearance of his friends. What had become of them? He stopped and shouted. Soon the three men emerged, still trembling, each from behind a big tree. They one after another confessed they had been so terrified at the approach of the "cannon ball," as they called the car, that every time it passed they had taken refuge behind the nearest tree! Though the driver failed to get the exact time he had taken to cover the kilometre, he came back to Paris quite satisfied, and now tells his intimate friends to bet on him as the winner of the great race.

^{misses} BRITISH motorists touring in France, who, like Frenchmen, are responsible for the material damage done by their chauffeurs, will learn with pleasure that the Court of Cassation has definitely established the jurisprudence on the matter. Until now, under whatever circumstances an accident happened, the owner of the car causing it was invariably condemned to pay for the damage done, even if he had not been aware that the vehicle had left the garage. According to the definitive ruling of the Supreme Court the owner of a motor-car, of course, remains responsible for all accidents caused by it if he is driving the vehicle, and also if any one in his employ (his chauffeur) should be at the steering wheel executing instructions received from his master. However, if, as is too often the case, a gentleman's chauffeur takes the car out unknown to his master, or in violation of the instructions received from him, and causes an accident, the owner of the automobile is relieved from all responsibility. Moreover, in the case of the owner of a car being supplied temporarily with a chauffeur from a garage, he is not responsible for the accidents which may be caused by his vehicle. The Court of Cassation ruled that, as the chauffeur remains the servant of the garage-keeper, it is he who is responsible for the acts of his servant and not the owner of the automobile he may happen to be driving.

THOUGH the flight on his monoplane was not officially controlled, there is no doubt that M. Robert Esnault Pelterie has broken the French records for height and speed. He rose on his machine, flying at the speed of about 80 kilometres (50 miles) an hour, to the altitude of at least 30 metres, or 98½ feet. Having overshot the boundary of his experimenting field, he brought his aeroplane to the ground more quickly than prudently and damaged it considerably. The aviator fortunately escaped without serious injury. The other French aviators are wondering whether he flew up so high on purpose. Most of the men who know anything about such matters are inclined to think he did not. M. Robert Esnault Pelterie is silent on the point. In spite of that his monoplane, which will be repaired in a few days, is regarded as a serious competitor to the Wright Brothers' aeroplane, as well as to the machines of M. Delagrangé and Mr. Henry Farman. Everyone is talking about the Wrights and their promised aerial performances, and technical men are once more inquiring how it is possible that the Wright Brothers' machine, which admittedly has not a larger bearing surface than that of M. Delagrangé, can, with a less powerful motor, carry two men and remain in the air so long a time. However that may be, their experiments are looked forward to with intense interest. In the meantime Mr. Henry Farman has decided to abandon the Issy les Moulineaux parade ground, which is too small for his experiments, and to instal himself at Paris Plage (Le Touquet), where he has obtained permission to utilise the beach at low water for his flights. MARNEY.

MR. WYNNE BAXTER, the coroner for the East End of London, believes in the erection of street bridges at convenient intervals along the busiest arteries of traffic. Would they be better patronised than are the subways that are so little used in the vicinity of the Mansion House and the Bank of England?

THE other day we had an opportunity of inspecting a new puncture proof band for motor tyres, which is being introduced by the Gossamer Puncture Proof Band Company, of 235, High Holborn, London, W.C. It consists of a casing intended to be solutioned to the inside of the cover, and within which is enclosed a quantity of fine vegetable fibre. Interposed as it consequently is between the cover and the inner tube, it is claimed that it not only prevents the latter being punctured, but also from being nipped when the car is travelling over rough roads. We have not yet been able to try the band in actual practice on the road, but the one we tested successfully resisted all attempts to force a sharp pointed instrument through it. Those motorists who have experienced tyre troubles will do well to enquire into the Gossamer band; it adds but little weight to and does not slow the tyres, and is being put on the market at a reasonable price; the makers are supplying them separately or will undertake to solution them inside the covers of customers.

The 2,000-miles Trial.



INCLUDING THE SCOTTISH RELIABILITY TRIAL.

CONTINUING our record of the International Touring Car Trial begun last week with the announcement that there would be forty-six starters out of fifty-one entries, it may be well to point out some essential features with regard to the computation of marks—both in the long jaunt of 2,000 miles and the portion of the event known as the Scottish Reliability Trial, on which eighty-three cars started from Glasgow on Monday. In the former a unique system of marking has been adopted on a basis of time lost under eight headings, as follows:—(1) Excess of maximum running time. (2) Advance of minimum running time. (3) Adjustments, replacements, involuntary stops, replenishments, &c. (4) Excess of three minutes for petrol cars and ten minutes for steam cars allowed for starting up each morning. (5) Excess of one minute starting allowance after compulsory stops on the road. (6) In filling with petrol, each

Pomfret Arms Hotel at Towcester for lunch, the new 52-59-h.p. Lorraine Dietrich, driven by C. Bianchi, being the first to put in an appearance and retaining its premier position all the subsequent way to Nottingham. After the rest the route was resumed to Costock, a delightful village 17 miles beyond Leicester, for tea, where we learned that one of the Zedel cars, which had been observed *en panne* on the way, had sheared a key in its differential gear. At Nottingham—the day's objective—the cars arrived well to time, being met by Mr. Warren-Smith, who had travelled on his 14-16-h.p. Argyll by another route, and several local motorists. The general public, however, seemed to have been previously unaware of the automobile invasion. Messrs. Atkey and Co. had made the garage arrangements, and the cars were quickly housed, the drivers and observers promptly making their way to the Victoria Hotel, in connection with the Great



The 2,000 Miles Trial.—Luncheon time at Wetherby.

gallon placed in the tank being reckoned as one minute lost. (7) Climbing the timed hills. (8) Covering the required distance on the Brooklands track. As before, the Scottish Trial is based on the idea of reliability, marks being allotted for low fuel consumption, non-stop runs and other factors that constitute the ideal touring vehicle.

The first stage of the 2,000 miles Trial occupied Thursday, Friday, and Saturday of last week, the daily runs being London to Nottingham (129 miles) with a stop at Towcester for lunch; Nottingham to Newcastle (161 miles) with a mid-day halt at Wetherby; and the Tyne to Glasgow (151½ miles), lunching at Peebles, this making a total of 441½ miles. There were sounds of busy activity in the White depot at Camden Town on Thursday morning when Mr. J. W. Orde and his assistants were eagerly admonishing those in charge of the forty-six vehicles to get ready for emerging into Carlow Street, from whence to begin their long pilgrimage. They issued forth, in competitive array. At 9 a.m. the first car started for Towcester, fifty-nine miles away. Three-quarters of an hour later not a car remained, and the first was not far from St. Albans. Dusty were the roads, and bright was the sun as the procession arrived at the

Central Railway, where a dinner was given by the Nottinghamshire A.C. to the judges and officials.

There was no dust in Nottingham when the cars, with the Armstrong-Whitworth leading, set sail—not a wholly inappropriate expression in view of the rain that fell—for the second stage of the journey. But the weather improved beyond Welbeck, and by the time we stopped for luncheon at Wetherby there was the promise of dust. This was fulfilled in the afternoon, when the only excitement vouchsafed the travellers happened to the Straker-Squire, which shed a detachable wheel, causing it a loss of 13 min. At Newcastle considerable interest was taken in the arrival of the cars, as they were housed on the Town Moor.

On Saturday the way was from Newcastle to Glasgow by Otterburn into Scotland, where mists were quickly encountered and where the landmark between the two countries set up by the Scottish A.C. was seen. At Peebles there was the luncheon halt and then through Lanark and Hamilton the cars went to Eglington Toll, at Glasgow, to be ready for the Scottish Trial. Despite the wretched weather and the various classes of roads over which the journey was made, it is very satisfactory to notice how

well the tyres are behaving, a tribute to their excellences as well as the reliability of the competing machines.

Thus far the cars had generally done extremely well, the marks recorded against the vehicles during the three days being as follows, the large total to the debit account of the second Zedel in Class D being due to the mishap near Costock on the first day.

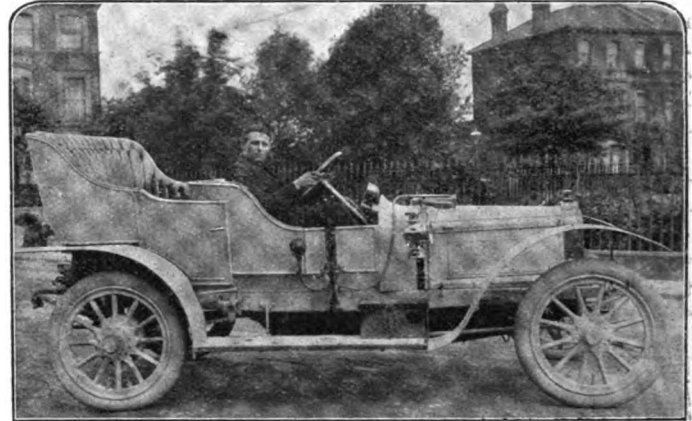


The 2,000 Miles Trial.—The 15-h.p. Coventry Humber Car.

| Car. | Driver. | Minutes lost. |
|---|----------------------|---------------|
| CLASS A. (Cars up to 6.4-h.p.). | | |
| 6.2-h.p. De Dion | W. V. Jolley | 20 |
| CLASS B. (6.4-h.p. to 9.4-h.p.). | | |
| 8.9-h.p. Adler | Fincke | 27 |
| CLASS C. (9.4-h.p. to 13-h.p.). | | |
| 10-h.p. Cadillac | F. S. Bennett | 17 |

CLASS E. (16-h.p. to 20.8-h.p.).

| | | |
|-----------------------------------|-----------------------|----|
| 20.5-h.p. Vauxhall | P. C. Kidner | 20 |
| 20.08-h.p. De Luca-Daimler | F. Griffin | 20 |
| 20.08-h.p. Talbot | John Hedge | 23 |
| 20.5-h.p. Panhard | A. F. Cooke | 27 |
| 20.5-h.p. Panhard | T. Ward | 30 |
| 19.6-h.p. Hillman-Coatalen | J. Broadbent | 43 |
| 19.6-h.p. Coventry-Humber | G. A. Phillips | 49 |
| 17.9-h.p. Benz | F. Stoecker | 49 |



The 15 h.p. Talbot Car which is taking part in Class E in the 2,000 Miles Trial.

| | | |
|-----------------------------------|------------------|----|
| 23.08-h.p. De Luca-Daimler | E. Allen | 53 |
| 20.08-h.p. Belsize | H. Dawson | 77 |

CLASS F. (20.8-h.p. to 25.6-h.p.).

| | | |
|--------------------------------|------------------------|----|
| 25.5-h.p. Talbot | G. Day | 21 |
| 25.6-h.p. Beeson-Humber | J. Reid | 28 |
| 25.6-h.p. Thornycroft | T. Thornycroft | 28 |
| 24.79-h.p. Junior | C. F. Bertelli | 31 |
| 25.6-h.p. Minerva | A. S. Henderson | 33 |



The 2,000 Miles Trial.—The Cars Lined up at the Hydro Hotel, Peebles.

| | | |
|--|------------------------------|-----|
| 12.8-h.p. Zedel | C. Machin | 28 |
| CLASS D. (13 h.p. to 16-h.p.). | | |
| 15.8-h.p. Singer | G. Herbert | 21 |
| 15.8-h.p. Zedel | Capt. J. D. Johnstone | 25 |
| 13.9-h.p. De Dion-Bouton | J. W. Stocks | 26 |
| 15.4-h.p. Straker-Squire-Shamrock | A. H. Roy Fedden | 56 |
| 15.8-h.p. Zedel | W. Couchman | 747 |

| | | |
|----------------------------------|--------------------|----|
| 23.8-h.p. Coventry Humber | W. G. Tuck | 34 |
| 25.6-h.p. Star | G. F. Prew | 34 |
| 24.79-h.p. Panhard | Patault | 40 |
| 24.79-h.p. Brown | B. R. Banks | 42 |

CLASS G. (25.6-h.p. to 32.4-h.p.).

| | | |
|------------------------|-------------------|----|
| 31.1-h.p. Ariel | P. R. Lamb | 32 |
| 30-h.p. Adler | Wilhelm | 32 |
| 27.3-h.p. Deasy | F. Berry | 33 |

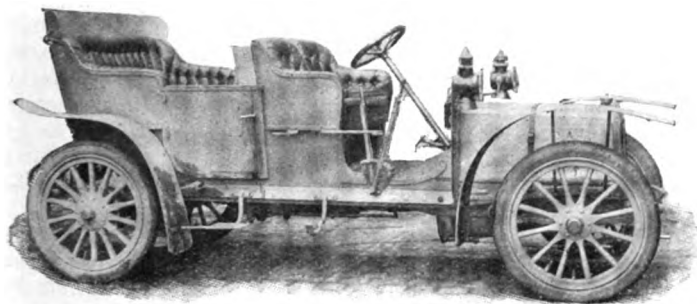
| | | |
|------------------------------|---------------------|----|
| 27-8-h.p. Nagant-Hobson ... | A. E. Robson ... | 36 |
| 32-4-h.p. Belsize ... | R. Crossley ... | 36 |
| 32-4-h.p. Beeston Humber ... | T. C. Pullinger ... | 38 |
| 28-h.p. White (steam) ... | B. C. Rhodes ... | 45 |

CLASS H. (32-4-h.p. to 40-h.p.)

| | | |
|---------------------------------|---------------------|----|
| 38-1-h.p. Daimler ... | G. H. Street ... | 29 |
| 40-h.p. Armstrong-Whitworth ... | G. H. T. Slaney ... | 36 |
| 38-1-h.p. Daimler ... | G. H. Ison ... | 48 |
| 37-h.p. White ... | G. H. Holloway ... | 50 |
| 40-h.p. Hillman-Coatalen ... | H. N. Smith ... | 66 |

CLASS J (40-h.p. to 46-4-h.p.)

| | | |
|---------------------|----------------|----|
| 45-8-h.p. Ariel ... | H. Cordery ... | 59 |
|---------------------|----------------|----|



One of the Panhard 15-20-h.p. Live Axle Cars taking part in the 2,000 Miles and Scottish Reliability Trials.

CLASS K (46-4 to 52-8-h.p.)

| | | |
|---------------------------------|-----------------|----|
| 48-6-h.p. Rolls-Royce ... | E. Platford ... | 30 |
| 48-4-h.p. Deasy ... | P. Graham ... | 32 |
| 48-6-h.p. Rolls-Royce ... | C. Johnson ... | 37 |
| 52-4-h.p. Lorraine Dietrich ... | C. Bianchi ... | 49 |

CLASS L (52-3-h.p. to 60-h.p.)

| | | |
|---------------------|--------------|----|
| 59-5-h.p. Ariel ... | P. Lewis ... | 59 |
|---------------------|--------------|----|

It will be seen that the 20-5-h.p. Vauxhall and 20-06-h.p. De Luca Daimler in Class E are bracketed as equal, as are also the 25-6-h.p. Beeston Humber and the 25-6-h.p. Thornycroft in Class F., in which also the 23-8-h.p. Coventry Humber and the 25-6-h.p. Star are together; the 31-1-h.p. Ariel and the 30-h.p. Adler, as well as the 27-8-h.p. Nagant-Hobson and 32-4-h.p. Belsize in Class G.

THE SCOTTISH TRIAL.

On Monday morning the forty-six cars which had come up from London set forth on a very arduous day's travel, accompanied by thirty-seven other cars which had been entered for the Scottish Trial only, making a total of eighty-three cars on the road, thirty-two of which are engaged in the double event.

This run was northward to Aberdeen, a distance of 172½ miles, and including not only the timed hill climb, but also many other ascents and gradients that brought some of the drivers in the small car classes down to the lowest gear. We lunched at Perth, where the 16-h.p. Belsize was withdrawn, and then ran into one of the worst downpours that has been experienced on any of the three preceding Scottish trials. A score of miles beyond Blairgowrie the famous Spittal of Glenshee was reached, and then came the climb up Cairnwell Hill, with its average gradient of 1 in 11, and the horrible Devil's Elbow with 1 in 6½. Unhappily the rain had transformed the surface into a kind of quagmire, such as was experienced on the hill near the Bridge of Brown last year, and even the larger cars required very careful handling to avoid being stuck—as were some of the vehicles—while eight had to shed their passengers. The 20-h.p. Coltman driven by Mr. W. Wilson, its designer, was making a first public appearance in the trial, and after a good run to Glasgow had an unfortunate mishap just beyond the Spittal of Glenshee. The differential broke, and after a delay of five hours the journey to Aberdeen was finished by driving with one rear wheel only.

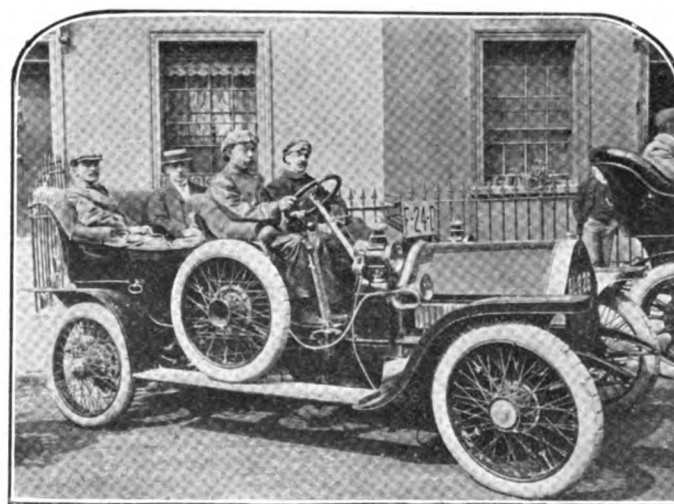
From Cairnwell it was a bleak, desolate run, rendered cheerless by the pitiless rain, and all were glad of the tea-stop at Braemar. The rain had caused many delays, and four cars had not reached the Royal town long after the big contingent were drying their clothes in Aberdeen. As a team the Argylls made

a uniformly consistent performance, securing non-stop runs, as did also the 18-h.p. Benz, the 10-12-h.p., and the 18-24-h.p. Swifts, the 10-h.p. Adams, the 15-h.p. Mass, the 20-h.p. Bell, the 20-h.p. De Luca-Daimler, the 40-h.p. Armstrong-Whitworth, while tyre trouble only caused the delay of the 45-h.p. Sheffield-Simplex, which ran well throughout the day.

The run from Aberdeen on Tuesday was begun in sunshine, and it was a delightful trip to Clatterin' Brig, at the foot of the Cairn o' Mount. This is a severe test, the timed portion being over a distance of two miles thirty-five yards, with gradients ranging from 1 in 5-4 to 1 in 30. It was fortunate that the day was dry—with the result that the small cars, which had been the first to leave the Granite City, mostly strode up the first part of the hill in good style. Towards the end of the long distance, however, there was an accumulation of panting vehicles, which caused much murmuring among the drivers of the sturdier cars. Conspicuous among the best climbers in their respective classes were the 15-h.p. Coventry-Humber, the Metallurgique, the 18-h.p. Benz, the Daimlers, the Vinot, the Argylls, Humber, the White, and the Nagant-Hobson. Yesterday's experience led the 20-h.p. Coltman to be withdrawn, as was also the 25-h.p. Werbell, while the tale of trouble has been further increased by the withdrawal of the 24-h.p. Porthos, the 8-h.p. Clyde, and the 12-h.p. Riley; the two latter having had differential and gear difficulties. A backfire from the Belsize has so affected the arm of the driver, Mr. R. Crossley, that he retired from the contest.

After Cairn o' Mount, the journey was continued down into Aboyne for luncheon, and then the route was made to Duftown through Tomintoul—that cold and bleak mountain village—down to the bridge leading into Grantown-on-Spey for tea. Two hours later we were nearing Inverness, where news of the day's doings was anxiously discussed.

The two trials running simultaneously, each with its special system of marking, renders the publication of the daily performances somewhat confusing, but it is satisfactory to learn that only ten drivers who started from Glasgow on Monday had



The 2,000 Miles Trial.—The 20-h.p. Beeston Humber Car.

failed to report themselves at Inverness when this report left the northern town of Flora Macdonald.

When we went to press on Wednesday, the cars were journeying South to Pitlochry; Thursday's run was to Oban, and the Scottish section of the Trial comes to an end at Glasgow on the night of the 19th.

The week-end, so far as the cars in the 2,000-mile Trial are concerned, will be spent in the Lake District, the journey being made from Glasgow on Saturday morning, and Windermere being reached in the evening. On Monday there will be a tour of the district, with hill climbs at Dunmail Raise Pass and Kirkstone Pass, and then to Brooklands.

THE COTTIN-DESGOUTTES SELF-ADJUSTING CLUTCH.

A LITTLE-KNOWN car in this country, but one which has an excellent reputation in France, is the Cottin-Desgouttes, made by the firm of that name at Lyons. The vehicles, while following what may be termed the usual lines of modern automobile construction, comprise in the details a number of special features, among which is the self-adjusting clutch described below.

In many cars the power of the engine is still transmitted

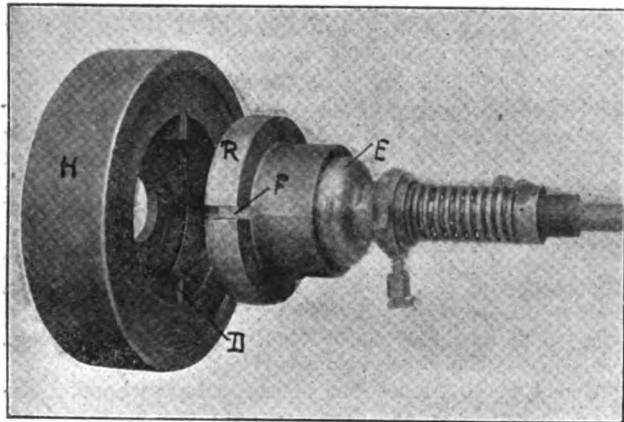
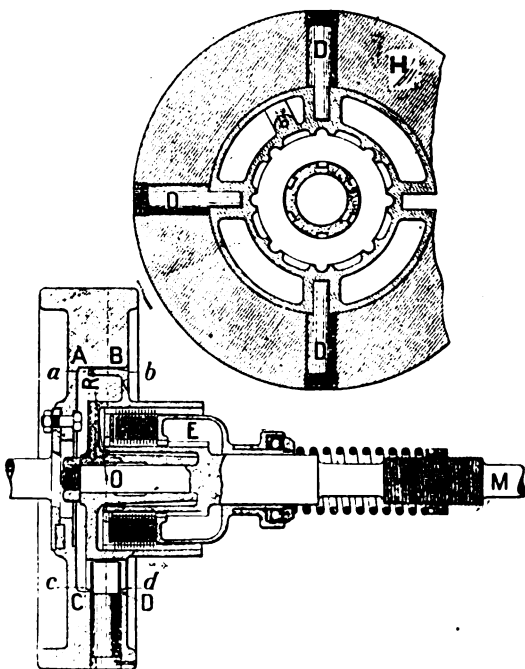


Fig. 1.—The Cottin-Desgouttes Improved Clutch.
The view shows the complete clutch withdrawn from the flywheel.

from the clutch to the gear-box by a rigid shaft, which calls for perfect alignment between the two parts—a condition which, however, owing to the temporary distortion of the frame, due to road shocks and other causes, is not attainable, the result being that the gear-box, clutch, or engine are subjected to undue strains and consequent wear. With the view of overcoming this great drawback, it has become the practice in modern automobile



Figs. 2 and 3.—Sectional Views of Cottin-Desgouttes Improved Clutch.
D. Tenons in flywheel. E. Drum of male portion of clutch. H. Flywheel.
R. Drum of female portion of clutch.

engineering to introduce a flexible joint in the clutch shaft, and, although this has to a large extent remedied the trouble, Messrs. Cottin and Desgouttes have attacked the problem in another and, they claim, a better way, in so far as the strains are taken up at

the point where their maximum effect is felt—in the clutch itself.

In Figs. 2 and 3 sectional views are given of the firm's novel clutch; it should be mentioned, however, that although the new feature is shown incorporated in a clutch of the multiple disc type, it can be adapted to other forms. Briefly put, the improvement consists of building the female portion of the clutch not as an integral part of the flywheel, but in such a way that, while it is bound to rotate therewith, it has a certain amount of room in which it can adjust itself to allow for any temporary lack of alignment. Referring to the drawings, it will be seen that the female part of the clutch consists of a specially-shaped drum R, the circumferential surface of which is so curved that it only touches the inside of the flywheel at one point on the line A B. Fixed in the flywheel at equidistant points are four tenons D, the upper ends of which pass into corresponding slots formed in the outer portion of the female part of the clutch. It is by means of the tenons that the power of the engine is transmitted to the clutch, which, as will be seen, is free to oscillate on its centre O, and yet drive without loss of power.

Apart from its advantage in rendering the usual flexible joint on the clutch-shaft unnecessary, the makers claim that it renders the work of dismantling the whole clutch an extremely easy matter, and enables it to be given that occasional attention in the way of thorough cleaning which a clutch, like other parts of the car, requires; the shaft is connected with the primary one and the gear-box by a screwed sleeve held in place by a spring pin. The latter can be removed by means of a blacklead pencil, and then the sleeve can be drawn back, and after loosening the two bolts by means of which the clutch-operating mechanism is attached, the whole of the clutch and its shaft can be dropped out of the chassis. We understand that Messrs. Cottin and Desgouttes, whose works are at Monplaisir, Lyons, have subjected the new clutch to exhaustive trials, and that they are open to negotiate with motor manufacturers who desire to incorporate the arrangement in their cars.

TRIAL NOTES.

CHEVALIER DE KNYFF, of the Panhard and Levassor firm, was among the group of distinguished motorists who witnessed the start of the 2,000 mile trial.

TWENTY-NINE of the cars in the trial are fitted with Dunlop tyres. Five have Palmer, four Continental and one Jenatzy tyres.

THE nationalities of the cars that started were as follows:—Belgium, 3; France, 8; Germany, 3; Great Britain, 26; Italy, 3; United States of America, 3.

THE "Thames" Car, No. 84 H, did not start in the Scottish Trial owing to the late delivery of the chassis from the works not allowing sufficient time, after completion of the coachbuilders' work, to prepare for the event.

THE six-cylinder 45-h.p. Sheffield Simplex was withdrawn from the International Touring Car Trial, firstly, owing to the great demand at the works for cars for demonstration runs, and secondly, "as efficiency and reliability are the chief qualities upon which the results of the trials are based, without consideration of the other very necessary requirements demanded by private users in a car, such as simplicity of construction, silence, and niceness of running etc., it is evident that a specially-prepared car in which efficiency has been chiefly studied, to the detriment of the other qualities mentioned, would be favoured in the awards, though it would not be a car that would be in accordance with the requirements of the majority of private users, and we prefer (say the makers) to demonstrate to the public with a car of exactly the same type and quality that we would supply to them as a standard article." This was one of the five entries to which we referred last week.

CONTINENTAL NOTES.

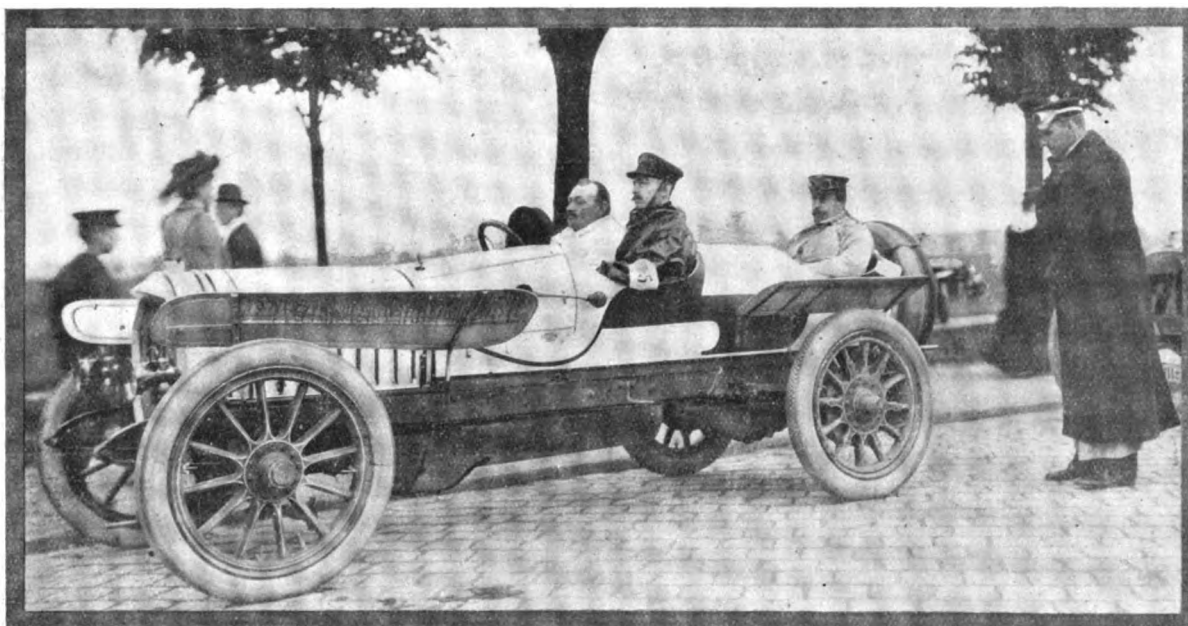
The Prince Henry of Prussia Touring Competition.

As was mentioned in the last issue of the *M.C.J.*, no less than 130 competitors in this event left Berlin on Tuesday of last week on the first stage of the trial—viz., to Stettin, a distance of 193 miles. Of the competing cars one hundred are German, Belgium is represented by ten vehicles, France by nine, Italy by five, Austria four, and Switzerland and England by one each. A striking feature of the trial is the fantastic design of bodies which have been evolved by manufacturers to meet the regulations. So unlike are these to the accepted type of touring car, that it is reported Prince Henry of Prussia is already contemplating an alteration of the rules, which shall next year make the contest what it was originally intended to be—namely, one for amateur drivers in genuine touring cars, and in order to prevent the entry of specially-constructed vehicles, which nominally satisfy the conditions of the trial, and which are driven by professionals. Another point of note is in regard to the engines of the cars, many of which have an unusually long stroke in relation to the cylinder bore. Thus

4 min. 24 4-5 sec. (81 miles an hour); and De Lengerke, on a Benz, third in 4 min. 35 sec. (77½ miles an hour). F. Rendel (Mercedes) did 4 min. 54 4-5 sec.; Miss Levitt (Napier), 5 min. 37 2-5 sec.; and E. A. Philippi, Winchester (Lorraine Dietrich), 6 min. 31 1-5 sec. Four cars failed to reach Hamburg, reducing the number of competitors to 122. On Saturday the cars were on exhibition in the Velodrome, Hamburg, the start for Hanover (194 miles) being made on Sunday morning. The route was a very difficult one, but 120 are recorded as having safely arrived. Monday's run was to Cologne, 206 miles. The route was again very difficult, and several cars fell out, only 112 reaching the cathedral city. On Tuesday the journey was continued to Treves, and on Wednesday the event was brought to a conclusion at Frankfort am-Main, the result not being available at the time of going to press.

An Industrial Vehicle Trial in Italy.

On the occasion of the opening of a new bridge over the river Po, an international competition of motor-omnibuses and other commercial vehicles will take place at Piacenza, Italy, during the second half of September. In connection with the



The Prince Henry of Prussia Touring Competition.—Herr von Lengerke on the 40-h.p. Benz Car. The body of the vehicle is typical of many of those taking part in the Contest.

the Mercedes are 130 mm. bore by 172 mm. stroke, the Benz 115 mm. by 160 mm., one indeed being 115 mm. by 180 mm., and the Suddutsche 85 mm. by 130 mm. In addition to Miss Dorothy Levitt, who is at the wheel of the Napier, the only British car entered, there are two other English drivers taking part in the event, Mr. F. Rendel, of London, with a Mercedes, and Mr. E. A. Philippi, with a Lorraine Dietrich. Although many minor breakdowns were reported, all but one of the 130 starters safely reached Stettin, the absentee being M. Hamoir, of Brussels, whose Protos collided with a tree at a nasty turn, damaging the front axle. Miss Levitt arrived sixth. The journey on Wednesday, the 10th inst., was the longest of the tour. The start was from Stettin, and the route lay through Goldberg, Schwerin and Lubeck to Kiel, a distance of 243 miles. The first car was dispatched at five a.m., and the others left at short intervals. Altogether 126 safely reached the German port, the Napier arriving fourth. There was no run on Thursday, the 11th inst., the day being devoted to sight-seeing in the neighbourhood. Hamburg (209 miles) was the destination on Friday, a speed trial on a 9½-kilometre level course being held *en route*. The highest speed was attained by Erle, on a Benz, his time being 4 min. 22 4-5 sec., equal to 86 miles an hour. W. Poge, on a Mercedes, was second in

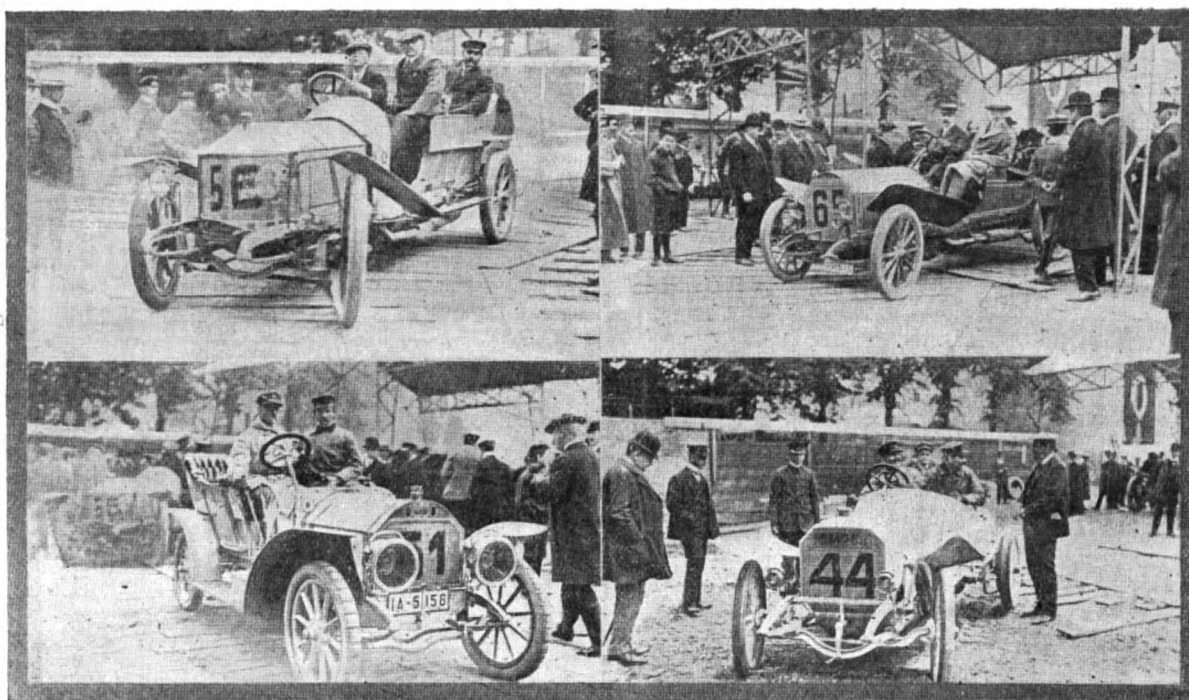
event three special competitions are being organised:—(1) For agricultural motors, instituted by the Italian Ministry of Agricultural Industry and Commerce; (2) for motor-omnibuses and lorries, according to the specification of the Italian Minister of War, to be adopted by the Army; (3) vehicles with elastic wheels. In the general competition motor-vehicles and road trains of any system will be admitted. After the trials there will be a compulsory exhibition of the competing vehicles, which will last about ten days. The competitors will be divided into two classes:—(1) Petrol, paraffin, steam, and petrol-electric machines; and (2) those propelled by electricity. Each class will be sub-divided into the following categories: (1) Vehicles carrying net loads up to 900 kilos.; (2) ditto from 901 to 1,500 kilos.; (3) ditto from 1,501 to 2,000 kilos.; (4) ditto from 2,001 to 3,000 kilos.; (5) ditto over 3,000 kilos.; (6) motor-buses to carry from six to ten passengers; (7) ditto over ten passengers; and (8) road trains. Entries must be sent to the Executive Committee of the Exhibitions and Competitions (Sport and Motor-cars Commission), care of the Chamber of Commerce of Piacenza, not later than July 10th. For Classes 1 and 2 the entry fee is £16 per vehicle; Classes 3, 4, and 5, £24; and Classes 6, 7, and 8, £28. To the manufacturer who enters two vehicles, even if in a different class, a reduction of 10 per cent. will be made on

the fees, and 15 per cent. if more than two are entered. For entries to the special competitions there is a further charge of 10 per cent. on the entry fee on the relative category for the agricultural motor trial; 20 per cent. for the Minister of War event; and 10 per cent. for the elastic wheel section. The vehicles will be subjected to several practical trials of reliability and efficiency on the road, over a distance of about 600 kil. The Piacenza-Bobbio Passo del Penice-Voghera-Piacenza circuit (162 kil.) will be covered twice on two different days, once in one direction, and another time in the opposite direction. A further run of about 120 kil. will be made over a flat country. A test will take place for the fuel, water and electric energy consumption for maximum speed on a level road. No speed over 25 kil. per hour will be allowed, while the minimum speed required for Classes 1, 2, 6, and 7 is 12 kil. per hour; for Classes 3 and 4, 10 kil.; and for Classes 5 and 8, 8 kil. Full particulars of the various competitions can be obtained from Mr. A. G. Graziani, 22, Billiter Street, London, E.C., who has been appointed delegate of the Executive Committee in the United Kingdom.

Club are again engaged with the question of the establishment of a permanent racing circuit. Several members of the committee are this week inspecting a proposed course in the Auvergne, while the Automobile Club du Nord de la France is setting forth the advantages of one it has projected in the Northern district of France. It is urged that the latter would be within easy reach of British and Belgian as well as French motorists. The estimated cost is £200,000.

Motor-Cars in Turkey.

Arrangements have now been made whereby motor-cars introduced into Turkey and taken out of the country within six months are regarded as cars in transit. An import duty of 11 per cent. *ad valorem* has, however, to be paid; this is calculated on the invoice price, but if the invoice is not available the duty is based on a sum approximately between £200 and £400. An identification label is given with the receipt for attachment to the car, and on this being produced at the Customs House when the vehicle leaves the country, ten-elevenths of the duty will be refunded.



Some of the Competitors in the Prince Henry of Prussia Touring Competition.

Duke Ludwig of Bavaria on his Metallurgique Car.
Oberleutnant v. Bismarck on a Daimler Six-Cylinder Car.

Herr Fritz Opel on his Opel Car.
Herr Willy Pöge at the wheel of his Mercedes.
[Allgemeine Automobil Zeitung, Berlin.]

German Motor-Car Imports and Exports.

An extremely quiet state of affairs is prevailing as regards the exports and imports of motor-cars by Germany. The imports of pleasure and industrial motor vehicles and chassis into the country during the four months ending with April last only attained a value of £203,577, as compared with £347,500 in 1907. During the same periods the value of the similar exports from Germany declined from £263,880 to £170,080.

British Motorists in France.

Recent motoring visitors to France include Mr. and Mrs. Martin, London (40-h.p. Dietrich); Mr. H. Cox, London (24-h.p. Napier); Mr. and Mrs. Doillet (16-h.p. Dietrich); Captain Horn and Captain Alderborn (Sizaire-Naudin); Mr. James Austen Cartmell, London (30-40-h.p. Fiat); Sir William and Lady Holland, London (40-h.p. Itala); and Mr. and Mrs. Vaughan, Dover (20-h.p. Brasier).

A Permanent Racing Circuit in France.

The Competitions Committee of the French Automobile

Miscellaneous Items.

A public motor-car service operated by the Bavarian Government has just been established between Bad Tölz and Mittenwald.—The French War Authorities are sending out to Morocco a 40-h.p. Clement-Bayard car in the rear portion of which is fitted a quick-firing gun.—Motorists who intend taking a tour as far as the Alps will be interested to learn that the Arlberg and Stelvio Passes are now free from snow and are open to traffic.—A number of taximeter motor-cabs have just made their appearance in Havre.—The Mid-German Automobile Club is organising an International Touring Competition, to be held in Thuringia, on September 3rd, 4th, and 5th next.—Arrangements are in hand for the starting of a public motor-car service between Innsbruck and Kufstein in the Tyrol.—A petrol motor ambulance has lately been added to the equipment of the Volunteer Ambulance Society in Munich. The body is mounted on a Horch 22-h.p. chassis.—The Belgian Automobile Club announces that no practising with racing cars on the Ardennes circuit will be allowed.—The Automobile Club of Antwerp has just celebrated its tenth anniversary.

AFTER an experiment lasting over three years the motor-buses of the Nottingham City Council have been taken from public service.

ONE of the conveniences promised at the Grand Hotel, Worthing—to erect which a new company has just been formed—is a well-equipped motor garage adjoining the building.

ON Saturday, the 27th inst., the Manchester, Lancashire, Yorkshire, Sheffield and other automobile clubs will hold an inter-club meet at Buxton, the headquarters being the Empire Hotel.

A MOTOR CAR in which the Duchess of Wellington was travelling collided with a tramcar at Brentford the other day, both vehicles being damaged. Fortunately no personal injuries were inflicted.

THE Reading Motor Company, Ltd., of Castle Street, Reading, have a well-appointed garage on the main London road at its junction with the turning which crosses the Hunt Cup Course at Ascot, where a record number of cars has been seen this week.

ANY motorist whose car may have sustained damage at Towcester on Sunday, the 31st ult., owing to the presence of a quantity of liquid tar on the road through that town, is invited to communicate with the Automobile Association, Prince's Buildings, Coventry Street, London, W.

AT one of the opening meetings in connection with the Pan-Anglican Congress in London, Mrs. Carus Wilson said that the craze for motoring had a distinctly bad effect with regard to the training of the young, as it led to a diminished reverence for home life. What do the bishops—particularly those who motor—have to say on the point?

HIS name having been attached to the requisition to the Lord Mayor for a meeting against motor-buses in the City of London under a misapprehension, Mr. W. Joynson Hicks, M.P.—the death of whose father-in-law last week we regret to hear—has asked that his name be withdrawn from the petition. Mr. Joynson-Hicks is solicitor to the London General Omnibus Company, Ltd.

MESSRS. ARTHUR STODDART AND CO. have erected a commodious and up-to-date motor garage at the east end of Gullane, one of the chief golfing centres of Scotland. It is capable of standing from forty to fifty cars, and power machinery has been put in which will enable the firm to undertake any class of motor repairs. A large stock of petrol, oils, tyres, and spare parts is also kept.

AT the request of a number of our readers we have reprinted the table giving the details of the setting of valves of petrol motors, published in the *M.C.J.* of the 6th inst. Being mounted on stiff card it should prove a handy means of reference in motor repairing establishments, and we shall be glad to send a copy gratis to any motor-car agent and repairer making application for the same.

THE Senate of Rhode Island, U.S.A., has adopted a new Bill relating to the taxation of motor-cars. The chief departure is the adoption of a horse-power tax on the basis of £1 per annum up to and including cars of 20-h.p.; £2 for 20 to 30 h.p.; £3 for 30 to 40 h.p.; and £5 for cars of over 40-h.p. Dealers' licences will cost £10, and drivers' licences 4s. 2d. in the case of a car, and 2s. for motor-cycles.

UNDER the guidance of Mr. Frank Morriss, the manager, we had an opportunity the other day of going over the premises of the London and Paris Exchange Motor Agency at 55 to 59, Shaftesbury Avenue, W.C., and of inspecting the large stock of second-hand cars that is on hand, ranging from small single-cylinder vehicles to town carriages and high-power touring vehicles. Mr. Morriss, who, by the way, has entirely severed his connection with his old firm at King's Lynn, informs us that, owing to the increasing business in second-hand cars, the London and Paris Exchange have found it necessary to take additional premises for the storage of vehicles in Marshall Street, Golden Square, W., where plant is also being put down to enable any small repairs to be carried out. We understand, too, that the Agency are about to put on the market a new light car at a popular price, in which some novel features will be introduced.

HERE AND THERE.

THE Corporation of Dover have granted licences for six motor-omnibuses to ply between that town and Folkestone.

THE imports of foreign motor-cars and parts into the United States during April last

only attained a value of £37,593 as compared with £58,801 in the similar month of last year.

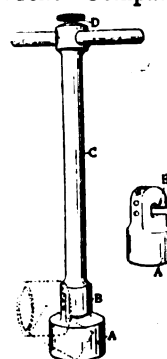
THE Dumfries Motor Company, Ltd., have installed an efficient accumulator charging plant in their garage, which will be at the service of motorists calling in the town.

MR. A. T. HOULDCROFT, the Superintendent of the Carriage and Wagon Department in Lahore of the North-Western of India Railway, has lately acquired a 14-16-h.p. Argyll car.

AMONGST recent purchasers of Daimler cars are the Rt. Hon. Earl Harrowby, who has acquired a 42-h.p. "Aston" landaulet, Sir John Jackson a 42-h.p. chassis with a Hooper landaulet body, and Count Gurowski, of Weild Manor, Alresford, Hants, a 42-h.p. "Daventry" detachable limousine.

THE value of the motor-cars and parts exported from the United States during April last only reached a total of £103,891, as contrasted with £137,228 in the corresponding month of 1907. The United Kingdom heads the list with £37,503, France being second with £18,723, and Italy third with £15,644.

A SOMEWHAT novel spanner known as the Rex T-Socket Auto Wrench has lately been put on the market by the Rex Wrench Company, of 184, Summer Street, Boston, Mass., U.S.A.



The outfit consists of a handle C and a set of six interchangeable sockets, as A, for one-quarter inch to five-eighth inch nuts and bolt heads. In addition, a screwdriver and open wrench for 1 inch nuts are fitted for use upon the handle. The handle C has a cylindrical portion at its upper end, pierced with a hole for the reception of a crosspiece, which may be locked in place by a screw D. The socket A has a claw shaped upper portion E, which is fitted over a circular pin in the lower portion B of the handle. A spring plunger in B snaps into the pits or wells shown in E and retains the socket at an angle to the handle as

desired. The sockets are readily removable, but must be turned to the position shown in the full lines to be removed. It will be seen that no bolts or screws are used to retain the sockets upon the handle. As a number of angles of the socket can be obtained on this wrench, it is well adapted for use in positions inaccessible to the ordinary socket or open-type wrench.

THE drop in the price of raw rubber to 2s. 6d. per lb. some few months ago has been since succeeded by a considerable and steady rise, and the figure is now reported at 3s. 8½d. The hopes of a permanent reduction in consequence of the enormous planting of rubber trees cannot possibly be fulfilled for at least another three or four years, as the demand, now that the American market has again reached its normal proportions, is rapidly depleting the stocks on hand, and the position generally shows that the price of tyres must inevitably increase. The progress of the motor industry has been hardly more rapid than the advance of the rubber industry, and factories which a few years ago were merely little shanties to-day cover many acres of ground. The Russian Prowodnik factory at Riga is mentioned by the Motor House as a case in point. Twelve years ago this factory employed a very few hands, but to-day the number of employees exceeds 12,000, while the works cover an enormous area. At the present time the tyres produced by the Prowodnik factory are said to be made of "floating" rubber quality, the weight per cubic foot being 52.8 lb. only. This may explain the very excellent results achieved with these tyres. A stock of Prowodnik tyres to the value of over £15,000 has just been acquired by the Motor House, of Euston Road, London, N.W., and they propose to sell these on terms which should prove attractive to motorists generally.

LORD MIDLETON has written in favour of the suggested speed limit for motor-cars over Hindhead.

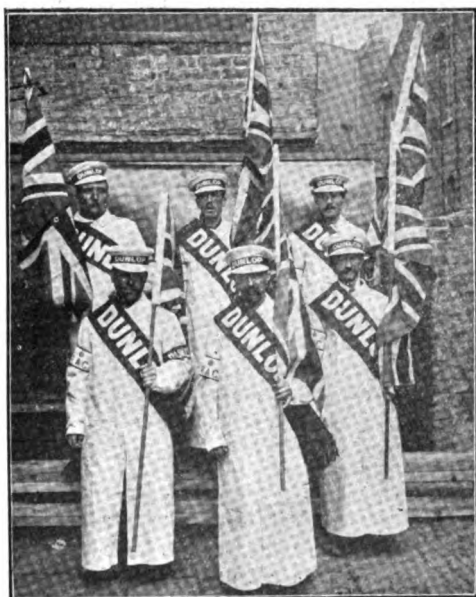
MR. GEORGE PENMAN'S garage at Moffat is well known to motorists in Dumfriesshire and the district round about.

MESSRS. CASTLEHOUSE BROS., who have a garage at 124A, Victoria Road, Scarborough, have been appointed official repairers to the R.A.C.

THE Newhaven Rural District Council have adopted a resolution calling the attention of the Prime Minister to the need of legislation to minimise the alleged evils caused by heavy motor road traffic in rural districts.

FROM the report of the Comptroller-General of Patents, Designs, and Trade Marks of last year we learn that, owing to the success attained by certain flying-machines, inventions relating to aeronautics were more than twice as many as in 1906, and nearly five times as many as in 1905.

A SHEFFIELD journal advocates the motor hearse, as it "saves the somewhat distressing necessity of removing the body to the railway station, placing it in a train, and then removing it once more when the destination is reached. The motor hearse runs to the door of the house from where the dead one is to be removed, and can go to the door of the home."



A Section of the Flag Signallers employed by the Dunlop Company to indicate the way through the towns along the route of the 2,000 Miles Trial.

THE Whitney Manufacturing Company, of Hartford, Conn., U.S.A., has brought out a new chain belt for driving radiator fans or mechanical lubricators. Each pair of side links of the steel chain is closely wrapped in a leather cover; the latter is held firmly in place by steel locking plates that have teeth on the sides embedded in the leather, while the plates are secured in place on the links by projections on the side links which pass through the locking plates and are riveted to them. Only the leather covers come into contact with the grooved pulleys, and the drive is therefore noiseless. It is claimed that all stretching is obviated, although the chain is perfectly flexible.

Now that the season for hiring motor-cars is progressing so favourably the point occurs as to the necessity of supplying only satisfactory vehicles for that purpose. It is by the adoption of such a policy that the Park Motor Company, of 216, Tottenham Court Road, London, W., have developed their extensive business in hiring vehicles. They only send out high grade cars in charge of really practical drivers, who, in addition to knowing their vehicles, are also acquainted with the country in which they are told to drive. This fact has resulted in the Park Motor Company establishing a motor hiring business in London, which is not only proving satisfactory to patrons but gratifying to themselves.

A SERVICE of motor-buses is now running from Dunoon to the outlying districts on the Firth of Clyde.

THE Weiss Aeroplane and Launcher Syndicate, Ltd., is one of the latest registrations at Somerset House.

ONE of the latest purchasers of an 18-h.p. Reo car is Mr. D. F. Cronin Coltsman, D.L., Glenflesk Castle, Killarney.

THE DAIMLER COMPANY have just delivered a 58-h.p. car with Hooper limousine body to the Grand Duke Michael of Russia, Keele Hall, Newcastle, Staffs.

THE Broadway Garage has been opened on the Sevenoaks Road, Bromley, Kent, by Mr. Allen. He is undertaking the maintenance as well as the storage of cars.

AT Johnstone, N.B., a new garage has been erected in Rankine Street, by Messrs. Love's Motor Car and Garage Company. Tyres, spare parts, oils, &c., are being stocked, and there is also a well-equipped repair shop in connection with the establishment.

MESSRS. MARTEN AND JELLCOE, LTD., of the Ferry Works, Thames Ditton, send us a photo of a 20-cwt. van they have lately completed for Messrs. H. A. and F. Nelson, wholesale tobacconists, East Ham. The order for the vehicle was booked in March last at the Cordingley Show, in regard to which the firm write that, "We are fully satisfied with the results."

MOTORISTS entering the town of Nottingham from the South know the tram-lined Arkwright Street, which constitutes the way to the famous market-place. On the right hand side is the motor-car depot of Messrs. R. A. Cripps and Co., Ltd., who were among the pioneers of automobilism in the county of Robin Hood. Here are stocked spare parts, tyres, oil, petrol, and everything that the traveller by car requires, while in a street nearly opposite is the firm's capacious and commodious garage. Originally the building was devoted to the housing of tram-cars and the horses which drew them; now it is wholly given up to the storing of motor-cars, and those drivers who have occasion to visit the city can easily leave their cars with Messrs. Cripps and Company and go up to the further corner of the town by tram—a convenience that even motorists do not always spurn.

AN interesting demonstration of fire extinction took place on Tuesday last before representatives of various municipal authorities and other experts to test the qualities of the new fire extinguisher known as "The Diamond Powder." A structure 18 ft. high and 2 ft. wide was set well alight and the fire put out by a few "throws" of powder. Again, a large iron pail was taken and a two-gallon tin of petrol emptied into it. This was set ablaze, and, for experiment, water and sand were poured upon it to show how ineffective they were to smother the fire. A very small quantity of the Diamond powder was then thrown in, and the flame disappeared instantaneously. Petrol was also poured on the ground, which, when lit, produced a blaze of several yards. This also was extinguished with perfect ease by merely sprinkling the powder over it. Everything pointed to the fact that the Diamond Powder was an effective and instantaneous medium for fighting fire, and we can congratulate Mr. Whaley on the success of his invention.

IN connection with the Napier-Fiat match on the Brooklands track on Whit Monday, Mr. D'Arcy Baker, of the Fiat Company, has received a letter from Mr. Ed. Rodakowski, the clerk of the course, in regard to the speeds attained. He states:—"The official times automatically recorded on the Brooklands Automobile Club's automatic electric chronograph for the first two laps (the laps in which both cars were running) of the Napier-Fiat match in the 90-h.p. Standard Class, on Whit Monday, correspond to the speeds given hereunder. It must be noted that automatic timing commenced while the cars were passing at speed over the contact strip, some 490 yards after a standing start. Napier, first lap was traversed at an average speed of 96.15 miles per hour. Fiat, first lap was traversed at an average speed of 105.24 miles per hour. Napier, second lap was traversed at an average speed of 113.01 miles per hour. Fiat, second lap was traversed at an average speed of 121.64 miles per hour. The official length of each lap slightly exceeds 2.765 miles."

Correspondence.

[Letters to the Editor should be addressed to the offices, 27-33, Charing Cross Road, London, W.C.]

DOCTORS AND THE TRADE.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—While one is glad to recognise the enthusiasm with which medical men have taken to motoring, there is an aspect of their advocacy to which attention may usefully be drawn. From the nature of their profession they have splendid opportunities of gaining access to the country and country people who are likely to adopt cars; they have their confidence in a great degree; and they can secure their car without difficulty.

These advantages would be of material assistance to motor-car agents anxious to sell cars. I have just heard that in one important district some of the local doctors are doing, unconsciously, of course, a great injustice to those who are locally engaged in the automobile business by giving glowing accounts of the performances of their cars, extolling their tyres, and generally exalting particular goods and parts. More than that, they may sometimes suggest various traders with whom to deal.

I know the matter is a difficult one and not likely to be appreciated in those places of large extent, but the motor firm in a small town

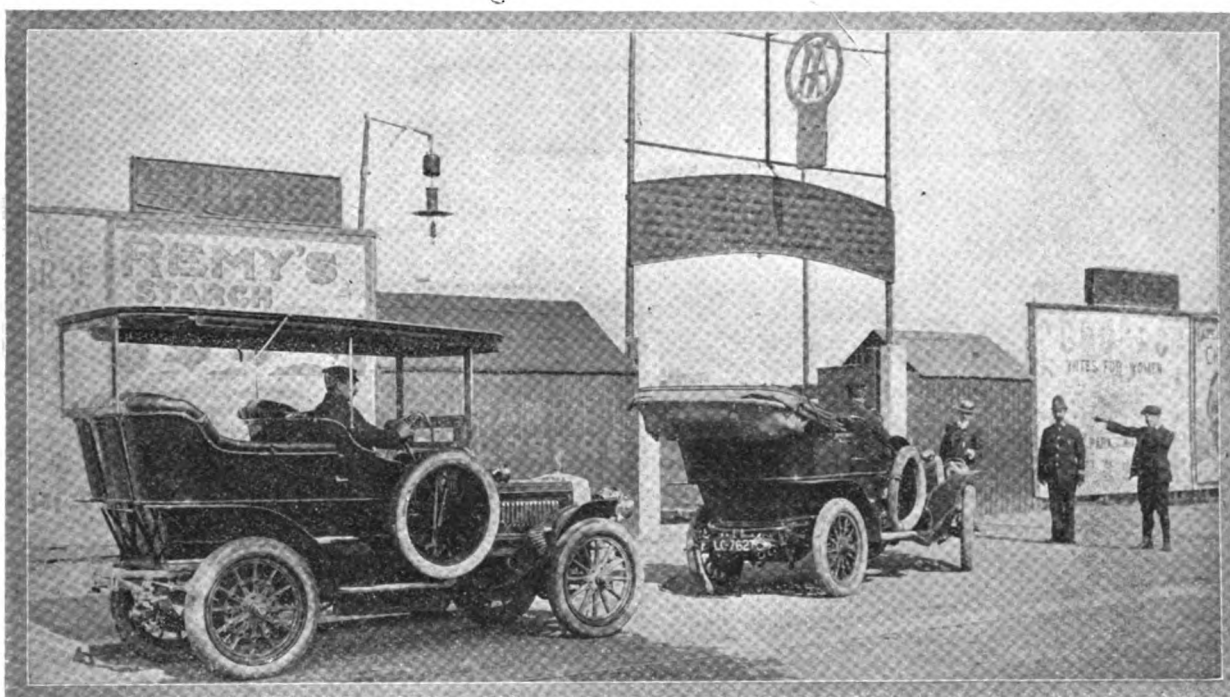
The clean condition of the working surfaces is easily accounted for, as the light oil would exert a flushing or cleansing action on the residue of the heavier oils. The subject is surely of importance, so I hope that other motor enthusiasts will investigate the question and let the readers of the *M.C.J.* have their results.—Yours truly,

C. T. W. H.

MOTOR-BUS MATTERS.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—Those responsible for the management of the various motor-bus services in London are as fully aware as are the public of the necessity for continuing experimental work with a view to obtaining a more perfect vehicle than is now seen in the streets of the capital. On this point Mr. F. Searle, engineer to the London General Omnibus Company, is of opinion that the successful motor-bus of the future will weigh about 3½ tons, be noiseless, having greater acceleration in starting than is now the case, and also be perfectly clean—the latter a quality which does not now characterise many of the vehicles in service. His belief is



The Entrance to the Automobile Association's Garage at the Franco-British Exhibition.

which has equipped itself for business purposes will not like to feel that there is another Roland in the field, who has the advantage of getting so well forward to the inner room of the great mansion. Perhaps medical men will, on reflection, see the unfair competition they engender by sending their patients to firms in London and the great cities instead of allowing the local trader a chance.—Yours truly,

B. SUMMERS.

SOME FACTS IN THE SELECTION OF MOTOR OILS.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—I have been delayed by other work or I should have replied to "Veritas Prevalebit" before. I certainly do take his remarks in good part, and I am really interested in his experiences. The only conclusion I can come to is that he is the fortunate possessor of cars provided with most perfectly cooled engine cylinders. Such an approach to the ideal almost makes one inclined to become poetic over his Utopia. I will certainly, for a few days, try a cycle oil, only it seems to me that an oil that yields on fractionation over 50 per cent. distillate at 160 F. must be accompanied by two drawbacks: Firstly, at a relatively early stage so much of the oil would be volatilised as to seriously affect the composition of the gases, and consequently their proper combustion. Secondly, less than half the lubricant would be left available for oiling, so that at least double the usual quantity of oil would be required, and that is why I question the economy and efficiency.

that there will be a reversion to steam in connection with motor-bus work, although he is fully satisfied that the petrol motor-bus can be made a sound financial undertaking.

This opinion may receive useful publicity in your columns in view of the forthcoming meeting against the motor-bus at the Mansion House.—Yours truly,

A. B. T.

ATTEMPTED ILLICIT DEALING.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—To-day a chauffeur invited us to supply six gallons of petrol, to give him a receipt for double the quantity, and to hand him the cash value of the excess. Prompt refusal called forth the rejoinder "I shall never come to your garage again unless you do."

As the owner of the car was unknown to us, the man was followed. By the time the name and address were found, the owner had left for London, so our Mr. Henry Moore is making a special journey there, to interview, and put the facts before him.

Many cars are put up at our garage, and our experience proves that the very large majority of chauffeurs are honest and trustworthy men, but the above incident is not an isolated case, and proves, not only that some are thieves and swindlers, but also proves at one and the same time that some garage owners are equally dishonest, indeed, more so, for no chauffeur would make such proposals unless he met with some measure of success. The action we are taking is costing time and money

but we feel it a public duty, and that prompt action must be taken to expunge the degradation of being asked to be a party to such a swindle.—Yours truly,

MOORE OF BRIGHTON, LTD.

STARTING ON THE SWITCH AND A DANGER TO BE AVOIDED.

TO THE EDITOR OF *The Motor-Car Journal*

SIR,—An excellent feature of modern petrol cars, where fitted with coil and accumulator ignition, is the ability which they possess of frequently starting "on the switch," without any turning of the starting handle being required. I am reminded, however, that even in this way of putting an engine in operation, just as in the usual method, care must be taken in first seeing that the change-speed gear is in the neutral position, by the receipt of a letter from an American friend in which he mentions a rather serious accident which recently occurred in a garage in Chicago owing

of cars to lend their vehicles for the day. They should be available at 10.30 in the morning, and will return to town before dark. Every possible care will be taken of the cars, and the club will take every precaution that no damage is done to them. Will those who are willing to help in this matter please communicate with me at "Wivenhoe," Wynndale Road, South Woodford, Essex, as soon as possible?—Yours truly,

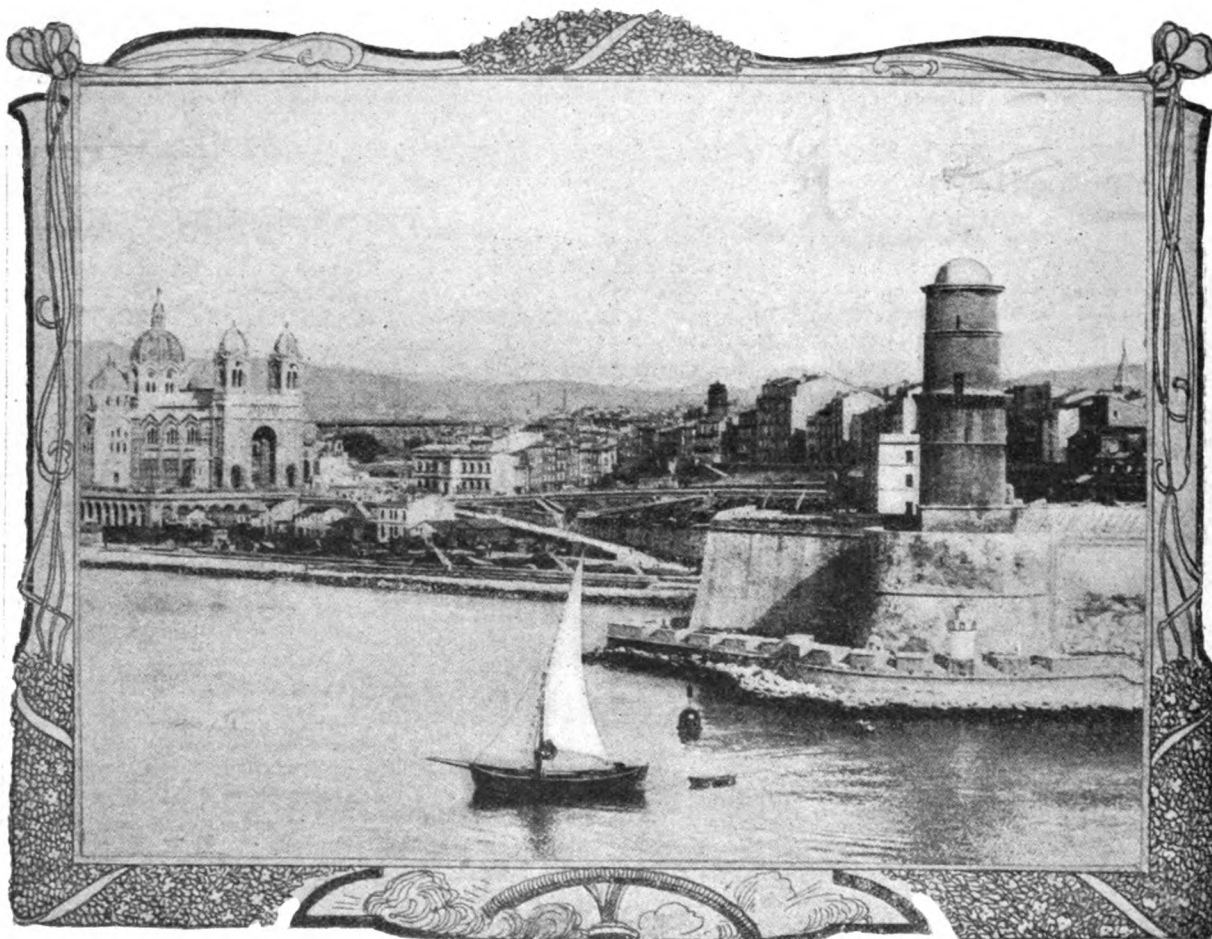
HAROLD FULLER,

Hon. Sec. Essex Motor Club.

THE HORSE POWER OF MOTOR CABS.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—A question is raised by your correspondent "R. B. N." in the last issue of the *M.C.J.* with regard to the horse power of motor cabs. It may interest him to learn that the winner of the recent motor-cab reliability competition in France was a single-cylinder vehicle. Competing with a number of two and four cylinder-cabs, it not only



Touring in France.—The Harbour, Marseilles.

to the fact that an owner had stopped his car with the gears in mesh. When he came to take the car out again he started the motor on the switch before taking his seat, and the big 40-h.p. vehicle at once bounded forward at considerable speed, broke through the garage doors and finished against a brick wall on the opposite side of the road. The incident may serve as a reminder to motorists to always see that the gear is in neutral when they put their cars away.—Yours truly,

R. S. W.

CRIPPLES' OUTING.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—On Saturday, the 27th inst., the Essex Motor Club has arranged an outing for crippled children, of whom it is surprising what a number are to be found in London. It is proposed to fetch the children from one of the day schools in the East End of London, and drive them out into Epping Forest, where they will be amused and looked after for the day.

The club have already been promised the active support of Alderman Billings (the Mayor of Hackney), Sir John Kirk, the Ragged School Union, and the Fresh Air Fund, and an appeal is made to owners

went through the 4,000 kilometre run without trouble, but in the fuel consumption test came out with a noteworthy high mileage to the gallon of spirit.—Yours truly,

SINGLE CYLINDER.

We shall be glad to receive the address of Mr. Hewer, of Worthing, who has sent us a photograph of his Jackson car.

The address of the makers of the H. D. W. petrol gauge for which a correspondent asks is Messrs. H. D. Woolley and Co., 25-29, Coleman Street, London, E.C.

A HUB-CAP from a Humber car has been picked up in the neighbourhood of Harlesden, and the owner can have same on application to 32, St. Mary's Road, Harlesden, N.W.

A CORRESPONDENT asks for advice as to the engine power most suitable for a motor repair shop, the style and size of lathe most generally useful, and size of dynamo required for charging accumulators.

MR. A. A. HANDS, Brookville, Elm Grove Road, Barnes, S.W., shed a Palmer tyre and tube (810 by 90 mm.) on the London side of Reading, on the main Bath road, recently, and will be glad to hear if it should be found.

MOTOR-CARS FOR AUSTRALIA.

SOME NEEDED MODIFICATIONS TO MEET ANTIPODEAN CONDITIONS.

THE rapid advance made by motor-cars in popular favour in Australia, and the many and various avenues of useful employment that are open to this type of road vehicle, prompt some inquiry as to the experiences of motor users on Antipodean roads. It is something of a test of delicate machinery to subject it to rough and ready trials on the primitive roads of a new country under conditions of which its designers and manufacturers 10,000 miles away know absolutely nothing. It is the fashion to speak of Australia as a new country, and though the colony of New South Wales was founded just after the American war of independence was ended, and the Georges had many merry years to run on the throne of England, our roads are still those of a brand new settlement. The good roads of Australia reckoned in anything like decent stretches, as the motor requires, could easily be counted on the fingers of one hand, while the name of the bad roads is legion. Even the good roads have grave faults, such as the dreaded open water channel or V-shaped gutters.

Pertinent inquiry may, therefore, be made as to the effect which rapid passage over these roads has upon the speedy cars now turned out of British and Continental motor factories. Although the want of enterprise, foresight, and even of forbearance on the part of the British authorities kept the motor industry back for years in England, and helped to give France a commanding lead in the trade, it is a source of great gratification to Australians that the old mother land has since come to the front, and overhauled her brilliant and versatile neighbour across the Channel, and that Britain now produces cars which are capable of taking their place in the very front rank of those of all the world. Are any modifications in the design and manufacture of these cars required to suit Australian conditions. A few weeks ago the writer sat in a car in Melbourne which, as it rolled majestically along, exuding an impression of an irresistible reserve power delicately controlled in the simplest way by the frankest-looking throttle handle, completely filled his eye and charmed his senses. Instinctively he felt that this was a car par excellence; that the designer and maker had produced a masterpiece. "How many of those have you got? the owner—a car importer—was asked. "Only this," was the unexpected reply. "Immediately I got hold of the steering wheel and gave her a run I cabled for a dozen. It is a dear car, too, worth a thousand pounds. I got a reply next day; "Cannot deliver any this year; can book three for you next year." It will be readily understood that while the trade is in this state manufacturers are not likely to bother their heads very much as to whether the conditions of roads situate at the other side of the globe necessitate any structural alterations in the cars. It may be well to consider, however, in what form would representations made to the manufacturers, supposing that they were willing to make some alterations to suit our special conditions? Are the experiences of motor drivers on Australian roads such as to justify them in a demand for a remodelling, or, at any rate, a modification in parts of the design? What is the tale told by the repair shops? Some inquiry specially directed to this aspect of the question shows that the modern motor-car has achieved such a stage of perfection that radical troubles are few. But there are some, and undoubtedly some of them are due to the rough Australian roads.

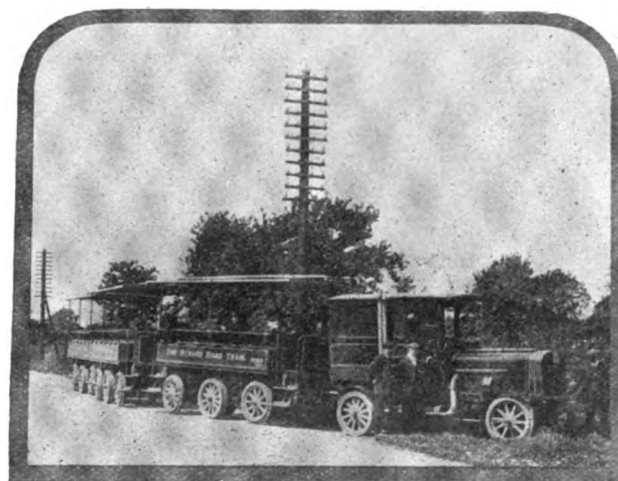
It may briefly be accepted that the engine of a first-class car of British or European build will give practically no trouble with proper care; although even here one finds a point in which Australian conditions demand a modification. Owing to the long patches of bad surface met with the slow speeds are more often called in requisition than where for hundreds of miles billiard-table tracks stretch like white ribbons through verdant fields. Consequently more radiation is needed, more water, and larger circulation pipes required. The fastening flanges on the circulation pipes also give considerable trouble, snapping off owing to the incessant vibration. They should be strengthened in some way. This is perhaps the only alteration that could be considered essential on the engine side, although Australian conditions in respect of sparsity of population, and, therefore, of repair shops in the country districts, make it extremely advisable that in addition to the magneto there should be an alternative and an entirely independent ignition. The ignition is responsible for considerably more than 60 per cent. of engine stops. In the recent trials in Australia over long distances and through rough conditions, the breaking down of coils has given considerable trouble. In several instances this has occurred in absolutely new cars. High-tension switches have also caused trouble by short-circuiting. An improvement which might very well be effected is the better insulation of coils from heat. With a temperature ranging to over 160 deg. in the sun, the wax filling is liable to melt, and this has serious results. Coils would be better suited to hot climates if boxes were lined with asbestos sheeting.

Tyres may be excluded from any consideration of this sort. This sort of trouble we ever have with us, and tyres are always anathema. Something might be said, perhaps, on the score of heat in Australia affecting tyre conditions, but the Dunlop Company is experimenting with motor tyres here now, and as their capable experts closely watch all developments they can be safely trusted to properly meet the requirements of the situation. Upon the subject of tyres, however, it may be said that bigger tyres would certainly be an advantage

in Australia. The comparatively small size of the tyres is perhaps the biggest defect in cars imported into this country. No car of 10-h.p. or over should be fitted with tyres less than 120 millimetres.

The transmission gear in many cases gives serious trouble, and here the bumping and vibration on rough and uneven roads is distinctly to blame. Makers could advantageously devote attention to strengthening this important portion of the running mechanism for Australia. It is simply a question of strength, though doubtless allied to the problems of distributing and taking up shock generally. Occurrences of trouble in transmission gears through no "stop" being provided to prevent the spinning of the male portion of the clutch whilst changing speed are by no means infrequent, and a considerable number of the ruined pinions seen in the garages are traceable to this defect. This certainly is a point in which makers can assist Australian drivers materially. The clutch stop or brake should be made universal, and if the gear were generally strengthened, and particularly the bevel pinions, by more metal being used in the wheels, a great deal less would be heard of troubles in the transmission gear.

Engine, gear, and tyres passed, we come to frame and springs, and here undoubtedly the Australian must speak as an Australian and demand, if not preferential, at least differential, treatment. We need not look for really good roads for many years to come. The route that links the two chief capital cities of the continent is over one of the worst tracks that could possibly lay any claim to be regarded as a main road. The recent drive of Messrs. C. B. Kellow and H. B. James from Sydney to Melbourne over this execrable piece of road is one of which Australian motorists might well be proud, and the fact that they drove almost 600 miles in a little over twenty-five hours without taking a spanner out of the tool-box might be regarded as proof positive that there is not much the matter with the car as sold to-day for Australia. But it



The Renard Road Train which is now employed in transporting visitors at the Franco-British Exhibition.

This is the first train manufactured at Coventry by the Daimler Company, the sole manufacturing contractors for the system. The motor, it may be added, is of 100-h.p.

should not be forgotten that this car was piloted by two of the most skilful drivers south of the line, if not in the world, and what must be considered is the effect of average and sometimes decidedly unskilful driving. And reckoning generally, skilful, average, and unskilful drivers being considered in the mass, the most persistent breakages, excluding tyre troubles, are undoubtedly the snapping of springs. In every contest so far run, where the breakages take place on the stage, so to speak, in full view, spring troubles have been existent. Here more strength in the way of extra leaves is undoubtedly needed. Numerous preventives have been tried, but there seems to be only one effective remedy for our roads, and that is the general adoption of some mechanical shock absorber after the Truffault principle. With some good device of this sort in use practically all trouble will be eliminated, and even the dreaded Melbourne-Sydney road can be followed with perfect safety.

Frames, generally speaking, seem strong enough, and when one considers the work they successfully go through it must be admitted that at this point the motor manufacturer has achieved a masterpiece of design and construction. But even here our roads have asked some cars—and first-class cars, too—a question to which they could not satisfactorily reply. In a long-distance trial a couple of years ago the frames of three 15-h.p. cars cracked. The weakness occurred on the bend of the narrowed section of the chassis. Bent front axles are to be found on fully twenty per cent. of our touring cars, and this is caused in most cases through the chassis "getting down" on to the front axle when bumping across "V's" or the open water channels previously mentioned. The remedy for this is more clearance between the frame and the axle, and the use of shock absorbers.

Finally, the question of ground clearance may be referred to briefly. Many cars are built dangerously close to the ground, in some

instances not more than seven inches clearance being left. A number of vehicles have had their bottom practically ripped off from this cause. There are many routes in Australia where short stumps have been left in the road, and where high ridges run between ruts high enough to make themselves unpleasant. One of the best Australian drivers remarked only recently that in driving a car with a 9 in. clearance he has often had his heart in his mouth in the fear that boulders, stumps, or high ridges would crash into the under-gear. Cars for this country should have not less than 10 or 12 in. clearance. Only one more remark need be made, and that is that, taken all round, a general strengthening up is required. For instance, there are few motorists here who have not found that they would like stiffer supports to their mudguards. In the body also the constant vibration works havoc, and extra strength is needed. After three or four months foreign bodies will be found in the workshop being generally supported and stiffened, and British bodies find their way there also after a slightly longer use.

THE SPEED OF VEHICULAR TRAFFIC IN POPULOUS PLACES.

THE following is the text of the bill to secure the regulation of speed of vehicular traffic in public thoroughfares in populous places, which passed its first reading in the House of Commons on Monday, and is set down again for the 22nd inst.

Whereas it is expedient to secure better protection to persons lawfully using highways and other public thoroughfares, and especially of children in public thoroughfares in populous places: Be it therefore enacted by the King's most Excellent Majesty, by and with the advice and consent of the Lords Spiritual and Temporal, and Commons, in



The 18-22-h.p. Eight-seated Fire Service Wagon, built by the Sud-deutsche Automobil Fabrik, of Gaggenau, Germany, for the Fire Brigade of Moscow, Russia.

this present Parliament assembled, and by the authority of the same, as follows:—

1. In this Act, unless the context otherwise requires:—(a) By "thoroughfare" is meant any public highway, street, or other way used for the purposes of foot and of vehicular traffic. (b) By "populous places" is meant any place where there are continuous human habitations on either or both sides of a thoroughfare for not less than a quarter of a mile. (c) "Dangerous crossings" are where two or more roads meet, intersect or cross each other, at any point to be determined by the police as dangerous, and which shall have suitable indicators to that purpose on both sides of the road. (d) By "vehicle" is meant any kind of carriage, conveyance or machine which is propelled by any kind of motive power, whether conveying passengers or otherwise.

2. No person shall drive or cause to be driven any vehicle in any populous place at a speed exceeding ten miles an hour.

3. No person shall drive or cause to be driven any vehicle at or past any dangerous crossing at a speed exceeding six miles an hour.

4. This Act shall not apply to police, military, or firemen on duty.

5. Every person, whether principal or agent, who is guilty of any offence under this Act shall for each offence be liable, on summary conviction, to a fine of not less than twenty shillings, and not exceeding five pounds, and in the case of a second or subsequent offence to a fine of not less than forty shillings and not exceeding ten pounds, together with the costs of the prosecution, or in the discretion of the court imprisonment for a period not exceeding one month for the first offence, and for any subsequent offence to a period not exceeding two months.

6. Proceedings under this Act may be taken in any court of summary jurisdiction on information or complaint made by a police constable or by any other person, but such proceedings must be commenced within fourteen days of the commission of the alleged offence.

7. This Act shall come into operation immediately on its receiving the Royal Assent.

8. This Act may be cited as the Vehicular Traffic Regulation of Speed Bill.

The Bill is introduced by Mr. B. S. Straus, supported by Sir J. W. Collins, Sir Andrew Torrance, Sir John Brunner, Messrs. W. N. Dickinson, W. C. Steadman, Dr. Cooper, W. Crooks, Ernest Gardner, Abel H. Smith, G. A. Hardy, and William Pearce.

ROAD REPORTS.

DALKEITH.—The Secretary for Scotland has acceded to the request of the Dalkeith Town Council for the restriction of the speed of motor-cars to ten miles per hour in certain portions of the borough. Even now the anti-motorists are not satisfied and are expressing surprise that their request for the inclusion of the Eskbank Road in the restrictive zone has not been acceded to.

EAST SUSSEX.—The recent hill climbing competition for motor-cycles at Clayton Hill has been the subject of discussion at the Parish Council meeting, when it was resolved to ask the Chief Constable to prevent a recurrence of such events. The attention of the East Sussex County Council is also to be called to the necessity of a warning notice being placed at the bottom of Clayton Hill.

SCOTLAND.—Among police traps lately noticed in Scotland, Dumfriesshire has obtained an unenviable notoriety, and there are also controls on most of the main roads in the county of Forfar.

LANCASTER.—The police are reported to have been exceedingly watchful of late on the roads to Preston and also to Milnethorpe.

WEYBRIDGE.—At the Weybridge Urban Council meeting, the Highways and Lighting Committee reported that they instructed the clerk to inquire why the Council's application for a ten-mile motor speed limit had not been acceded to, and to request that the County Council should include Weybridge in their next application to the Local Government Board.

HENDON.—Acting on a memorial from the inhabitants of Great Stanmore, Middlesex, the Hendon Rural District Council have resolved to apply to the Local Government Board to restrict motor-cars to a ten-mile speed limit along the main street.

SHOREHAM.—Along the Steyning road at Old Shoreham the police have measured a quarter of a mile along which motorists are being timed daily.

NANTWICH.—At a meeting at Nantwich on Saturday, Mr. S. Gleave, a member of the Cheshire County Council, mentioned that in consequence of the motor traffic on the main roads in the rural districts, the county surveyor had had to provide for their upkeep by increasing the expenditure per mile from £80 to £100.

AN ACCIDENT AVERTED.

THE Grand Duke Michael of Russia and his wife, Countess Torby, were in a motor accident a few miles from Crewe on Saturday evening. His Imperial Highness had purchased a new motor brougham, and this arrived at Keele Hall on Saturday. Accompanied by the Countess and two chauffeurs, the car was being taken for a trial trip, and, in the evening was returning along the Newcastle Road, when a child attempted to cross the road. The car was going at a moderate speed, and, in order to save running down the child, the chauffeur turned the car into the hedge and collided violently with a huge oak tree. One of the chauffeurs was pitched into a field and his leg injured.

The Grand Duke and the Countess happily retained their seats, but the violent impact gave them a severe shock, and they were lifted out of the tilted car and conveyed to a farm close by. Later the Grand Duke and the Countess returned to the scene of the accident and congratulated the chauffeur on his prompt action.

IN view of the great punctuality in starting which was a feature of the Whitsuntide racing at Brooklands, it is interesting to note that the B.A.R.C. authorities have added to the duties of Mr. H. Waymouth Prance, A.I.E.E., A.M.I.A.E., the marshalling of the cars preparatory to the start of each event.

MESSRS. MUTEL AND CO., of 124, Rue St. Charles, Paris, direct attention to the fact that the Mutel motor fitted to the successful motor boat Lolotte at the recent meeting at Monaco was a standard four-cylinder engine, as supplied to their clients for various purposes, and not a machine made specially for the races. The firm are making a speciality of petrol motors not only for pleasure cars but also for industrial vehicles and flying machines.

THE question of the actual cost of running a high-powered car is a frequent topic of discussion, and the item for repairs has usually to be taken closely into consideration. Mr. T. Burnside, of Thorndale, Delgany, county Wicklow, writes that his Beeston-Humber has given him complete satisfaction. "I have travelled nearly 3,000 miles on bad roads all through the winter and the repairs have only been a few shillings. Although the car is 30-h.p. I have only had one puncture."

THE United Motor Industries, Ltd., inform us that the German Government have adopted the Eisemann low tension magneto for use on their special vehicles, this having been found to be most effective in resisting the action of sea water and damp.

CLUBS AND ASSOCIATIONS.

ROYAL.

THE R.A.C. has issued 1,500 of its car badges, 85 of which were supplied during June, and 1,100 drivers' badges.

MOTOR UNION.

LAST month 207 Motor Union badges were issued, making the total number 3,600. 160 hotel signs have been supplied to recommended hotel proprietors, and 112 repairs' signs have also been issued.

THE AUTOMOBILE ASSOCIATION.

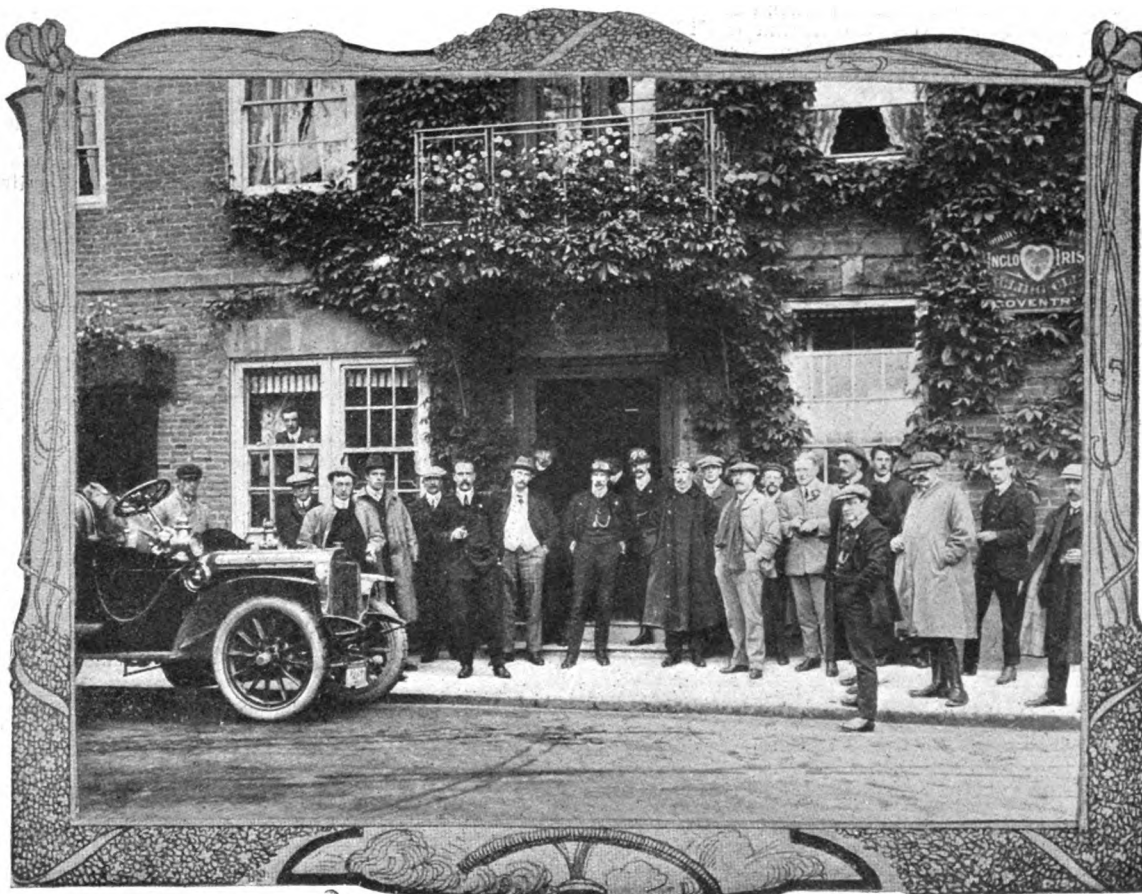
LAMPS are now, by the arrangements of the A.A., being kept alight between the lighting up time and sunrise on the premises of the following agents, the figures shown being the distance to London from the nearest town:—F. Hygate, High Street, Handcross, Sussex, 33½ miles; Messrs. Fry and Compton, Motor Factors, Bagshot, 26 miles; J. Moggeridge, Orme Motor Works, Potters Bar, Barnet, 14 miles; W. Collyer, High Street, Redbourn, Herts, 24½ miles; H. Mitchell, Winchester Street, Overton, Hants; C. A. Roberts, Chandlers Ford, Hants, 72 miles; E. J. McLennan, 18, London Street, Basingstoke, 48 miles; J. E. Glover,

Shaw, Messrs. F. W. Lanchester, D. J. Smith, Max R. Lawrence Douglas Leechman, F. L. Martineau, L. A. Legros, T. C. Pullinger, T. B. Browne, and Rees Jeffreys.

An article on the "Setting of Valves" in the *M.C.J.* was considered. It was decided to postpone taking any action in the matter until next session, when a sub-committee would be formed to consider and report on the subject. Mr. Max R. Lawrence promised to draw up a preliminary report in the meantime.

LINCOLNSHIRE.

MEMBERS of the Lincolnshire A.C. assembled from all parts of the county in Lord Ancaster's picturesque park at Grimsthorpe, on Saturday, to witness a series of speed trials for touring cars. The private road in the park, having recently been steam rolled, was in splendid condition and some excellent trials were witnessed. The length of the course was about a mile, and it took in the stiff ascent in the Red Deer Park. There were three events, for small, medium and high-powered cars respectively, and a really capital entry was secured; most of the entrants turned up and took part in the racing. The handicapping formula was that adopted by the R.A.C., and the times were



The Manchester Motor Club's Reliability Trials.—Some of the Competitors at Stratford-on-Avon.

Witham, Essex, 39 miles; E. H. Hides, Cobham Motor Works, Cobham, 20 miles; Wadham Bros., Horndean, Hants, 62 miles.

THE AUTO-CYCLE UNION.

It has just been decided that the Land's End to John o' Groat's event will take place from July 13th to 18th. Fifteen entries have been received up to the present.

The International Auto-Cycle Tourist Trophy Race will be held about the end of September instead of October as was originally proposed. This year the fuel allowances will be one gallon per 100 miles for single-cylinder motor-cycles, and one gallon per eighty miles for multi-cylinder machines.

THE INCORPORATED INSTITUTION OF AUTOMOBILE ENGINEERS.

A MEETING of the Council of the Incorporated Institution of Automobile Engineers was held on the 10th inst. There were present:—Mr. Dugald Clerk (in the chair), Col. R. E. Crompton, Dr. H. S. Hele-

taken from a flying start. In addition to two prizes offered by the club in each event, open to amateur members only, the competition decided the winner of the Newsum Challenge, a trophy given by Capt. H. E. Newsum. A special prize was also offered for the car making the fastest time over the course, and for this there was fine racing between Mr. R. M. Wright's 38-h.p. Napier and Capt. H. E. Newsum's 55-h.p. Daimler. The first named had the better time, viz., 61 3-5 sec., while Capt. Newsum's time was 66 sec. The results in the other classes were announced as follows:—

CLASS A.—For cars not exceeding 14-h.p.: 1, Dr. E. H. Cragg, Baby Peugeot; 2, Dr. Sharp, Brant Broughton, Richardson. Also competed: Mr. J. Tomlinson, Baby Peugeot; Mr. H. Willis White, Rover; Dr. W. F. Müller, Peugeot; Mr. J. G. Constable, Darracq.

CLASS B.—For cars not exceeding 25-h.p.: 1, Mr. W. Niasler, Talbot; 2, Dr. F. Husband, Spyker. Also competed, Mr. T. M. Winch, Gladiator; Mr. G. Linnell, Argyll; Mr. T. W. Mays, De Dion; Mr. W. J. Newsum, Panhard; Mr. W. A. Tomlinson, Hamber; Mr. G. H. Nalder, Germain.

CLASS C.—For cars exceeding 25-h.p.: 1st, Dr. R. G. Hogarth, Clement-Talbot; 2nd, Major R. H. Fowler, Siddley. Also competed:—Mr. C. H. Gilbert, Siddley; Sir Hickman Bacon, Wolseley; Major

J. A. Cole, Humber; Mr. H. G. Nalder, Berliet; Mr. A. H. Moreing, Daimler; Mr. T. W. Mays, Napier; Mr. F. Richardson, Daimler; Capt. H. E. Newsum, Daimler; Mr. R. M. Wright, Napier, competed for the special prize only.

The Newsum Challenge Cup was taken by Mr. T. W. Mays, of Bourne, on his Napier.

The admirable manner in which the arrangements were made for the gathering was freely commented upon, and the responsible officials were as follows:—Clerks of course, Sir H. Bacon, Col. J. S. Ruston, Major J. A. Cole, Capt. H. E. Newsum, Mr. C. W. Pennell, Mr. C. Hardy, Mr. A. A. Padley; marshal, Dr. W. J. Gilpin; assistant-marshals, Dr. Husband, Major R. H. Fowler, Dr. E. H. Cragg, Mr. T. Ives; starter, Mr. W. R. Pennell; timekeepers, Mr. T. E. Foster and Mr. W. Mansell; hon. secretary, Dr. Godfrey Lowe.

ESSEX COUNTY.

THE Essex County Automobile Club held their first hill-climbing competition at Bottledown Eill, near Billericay, on Saturday last.

A "picnic" luncheon in an enclosure adjoining the hill, by permission of Mr. C. Gibson, preceded the competition, which was held under the following conditions, viz.:—The cars ascended the hill in a preliminary test and were clocked, after which they were drawn in pairs and handicapped on the result of their preliminary performance, and run up together in heats, any competitor improving his time by as much as 10 per cent. in any of the heats being disqualified.

The winner proved to be Mr. W. Guppy, of Buckhurst Hill, on a 20-h.p. Humber, Mr. F. Lindus Forge on a 12-16-h.p. Vauxhall, and Mr. J. Gurney Fowler, on a 35-h.p. Renault, tying for the second place.

After the competition the members and their friends proceeded to Hope Lodge, Little Burstard, where they were entertained to tea by Mr. and Mrs. R. B. Johnson.



The Double-deck 'Bus employed by the London and North-Western Railway Co. between Watford and Bushey.

MANCHESTER.

THE Manchester Motor Club has held a three days' reliability trial. At the start from Hereford on the last day the weather was unpropitious. The route lay from Hereford to Abergavenny, Rye, Monmouth, Speechhouse, for the hill climb, Gloucester, Cheltenham, Chipping Norton, Tredington, and Stratford-on-Avon. The rain ceased soon after the start, the roads improved, and there was sunshine the remainder of the day. The total distance was 122 miles, the first half being a severe test. The following made non-stop runs: N. Crossland, 16-20-h.p. Calthorpe; V. New, 14-h.p. Siddeley; A. Albert, 12-h.p. Riley; J. Aiken, 12-h.p. Gladiator; R. Carlisle, 14-h.p. Argyll; H. Cranham, 22-h.p. S.C.A.T.; C. Antill, 14-h.p. Argyll; H. Hollingdrake, 35-h.p. De La Buire; J. Chambers, 20-h.p. Bell; F. Hunt, 15-h.p. Humber; Hunt, 20-h.p. Humber; H. Brady, 8-h.p. De Dion. The result of the hill climb, time test only, was that H. Hollingdrake was first on his 35-h.p. De La Buire, J. Higginson, 80-h.p. De La Buire, was second, and F. Hunt, 20-h.p. Humber, was third.

NORTH MIDDLESEX AND SOUTHERN.

THANKS to the hospitality of Mr. A. W. Gamage, who invited the members of the North Middlesex Motor Club and of the Southern Motor Club to a garden party at his residence at the Manor House, North Finchley, a very enjoyable afternoon was spent on Saturday.

The competition for the Gamage challenge cup in the inter-club speed judging contest was first held over a course from Hadley Common to Bell Bar and back, a distance of about ten miles. The team of members from each club had to drive at a speed which was set them without

the use of speedometers, so that it became a matter of judgment solely. In the end the North Middlesex A.C. retained the cup, which it has held during the past year, by a narrow margin of total difference of errors in the two teams of 17 miles per hour.

Following the names of the teams we give two sets of figures, the first indicating the speed set, the second the actual speed made:—North Middlesex team:—C. W. Smith, 12-h.p. Darracq, 19 m.p.h., 17.25 m.p.h.; T. Clements, 12-h.p. Humber, 15 m.p.h., 15.7 m.p.h.; C. Cutler, 15-h.p. White steamer, 17 m.p.h., 18.1 m.p.h.; T. Robertson, 8-h.p. Rover, 16 m.p.h., 15.2 m.p.h.; Max Graddon, 16-24-h.p. Fiat, 14 m.p.h., 14.4 m.p.h.—total of errors, 4.99 m.p.h. Southern M.C. Team:—Malcolm Brooke, 24-h.p. Malcolm, 17 m.p.h., 15.6 m.p.h.; H. Gutteridge, 8-11-h.p. Peugeot, 14 m.p.h., 15 m.p.h.; W. J. Jones, 12-14-h.p. Clement, 13 m.p.h., 13.4 m.p.h.; J. Pattison, 8-11-h.p. Panhard, 15 m.p.h., 13.8 m.p.h.; T. Carpmal, 12-18-h.p. Riley, 19 m.p.h., 18.8 m.p.h.—total errors, 5.16 m.p.h.

The competition over, the competitors and their friends adjourned to the Manor House, where the cars were accommodated in the buildings and grounds adjoining Mr. Gamage's charming place. After tea an inspection of the gardens was made and an entertainment followed during the evening. At the conclusion of the programme a hearty vote of thanks to Mr. Gamage for his hospitality was enthusiastically given, on the proposition of Mr. F. T. Barber, the hon. secretary of the Middlesex A.C., seconded by Mr. C. Lorkin, the hon. secretary of the Southern M.C. In reply Mr. Gamage, who is a vice-president of the former club said he hoped this annual reunion would do something to promote good feeling between the sportsmen of the two London clubs.

SHEFFIELD.

THE Sheffield and District A.C. has removed its offices to 7, Pri-deaux Chambers, Change Alley, Sheffield, opposite its head-quarters.

The committee have placed a red triangular notice near the dangerous cross road into Whiston, on the Bawtrey road, and are endeavouring to get the city authorities to erect similar signs at Millhouses tram terminus.

HERTFORDSHIRE COUNTY.

FOR the members' meet at Great Marlow on Saturday last the weather was not at its very best, but, notwithstanding lowering clouds and a keen wind, a very fair number put in an appearance and took tea on the riverside lawn of the Compleat Angler.

Mr. Arthur J. Salmon, the hon. press secretary, had on his car the proposed new car badge which it is suggested shall be adopted by members as a distinguishing mark, and it attracted a great deal of attention.

A meeting of the sub-committee dealing with the club fixtures was held on Friday, the 12th inst., when good progress was made with the preliminary details of the annual gymkhana. This event, which will be held on July 18th, as previously announced, is always a feature of the club's year, and it is hoped this year to make it an even greater success than in preceding years.

BRITISH MOTOR-BOAT CLUB.

THE London-to-Cowes race of the British Motor-Boat Club starts from Gravesend to-day (Saturday) at 4.30 p.m. and a gold medal is offered for the boat using heavy oil exclusively completing the course within thirty hours.

Entries for the International Cross Channel races from Dover to Ostend in July, organised by the Belgian Motor Yacht Club and the B.M.B.C., should be sent to the secretary of the latter in Coventry Street, London, W., on or before the 6th prox.

WELSH.

THE following is the official result of the working out of the handicap of the hill-climbing competition of the Welsh A.C., reported in our last issue:—1, Mr. E. H. Leeder's 20-25-h.p. Simms-Welbeck; 2, Mr. H. S. Thomas's 10-12-h.p. Argyll; 3, Mr. H. G. Davies's 12-14-h.p. De Dion-Bouton; 4, Mr. T. J. Williams's 12-14-h.p. De Dion-Bouton; 5, Captain Hughes Morgan's 40-h.p. Weigel; 6, Captain Hughes Morgan's 45-h.p. Daimler; 7, Mr. T. D. W. Drummond's 14-h.p. Belsize; 8, Mr. W. Morris's 16-18-h.p. Darracq; 9, Mr. A. A. Jones's 14-16-h.p. Argyll; 10, Mr. A. J. Barn's 6-h.p. Siddeley; 11, Colonel Williams's 15-h.p. Humber; 12, Mr. T. J. Williams's 28-h.p. Daimler; 13, Mr. E. F. Sutton's 16-18-h.p. Darracq; 14, Mr. B. W. Valentine's 30-h.p. Beeston Humber. Mr. Leeder thus holds the silver challenge cup for one year and permanently possesses a miniature replica.

SCOTTISH MOTOR TRADE ASSOCIATION, LTD.

AT the last meeting of the Council of this Association at the Station Hotel, Perth, Mr. Thomas Shaw (Dundee) presided and several new members were elected.

Nearly thirty new members have been elected to the Scottish Motor Trade Alliance centres, one of which has now been formed for Aberdeen and Dundee.

IRISH.

WHILE the Irish A.C. has no objection to the closing of the coast road between Malahide and Portmarnock, the General Committee have

written to the Local Government Board of Ireland suggesting that those who live alongside the road should be exempt from the Order.

New members of the Club include the Marchioness of Conyngham, Capt. the Hon. C. Palk, his Honour Judge Wakely, Messrs. H. Malcolmson, A. B. Cairnes, W. C. Roche, J. G. Wilson, J. J. Smith, E. Fitzgerald, and R. Luker.

A REPORT of the petrol consumption trial of the Bury and West Suffolk A.C. reached us at the moment of going to press, and will be published in our next issue.

Mr. J. A. T. GOOD is the Club solicitor to the S.E. Auto-Cycle Association, particulars of the membership of which can be obtained from Mr. H. B. Renner, 31, Kidbrook Park Road, Blackheath, S.E.

CASES UNDER THE MOTOR CAR ACT.

EXCEEDING THE LEGAL LIMIT.

Five cases of exceeding the speed limit on the Alton road have been heard at the Farnham Petty Sessions, fines of £2 being imposed in each instance. Seven motorists have been fined sums of £2 each at the Chertsey Petty Sessions for excessive speed on the Bagshot road. A number of motorists have been charged with exceeding the ten mile speed limit on Bury Road, Newmarket. Fines of £3 were inflicted. Four motorists have been fined an aggregate sum of £9 for motoring too rapidly in the neighbourhood of Colchester. Fourteen motorists were mulcted in fines to the amount of £70 at the Kingston Police Court, on the 11th, for exceeding the speed limit on the Portsmouth road and in Richmond Park. At the Guildford County Petty Sessions, on Saturday, thirty-two summonses under the Motor Car Act were heard, and the fines amounted to £107 3s. The defence raised by Franklyn Ceallar, of West Kensington, who was summoned for having exceeded the speed limit, was that he was not driving the car at the time. The car was going on its own momentum with the clutch out. The chairman (Sir William Chance).—Were you steering? The defendant.—Yes. A fine of £3 and costs was thereupon inflicted. During the last few months the recognised fine at Lancaster on motorists exceeding a speed of thirty miles per hour has been £7 10s. plus the costs. On Saturday, however, a reduction took place, three drivers who had been alleged to have travelled thirty-one miles an hour through Garstang road trap south of Lancaster being each fined only £5 and costs.

A TRIPLE OFFENCE.

At the Brentford Police Court, Henry Markham, of Edgeware Road, Paddington, has been summoned for having driven a motor-car to the common danger in Bath Road, Hounslow, for not stopping after an accident, and for not having a licence. Mr. Barker prosecuted for the police, and said that the defendant was lately in the employ of Mr. Ivor Guest, M.P. Without permission he took a party of friends for a drive in the car. Returning at night, when near Cranford, he collided with a pony and cart, killed the pony, severely injured the occupants, left his car by the roadside, and ran away. The Chairman said the Court considered the case one of the worst that had ever come before them. The defendant would be fined £35 and prohibited from holding a licence for three years. In default of payment three months' imprisonment would be imposed.

DANGEROUS SPEED.

At the Nottingham Summons Court, on the day the cars in the reliability trial reached the town, a motor-cyclist was fined £5 for having, as was alleged, driven his machine at a dangerous pace on St. Ann's Well Road. He was riding in the direction of the police station when stopped by the officers.

DISMISSAL.

At Reigate Police Court, on Saturday, Arthur Cooper, chauffeur to Mr. H. C. Dean, of Worcester Park, a member of the Automobile Association, was accused of driving at a speed of thirty miles an hour along the Reigate road. Mr. W. Taylor-Parkes (Amery-Parkes, Macklin and Company) appeared to defend. The defendant had a speedometer fitted to the car with a maximum hand which at the time he was stopped showed twenty-four miles, but it was proved that this speed was attained before the measured distance was reached, the speedometer showing under twenty miles over the 220 yards. The method of signalling and timing was severely criticised, and after proof had been given that the speedometer was accurate, the chairman of the bench, in dismissing the case, remarked that it was not without its doubts.

A BAD BLUNDER.—REGISTRATION BUNGLE.

At Bromley (Kent) Police Court, on Monday, the chauffeur to Mr. J. W. Orde, secretary to the Royal A.C., was summoned for driving an unregistered car, and Mr. Orde was summoned for aiding and abetting him. The summonses were taken out at the instance of Mr. R. Davis, of Orpington. Mr. J. B. Matthews appeared to prosecute, and Earl Russell defended.

Mr. Matthews now asked the permission of the Bench to withdraw the two summonses under circumstances which he said were of great public interest and importance. When Mr. Davis sent the identification number to the London County Council it was found that the car registered under the number did not agree in its description with the one concerned in the complaint, the County Council's particulars referring to a 6-h.p. car, while Mr. Orde's was 30-h.p. to 40-h.p. After the summons was taken out on the supposition that the registration number had been illegally transferred, a communication came from the

L.C.C. explaining that the registration had been properly transferred, and Mr. Davis could only express his regret that the summons had been taken out. It appeared that the County Council had divided the registration department, so that its left hand did not know what its right hand was doing. Mr. Davis regretted that he had charged Mr. Orde with the offence.

Earl Russell asked the Bench to dismiss the summonses, and not simply to allow their withdrawal. Mr. Orde was at present away in connection with the reliability trials, but he had been open to access, and Mr. Davis could have ascertained what was necessary.

The Bench decided to dismiss the summonses, allowing £7 expenses between the two.

COMMON DANGER.

At Haywards Heath Petty Sessions, on Monday, a chauffeur was summoned for driving to the common danger at Cuckfield on April 6th. Superintendent Brooman asked for an adjournment, the chief constable being of opinion that the owner of the car should also be summoned. The case was thereupon adjourned for a fortnight, the defendant being allowed the costs of the day.

DANGEROUS DRIVING.

At the Steyning Petty Sessions, on Monday, two motorists were charged for driving motor-cars at dangerous speeds in the High Street, one being fined £10 and costs and the other £5 and costs. Notice of appeal was given in the first case.

On Saturday, at the Hereford County Police Court, Andrew Hamilton was summoned by direction of the Public Prosecutor in connection with a motor-car accident already referred to in our columns. Mr. J. S. Blankenssee, of London, was for the defence, and after the prosecution had been opened made a point that the brake was on for some distance prior to the mishap. On the question of alleged negligence he referred to a rule



The Two-ton Van recently supplied to the Derby Co-operative Provident Society by Messrs. Dennis Bros. through their agents, Messrs. Stareys and Woolleys, Ltd., Lower Parliament Street, Nottingham.

laid down by Mr. Justice Blackburn that the amount of negligence which occurred was something that could not be defined. It must be a great failure of duty to make him criminally responsible. In this case the defendant said he had done certain things which were precautionary things and he urged that the case of criminal negligence had not been made out. In the end the Bench sent the defendant for trial, the defence being reserved.

NOTIFYING CHANGE OF OWNERSHIP.

Messrs. J. E. Hutton, Ltd., were summoned before Mr. Marsham, at Bow Street (London) Police Court, on Tuesday, for failing to notify to the L.C.C. the change of ownership of a motor-car sold by them. Mr. Muskett, who supported the summons on behalf of the Commissioner of Police, said that the proceedings were taken under Article IV. of the Motor Car Order of 1903. According to that order the person who sold a motor-car, or the person who purchased it, should notify the change of ownership to the Council with whom it was registered, or cancel the existing registration. On the evening of April 16th P.s. Davis was on the Bath road, at Longford, Middlesex, when he saw a motor-car approaching him. He signalled to the driver to stop, but he went on without taking any notice. The sergeant saw that the number on the back plate of the car was L.N. 2311. Sub-Divisional Inspector Smith went to the offices of the L.C.C. and found that the defendants were the registered owners of the car bearing that number. He afterwards called at the defendants' establishment, and was informed that the car in question was sold by them in July, 1907, to Mr. Kilner. Inquiries were made at that address, and it was found that Mr. Kilner left there a long time ago. Mr. Muskett contended that the vendor of the car should see that it was no longer registered in his name. Mr. Marsham said he quite agreed, although, of course, the vendor would be free from responsibility if he ascertained that the purchaser had promptly altered the registration. He ordered the defendants to pay a fine of £5 and £3 3s. costs.

FORTHCOMING EVENTS.

JUNE.

- 20th (Sat.).—Meet of the Hull Auto Cycle Club and the Lincolnshire Motor Cycle Club at Brigg.
Annual Hill Climb of the Bristol and Gloucestershire A.C.
Lunch of the Kent A.C. at Dover.
Herts C.A.C.'s climb for cars at Aston Hill.
- 26th (F.).—Welsh A.C. reliability trial for motor-cycles.
- 27th (Sat.).—Saltburn beach races.
Buxton meet of the Manchester, Sheffield, and Lincolnshire clubs.
Members of the Cheshire A.C. will participate in the Gymkhana of the Manchester A.C.
Visit of the Essex C.A.C. to Audley End.
Meet of the Kent A.C. at Holwood by permission of the Earl of Derby.
- 28th (Sun.).—Southend M.C. run to Grand Hotel, Clacton.

JULY.

- The Land's End to John o' Groat's Trial of the Auto C.C. will be held.
- 4th (Sat.).—Derby A.C. challenge cup competition.
Meet of the Kent A.C. at Gravesend.
Brooklands A.R.C. meet.
Cheshire A.C. gymkhana.
- 6th (M.).—Grand Prix A.C.F. (Voiturette section).
- 7th (Tu.).—Grand Prix A.C.F. on the Dieppe Circuit.
- 8th (W.).—Meet of the Cambridge A.C. at Waresley Park by invitation of Col. Duncombe.
- 9th (Th.).—Meet of the Ladies' A.C. at Hanworth Park, Middlesex.
- 10th (F.).—Start of tour of motor factories in the Midland by the I.I.A.E.
Welsh A.C. motor-car reliability trials.
- 11th (S.).—Provincial meet of the R.A.C. at Hereford. Lunch at the Green Dragon Hotel; visit to Ledbury Park, and dinner at the Assembly Rooms.
Essex C.A.C. gymkhana at Brentwood.
Aston Hill climb of the Hertfordshire C.A.C.
Essex M.C. gymkhana at High Beech.
Leicester A.C. hill climb at Kettleby.
- 16th (Th.).—Club meet of the Notts A.C. at the Hop Pole, Ollerton.
- 18th (Sat.).—Annual Gymkhana of the Herts C.A.C. at The Grove, Watford, by permission of the president, the Earl of Clarendon.
Gymkhana of the Kent A.C. at Maidstone.
Meet of the Liverpool and Cheshire A.C.'s at Delamere.
New Forest and Dorset A.C.'s joint hill climb.
Hill Climb of the Essex C.A.C.
- 20th (M.).—Entries close for the O'Gorman trophy.
- 20th and 21st.—The R.A.C. dust trial.
- 23rd (Th.).—Gymkhana of the Cambridge A.C. at Chippenham Park.
Hill climbing competition of the Hull and East Riding A.C.C.
- 25th (Sat.).—Petrol Consumption Tests of the Motor Cycling Club.
Annual Open Hill Climb of the Midland A.C. at Shelsley Walsh.
Committee meeting of the Kent A.C. at Herne Bay.
Motor Union Provincial meet.
Cheshire A.C. hill climb.
Leicester A.C. gymkhana.
Lancashire A.C. open hill climb.
- 26th (Sun.).—Southend M.C. run to Coach and Horses, Quendon.

AUGUST.

- 1st (Sat.).—Brooklands A.R.C. meeting.
- 2nd-3rd.—Newcastle and District M.C.C. reliability.
- 3rd (M.).—Brooklands A.R.C. meet.
- 8th (Sat.).—Visit of the Kent A.C. to Brasted Chart.
- 12th (W.).—A.C. of Belgium—Circuit des Ardennes and the Liedekerke Cup race.
- 22nd (Sat.).—Annual race meeting of the W.A.C.
Invitation of Sir D. Salomons to the Kent A.C. to visit Tunbridge Wells.
- 23rd (Sun.).—A. C. du Rhone Mont Pilat trial.
- 29th (Sat.).—Meet of the Lincolnshire Motor Club at Lincoln.
Mont Ventoux hill climb of the A.C. Vauclusien.
- 30th (Sun.).—Southend M.C. run to Great White Horse Hotel, Ipswich.

SEPTEMBER.

- 4th and 5th.—Reliability Consumption Trial of the Essex C.A.C. at Norwich in connection with the R.A.C. provincial meet.
- 5th (Sat.).—Aston Hill climb of the Herts C.A.C.
Provincial meet of the R.A.C. at Norwich.

LIGHTING-UP TIMES—LONDON.

| | | | | | | |
|----------------|----|-----------|----|-----------|----|-----------|
| June 20th—9.18 | .. | 22nd—9.18 | .. | 24th—9.19 | .. | 26th—9.19 |
| " 21st—9.18 | .. | 23rd—9.18 | .. | 25th—9.19 | .. | 27th—9.19 |

To find the approximate lighting-up time in June for Birmingham 13 minutes should be added to the above times, 17 for York, 21 for Manchester, and 43 for Glasgow.

COMPANY NEWS.

SOCIÉTÉ DES AUTOMOBILES "BELLONE" LTD.—Capital, £16,000. To take over the business of manufacturers of automobiles carried on by M. Louis Bouillant at 137, Boulevard Ney, Paris. No initial public issue. Registered office, 56, Cannon Street, E.C.

CHARGE DISMISSED.

THE coroner's jury having exonerated Albert Spilling, a chauffeur, who was mentioned in connection with the Redbourn motor fatality. The police offered no evidence on Saturday when he attended the St. Albans Divisional Sessions. He was therefore discharged.

As a sequel to a recent motor-car fatality at Barston, George Reid, a chauffeur employed by Mr. Joseph Horton, of Birmingham, was charged at Solihull on Tuesday with driving his car at a dangerous speed at a cross-road. The car ran into a cyclist, who sustained injuries from which he died. Reid called witnesses to prove that he was not travelling at more than ten miles an hour and the magistrates dismissed the case.

AUTOMOBILE ACCIDENT.

AN inquest was held at Chiswick on Tuesday, on the body of Beath Redford, aged nine and a half years, who was knocked down and killed in the High Road, Chiswick, on Sunday by a motor-car owned and driven by the Hon. Cecil Bingham. It was shown in evidence that the little girl slipped owing to the greasy state of the road and fell in front of the motor-car, so close to it that it was impossible for Colonel Bingham to pull up, although at the time he was only travelling at about five miles an hour. Mr. J. S. Blanckensee represented the Colonel and the jury returned a verdict of "Accidental death," exonerating Colonel Bingham from blame.

BUSINESS NEWS.

THE Daimler Company will shortly occupy as additional London showrooms two of the shops on the Piccadilly side of the new Piccadilly Hotel, W.

LONDON users of the Stepney wheel will be glad to hear that the showrooms of the Stepney Wheel Company, situated at 168, Great Portland Street, W., are now open, so that in future motorists in the metropolitan area will be able to procure spare wheels without delay. In view of the increasing number of orders received by the company from the Colonies and abroad, they are compiling a private code specially suitable for their requirements, which will be ready in the course of a few days, and which will be sent to all clients outside England.

THE victory achieved by Nazzari on the 90-h.p. Fiat at Brooklands on Whit Monday, in which he touched the record speed of 120 miles per hour, was achieved on Pratt's motor spirit.

IN connection with the Argyll cabs supplied by the Meter Cab Company for the suite of M. Fallieres during the recent visit of the French President to London, Commander Howard Kelly has written from the Admiralty as follows:—"I am much obliged for all the trouble you have taken, and the whole of your contract has been most satisfactorily carried out. I cannot speak too highly of the ability and behaviour of the three drivers who have been mostly specially attached to us, and the appearance and turn out of all the cars we have used have been the admiration of every one."

AT the Whitsuntide Race Meeting at Brooklands, the winners of seven races out of nine used the Shell motor spirit of the British Petroleum Company, Ltd.

REPLYING to J. H., the Velure paint referred to in the last issue can be obtained from Messrs. C. Chancellor and Co., 13, Clerkenwell Road, London, E.C.

THE KEMPSTALL TYRE COMPANY OF EUROPE, LTD., have just issued a new price list which gives full particulars of the Kempshall non-skid tyres, the cost of retreading, the inflation pressure recommended, &c.

NOW that motorists are conversant with the economy of having renovated tyres that formerly were ineffectually scrapped, it has become impossible for the Dunlop Company's Birmingham Works to handle all the repairs of the concern's clients, and the establishment of a fully equipped repairing branch in London should be welcomed by Metropolitan motorists, if only for the saving of the time heretofore absorbed by the passage to and from the Midlands of damaged tyres. The new Dunlop works, which will be opened shortly, are at Acton Vale, W., within fifteen minutes' drive of the centre of town, and are competent to deal with the smallest or largest repairs with the utmost dispatch.

THE Nottingham and District Motor Cycling Club held its first meet on Saturday, taking a run to Newark.

ON Saturday last the members of the Kent Automobile Club were entertained by Mr. and Mrs. T. L. Boyd at their residence, North Frith, Tonbridge.

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COMMENTS.



WHEN the Incorporated Association of Municipal and County Engineers visited Leicester in 1901 Mr. E. G. Mawbey, who has done much for the Leicestershire A.C., was president of that useful organisation. The Leicestershire automobilists then organised a motor-car run in the county for the entertainment of the Engineers, and the

Nottinghamshire and Midland Clubs sent no fewer than 40 cars for that purpose. Now that the Incorporated Association is meeting at Nottingham this week-end the Leicestershire and other clubs are reciprocating the attention of seven years ago, and responding to the request of the Nottinghamshire Club to render assistance in organising a similar run. To-day (Saturday) the Association will visit Welbeck Abbey by motor-cars, and there will be a picnic lunch in the Russian log hut at the Dukeries, to the success of which the splendid way in which motorists are lending their cars will materially contribute.

Names for Racers.

ALTHOUGH there has been no great rush of motorists to register names for their cars when racing on the Brooklands track, it is generally thought that the practice will steadily be followed. Being of such opinion, the committee of the Brooklands Club has issued a new regulation with regard to the matter, providing for a ten shilling registration fee and for the entry of approved names on the supply of the following particulars with regard to the cars, viz., the cylinder bore, the cylinder stroke, the number of cylinders, the engine number, and the chassis number of the car, and also an undertaking that the owner will not change the cylinders of the car nor alter their size without giving notice to the Clerk of the Course of his intention of so doing. Upon such change being made, the Clerk of the Course shall cancel the registered name. When entered for races, cars with registered names will be given in the race-card by the name of their maker, without mention of horse-power, with the registered name in inverted commas following the maker's name.

Change of Ownership.

LAST week we reported a case in which a motor-car agent was summoned for failing to notify to the London County Council the change of ownership of a motor-car sold by him. After hearing counsel for the police and also the defendant, the Bow Street magistrate inflicted a fine of £5, regarding the case as a very important one. Apparently Mr. Marsham accepts the view of the Commissioner of Police that "the man who sold a car should see that it was no longer registered in his name," although this seems hardly the right interpretation to be placed on Article IV. of the L.G.B. Order issued in pursuance of the Motor Car Act of 1903. While this distinctly states that notice of a change of ownership shall be given "either by the new or the old owner to the

Council with whom the motor-car is registered," there is no suggestion as to which of the parties is to hold responsible for the notification; hence the defendant in the recent action naturally felt aggrieved, and we would emphasise the point as one which the Motor Union and other organisations should bear in mind when watching the progress of future automobile legislation. In the counties the surveyors have occasionally issued official advertisements directing those who purchase motor-cars to see that the change of ownership is properly communicated to the authorities, but they have not taken the course that now seems to be the policy of the Commissioner of Police for the Metropolis, viz., to summon, and with success, those firms who have sold cars to new owners, both parties omitting—inadvertently in ninety-nine cases out of a hundred—to make the change known to the registering authority.

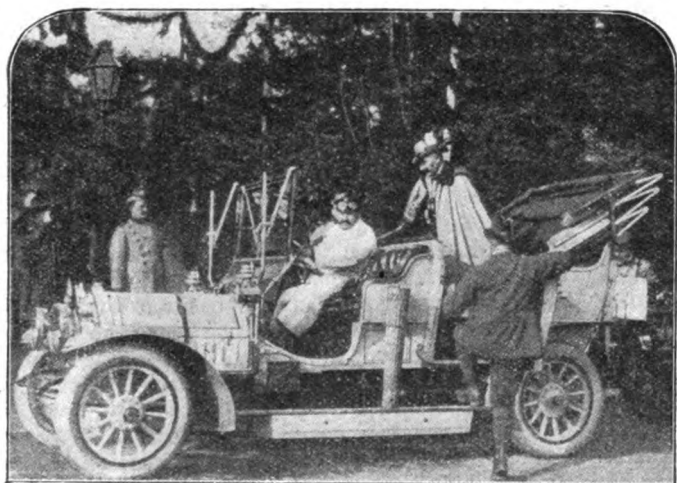
Watford's Proposed Speed Limit.

INQUIRY has taken place into the application of the Hertfordshire County Council for a ten-mile speed limit to be imposed on motor-cars on a large number of roads in the urban district of Watford. Several gentlemen who confessed that they had never had experience of practical motoring supported the application, and Mr. Rees Jeffreys, on behalf of the R.A.C. and the M.U., gave uncompromising opposition to the application in its present form. Mr. C. McWhirter, of the Hertfordshire A.C., who had gone over the whole of the scheduled roads, had come to the conclusion that if an order was granted for Watford similar steps would be justifiable for all towns and villages throughout the country. The Vicar of Leavesden declares that the ten mile limit might lead to accidents rather than obviate them by preventing motorists spurting to get out of difficulties. Several doctors also gave evidence, and subsequently an inspection of the roads was made by the Local Government Board Inspector, accompanied by various representatives of both sides of the question, and it is thought that the result will probably be an imposition of a limit of about one-seventh of the total length of streets included in the original application.

Motor-'Bus Traffic.

THE meeting of City men held on Monday to direct public attention "to the excessive danger, noise and inconvenience to which all who use the streets of the City are now subjected from motor-'bus traffic" brought together a goodly number of prominent citizens, who, having adopted a resolution expressing "the appreciation of the benefits that have accrued from the introduction of motor traction in the traffic of London," went on to deplore the noise, speed and fumes which characterise "a large proportion of the motor-buses, traction engines, and other power-drawn vehicles." They called upon the Government to provide the police authorities with new powers to deal with a condition of things that was unknown in the days of their grandfathers. The protest was not allowed to be made without the voice of the motor trade being heard, and Mr. Sydney Morse, on behalf of the Society of Motor Manufacturers and Traders, pleaded for toleration and fair play on the part of objectors, undertaking to say that the evil features complained of would gradually disappear. So far as the powers

of the police are concerned, he was able to show that with regard to the motor-buses they have already imposed restrictions which have had a very adverse effect on the prosperity of some of those concerned in the industry. Doubtless those who had convened the meeting feel very keenly on the subject of noise, and especially in the narrow streets of the "one square mile," but patience and time will do much to stay their objections. Those responsible for motor-buses recognise that the evils are attributable to defects in construction as well as in operation. It would be well if engineers would give attention to the matter of lubrication, about which hang many of the malodorous fumes that offend the public sense of smell. The daily use of the motor-bus has shown us how these vehicles vary with regard to this important matter. Some require little attention from the driver in the matter of lubrication, and when the passengers alight they do not experience a shock to the olfactory nerves. But in many cases the drivers are to blame, using oil in excess to save other troubles when indulging in high speeds or whenever anything disturbs the even tenour of their way. Then the noxious exhaust occurs, to the disgust of the passenger in the motor-car as well as the man in the street. Greater experience in driving as well as further experiments with regard to the design of parts, so as to avoid the dropping of oil that now takes place, will mitigate the terrors of the motor-bus of to-day.



The Kaiser starting for a spin on a Horch Car.

A Scale for Fines.

COL. W. H. CAMPION, C.B., having served his country with distinction in the Crimea and Indian Mutiny with the Highlanders, is now dispensing justice as chairman of the Haywards Heath Petty Sessions. This is no mere caprice, but the matter has been reduced to one of rule-o'-thumb, and the other day, when the Bench had a special sitting to deal with nearly fifty motorists, the scale of fines was gravely announced by the gallant colonel as follows:—Just exceeding twenty-five miles, £3; from that speed up to twenty-eight miles, £5; and from that up to thirty miles, £7 10s. Whether the rate is 25s. per mile above that speed was not explained, but that the new tariff is profitable may be judged from the fact that over £300 was received in fines on the day it was publicly announced.

A Tollgate Trouble.

THE Lancashire A.C. and the Motor Union have been jointly endeavouring to secure that the local authority should take over the direct road from Preston to Lytham across Freckleton Marsh, but the graziers who receive the tolls out of which the road is supposed to be kept have so far made successful opposition. One result is that the automobile organizations

are now recommending their members to avoid the tollgate by using the alternative road through Kirkham when journeying from Preston. In accordance with this policy the Lancashire Automobile Club, which has usually held the opening run of the summer season to Lytham, has just taken its first annual run to Southport. Should such a policy be generally adopted the people of the former place will probably join with the motorists in helping to secure the freeing of the tollgate.

Scotch Justice.

WHAT is said to be the first case of the kind heard in Scotland was reported in a recent issue. The driver of a car was summoned for failing to give audible and sufficient warning of its approach by a bell or other instrument required for the purpose. The judgment of the Sheriff was interesting, and, for the occasion, justice came into line with common sense. The section with which he was concerned was Article 4, Sub-section 5, of the Motor Cars Order of 1904. This pointed out that, "whenever necessary," the driver should blow his horn. He (the Sheriff) had to deal with the legal construction of that clause, and to attach a meaning to the words "whenever necessary." The Legislature, in his view, had purposely avoided any hard and fast rule, and had introduced words which were undoubtedly vague. In the special circumstances of the particular case there had been no necessity for the chauffeur to sound his horn, there being no pedestrians about. The wise rendering of the Scottish Sheriff suggests a combination of common sense with legal acumen that should lead to respect for the law in that part of the world.

'Ware of Windermere.

INDIVIDUAL threatenings against the prosperity of towns and resorts are of little concern, but collective withdrawal of custom are a serious menace, which should be avoided as far as possible. That probably will be the view of the hotel proprietors and others in the Lake District, when they realise that the absence of forty motor-cars with their full complements of passengers on a recent week-end was really intended as a protest against the attitude of the county magistrates and police of Lancaster towards motorists. This action has meant a financial loss of between £300 and £400 to the district, and is best explained in the intimation issued to the members of the Manchester A.C. by Mr. J. B. Thistlethwaite, the secretary, as follows:—The committee regret that they have thought it advisable to cancel the arrangements for this run. The complaints of members as to the action of the police and magistrates in some of the districts to be traversed make the committee think it inadvisable to hold any function in the direction of Windermere at present.

A Census of Calamities.

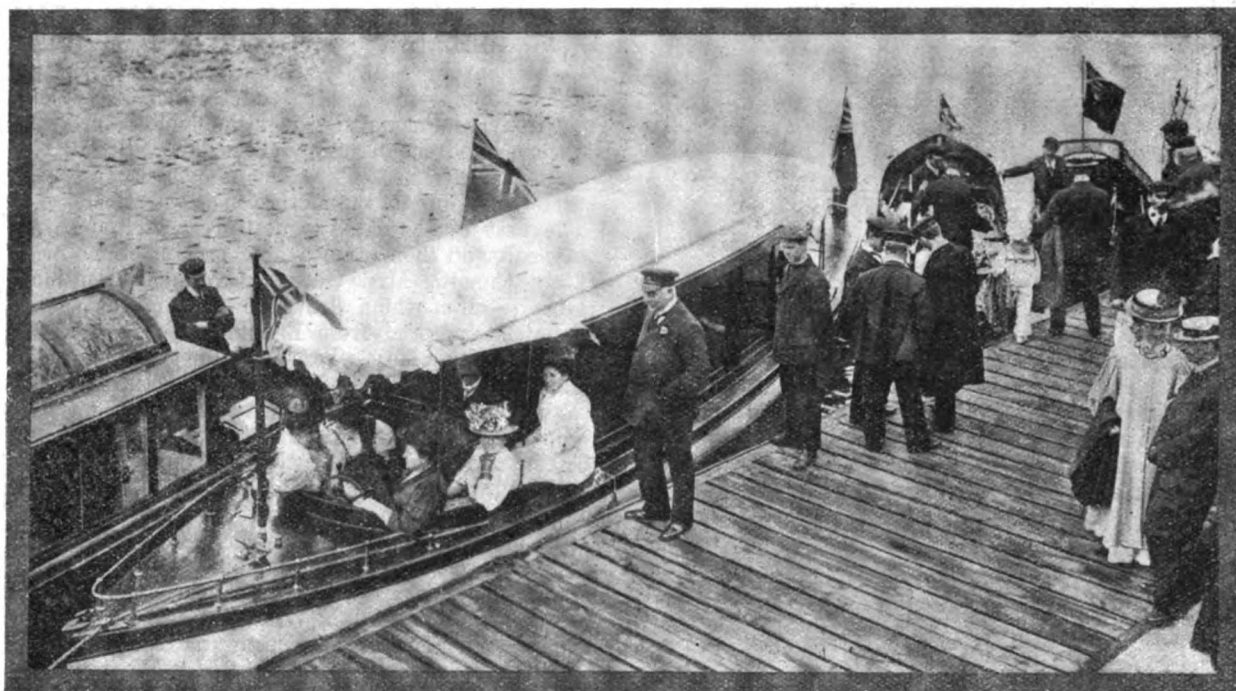
At the present time the Home Office is engaged in collecting information with regard to the number of accidents caused by motor vehicles throughout the country. They are also impressing upon the police in every district the necessity of securing a strict observance of the existing law with regard to the speed of motor vehicles. In the House of Commons Mr. Herbert Gladstone has several times recently emphasised his intention of securing a thorough census of motor accidents. Not only would we suggest that motorists should continue to be careful, but also that they should point out to local M.P.'s that any returns should be of the comparative order, showing not only the number of accidents in which automobiles are involved, but also those due to the vagaries of horses and those generally associated with animal-drawn vehicles. In each case, too, particulars of the actual number of vehicles on the road should be given, if the numbers are to have any real value in estimating as to the respective dangers associated with the two classes of traction now engaged on the highway.

The 2,000' Mile Trial.

THE long pilgrimage is practically over, and the tired drivers, mechanics, observers and others accompanying the cars are heartily glad that its termination is not far off. It has been a wearisome business, and the daily records have presented no features of interest; in fact, they have sometimes proved misleading. Motorists will, however, watch the conclusion with greater keenness, and the results will be awaited with interest. In our next issue these will be fully detailed, and the scene at Brooklands described and illustrated, with a view to assisting our readers to obtain a fair estimate of the performances of the various cars engaged in the event.

A Charming Day on the River.

A CHARMING day was spent on the occasion of the annual Thames meeting of the British Motor Boat Club on Tuesday of last week. About fourteen boats took part in the procession from Kingston, the admiral, Admiral Sir Wm. Kennedy, and Col. W. J. Bosworth leading on the "Ravissante."



The British Motor Boat Club's Annual Thames Meeting.—Mr. Charles Cordingley and party on his boat "Ayasha." Colonel Bosworth is seen standing by the vessel.

They cruised down the river as far as Teddington, and on the return tea was enjoyed at the residence, at Hampton Wick, of the vice-commodore, Mr. L. M. Waterhouse, who, with his charming wife, gave most cordial welcome. The craft then got under way again and paid a visit to the beautiful houseboat the "Santa Maura," in the Ditton Reach, where the host and hostess received the guests most hospitably and in a manner that contributed greatly to the pleasure of the afternoon. Later the boats returned to the landing-stage at Nuthalls, Kingston, and a large number of members and friends dined together at the conclusion of a most enjoyable day.

Suggested Impounding of Cars.

HARDLY a day passes without questions relating to automobilism being put to Government Departments in the House of Commons, and it is a curious coincidence that at the present time the Minister whose duty would be to answer most of them is laid aside through his effort to rescue a policeman from being entrapped between two automobiles. In

the absence of Mr. John Burns, therefore, his Under Secretary, Mr. C. F. G. Masterman, had to deal with a suggestion made by Mr. G. Hardy on Tuesday as to the desirability of "impounding cars abusing the unwritten law and violating the provisions of the statute law." Such idea is no more likely to commend itself to a Government Department than to any unprejudiced observer of affairs, and Mr. Masterman pointed out that the innovation could not be made without legislation. And even if an Act to that effect was adopted, the difficulties in the way of its execution would be great indeed—greater probably than the Local Government Board would be prepared to undertake.

Dust

THE Dust Trials which the R.A.C. are to hold on the Brooklands Track on July 20th and 21st—providing, of course, that the weather is favourable—have already been referred to in our columns. It has now been decided to use a fine limestone dust and possibly dry leaves on the track; while another decision will be of particular interest to those interested in steam cars. Last year the White and Stanley vehicles showed

such good results as regards dustlessness that it has now been decided to limit the 1908 trials to petrol cars only. In order, however, that steam cars should obtain full public credit for their merits in this respect they will be allowed to run, and will be bracketed with the actual competitors. Last year's winners are being asked to run their cars as trial vehicles in Classes 1 and 2, the makers and inter-club competitions respectively, and they have, we understand, consented to the arrangement by which they will not be eligible for the awards this year.

ON Tuesday the magistrates at Harrogate decided that, in the absence of special regulations with regard to motor-cabs, they must be dealt with under the ordinary bye-laws.

AT Shoeburyness, beyond Southend-on-Sea, Mr. Wilkinson has opened a motor garage, which is already proving useful to the officers attached to the gunnery school in the locality.

THE Paignton District Council has resolved to adopt certain sections of the Public Health Acts Amendment Act, which will give them power to deal with the motor-cars that persist in travelling along the sea-front during the season.

THE BUICK 15-20-H.P. CAR.

THE other day we had a short trial run on one of the latest Buick-15-20-h.p. cars, of which an illustration is given in Fig. 1. The vehicle, which is now being handled in this country by a new concern known as Buick Motors, at 45, Great Marlborough Street, London, W., of which Mr. F. Eason is the manager, is only being made in one pattern. As will be seen from the illustration, this takes the form of a light two-seated touring car, with a removable emergency seat at the rear.

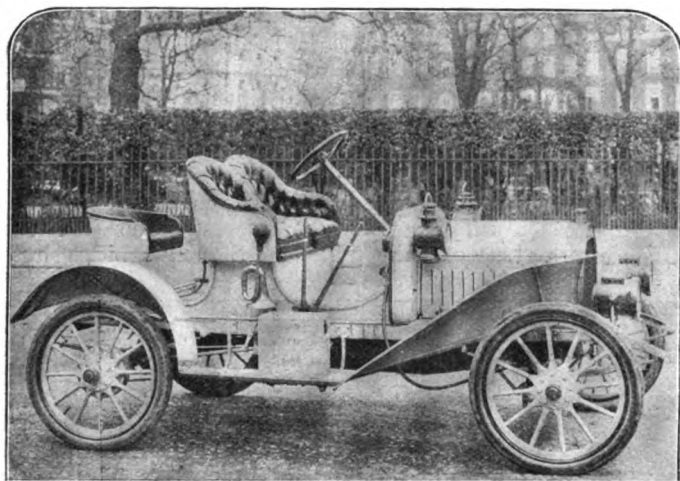


Fig. 1.—The Buick 15-20-h.p. Car.

The motive power is supplied by a four-cylinder vertical engine (Fig. 2); the cylinders, which are cast in pairs, are $3\frac{1}{2}$ in. bore by $3\frac{1}{2}$ in. stroke. The valves are situated in the cylinder heads, and are operated by overhead tappets and rods worked off a single cam shaft. The ignition is by trembler coil and accumulators, the current being passed to the different cylinders by means of a high-tension distributor. A force-feed lubricator supplies oil to all the main bearings and to the engine crank case. The crank shaft is supported in the upper half of the aluminium base

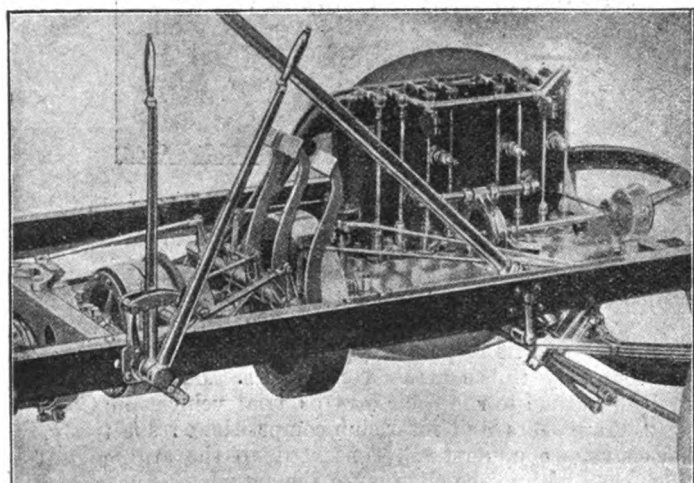


Fig. 2.—View of Forward Portion of Chassis of the Buick 15-20-h.p. Car.

chamber, enabling the lower portion to be readily removed when necessary.

The change-speed gear is of the planetary or epicyclic type, giving two speeds forward and a reverse. The slow speed and reverse motion are obtained by pedal, while the top speed, which gives a direct drive, is engaged by a lever at the right of the driver's seat. The gear is mounted on an extension of the engine shaft, the final transmission being by a universally-jointed shaft, and bevel gear to a well-designed live axle. The engine and gear

are supported on a sub-frame carried by the main one, which is of pressed steel; the suspension is by means of semi-elliptic at the front and double elliptic springs at the rear. Both hand and foot operated brakes are provided, while the ignition and throttle levers are mounted above the steering wheel in the approved way. The wheel base of the car is 7 ft. 4 in., and the track 4 ft. 8 in., the 30 in. road wheels being shod with 3 in. tyres.

During the course of the trial run, to which reference has already been made, we had ample evidence not only of the quiet running and speedy qualities of the new vehicle, but also of its hill-climbing capabilities. As a matter of fact the lowest speed is only required at starting, the car being able not only to attain a notable turn of speed on the top gear on open country roads, but of negotiating the crowded traffic of London thoroughfares without it being necessary to change gear. Turned out with lamps, horn, and tools, ready for the road, at an extremely moderate price, the new vehicle is one which should meet the requirements of a large section of the motoring public and should quickly become a popular type.

SOCIETY AND THE CAR.

A BRILLIANT week-end has again demonstrated the favour with which Royalty and Society regard the motor-car, and to the Garden Party at Windsor on Saturday, and along all the fashionable resorts of the Thames Valley, hundreds of automobiles conveyed "fair ladies and brave men." Never before has the famous Long Walk at Windsor been given up to the motor-car as was the case on Saturday. The first of the King's guests reached the royal borough by taxi-cab, and then came a long stream of motorists, headed by Lady Cunard, Mrs. George Cavendish Bentinck, and Lord Iveagh—all of whom drove down from town. The Rev. R. J. Campbell motored from Enfield—or, rather, his car was driven therefrom by a lady whose skilful negotiation of the throng of traffic leading to the Castle was much remarked upon. Having set down the pastor of the City Temple she turned—with the crowd of other drivers of cars—into the Royal Mews, on into Park Street, and into the Long Walk, where the automobiles were parked by permission of His Majesty. The Marquis and Marchioness of Cholmondeley motored over from Datchet, where they are spending the summer. Another arrival by motor-car was Lord Roberts, who, in addition to being a Field Marshal of the Empire, is president of the Berkshire Automobile Club. His car stopped on the hill in Windsor leading to the Castle, and the gallant soldier finished his journey on foot. Probably a thousand of the nine thousand guests of His Majesty arrived by automobiles—demonstrating to the Indian potentates among the guests the favour with which British Royalty and Society regard the car. The Garden Party over, some time elapsed before the motorists were driven away, and the Windsor sight-seers held a review of automobilism in the streets of the town. One or two of the cars were found *en panne* on the road to London, notably that of the Princess Henry of Battenburg, which broke down at Twickenham in the evening. The Princess accepted the situation with an air of gracious philosophy, and remained seated until another was obtained to convey Her Royal Highness to her destination.

On Sunday the King and Queen, with the Prince and Princess of Wales and the children of the latter, spent the afternoon at Virginia Water, whither they had motored. Seven motor-cars were engaged in the conveyance of the Royal party.

Never before had so many motor-cars been seen at Ascot as were present this year, and on one day among those who journeyed down on their Daimler cars were the German Ambassador, his Excellency Count Paul Wolff Metternich, Sir Frank Swettenham, Lady Kirkpatrick, Colonel Adamson, and Sir W. Gilbey.

Motor-cars were much *en evidence* on the occasion of the wedding of Miss Reid and the Hon. J. Ward in London on Tuesday. Among the presents to the bride was a Renault motor-car, the gift of Mr. and Mrs. Whitelaw Reid.

GOSSIP FROM PARIS.

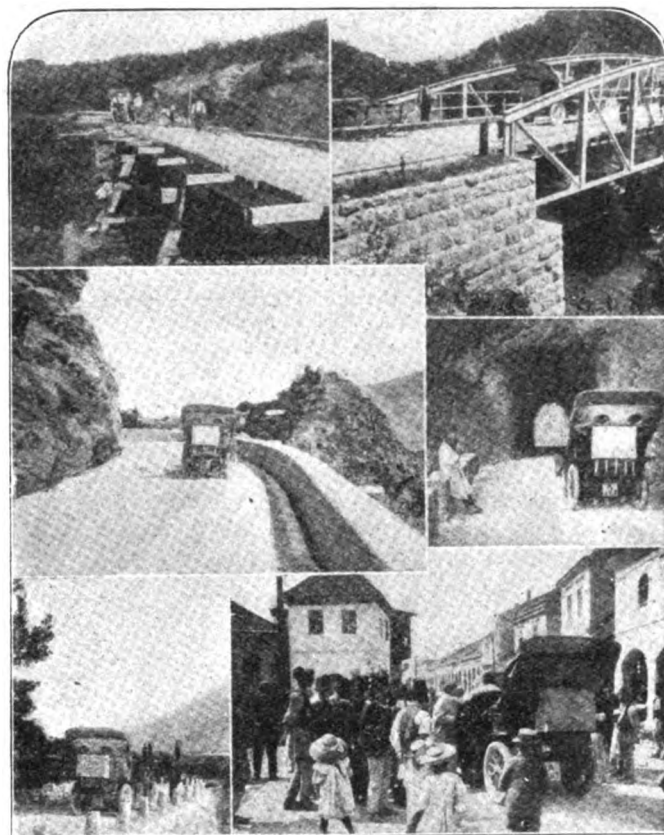
"THOUGH I don't expect to win the race, I will bet you two to one I beat Nazzaro's time last year." Those were the parting words of a driver who will figure in the Grand Prix race on July 7th. He had taken me out on his racing machine, which is certainly very fast. I had tried five or six times to take the speed of the car for a kilometre when we were going at full speed, but I fear I was not a sufficiently experienced hand at the work, for while once I calculated we were going at 150 kilometres an hour, a few minutes later, when we seemed to be going just as quick, my calculation worked out at no more than 99 kilometres. It is really very difficult to say what will be the average speed of the winner of the race, and it is just for that reason everyone is racking his brains with abstruse calculations which, after all, are based on conjecture. The matter, as I have said before, has been occupying the minds of motorists for a long time past, and in proportion as the date for the race approaches it is becoming the all-absorbing subject of conversation among those who take any interest in the great annual international contest. Very many bets have been made on it, and, if the majority of the drivers are to be believed, the speed will be higher than at any previous international race. Nevertheless it must not be forgotten that the bore of the four-cylinders is limited to 155 mm., and that the minimum weight is fixed at 1,100 kilogs., while formerly the bore of the cylinders was unlimited, and the maximum weight of the car was not allowed to surpass 1,000 kilogs. All the cars will therefore this year be heavier than last, and the bore of the cylinders will be much smaller than that of many of the racing motors of 1907. Consequently, if Nazzaro's time is beaten by several or even a few of the competitors, it will demonstrate a very considerable progress in the make of the motors and general machinery of the cars.

THE aeronautic world is on the tip-toe of expectation, so many things have been announced to come off within the next few weeks, but whether they will really materialise is quite another question. M. Delagrangé may realise his boast that he will, before he leaves Milan, remain on his aeroplane in the air half an hour at least, and Mr. Henry Farman may fly up in the air to the height of 30 or 40 metres (131 or 164 ft.), thus beating the unintentionally high flight effected a fortnight ago by M. Robert Esnault-Pelterie. Then there are at least half a dozen other ambitious aviators whose machines are now ready for trial, and who are all the more convinced they will achieve wonders because they have never yet left the ground. But the greatest of all the sensational events which are looked forward to with such keen interest is the promised flight of Mr. Wilbur Wright. That, indeed, will be an event which will count in the annals of aviation, whether he succeeds or whether he fails. Mr. Wright has to fly at least thirty-one miles in an hour twice in the same day. When he has done that M. Lazare Weiller will pull out his pocket-book and hand him the coveted cheque of £20,000. The American aviator seems to be confident of success, but in his conversation with Mr. Henry Farman and other experts he has not divulged the secret which he thinks will enable him to perform the wonderful feat and pocket the money.

HOWEVER that may be, everybody acquainted with the capacities of the French aeroplanes is astonished Mr. Wilbur Wright should have accepted so circumscribed a space as the Le Mans race-field for his performances. If his experiments are successful, it will be clear that he really does possess a secret unknown to the rest of the world. He promises to fly during an hour on an aeroplane with no larger bearing surface than that of the Delagrangé or Farman machines, and it is to be propelled by a motor having no more than half the horse-power of those employed by the French aviators. Then the Le Mans race-field is only about 2,700 feet long by 1,000 feet broad at most. It is encumbered with trees and railings, and, so far as I know, those obstacles are not to be removed. Therefore, to fly as he says Mr. Wilbur Wright will have to ascend at once to a considerable

height and then remain circling overhead above the trees, and perhaps over the neighbouring fields, for sixty minutes at least, and to repeat that feat the same day. If it is accomplished, the spectacle will be worth not simply a couple of hours' journey in the train from Paris but a voyage round the world.

A YET greater marvel than even the promised flights to be made by Mr. Wilbur Wright, in France, and by his brother in America, is said on good authority to be feasible. And it certainly is not the "premier venu," as the French say, who declares he has accomplished it. No, it is no less a personage than M. Marcel Deprez, Member of the Academy, who affirms he has realised the stationary suspension in the air of a "body" heavier than the air without that body being attached to anything. The announcement of this discovery or invention, whichever it should be called, was contained in a note signed by M. Deprez himself and read to the Academy of Sciences at its last



MOTORING IN BOSNIA.

A Temporary Bridge near Novi.
On the Heights of Spalato.
Near Duare.

A Halt at Urbastal.
A Tunnel near Urbastal.
The Interest of the Natives.

[Allgemeine Automobil Zeitung.]

sitting by M. Darboux, the permanent secretary. No particulars of the "body" were given, but if the application of the principle of its suspension is easy, the prize of £400 quite recently offered by M. René Quinton for the first aviator who shall remain in the air on a flying machine, without the use of any motive power and without descending more than 50 metres, may soon be won.

MARNEY.

FREQUENTERS to the Hut, at Wisley, Surrey—and they are many—will hear with much regret of the death of Mrs. Pullum, the wife of the manager of the hotel. Her end was peaceful, and the deceased lady passed away with her sorrowing family around her. In his affliction the popular manager has some consolation in having a winsome daughter, who has for some time past borne the burdens of management.

B

A NOVEL INDICATOR.

An ingenious arrangement, by means of which the driver of a motor-car can give some indication to following vehicles of his intention to stop or to turn, is described in a recent issue of the "Omnia," of Paris. As will be seen from the general view (Fig. 1) it is fitted in conjunction with the rear number plate;

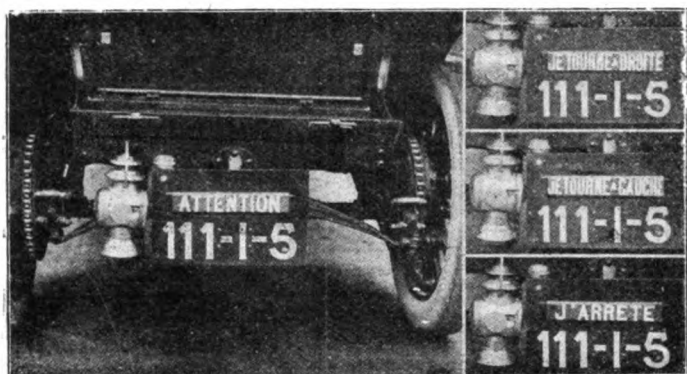


Fig. 1.

as a matter of fact the latter is of special design, having at the rear a box in which is contained a simple mechanism and a four-sided indicator, any one face of which can be brought into line with a corresponding slot in the number plate. The indications given are (1) Attention, (2) J'arrête (I am stopping), (3) Je tourne à droite (I am turning to the right, and (4) Je tourne à gauche (I am turning to the left). Fig 2 shows how the device is operated from the steering wheel by the lever A acting through Bowden wire connected to the lever C, which in turn is attached to the sector E; the latter engaged with a pinion F on one end of the indicator I, 1, 2, 3, 4. By moving the lever into one or other of the four notches provided on the quadrant any desired indication can be given through the slot in the plate H. In view of the great increase in the use of motor vehicles as town carriages, the idea, which has been introduced by the Box

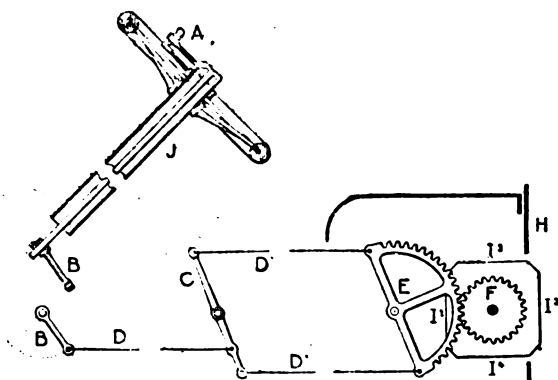


Fig. 2.

Garage, 157, Boulevard Murat, Paris, is one which could usefully be adopted, especially in the crowded thoroughfares of the West End of London.

THE Victoria Trading Company, of 47, Lamb's Conduit Street, London, W.C., are introducing a new car known as the "Piccolo," for which they have been appointed sole concessionaires in this country. The vehicles, which are of German manufacture, are made in two sizes, 6-8-h.p. two-cylinder, and 12-16-h.p. four-cylinder, the engines being of the air-cooled type; the transmission is by cardan shaft and bevel gear to a live axle. The smaller car can be supplied with either a two-seated, enclosed landaulet, or light delivery van body, while the larger model can be provided with any pattern of open or closed side-entrance body.

MOTORING NOTES FROM BRIGHTON.

THOSE who motored to Brighton last Sunday found the "Queen of the South" in her most radiant mood, with Italian shades of blue alike in the sun-swept sky and the lazily tranquil sea, from whence—I mean the seashore, of course—the percussive rattle of several smart little motor craft echoed faintly all day long. Mr. Davenport-Powell came down from London in his 120-h.p. Mercedes to join the luncheon party at the Royal York, and the Rev. W. Owen, a Welsh clergyman who is an enthusiastic motorist, was another Mercedes-borne visitor—with a compatriot, presumably, in Mr. Owen-Owen, who drove a Delaunay-Belleville. Mr. Fassonbridge came in from Uxbridge on a Napier. Mr. Paton, a Scottish tourist, and Mr. Lowe with Argyll cars, and Mr. Hoskin, with a Jackson, were "stabling" at the big Brighton and Sussex garage, just behind the Grand Hotel, where I also found Mr. Wormald, a frequent visitor to Brighton, having both rear wheels of his big Daimler "re-shod" with Palmer tyres. There was good reason for it! He had been a sorry victim of tyre troubles on the road that morning. Both back tubes went wrong, in quick succession, near Crawley, and after a hopeless burst had succeeded an ineffectual attempt to put things right, he continued and completed his journey on the rims, with both tyres flat!

AT the same garage they had in three Lanchesters and a Daimler of the Jam Sahib of Nawagar, better known in this country as "Ranji," last week, and it was a picturesque sight to see him and his dusky, turbaned, grave-featured retainers driving off to the cricket ground every morning. His chauffeurs are, of course, Englishmen. Sir Arthur Conan Doyle was another celebrity driving round about Brighton all the week in his Dennis car. Week-enders at the Metropole were fairly numerous, among the car-owners there for luncheon on Sunday being Mr. Errington and Mr. Bethel with Daimlers, Mr. Fletcher (Franklin), Mr. Elsey (Mercedes), Mr. Rucker and Mr. Hansard (Panhard), and Mr. Adams (Renault).

NEXT Sunday there will be no lack of visitors, for the "Water Rats"—a famous coterie including all the music-hall celebrities of the day—are making an excursion from town in full force. Something approaching a hundred cars are expected to pour into Brighton in quick succession, with these lively professional rodents on board, and their arrival at the Royal York, where they will take lunch, will be a sight well worth seeing. I hear they all intend to try the novel experiment of keeping strictly within the legal limit.

FOR those unable to indulge outright in the luxury of a car of their own, the Brighton week-end is being popularised by the Daimler Company, who are running Sunday excursions from London to the seaside during the summer season. They have instituted a special 42-h.p. type of car, with comfortably cushioned omnibus seats, for the purpose, and the fare is only 15s. for the return journey. Starting from the Waldorf at 10 a.m., the car, after calling at a number of hotels in the metropolis, arrives at its destination for lunch. The return journey begins at 5 p.m., and the passengers are able to descend at their respective hostleries with time to make an expeditious toilette ere the hotel gongs sound the fashionable dinner-hour. This novel enterprise of the Daimler Company seems to be well patronised so far, and to visitors to London at present makes a pleasant break in the fatiguing round of sight-seeing.

AND with its great Exhibition as a "star" attraction, London is booming at Brighton's expense. The latter, and, indeed, all the south coast resorts, have never been so bereft of holiday makers in June as is the case this year. Even the taxicabs are idling most of their time away—and they came in with such a rush three months ago! There are now between fifty-five and sixty of these up-to-date vehicles plying in Brighton—actually more than half the total number (102, I understand) licensed so far in England out of London. SAXONIAN.

CONTINENTAL NOTES.

The Prince Henry of Prussia Touring Competition.

Of the 130 cars which left Berlin on the 9th inst. 114 succeeded in reaching Frankfort on the 17th inst. after covering seven daily stages ranging from 253 to 392 kilometres. The principal feature of the last day's run was a six-kilometre timed hill climb over a very hilly course at Bacharach. The contest aroused enormous interest and drew many thousands of spectators. The best time was made by Erle on the Benz, his figures being 4 min. 27 1-5 sec., Pöge being second with 5 min. 15 3-5 sec. The official awards were as follows:—

1. Herr Erle (Benz), 7·96 points: The Prince Henry Trophy and the first prize of the German Imperial Club.
2. Herr Pöge (Mercedes), 7·91 points: The City of Frankfort prize.
3. Herr Geller (Adler), 7·28 points: The Lübeck prize.
4. Herr Zimmer (Benz), 6·76 points: The City of Cologne prize.
5. Herr Lühr (Adler), 6·51 points: The Frankfort Automobile Club prize.
6. Herr Ladenburg (Benz), 6·38 points: The Kiel prize.

bore; two cylinders, 78 mm.; and four cylinders, 62 mm.; they must also not weigh less, in running order, than 600 kilos.

More Speed Trials in France.

The Automobile Club de la Sarthe, in conjunction with the Syndicat d'Initiative des Alpes Mancelles et de la Ville de Fresnay-sur-Sarthe, is organising a series of flying kilometre speed trials for the 28th inst. The event, which will be held on the La Hutte-Fresnay road, will be open for motor-cycles, tri-cars, voiturettes, and heavy cars, the latter being divided into classes on a cylinder bore basis.

Aeroplane Trials in Italy.

At Milan, on Monday, M. Delagrangé made a flight with his aeroplane which beats all previous records. In the presence of numerous members of the Aeronautical Association and the official timekeeper of the Italian Automobile Club, he went nine times round the Piazza d'Armi, which has a circumference of 1,700 metres, in 16 min. 30 sec. Afterwards he travelled diagonally across the Piazza, passing over the heads of the



The Prince Henry of Prussia Touring Competition.—A View of the Cars lined up ready for the Bacharach Hill Climb.

7. Herr A. Horch (Horch), 5·83 points: The Hamburg prize.
8. Dr. Stöck (Horch), 5·68 points: The Hanover prize.
9. Herr Jochems (Mercedes), 5·53 points: The Bremen prize.
10. Herr Flinsch (Mercedes), 5·53 points: The Stettin prize.

Herr Erle also secured the first prizes offered for the speed trials on the level and on the Bacharach Hill, Herr Pöge the second and Geller the third. The event was brought to a conclusion by a banquet at the Frankfurter-Hof, Frankfort-am-Main, on the 18th inst., when the prizes were presented to the successful competitors.

A Belgian Race for Light Cars.

The Belgian Automobile Club is organising, in addition to the Circuit des Ardennes and Liedekerke Cup contests, an international race for light cars, to be held on the Ardennes circuit. The exact date for the event, which will be over a distance of 350 to 500 kilometres, has not yet been fixed, but entries will be received until July 15th at a fee of £10 per vehicle. The competing vehicles must be fitted with engines having the following cylinder dimensions as a maximum:—Single cylinders, 100 mm.

spectators, and taking his aeroplane back to its shed. During the flight the elevation of the aeroplane above the ground varied between ten and twenty-one feet.

British Motorists in France.

Recent motoring visitors to France include Mr. W. Selvo (60-h.p. Opel); Sir Edward Green and Major Frank Green, London (60-h.p. Napier); Lord Ingestre (35-h.p. Clement-Talbot); Mr. and Mrs. Stokes (32-h.p. Panhard); Mr. and Mrs. Wythes, London (30-h.p. Hotchkiss); Mr. L. Thomas, Mr. Robert Jones, and Dr. William Dawson, Edinburgh (24–32-h.p. Daimler), and Sir Mark Collet (50-h.p. Siddeley).

A Reliability Trial in Denmark.

A three-days' reliability trial, organised by the Danish Automobile Club, commenced on Sunday last. Only eighteen entries were received, and of these but fourteen started. The first day's run was from Frederica to Viborg, over a route which brought the distance to 275 kilometres. Aalborg, 276 kilo-

metres, was the destination on Monday, and Aarhus, 210 kilometres, on Tuesday.

Speed Trials at Marseilles.

On Sunday last the Automobile Club du Rhone held a series of flying kilometre speed trials at Anse, near Marseilles. The best time of the day (22 1-5 sec.) was made by Venus on a Clement-Bayard, his speed being equal to 104 miles an hour. In three of the racing car categories, viz., under 100 mm. bore, 110-120 mm. bore, and 120-130 mm. bore respectively, the honours of the day fell to Cottin Desgouttes vehicles.

The Ostend Automobile Week.

The programme of the automobile meeting which is to be held from the 13th to the 17th July at Ostend, under the auspices of the Automobile Club d'Ostende et du Littoral, has just been issued. On the first day (July 13th) there will be a series of five kilometre speed trials for both racing and touring vehicles on the Route Royale; July 14th will be devoted to an excursion to Nieuport; on the 15th the Circuit Touriste du Littoral will be held, consisting of six laps of a course taking in Ostend, Blankenberghe, Bruges, Roxem, and Ghistelles, the total distance being about 250 miles. On the last day (July 16th) the scene of operations will again be on the Route Royale, on which speed trials over the flying kilometre and standing mile will take place. The event will be open to both racers and touring cars, which will have to make two runs, one in each direction. Entries will be received up to July 4th, by M. T. Ratinecx, 40, Grand Place, Antwerp, from whom the full programme can be obtained.

The International Road Congress and Exhibition.

An exhibition is being organised in connection with the International Congress which is to be held in Paris from the 11th to the 18th of October next, with the object of studying the construction and treatment of roads in view of their adaptation to the modern methods of locomotion. The scope of the display is extensive, as it will include everything pertaining to the road, such as maps and plans, cost of upkeep, metallising material, tar, stone and wood pavement, asphalt, rollers, tar-spraying, tools, appliances, &c. One of the sections deals with disc wheels, elastic wheels, wheels for heavy cars, tyres, anti-skid devices, springs, axles, &c.

Belgian Motor-Car Imports and Exports.

The value of the foreign motor-cars and parts imported into Belgium during the five months ending with May last amounted to only £61,631, as compared with £63,239 in the corresponding period of last year. On the other hand, there has been an increase in the exports of Belgian motor-cars and parts—from £162,901 in the first five months of 1907 to £190,544 in the similar period of the current year.

Miscellaneous Items.

The annual Belgian Motor-Car Exhibition is to be held in Brussels from January 16th to 25th next.—The Mont Cenis hill-climbing competition, which was to have been held on the 21st inst., has been postponed until August 9th.—The French Post and Telegraph authorities are about to invite tenders for the transport of the mails by motor-cars between Ghisonaccia and Sartene, Corsica.—It is reported that the Benz Company is about to establish a branch factory in Budapest, Hungary.—The Austrian Automobile Club is, it is announced, organising a trial of industrial motor-vehicles.—A party of members of the Automobile Club du Périgord has just returned from a visit to London and the southern counties.—The A.C.F. draws attention to the fact that any excessive speed on the Dieppe Circuit is being closely watched, and that offenders will be rigorously punished. The maximum rate allowed is 15 kilometres (9½ miles) per hour.—The Geneva section of the Swiss Automobile Club is holding a speed trial on the Cote de la Faucille, between Gex and La Faucille, on Sunday next.—A series of flying kilometre speed trials was held at Le Mans, by the Automobile Club de la Sarthe, on Sunday last, when the best time of the day (38 4-5 sec.) was made by M. Lhonore on a Peugeot, M. Leon Bollee on a six-cylinder car of his own construction being second, in 42 1-5 sec.

THE TRAFFIC OF CITIES.

PROPOSED PROHIBITION OF HORSE-DRAWN VEHICLES

THE problem of keeping clean the streets of the great towns and cities has always been one of the greatest perplexity to the responsible authorities. It is a department in which expenditure has steadily grown and no great hope of substantial diminution has hitherto been entertained. The coming of the automobile, however, has revived the spirit of optimism in the minds of many of the experts who are responsible for the maintenance of the roadways in a proper condition.

Especially is this the case in such a city as Westminster where the favour with which the motor vehicle is being regarded by all sections of the community is so conspicuously evidenced. It is probably a fact that there are more motor-buses running through Westminster than through any other city in the world. There, too, the presence of motor-cabs has become almost a commonplace. Then, too, from all parts of outer as well as from inner London come the heavy vehicles used by contracting and delivery firms, while the pleasure cars of Society are met with in greater numbers than elsewhere in its parks and fashionable streets. It is not generally known that there are over 100 miles of roadways in the city of Westminster, the boundaries of which stretch from the Rolls Office, in Chancery Lane, to beyond the Round Pond in Kensington Gardens. Some idea of the value of the assets of the city of Westminster may be gleaned from the statement that a penny rate produces no less than £25,000. The rateable value of the borough is beyond six millions sterling, although the area is only 2,502 acres.

The annual cost of keeping clean the streets of this important municipality is no less than £100,000, equivalent to practically a 4d. rate; hence the importance of the subject to the Highways Committee, of which Mr. H. Thomson Lyon is the chairman. To effect the ordinary cleansing of the streets a staff of 138 sweepers, forty orderly boys, and nine motor drivers is required. In maintaining the proper condition of the streets and clearing the mud and dust therefrom a great deal of ballast finds its way into the sewers, this being the reason why the department responsible for cleansing the roads is also entrusted with the duty of securing the cleansing of the sewers.

Recently we had a chat with Mr. Lyon at the Westminster City Hall, opposite the offices of the M.C.J., and learned that he is one of the far-sighted municipal experts who recognises that the advance of the motor-car means the total supersession of the horse from the streets of great towns and cities. He would like to see powers granted to borough authorities to close certain streets and thoroughfares to horse traffic—on the ground that such traffic is so dirty that it is economically unsuitable for the present age. In many of the squares of Westminster it would be possible to keep, as a step towards the ultimate goal, viz., the total prohibition of horse traffic, one or two sides solely for mechanical traction, leaving the others for horsed vehicles. Such a course would at once provide an ocular demonstration of the undoubted cleanliness of the motor vehicle as compared with horses. At first, in order to facilitate matters and prevent too great a dislocation of our present antiquated methods, the municipalities might be empowered to provide tractors, &c., for the carriage of such heavy goods as coal, &c., by motor power to places in areas from which horses were prohibited. This could easily be done, in the view of Mr. Thomson Lyon, with corresponding advantage to all concerned. The idea is certainly a striking one, and should provoke considerable discussion, for, although it has the merit of novelty, it is probably only anticipatory of the future, where the burdens now borne by the horse will be carried by mechanically-propelled vehicles.

AFTER several years of laborious research, Professor Charles L. Norton, of the Massachusetts Institute of Technology, has succeeded in producing an asbestos wood which, while being fire-proof, is claimed to be harder than ordinary wood, and takes a higher polish. The new material is expected to find many uses in the construction of motor garages, fire-proof doors, &c.

The 2,000-miles Trial.



INCLUDING THE SCOTTISH RELIABILITY TRIAL.

LAST week we chronicled the early stages of the Scottish A.C., which concluded on Friday of last week, and—so quickly do things move in the motor world—have almost become forgotten. But the results, so far as they can be obtained until completed by the final returns made by the Club officials, are of interest. The routes of the Trials were over familiar ground until Pitlochry was left on the morning of the 18th. Then came the run from Pitlochry, that delightful Highland centre near the Pass of Killiecrankie, to Oban. A portion of the route had been included in earlier itineraries, and most of us were familiar with Aberfeldy and the region round about. Difficulties began to present themselves after reaching Amulree. The route-book said, "Take two sharp elbow turns carefully." To do otherwise would have brought disaster. Several cars had to shed their passengers and break all chance of securing a non-stop record. These two "turns" were really a kind of "twin

thence was a run of 41½ miles to Oban *via* Cladich, Loch Awe, the Pass of Brander, and Connel Ferry—a lovely trip, including the Falls of Cruachan and some of the most delightful scenery of the whole course. Non-stops for such a day assure credit both to driver and car, and publicity is well deserved. They were as follows:—

- Class A.—10-12-h.p. Swift, 10-12-h.p. Chambers, 10-h.p. Adams.
- Class C.—14-16-h.p. Argyll, 15-h.p. Mass, 16-h.p. Bell, 14-16-h.p. Darracq.
- Class D.—20-h.p. Beeston-Humber, 18-24-h.p. Swift, 12-16-h.p. Vauxhall, 14-16-h.p. Argyll, 20-h.p. Bell, 20-h.p. De Luca-Daimler, 20-24-h.p. Junior.
- Class E.—30-h.p. Beeston-Humber, 20-h.p. Sunbeam, 15-h.p. Panhard, 20-h.p. De Luca-Daimler, 25-35-h.p. Darracq, 26-h.p. Metallurgique.
- Class F.—24-h.p. Albion, 35-50-h.p. Vinot, 18-24-h.p. Piccard-Pictet, 25-30-h.p. Maudslay, 18-h.p. Panhard, 50-h.p. Darracq and 18-h.p. Benz.



The 2,000 Miles and Scottish Reliability Trials.—The Scene at Amulree Hill.

devil's elbows," and constituted the "tit-bit" of the Trial. Every year such an exploit is given by the Scottish A.C., but this time the organisers exceeded previous efforts in this direction. The 14-h.p. Argyll, the Vinot driven by Mr. H. Ramoisy—an old favourite in these Trials—the 15-h.p. Humber, and a few others went up in good style; but few of the drivers would care to repeat the performance on a dark night. Even then the hardships of the day were not over, and there was a treacherous fearful descent into Kenmore to be taken "dead slow, with your car thoroughly in hand." Everyone was thankful to get on the road along Loch Tay for Kellin, one of the "show" villages of Perthshire, and have a glimpse of the famous Falls of Dochart before getting on to the route of last year's event to Tarbet, where we have previously run through, but where on the present occasion we halted for lunch. The next stage was to the Glencroe hill climb, and there on the "Rest and Be Thankful" ascent was the timed distance of the day, the fastest cars in each class being duly chronicled in the table on another page. The hill climb over, the way was familiar enough to Inverary by the shores of Loch Fyne. From

- Class G.—40-50-h.p. Ariel, 40-h.p. Whitworth Armstrong, and 25-30-h.p. Maudslay.

The last day of the Scottish Trial was on Friday, the 19th, and well will all who took part therein remember the occasion. Not only had rain fallen all night while the drivers slept in Oban, but it fell all the day as we almost waded to Glasgow. Of course there was a hill climb—at Fintry, over a distance of 1 mile 694 yards, with an average gradient of one in fifteen that did not cause trouble. But everyone was heartily glad to see the grey walls of Glasgow again.

So severe was the test of the Scottish Trial that only about a dozen automobiles were declared to have made absolute non-stop runs, viz:—

- Class A.—10-h.p. Swift, 10-12-h.p. Chambers.
- Class C.—14-16-h.p. Argyll.
- Class D.—20-h.p. Beeston Humber, 18-24-h.p. Swift, 14-16-h.p. Argyll, 20-h.p. De Luca-Daimler.
- Class E.—30-h.p. Beeston Humber.
- Class F.—24-h.p. Albion, 23-30-h.p. Maudslay, 50-h.p. Darracq, 18-h.p. Benz, 18-24-h.p. Piccard-Pictet (under consideration).
- Class G.—40-h.p. Armstrong-Whitworth.

The list of the withdrawals from the Scottish Trial during the progress of the event may now be set down. There were three on the first day:—The 14-16-h.p. Belsize had water in the cylinder; the 16-h.p. Sunbeam had a leaky radiator, and the 20-h.p. White steam was in difficulties with the back axle. Seven cars withdrew on the second day—the 20-h.p. Coltman from a stripped differential, the 25-h.p. Werbell from a burnt clutch, the differential key of the 8-h.p. Clyde sheared, the 12-18-h.p. Riley stripped its gear at Dufftown, and the driver of the 28-h.p. Belsize was unfortunate enough to injure his arm in a backfire. These, with the withdrawal of the 24-32-h.p. Porthos at Cairn o' Mount, complete the casualty list for the day. On the third day the 45-h.p. Sheffield-Simplex was withdrawn owing to a damaged wheel, and the 25-30-h.p. Ariel and the 12-15-h.p. Hillman Coatelen did not continue, while on the fourth day a broken ball race compelled the withdrawal of the 30-h.p. S.P.A., and the 16-h.p. Star was also *hors de combat*.

During the Scottish Trial no fewer than 119 daily non-stop runs were made by cars fitted with Dunlop tyres. Nine cars made complete non-stop runs on all the five days on these tyres. On the hill climbs, too, the Dunlop tyres had a good record, thirty of the thirty-five first places in the seven classes being secured by cars thus fitted.

The Scottish Trial over, on Saturday the cars left Glasgow for Windermere, when wonderful regularity characterised the running of the thirty-seven competitors who will continue the trial through England. The order of merit officially given to

the end of Saturday's run in the R.A.C. 2,000-mile Trial was as follows:—

| CLASS A. | | | | Time Lost. |
|---------------------------------------|-----|-----|-----|---------------------|
| | | | | min. sec. |
| 6-2-h.p. De Dion | ... | ... | ... | 191 |
| CLASS B. | | | | |
| 8-9-h.p. Adler | ... | ... | ... | 150 35.4 |
| CLASS C. | | | | |
| 10-h.p. Cadillac | ... | ... | ... | 119 4.6 |
| 12-8-h.p. Zedel | ... | ... | ... | 123 54 |
| CLASS D. | | | | |
| 15-8-h.p. Singer | ... | ... | ... | 84 2.6 |
| 15-8-h.p. Zedel | ... | ... | ... | 109 13.6 |
| 15-4-h.p. Shamrock | ... | ... | ... | Not yet chronicled. |
| CLASS E. | | | | |
| 20-5-h.p. Vauxhall | ... | ... | ... | 58 19 |
| 20-1-h.p. De Luca-Daimler (Griffin's) | ... | ... | ... | 78 41.6 |
| 20-1-h.p. De Luca-Daimler (Alleu's) | ... | ... | ... | 100 3.8 |
| 17-9-h.p. Benz | ... | ... | ... | 108 42.6 |
| 20-1-h.p. Talbot | ... | ... | ... | 135 9.2 |
| 20-5-h.p. Panhard (chain-drive) | ... | ... | ... | 143 16.4 |
| 20-5-h.p. Panhard (live-ax-*) | ... | ... | ... | 146 13.6 |
| 19-6-h.p. Coventry-Humber | ... | ... | ... | 215 13.6 |
| CLASS F. | | | | |
| 25-6-h.p. Thornycroft | ... | ... | ... | 72 45.8 |
| 25-6-h.p. Beeston-Humber | ... | ... | ... | 80 34.2 |
| 25-5-h.p. Talbot | ... | ... | ... | 86 45.6 |
| 23-8-h.p. Coventry-Humber | ... | ... | ... | 113 54.2 |
| 24-8-h.p. Junior | ... | ... | ... | 118 21.2 |
| 24-8-h.p. Panhard | ... | ... | ... | 122 31.6 |
| 24-8-h.p. Brown | ... | ... | ... | 158 20.6 |
| 23-6-h.p. Minerva | ... | ... | ... | 173 0.2 |

THE BEST PERFORMANCES IN THE HILL CLIMBS IN THE SCOTTISH TRIALS.

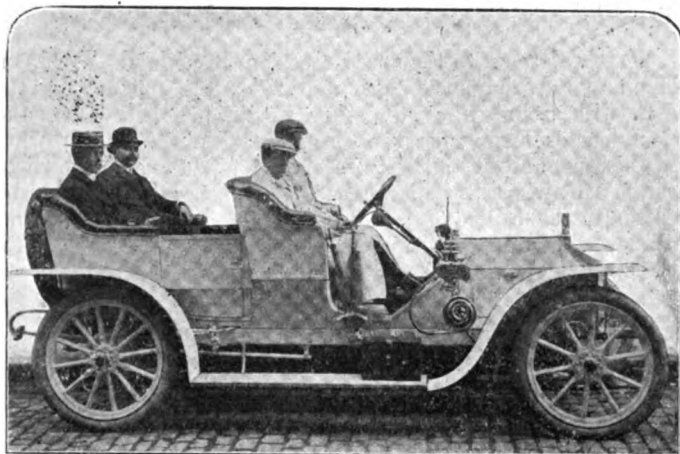
| Class. | Cairnwell. | Cairn o' Mount. | Trinafour. | Glencroe. | Fintry. |
|----------------------|---|---|---|--|--|
| A.— 1 £200 2 3 | 10-h.p. Adams 10-12-h.p. Swift 10-12-h.p. Chambers | 10-12-h.p. Swift 10-12-h.p. Chambers 10-h.p. Adams | 10-12-h.p. Swift 10-12-h.p. Chambers 10-h.p. Adams | 10-12-h.p. Swift 10-12-h.p. Chambers 10-h.p. Adams | 10-12-h.p. Swift 10-12-h.p. Chambers 10-h.p. Adams |
| B.— 1 £250 2 3 | 12-18-h.p. Riley 12-14-h.p. Argyll 10-12-h.p. Darracq | 10-12-h.p. Cov.-Hum. 12-18-h.p. Riley 10-12-h.p. Darracq | 10-12-h.p. Darracq 10-12-h.p. Cov.-Hum. 12-14-h.p. Argyll | 12-14-h.p. Argyll 10-12-h.p. Cov.-Hum. 10-12-h.p. Darracq | 10-12-h.p. Cov.-Hum. 10-12-h.p. Darracq 12-14-h.p. Argyll |
| C.— 1 £325 2 3 | 15-h.p. Mass 15-h.p. Cov.-Hum. 16-h.p. Bell | 15-h.p. Cov.-Hum. 15-h.p. Mass 16-18-h.p. Vulcan | 15-h.p. Mass 15-h.p. Cov.-Hum. 14-16-h.p. Argyll | 15-h.p. Mass 15-h.p. Cov.-Hum. 14-16-h.p. Argyll | 15-h.p. Cov.-Hum. 14-16-h.p. Argyll 15-h.p. Mass |
| D.— 1 £425 2 3 | 12-16-h.p. Vauxhall 18-h.p. Minerva 18-24-h.p. Swift | 12-16-h.p. Vauxhall 18-24-h.p. Swift 20-h.p. Beeston-Humber | 12-16-h.p. Vauxhall 18-h.p. Minerva 18-24-h.p. Swift | 12-16-h.p. Vauxhall 18-24-h.p. Swift 18-h.p. Minerva | 12-16-h.p. Vauxhall 20-h.p. Beeston-Humber 18-24-h.p. Swift |
| E.— 1 £525 2 3 | 25-30-h.p. Ariel 26-h.p. Metallurgique 30-h.p. Beeston-Humber | 26-h.p. Metallurgique 25-35-h.p. Darracq 30-h.p. Beeston-Humber | 26-h.p. Metallurgique 25-35-h.p. Darracq 30-h.p. Beeston-Humber | 26-h.p. Metallurgique 30-h.p. Beeston-Humber 20-h.p. Sunbeam | 26-h.p. Metallurgique 30-h.p. Beeston-Humber 20-h.p. Sunbeam |
| F.— 1 £650 2 3 | 30-40-h.p. Ariel 35-50-h.p. Vinot 18-h.p. Benz | 30-h.p. Adler 35-h.p. Deasy 38-h.p. Daimler | 38-h.p. Daimler 35-h.p. Deasy 30-h.p. Adler | 30-h.p. Adler 18-h.p. Benz 35-h.p. Deasy | 30-h.p. Adler 35-h.p. Deasy 30-h.p. Daimler |
| G.— 1 £800 2 3 | 40-50-h.p. Ariel 35-45-h.p. Maudalay 40-h.p. Arm.-Whit. | 40-50-h.p. Ariel 40-h.p. Arm.-Whit. 30-h.p. White Steam | 40-50-h.p. Ariel 40-h.p. Arm.-Whit. 30-h.p. White Steam | 40-50-h.p. Ariel 40-h.p. Arm.-Whit. 30-h.p. White Steam | 40-50-h.p. Ariel 30-h.p. White Steam 40-h.p. Arm.-Whit. |

Cov.-Hum. = Coventry-Humber. Arm.-Whit. = Armstrong-Whitworth.

The speed relationship of the various classes on the five timed hill climbs is as follows, the figures representing the best performances in each class on each hill, relative to the best performance over all classes, which is represented by X in each instance:—

| Cairnwell. | | Cairn o' Mount. | | Trinafour. | | Glencroe. | | Fintry. | |
|---------------|----------|-----------------|----------|---------------|----------|---------------|----------|---------------|----------|
| Class. | Seconds. | Class. | Seconds. | Class. | Seconds. | Class. | Seconds. | Class. | Seconds. |
| £800 X | | £800 X | | £800 X | | £800 X | | £800 X | |
| 425 X + 6 | | 650 X + 89.4 | | 650 X + 17 | | 650 X + 19.8 | | 650 X + 25.4 | |
| 650 X + 16.8 | | 425 X + 119.4 | | 525 X + 35.8 | | 425 X + 29.2 | | 425 X + 39.6 | |
| 525 X + 24.4 | | 525 X + 130.6 | | 425 X + 45 | | 525 X + 32.6 | | 525 X + 55.4 | |
| 325 X + 73.2 | | 325 X + 252.6 | | 325 X + 94 | | 325 X + 80.0 | | 325 X + 108.0 | |
| 250 X + 119 | | 250 X + 311 | | 200 X + 122.4 | | 250 X + 103.6 | | 250 X + 123.2 | |
| 200 X + 129.8 | | 200 X + 361.2 | | 250 X + 128.4 | | 200 X + 117.8 | | 200 X + 142.4 | |

| CLASS G. | | | |
|------------------------------|-----|-----|----------|
| 32·4-h.p. Beeston-Humber | ... | ... | 116 52 |
| 27·3-h.p. Deasy | ... | ... | 162 48·2 |
| 27·8-h.p. Nagant-Hobson | ... | ... | 163 11·6 |
| 30-h.p. Adler | ... | ... | 188 29·8 |
| CLASS H. | | | |
| 40-h.p. Armstrong-Whitworth | ... | ... | 101 50·4 |
| 38·1-h.p. Daimler (Street's) | ... | ... | 103 37·2 |



The 25-h.p. Metallurgique which took part in the Scottish Trials. The chassis only arrived in London on the evening of the 10th inst., and the car was completed and on its way to Scotland on Friday night, the 12th—a smart piece of work, upon which Messrs. Warwick Wright, Ltd., the British agents, are to be congratulated.

| 38·1-h.p. Daimler (Ison's) | ... | ... | 105 11·4 |
|----------------------------|-----|-----|----------|
| 37-h.p. White Steam | ... | ... | 197 49·8 |
| 40-h.p. Hillman-Coatalen | ... | ... | 285 12·8 |
| CLASS J. | | | |
| 45·8-h.p. Ariel | ... | ... | 241 |
| CLASS K. | | | |
| 48·6-h.p. Rolls-Royce | ... | ... | 83 6 |

of 1 mile 740 yards, the gradient varying from 1 in 12 to 1 in 209. In the A, B, J and L classes the only competitors were the 6·2-h.p. De Dion, 8·9-h.p. Adler, 45·8-h.p. Ariel, and 59·5-h.p. Ariel respectively, so that they were the victors in their classes. In the others the best times up the hills were as follows:—

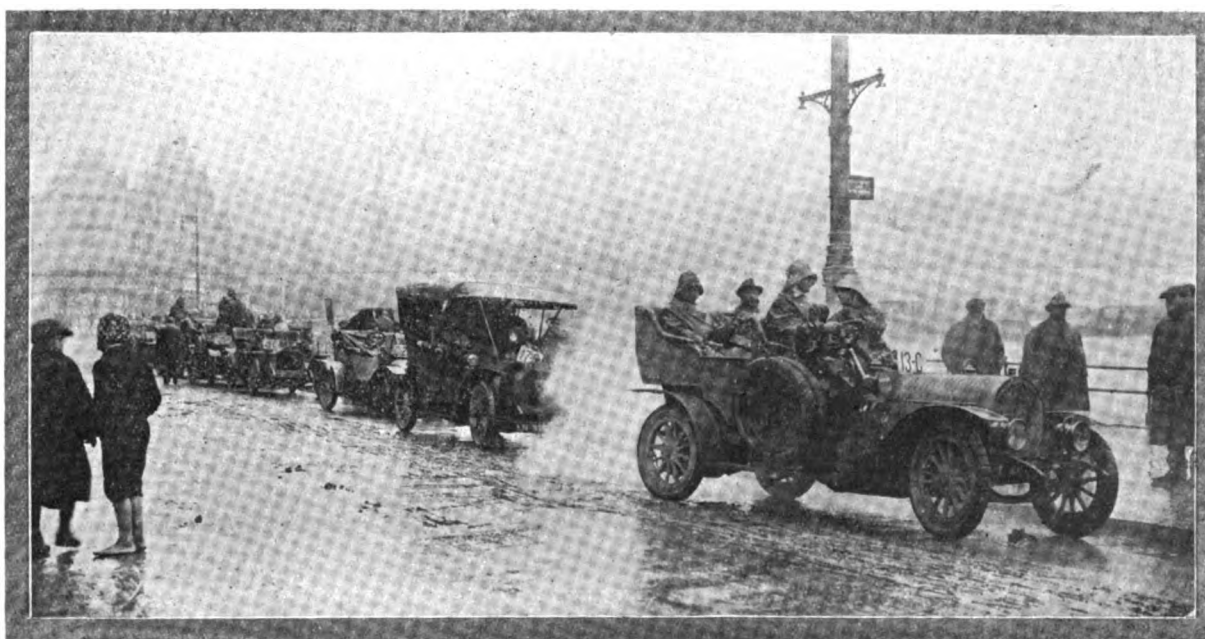
Class C.—12-h.p. Zedel, zero; 10-h.p. Cadillac, 4 min. 13·2·5 sec.
Class D.—15-h.p. Singer, zero; 15-h.p. Zedel, 2 min. 33·3·5 sec.; 15-h.p. Shamrock, 2 min. 46·4·5 sec.



The Dunlop Tyre Company provided the three vehicles shown in the above illustration for service during the Scottish and 2,000 Miles Trials.

One vehicle preceded the competing cars, the other two bringing up the rear. Over and over again they proved of signal service in affording lifts to belated parties interested in the proceedings, while they were most useful in conveying luggage, spares, &c.

Class E.—20-h.p. Talbot, zero; 17-h.p. Benz, 5 3·5 sec.; 20-h.p. Vauxhall, 23 1·5 sec.; Allen's 20-h.p. De Luca Daimler, 2 min. 42 3·5 sec.; 20-h.p. Panhard, with live axle, 2 min. 46 3·5 sec.; Griffiths' 20-h.p. De Luca Daimler, 2 min. 56 1·5 sec.; 19-h.p. Coventry-Humber, 3 min. 19 sec.



The 2,000 Miles and Scottish Reliability Trials.—The Cars Leaving Oban.

| 48·4-h.p. Deasy | ... | ... | 103 1·8 |
|-----------------------------|-----|-----|----------|
| 52·5-h.p. Lorraine-Dietrich | ... | ... | 384 56·2 |
| CLASS L. | | | |
| 59·5-h.p. Ariel | ... | ... | 194 |

On Monday motorists at Windermere were up in the morning early for a run in the Lake District, and an ascent of Dunmail Raise by Grasmere. The cars were timed over a course

Class F.—25-h.p. Minerva, zero; 25-h.p. Beeston-Humber, 57 3·5 sec.; 23-h.p. Coventry-Humber, 1 min. 8 sec.; 24-h.p. Panhard, 1 min. 43 3·5 sec.; 25-h.p. Talbot, 2 min. 31 4·5 sec.; 24-h.p. Brown, 3 min. 48 2·5 sec.; 24-h.p. Junior, 3 min. 51 sec.
Class G.—30-h.p. Adler, zero; 27-h.p. Nagant-Hobson, 1 min. 52 3·5 sec.; 32-h.p. Beeston-Humber, 1 min. 56 4·5 sec.; 27-h.p. Deasy, 4 min. 8 2·5 sec.
Class H.—Street's 38-h.p. Daimler, zero; 40-h.p. Armstrong-Whitworth, 44 sec.; Ison's 38-h.p. Daimler, 50 3·5 sec.; 37-h.p. White

TRIAL NOTES.

steam, 1 min. 13 1-5 sec.; 0-h.p. Hillman-Coatalen, 3 min. 52 3-5 sec.
 Class K.—48-h.p. Rolls-Royce, zero; 48-h.p. Deasy, 1 min. 11 1-5 sec.; 52-h.p. Lorraine-Dietrich, 1 min. 40 3-5 sec.

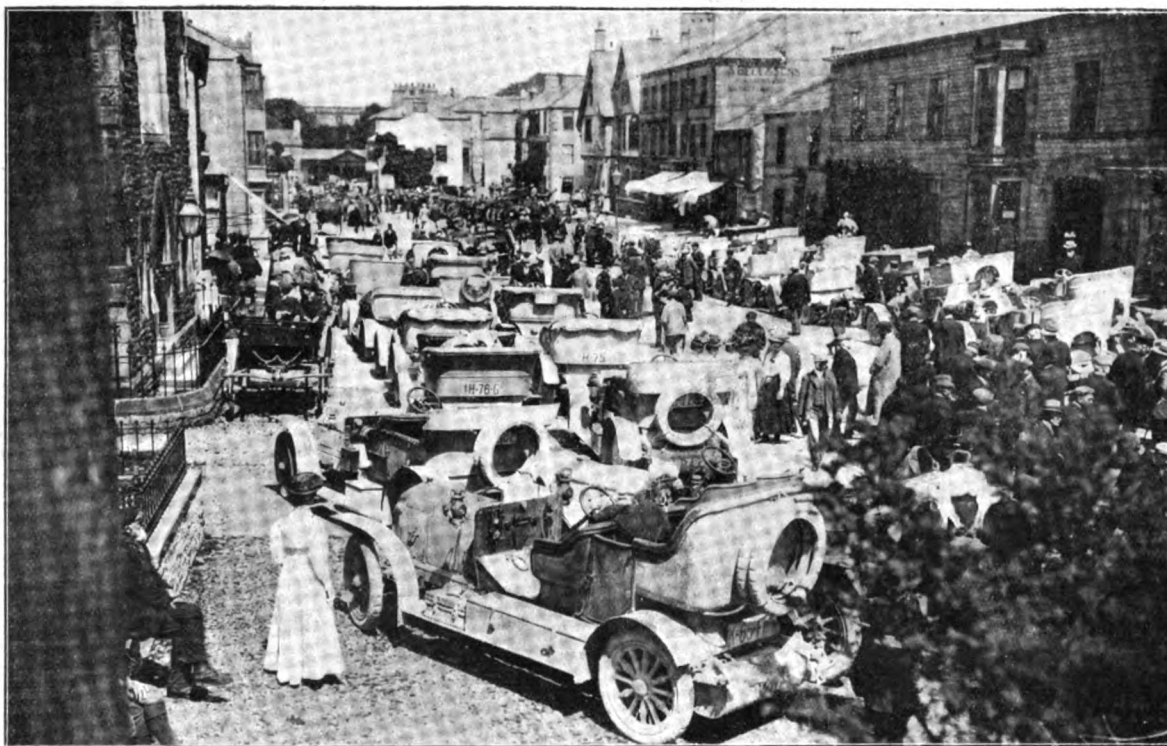
Later in the day another hill climb took place on Kirkstone Pass, when the fastest cars in their respective classes were: D, 15.8-h.p. Singer; E, 20.1-h.p. Talbot; F, 25.6-h.p. Minerva; G, 30-h.p. Adler; H, 38.1-h.p. Daimler; K, 48.6-h.p. Rolls-Royce. The 15.9-h.p. Zedel, 17.9-h.p. Benz and the Humbers were also conspicuous for speed on the climbs.

A mishap occurred on Kirkstone Hill as Mr. Tom Thornycroft was making the ascent on his car of similar name, a tyre bursting, causing the car to swing violently into a wall, throwing the mechanic out, and causing some severe scalp wounds. Mr. Thornycroft was only shaken, and soon set to work on repairs to the car and 572 minutes were lost, many being owing to the straightening of the front axle at the blacksmith's forge five miles away.

Monday's results left the order in classes A, B, C, D, G, J, K and L as on Saturday. In Class E the 17.9-h.p. Benz and 20.1-h.p. De Luca Daimler changed places; in F, the mishap

ONE of the pleasantries of the 2,000 miles trial has been the compliment paid to the competitors at the meeting of the Windermere District Council on Monday evening, when one of the members said that that authority should accord a word of praise to the motorists at Windermere, who had shown that they could drive carefully, considerably, and with due regard to the safety of the public.

WITH reference to the speed races on Brooklands Track on Friday and Saturday, the 26th and 27th, the tenancy by the R.A.C. will secure free admission to its members over the various enclosures, whilst the Brooklands A.R.C. is throwing open the lawn and hill hitherto reserved for its members to those of the R.A.C. who will be its guests. The general public will be admitted to the course on the usual terms, and we understand that a large attendance of persons representing industries akin to the automobile movement is anticipated.



The 2,000 Miles Trial.—Luncheon Time at Kirkby Stephen.

to the Thornycroft removed it from the premier position, into which the 25.5-h.p. Talbot moved; and in G the 37-h.p. White divided the two Daimlers.

On Tuesday there was another journey in the Lake District over a course of 137½ miles to complete 1,629½ miles in eleven running days. There were two hill climbs—one over Shap and a long climb of five miles over Alston Hill, the fastest in each class being:—

| Shap. | Alston. |
|---------------------------|------------------------|
| C, 12.8-h.p. Zedel. | 12.8-h.p. Zedel. |
| D, 15.8-h.p. Zedel. | 15.8-h.p. Singer. |
| E, 20.08-h.p. Talbot. | 20.5-h.p. Vauxhall. |
| F, 25.5-h.p. Talbot. | 25.5-h.p. Talbot. |
| G, 30-h.p. Adler. | 30-h.p. Adler. |
| H, 38.1-h.p. Daimler. | 38.1-h.p. Daimler. |
| K, 48.6-h.p. Rolls-Royce. | 48.6-h.p. Rolls-Royce. |

The runners-up deserve credit for good performances in most cases, notably the 52.49-h.p. Lorraine Dietrich.

On Wednesday the cars left Windermere for Church Stretton, and by the time these lines appear in print the cars will be pacing round the track to decide the premier position in each class.

ONE of our correspondents in the Highlands says that about 1,400 gallons of petrol were supplied in Aberdeen to the cars for their 180 miles run to Inverness. There was a great crowd in the Granite City when the first car got away at 8 a.m. At Dufftown the 10-h.p. Swift was the first arrival, being followed by an Argyll, the Chambers, and a Coventry Humber. As has been the case every year at Grantown-on-Spey, the cars were heartily welcomed. The Swift was still in front. Shortly after 5 p.m. it was at the excellent garage of Messrs. Macrae and Dick, in the Academy Street, Inverness.

ONE of the longest stages in the Scottish section of the Trial was that of ninety-six miles, from Inverness to Kingussie, along one of the finest routes in all Scotland. Ben Nevis was wreathed in snow, and the ascents and descents along Loch Ness and Loch Oich revealed the beauty of the Highlands.

As a misapprehension has arisen in regard to the cause of the withdrawal of the 25-30-h.p. Ariel from the 2,000 miles trial, Mr. C. Sangster informed us on Tuesday that the trouble was caused by a cracked sleeve carrying the ball race.

At the Gloucester Historical Pageant, at Cheltenham, early in July, a decorated motor-car parade will be included among the attractions.

With the help of motoring friends Miss Margaret Bevan, of Liverpool, recently took forty afflicted children from the Dingle Mount School of that city for a motor drive in the country.

MOTOR char-a-bancs are now running to Studley Rcyal from Harrogate, the regular service proving of popular interest.

A RELIABILITY test has, we learn, just been carried out on the Brooklands track with a "Standard" 20-h.p. six-cylinder car fitted with a new tyre, the invention of Mr. A. C. Gubbins.

At the Woodford Meet on Saturday last the Walthamstow Motor Club was strongly represented, and the first prize for decorated automobiles was won by the president of the club, Dr. Stanley Owen.

A NOVELTY has been provided for the members of the Automobile Club of St. Paul, U.S.A., the house committee of that organisation having established a "chop-suey house," which is "in charge of a high-class Chinese chef."

In the House of Commons the Home Secretary has mentioned the action taken by the City authorities with regard to the speed and noise of motor-omnibuses, and added that he did not see why the London County Council did not take somewhat similar steps.

THE Parish Council of Lindfield and a contractor who had placed a solution of calcium chloride on the highway to mitigate the dust nuisance have come to an arrangement with regard to the damage alleged to have been done by the solution to the boots of the workmen of the latter.

THE Index to Vol. XI. of the *M.C.J.* is available for those of our Subscribers and Readers who bind their copies. It will be sent to those who make application during the present month. The offer is also extended to the various institutions connected with the motor and engineering industries, public libraries, &c.

At Cannon Hill, on the Kenilworth road out of Coventry, the motor mail van which runs nightly from Warwick to Birmingham caught fire the other evening, and was totally destroyed. Fortunately the driver was able to throw the mail bags on to the roadside, and a passing motorist carried a number of them into Coventry for him.

LORD MONTAGU issued an appeal to motorists who might be leaving London for the week-end not to forget the Metropolitan Hospital Sunday Fund on the 21st inst. This has seriously suffered of late from the custom of motorists going out of town; hence the suggestion, which can still be carried out—though a few days late.

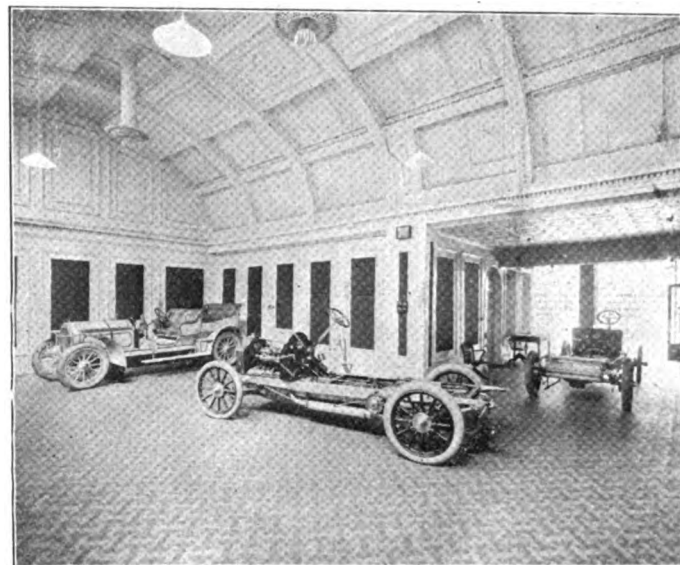
MESSRS. CARLESS, CAPEL AND LEONARD, of the Hope Chemical Works, Hackney Wick, N.E., have, we learn, now arranged to send out their Standard petrol and Movril motor spirit, either in the well-known round two gallon cans or in two gallon square tins similar to those generally used. They have decided on this step because they are often told that the square tins are more convenient to carry in a car than the round ones and that they also occupy less storage room. Unless specially asked for, however, they will continue to use the round cans, because, they believe, in many respects they are the most suitable package for the purpose; they are more strongly made and will stand more knocking about than the square ones; they are also safer for handling an inflammable spirit like petrol because they are less likely to leak. The firm have also issued a circular drawing attention to the quality of their Standard petrol. Quotations are given from the paper on "Petrol and Petrol Tests," recently read by Mr. G. H. Baillie at the R.A.C. It may be remembered that Mr. Baillie has devised an apparatus, which has since been adopted by the R.A.C., for testing the efficiency of motor spirit. By means of curves he gave the results of his examination of all the best known brands of essence now on the market. Messrs. Carless, Capel and Leonard's Standard petrol had an extremely good curve and compared very favourably with any of the ordinary brands of motor spirit.

HERE AND THERE.

At Shortlands, on the Bromley and Beckenham high road, a new garage and repair works have been opened by Messrs. Cox and Pearson.

At that end of the High Road at Leyton nearest Epping Forest the Home Counties Garage Company, Ltd., have adapted a whilom stabling establishment to the purpose of the accommodation of motor-cars.

WE give herewith a view of the new showrooms at 5 and 7, Regent Place, London, S.W., which have lately been opened by the Lorraine-Dietrich Company. As is well known, Messrs. Jarrott and Letts have had the exclusive agency for the De Dietrich cars ever since they were first imported into this country, but some time ago the French company, which now has works at Luneville, Argenteuil, Milan and Birmingham, approached them to see whether it would be possible to arrange for a showroom where nothing but De Dietrich cars would be shown. After some negotiation a perfectly fair arrangement was arrived at between the two companies, with the result that the De Dietrich depot is now at 5-7, Regent Street, while at the same time Messrs. Jarrott and Letts will also be showing them at their premises in Great Marlborough Street, W. By this means it is



hoped to be able to give old clients, and also the public generally, a better selection of these cars in England than has been possible hitherto, it being intended to have on hand examples of every chassis manufactured by the De Dietrich firm, fitted with carriage bodies, at either one or other of the depots, as well as trial cars of every description. Those motorists who have for so many years done business with Mr. Jarrott or Mr. Letts will be able to find them at either establishment, as they still continue as the representatives of the De Dietrich Company, and will look after clients' interests as hitherto. In fact, the new arrangement does not in any way interfere with the business, and it is immaterial whether customers order their cars through Messrs. Jarrott and Letts or the London branch of the De Dietrich Company.

THE latest additions to the excellent series of road maps issued by the Touring Club Italiano, of Milan, are those dealing with the Pisa, Leghorn, Brescia and Bologna-Florence districts. To motorists contemplating a tour in Italy the maps should prove indispensable companions.

A NOVEL event in the form of a regatta for model motor-boats is being organised under the auspices of "The Model Engineer," and will take place on the lake at Wembley Park on the afternoon of Saturday, July 25th. Races for model steam, petrol, and electric boats will be arranged, and as some of the latest of these small craft are capable of speeds exceeding ten miles per hour, some highly exciting performances are expected.

A MOTOR grass cutter is now employed on the Sandycote (Yorkshire) golf links.

THE Baroness Von Zwiedinek and Miss M. Bailey have passed the R.A.C. examination for driving certificates.

A SPECIAL summer course of lectures and practical work for motor-car drivers and attendants will commence on the 20th prox. at the Battersea Polytechnic, London, S.W.

GENERAL BOOTH's fifth motor-car tour commenced at Dundee on Monday and will be concluded on July 25th, when he is expected to arrive at the Crystal Palace.

ACCORDING to the "Standard," a car on the way to the Royal Garden Party on Saturday stopped "and was tackled by a burly constable, who wound up the machinery and set the car going."

On Saturday the Chief Petty Officers' Mess of the Royal Naval Barracks at Portsmouth had their annual outing, a party of 75 journeying by motor chais-a-banc from Portsmouth to Midhurst, via Petersfield.

AMERICAN motorists may now take their cars across the border into Canada duty free for three months, provided an invoice giving the value of the car is shown at the custom house at the point of entry, a cash deposit of £5 made, and a bond for double the amount of the duty signed.

A NUMBER of taximeter motor-cabs are being introduced into Mexico.

MR. T. GILLET has opened a motor repair works at Little Bookham, in Surrey.

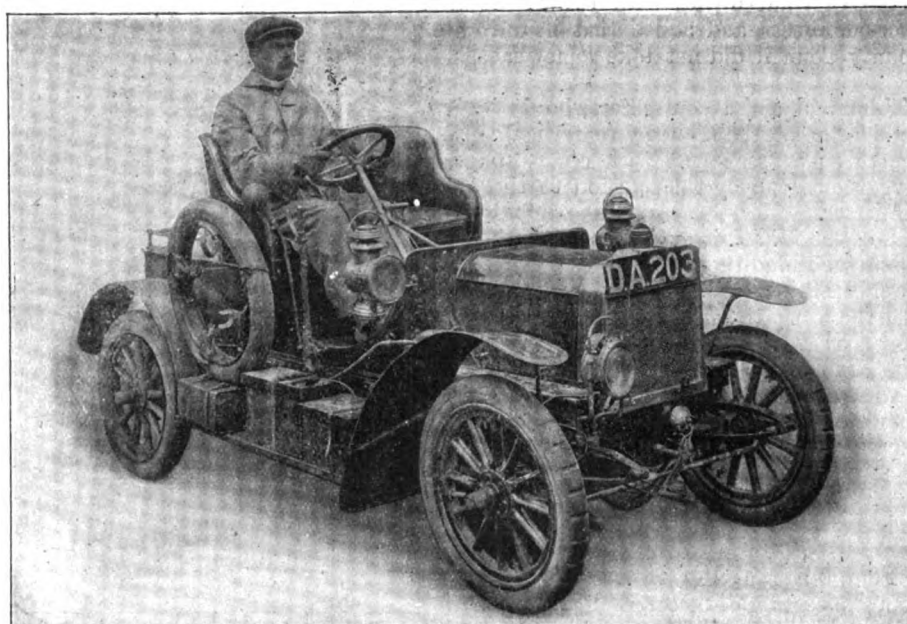
To their body building works in the High Road, Tottenham, Messrs. J. Moulding and Co. have added a motor garage.

THE first formal entry of a foreign car for the Vanderbilt Cup race has been made; it is a 90-h.p. Mercedes belonging to Mr. Robert Graves, of Mineola, Long Island.

THE Shoreham Urban Council has approved a recommendation of its Works Committee for a temporary building in the High Street, stated to be for the purpose of motor works.

A 16-h.p. motor vehicle has lately been travelling throughout Scotland with a view to inducing Scotchmen to spend their holidays in the summer resorts on the Highland Railway. Hundreds of guide books, &c., have been distributed through its agency.

ABOUT a month ago Mr. William Dyer, fitter at a works at Tondur, was soldering the petrol tank of a motor-car when an explosion occurred in the tank. He was terribly burned and died last week. The petrol had been removed from the tank but it is supposed that the explosion must have been caused by an accumulation of fumes.



Mr. E. Lisle, Jun., at the wheel of the 10-h.p. Royal Starling Car which made a non-stop run in the recent Irish Reliability Trials.

A CORONER's jury has called the attention of the St. Pancras Borough Council to the fact that the fire station in the middle of the Tottenham Court Road, London, W.C., obscures the view of the traffic to drivers in that thoroughfare.

ENTRIES for the trial of Light Army Tractors proposed by the Army Council are to be made on or before August 31st next. Full particulars can be obtained from the secretary, Mechanical Transport Committee, War Office, Whitehall, London, S.W.

THE spanner which has lately been introduced by the United Motor Industries, Ltd., for use in connection with Eisemann high-tension magnetos, has attached by a single pivot pin respectively a screw-driver blade and an adjustment gauge. The latter is exactly $\frac{1}{4}$ mm. thick, and it is intended for determining the exact distance between the broken platinum points of the make-and-break when the cam separates them. It is, of course, important that this distance should be correctly gauged, as upon it depends, to a great extent, the rapidity of the make-and-break effect. Another tool, which is being sent out with all 1908 Eisemann magnetos to facilitate the adjustment of the make-and-break, is a brass plug, the purpose of which is to enable the rocking member of the make-and-break to be adjusted relative to the lift effected by the cam on the end of the armature spindle.

At the annual meeting of the Commons and Footpaths Preservation Society Lord Eversley said that the advent of motor-cars had made the preservation of the paths more urgent than ever.

MR. A. E. QUICK has converted what was formerly a brewery in Queen Street, Horsham, into a depot where motor spirit, spare parts, and other requirements of those who travel by modern means can be obtained.

MESSRS. DENNIS BROS., of Guildford, have sent us a photo of a 30 cwt. and 15 cwt. van they have just supplied to Messrs. Gurney and Co., family grocers and wine merchants, Hereford, and a 15 cwt. van for their agent, Mr. H. Bracewell, Llaskett, Llandinabo, Hereford.

ONE of the motor-cab companies in New York now compels the driver to pay for all accidents due to carelessness. If he loses a part of his equipment, damages a wheel or mudguard, it is deducted from his commission at the end of the week. At first the company tried the experiment of offering a cash prize to the driver who could show the best record in a month. This, however, only interested a few, the rest seeming indifferent. The effect of the new rule, however, is said to be most gratifying, the repairs falling off 50 per cent.

MOTORING ACCESSORIES.

The "Fors" Accumulator.

ONE of the pioneer workers in the automobile movement was Mr. H. F. Joel, whose new "Fors" accumulator is being put upon the market by Messrs. Richard Pape, Ltd., of 59-61, New Oxford Street, London, W.C. The claims which are made for this well-constructed accumulator are of importance to motorists, who will do well to test the declared advantages for themselves. The reduction of weight for the increased output is said to be fully 50 per cent. as compared with many other types on the market. Short circuiting is prevented by the positive plate being separated by the porous pot from the negative plate, with consequent little liability of local action, so that the accumulator has the capacity of retaining its charge for an unusual length of time. The plates will not buckle nor can sulphating take place, and altogether it will be seen that great

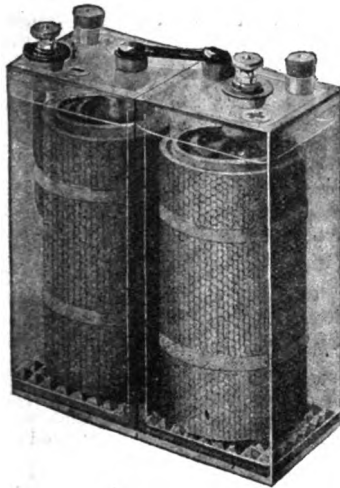


Fig. 1.

things are expected of the Fors accumulator. The cell follows the form of a positive electrode in the shape of a fluted cylinder placed within a porous pot which is closely surrounded by the negative electrode. The porous separator ensures freedom from short circuiting due to the accumulation of sediment at the bottom of the cell. The space usually left on this account is not required and the volume of the cell can therefore be diminished. As the electrodes are circular and the container square in plan, there is sufficient space for a store of electrolyte in the corner spaces left otherwise unoccupied. The ample support given to the electrodes enables very light supports to be used for the active material and buckling is impossible. It is claimed that the cell can be charged and discharged at high rates without injury—an important point in such a cell. Practical tests have demonstrated its efficiency and also its capacity for withstanding rough usage. We illustrate the type 4/1404 of 40 amp. hour capacity at 4 volts, which is specially designed for cars with one or two cylinder engines. It weighs 5½ lbs. and the size is 6 in. by 2½ in. by 4½ in. That for four-cylinder engines is the 100 amp. hour 4 volt type weighing 10½ lbs. and being of the following dimensions, 6½ in. by 4½ in. by 4½ in. In addition to ignition purposes it can also be employed for the interior lighting of cars, &c. The "Fors" accumulators are supplied in celluloid cases, and for carriage lighting batteries Messrs. Richard Pape, Ltd., have an excellent type complete in stout teak cases with outside terminals. All the connections are lead lined, leaving no metal subject to corrosion. Motorists will be well advised in becoming acquainted with the merits of these excellent specialities.

The "Signet" Luggage Carrier.

Those motorists who are now planning a tour on their car, and are somewhat puzzled as to how to carry all the necessary luggage, will be interested in the "Signet" collapsible and telescopic luggage carrier illustrated in Fig. 2, which has just been put on the market by Messrs. Brown Bros., Ltd. The device, which is easily fixed to the chassis, or fitted in boot of car as shown, can be supplied in any size to suit particular vehicles, the stock sizes, however, being 2 ft. 4½ in. by 1 ft. 6 in. and 2 ft. 7½ in. by 1 ft. 9½ in. It carries a lamp and number plate according to regulations, and folds into a space of 2 inches when not in use.



Fig. 2.

The carrier is made of steel throughout, but can be furnished in delta or aluminium alloys at an extra cost. Messrs. Brown Bros. have also sent us a sample of a new lining for the brakes of motor-cars they are introducing. The material, which is known as "Raybestos," is composed principally of asbestos woven with brass wire. While it will not burn out nor carbonise in any heat, it is claimed to produce more friction than metal against metal. It will rarely show signs of wear after many thousands of miles—in fact, cars have been driven 20,000 miles without wearing it out. The material has, we are informed, been subjected

to every known test, and has been used on the heaviest cars; it has also been soaked in petrol, paraffin, lubricating oil and water, without being affected. "Raybestos," which is extremely durable, is supplied in two thicknesses, $\frac{1}{8}$ in. and $\frac{1}{4}$ in., the thinner variety being usually sufficient.

Acetyloid Motor Lamps.

No fewer than one hundred and thirty motor lamps and generators are described and illustrated in the new catalogue for the season brought out by Messrs. Worsnop and Co., of the Carlton Lamp Works, Halifax. They are making a special feature of their acetyloid motor lamps, in which the light can be turned out and then lighted again safely when required without waste or smell occurring at either operation. The acetyloid can always be kept under control, and will not decompose in the ordinary atmosphere. It is claimed that the lamp remains uniformly steady, and that the rapid or slow movement of the car makes no difference to the size of the flame. The light given is very penetrating, and both economy and efficiency are secured. For use in connection with this system the Worsnop duplex gas lamp has been introduced. In this the lens and reflector are arranged to give a perfect illumination. The lamp is provided with a regulating valve for each carbide container, so that the light can be increased or decreased as required. It is also arranged so that one container can be refilled while the lamp is burning—an unique advantage that should assist its introduction to motorists.



The above illustration shows part of one day's output of "Stepneys," representing 250 Spare Wheels. When it is remembered that the Stepney Company turns out a similar number of wheels daily the huge number of the same in use will be apparent.

The "Rivett" Screen.

Now that the dusty season is with us, and motorists, as well as pedestrians and other users of the highway, are suffering the inconvenience of travelling over loosely constructed road surfaces, the attention of those who would associate motoring with comfort may usefully be drawn to the "Rivett" screen brought out by Mr. Alfred Rivett, of 236, High Road, Leytonstone, Essex, whose practical acquaintance with the motor business has been of long standing. This wind screen not only acts as a protection against rain and wind, but also effectually secures the user against the dust of preceding cars. It can be instantly raised or lowered to any desired angle while the car is in motion, being operated from the driver's seat. The shield is attached to the dashboard rigidly, being secured by brass rods screwed to the mudguard, and reaching to the top of the device. Should the dash be curved, brass sheeting is filled in to secure a straight line, upon which the shield is fixed, and the device is raised or lowered by the hand, a slotted quadrant being provided, so that the shield can be made firm at any angle, according to the circumstances required. It is made in two sizes, so that allowance may be made for the height of the driver's seat, and Mr. Rivett, who has depots at Ilford and East Ham, as well as motor works in the Steele Road, Leytonstone, can fit his excellent invention to any car. Those who have not yet studied or adopted a wind shield will do well to become acquainted with the simple and efficient features of this effective screen.

Correspondence.

[Letters to the Editor should be addressed to the offices, 27-33, Charing Cross Road, London, W.C.]

A PROPOSED NEW SPEED LIMIT.

TO THE EDITOR OF *The Motor-Car Journal*.

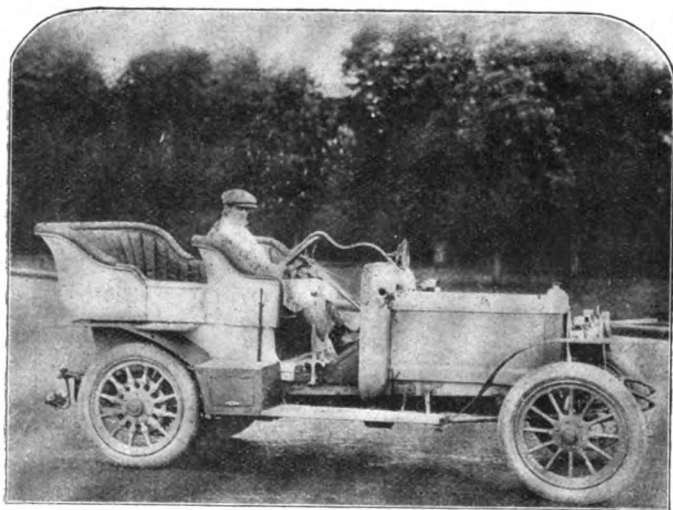
SIR,—I have read through the draft of the new Bill introduced by Mr. Straus, M.P., in which he proposes to reduce the speed of all vehicles in populous places to ten miles per hour, and can hardly imagine that the House of Commons will take it seriously. For years past there has in the Metropolis been a steady increase in the pace of all classes of traffic, and there are, I imagine, few who desire a return to the crawling speeds of the last century. If the proposals are accepted, it means that practically for a radius of a dozen miles round Charing Cross trams, buses, cabs and other vehicles, including automobiles, will be restricted to such a slow rate that a big outcry will be raised by the public owing to the difficulty of crossing the road on account of the never-ending funeral procession.—Yours truly,

TWENTIETH CENTURY.

THE EMISSION OF SMOKE.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—I was coming from Streatham towards London on Friday, last week, when a gentleman in a car registered in Surrey—I could not catch the number—protested very strongly against the smoke coming from the engine of the car I was driving. I fancy he took my number, but he did not stop for an explanation. I am very sorry to have been



Mr. Thomas Henshaw at the wheel of the 48-h.p. Daimler which secured the Gold Medal in Class G in the recent Irish Reliability Trials.

an annoyance to other users of the roads, and beg to apologise, but at the same time it was quite accidental. The cause of the trouble was a ball valve in the force pump which had gone wrong, the suction of the engine drawing the oil into the crank case wholesale. As soon as I was warned of the smoke coming from the exhaust I stopped and ran the surplus oil off.

I trust you can find space in your next issue for this letter, and hope it will catch the eye of the gentleman in question. I have been driving in London about three years, and this is the first complaint I have had. Thanking you in anticipation.—Yours truly,

A. H. REID, JUN.

SOME FACTS IN THE SELECTION OF MOTOR OILS.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—I fear that I am somewhat late in taking notice of "Veritas Prevalabit" letter in your issue of June 6th, with reference to the selection of motor oil, but I feel compelled to venture to say that in my mind it is one of the most sensible letters we have had on this subject, although I would criticise it in certain directions. He is quite right in saying that 2s. ought to be an outside price for motor lubricating oils, and I feel convinced that the very fictitious and exaggerated prices which are being charged will, in the near future, reach a more reasonable mark.

"V. P." was very fortunate in coming across a cycle oil which would suit his motor, because, of course, these cycle oils are not specially prepared to maintain their viscosity at high temperatures, or to necessarily give a low percentage of carbonisation, and in nine cases out of ten, speaking

from my experience of cycle oils, unsatisfactory results would be obtained. I have always very strongly preached the gospel of thin oils, but unfortunately it is frequently necessary to supply an article which is more or less "fool proof." To use a light oil, the driver has to be a very careful man, always keeping his engine in good condition, and his joints absolutely tight. Further, he must not use too much of it, because with a light oil one is apt to get a much larger amount through the cylinders than with a heavy oil, as it is so much more copiously splashed on to the piston, and can find its way more easily past the rings. In selecting an oil for a motor, the motorist often thinks that he is securing a better value and greater saving by using a heavy oil, and he may be correct in the latter supposition if his car does not receive proper attention, but I would like to point out that my firm are lubricating gas engine cylinders up to 500-h.p. with an oil with as little viscosity as our lightest motor oil. When you come to the question of the use of fatty oils, although the presence of a small percentage of this is of advantage in a steam engine cylinder, where water is present, on account of its property of making the mineral oil mix with the water, yet in the case of highly superheated steam, or in an internal combustion engine, its presence always means an increase in carbonaceous deposit, because these fatty oils cannot distil without decomposition, and that is indeed why in the past they have been known in text books as "fixed oils."

The reason why "V. P." got no sooting of cylinders with his very light oil is that, although the oil had sufficiently high tests to resist the temperature on the ring, yet as soon as it reached the hotter combustion area it immediately distilled away, whereas if he had used an oil of the same chemical nature but greater viscosity, he would have found a larger amount of deposit, because the heavier oil, having higher tests, cannot distil away so rapidly from the superheated surfaces, and so is "cracked" or decomposed, forming lighter hydro-carbons and carbon.

I also agree with "V. P.'s" last paragraph, and, in confutation of the opinion held by the man in the street, I would say that you can always "quench" a red hot poker in a bucket of ordinary paraffin lamp oil without fear of fire, although of course if you happen to hold a lighted match near the point of contact between the poker and the oil, the vapour would fire at once.

I shall be greatly obliged if "V. P." would let me have a sample of the oil he mentions, as it would interest me to determine the carbonisation values on my standard apparatus.—Yours truly,

A. DUCKHAM.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—I beg to thank "C. T. W. H." for his reply, and especially for his impartial interest in the subject under discussion. My single-cylinder car has a very well cooled engine cylinder. I have never known the water to boil, even after climbing long hills on low gear; on the other hand, my four-cylinder car is a nuisance, in boiling the water off during a long climb. I find, however, that this does not practically affect the oil question. It must be remembered that, so long as there is water in the cylinder jacket, the temperature, at atmospheric pressure of the cylinder walls, cannot go much over 212 deg. F. The formation of steam soon lets the driver know that he must stop for cooling or change the water, unless he wishes to court trouble.

I feel somewhat in difficulty to reply to "R. F. H." (your issue of 13th inst.) The manufacturers of the oil which I use send out enormous quantities of it in small tins, for which the cycle shops ask from 4½d. to sixpence. I suppose that a cyclist would run for months on a tin, so that 4½d. to 6d. for a nice little tin of oil is trifling in cost. After measuring the contents of several brands of cycle oil in these small tins, the cost per gallon is anywhere between 7s. 6d. and 13s. As these oils can be bought in quantity from one to two shillings per gallon, I hesitate in giving the manufacturers' names without their permission. This I will ask for and if permission be granted by them and our editor, I will give the name. Many people would think cycle oil a swindle, forgetting that the cycle shop-keepers must live and that it is not worth while to stock small retailing quantities without a good margin for profit, to say nothing of the cost of the neat little tins. I can assure your readers that there is nothing in the particular brand. The only points to practically consider are: first, that the oil is mineral oil only, I cannot speak about mixtures with certainty; second, that the oil should be of about the consistency or viscosity of ordinary cycle oil. These are the two main points. As I have moved to another house, I have not yet come across the analysis I had made of the oil, my papers and books not yet being in order, but I will give this to your readers as soon as possible.

Permit me to refer to my previous letter. I said that all the bearings of my single-cylinder car engine had white metal. I should have said, all the bearings excepting the gudgeon pin bearing were of white metal. Next, I believe that in regard to the oil losing more than half its weight on heating, this was when exposed in an open vessel and in fractional distillation. However, the analysis shall be given. I regret I cannot refer to it at present. So far, the thin oil is in use

successfully, on my recommendation, on seven cars—three single-cylinder cars of 10-h.p., one single-cylinder 8-h.p., one 18-h.p. four-cylinder (R.A.C. rating), one two-cylinder and one three-cylinder, the last two being the 7-h.p. and 8-11-h.p. Panhards. The owners say that they will never go back to heavy oils again. I gave thin oil a long trial before daring to advise my friends. Two of the above-mentioned cars are at present using mixtures of one part ordinary motor oil to three parts thin—their owners admit greater power, as far as they can judge, with all thin oil, but their bearings are such that the thin oil scatters and makes a mess. To those who are interested, I would say, use caution, believe no one, but do try. I cannot advise with absolute certainty for unknown conditions. All that I can say is that the cylinders of petrol engines require a light oil. Good carburation is of course inferred. Many engines are lubricated with a paste of soot.

Regarding the quantity of oil used, it is smaller than with heavy oil. I made an actual trial. I filled up my lubricator, which holds less than one quart. I was away on a little tour for a week, in which I ran more than 500 miles. I did not use a quart of oil, which lubricated the piston and cylinder gudgeon, big end, two side bearings, and the half-speed shaft. The cost of oil on this journey was about 3d. The car was a single single-cylinder 10-h.p.

A short time ago Mr. S. F. Edge gave the result of some interesting experiments with regard to temperature of cooling water in relation to h.p. efficiency. To me this is largely a question of lubrication—a heavy oil becomes thinner with heat. The amount of air and petrol that can enter a cylinder, all other things being equal, is inversely proportional to the absolute temperature of the air and petrol. As usual, a compromise has to be made to suit the conditions. When we consider that on an average 25 per cent. of the indicated power of an internal combustion engine at full load is absorbed in merely running the engine, we have room for improvement. I repeat that a water-cooled engine is comparatively a cold engine.—Yours truly,

VERITAS PREVALEBIT.

MOTOR RIDES FOR MANCHESTER CRIPPLED CHILDREN.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—We again bring before your notice the annual motor ride for the unfortunate children of Manchester and Salford, which has now reached the fourth year of its inception. The splendid efforts put forward last year in response to our appeal resulted in about 140 cars being generously lent for the occasion, and over 500 children (with their lady officials and medical staff) given the opportunity of an afternoon's run into the country. As this, however, represents less than half the number of the poor afflicted children in the district and on the books of the Crippled Children's Help Society, we hope the response to this present appeal will eclipse even that of last year, so that more may be included. By the kind permission of the Watch Committee, we shall have the assistance of the Chief Constable, Mr. R. Peacock, and his officers. The cars will arrive in Albert Square about 2 o'clock on Saturday, July 4th, and arrangements will be made with the local authorities on the route to have the roads watered as far as possible.

Some of the cars were decorated by their owners last year. This proved such a great delight to the children that we should appreciate the smallest effort in this direction, although it is hoped that no spirit of competition will enter into such a pleasing action. Saturday afternoon, July 4th, is the date fixed upon, and the distance out about eighteen miles to some rural and suitable place, to be selected.

If any of your readers can see their way to assist in giving the children this great looked-for pleasure, we shall be glad if they will send offers of cars to Mr. Wm. Hyde, J.P., Fernwood, Whalley Grange; Mr. C. B. Holmes, 28, Queen Street, Manchester; or to me at 50, Moseley Street, Manchester.—Yours truly,

W. COTSWORTH.

WHAT DOES A CHASSIS INCLUDE?

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—It would, I think, be useful if some definite pronouncement could be made as to what the term "chassis" does and does not include. Roughly speaking, I have always taken it to comprise everything but the body, but I find that in practice there is considerable variation in ideas as to what really comes within the term. For instance, some firms include the iron supports for the steps, the mudguards and their stays, lamp brackets, &c., while others do not furnish these as part of a chassis.—Yours truly,

COUNTRY AGENT.

PROPOSED TRIAL IN INDIA.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—In connection with the Central Provinces and Berar Exhibition to take place at Nagpur (India) during November and December next, motor trials are being proposed. It is suggested that on the first day a speed test should take place over a measured mile, the classification being according to the R.A.C. rating. On the following day a thirty mile race over a triangular course is proposed, on the third day a gymkhana, and then at the end of the week a tour over a distance of about 320 miles via Senai and Jubbulpore. The country through which

the latter route is proposed is of a delightful character, and although the road would be too long to picket, arrangements could be made to warn cartmen and herdsmen to give cars a wide berth. I understand that the committee of the exhibition are consulting leading manufacturers and owners of cars to ascertain the amount of support that might be obtainable, and am sending news of these to the *M.C.J.*, knowing its circulation to include many owners who might be inclined to visit India in order to participate in what is likely to be a very successful motor trial.—Yours truly,

A. D. F.
(Nagpur).

A STRANGE VIEW OF JUSTICE.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—Recently I was summoned for having, as alleged, exceeded the legal limit on the high road at Ilford on a certain day in May; but owing to my illness the case was adjourned till a date in June, when again I could not appear. I sent a medical certificate to testify that I was not in a fit state of health to attend the court and asked for a further adjournment. The case was, however, concluded in my absence, the Bench fining me £2 and costs. There was no one in court to defend my case, so that the police had it all their own way.

Subsequently I employed a solicitor to apply for a re-hearing, but his application was refused. It was alleged by the police that I had been travelling over fifteen miles an hour, despite the fact that there was a great deal of traffic in the road at the time. At the same court another driver said to have been going at a speed of 17½ miles per hour was



One of Messrs. Barford and Perkins' Motor Road Rollers at work at the Franco-British Exhibition.

fined 20s. and costs, although that was his second offence. For my offence of fifteen miles per hour, although it was the first time I had been summoned, the fine was double that imposed upon him. I think you and your readers will recognise that some injustice has been done.—Yours truly,

E. J. PRATT.

SOME POINTS ABOUT DESIGN.

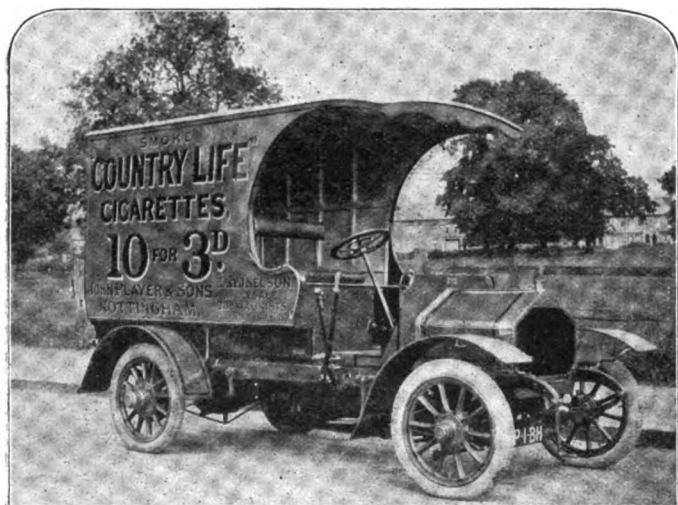
TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—It is really most interesting to compare the hundred and one different designs of engines now on the market. They nearly all have their little points, and also, although not mentioned in the catalogue, their drawbacks! It is obviously impossible here to go minutely into the various makes of engines, but perhaps a few general remarks may not be out of place. A type of motor that was very popular about two years ago, and which now has many supporters, is the multi-cylinder-engine with cylinders cast separately. It certainly does possess merit—it enables the manufacturer to put a bearing between each crank, as his engine had to be a long one in any case; there was no doubt about the cooling—every cylinder was, to all intents and purposes, cooled separately; it was sometimes much lighter, owing to the fact that lighter type castings could be used for the cylinders; one could lift one cylinder without of necessity lifting another, &c. But what about the drawbacks? How is it that most manufacturers are using cylinders cast in pairs? Well, the drawbacks were not apparent to the average owner until he had had the car a month or so, when the time came round for adjustments, replacements, &c. Now four separate cylinders have two water connections to each—eight in all—and usually the piping

became complicated and reaching any valve except the two end ones (and not always those) become a puzzle. Then there were the other connections, and if one wanted to lift one cylinder one might as well have lifted the lot, owing to time expended on the different connections. In the writer's opinion lack of accessibility and increase of complications are responsible for the decline of this type of engine.

Valve gearing and valve positions seem to have settled down to a definite routine. The overhead type of inlet valve is nearly dead, owing probably to the extra levers, &c., in the tappet gear required to work it, as well as one or two other minor objections. Valves are now placed all on one side or on opposite sides. There is some doubt about cam shafts—the majority are made with the cams out of the solid, but there are several manufacturers who cling to the old practice of keying and pinning the cams on the shaft; there is a great deal to be said for this method, as the difficulties of hardening the cams (when solid with the shaft) without the shaft warping are extreme. Timing wheels are now very generally enclosed, and this is undoubtedly correct practice. Exposed timing wheels collect dirt, dust, &c., and wear, and become very noisy and they are a trap for anything that may drop between them, e.g., a fan or lubricating belt—result, bent cam shaft. Circulation pumps are much improved. They are sensibly constructed and always direct driven. There seems, however, a growing tendency to discard the pump and cool by convection. The modern motor-car engine may be generally described as a high speed one. These motors are built as lightly as possible, particularly as regards their reciprocating parts. This, with a little attention to ratio of bore and stroke, and a little care given to size and setting of the valves and pipes, will produce a high-speed engine, and, providing the carburettor is correct, a flexible one. Just think what we used to have—3½ in. bore, 5½ in. stroke—and then we thought they were "getting round"! "Tempora mutantur, nos et mutamur in illo."—Yours truly,

ENGINEER.



The 20-cwt. Van lately completed by Messrs. Marten and Jellicoe, Ltd., of Thames Ditton, for Messrs. H. A. and F. Nelson, Wholesale Tobacconists, East Ham.

THE PRICE OF PETROL.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—I venture to suggest that it would be a good plan for the various petrol-supplying concerns to mention the current rate for their special brand of spirit in their advertisements in the *M.C.J.* and other motor papers. At present one is quite in the dark as to what is the fair price to pay, as only recently, at different depots, all within six miles of Charing Cross, I have been asked 1s., 1s. 1d., and 1s. 2d. per gallon.—Yours truly,

W. J.

THE COST OF KEEPING A CAR.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—It seems strange that the automobile industry should have reached its present stage of growth without there having been collated a much greater mass of definite and authentic data with regard to the cost of running motor-cars than is at present available. There are, it is true, a great number of variable quantities to be taken into account, not the least of which is personal equation of the driver, which combine in a variety of ways to form such widely differing results that it is very difficult to establish an equable basis of comparison. There is no longer any doubt that a reputable motor vehicle, granted fair treatment, will do all that is to be expected of it. The utility of the car has been proved beyond a doubt, its adaptability beyond question, and its reliability is continually increasing. There are many would-be motorists,

however, who would make the plunge if they could have some figures placed before them of the actual cost of running a car say of 10, 15 or 20-h.p., and I am sure it would prove interesting and useful if many of those owners who have kept a record would send you particulars of the same for publication.—Yours truly,

W. J. EMERTON.

A "KNOCKING" QUERY.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—There is a pronounced knock in the engine of my 10-12-h.p. double-cylinder car when the number of revolutions exceeds a certain point. There is very little play in the connecting rod bearings—insufficient, I think, to be the cause. The makers advise me the bearings are good for at least another two or three thousand miles. If you can help me in any way I shall be obliged.—Yours truly,

W. CHORLTON.

[The knock in the engine may be the result of premature ignition, caused by the cylinder head being covered with a deposit of carbon which becomes incandescent after the engine has run for a short time, causing the charge in the cylinder to ignite early.]

A CORRESPONDENT is anxious to know the address of Mr. Cavill, manufacturer of leather polishes.

WILL the firm, one of whose cars is registered under the trade identification mark of 197E8, communicate in confidence to the Secretary, Automobile Association, Princes Buildings, Coventry Street, W.?

CARS OUT WITHOUT AUTHORISATION.

ROBERT NORTON, chauffeur, was sent to prison for two months without the option of a fine, at Hull, for being drunk when in charge of a motor-car and driving to the public danger. Defendant took the car out without the sanction of his employer, and drove three friends into the country.

The case of a chauffeur taking out his employer's motor-car without permission has had its sequel in the Westminster County Court. Mrs. Grosvenor, the wife of the driver in question, sued Mr. Lazarus for £300 compensation under the Workmen's Compensation Act for the death of her husband. During the absence abroad of his employer, Grosvenor took some friends out in the motor-car and was killed in a collision with a water cart. The wife's application for compensation was based on the assertion that the car was being tested. Judge Woodfall dismissed the action with costs.

THE "FOUR-INCH" RACE FOR THE TOURIST TROPHY.

THE following are the entries up to date:—

| R.A.C. Rating. | Entrant. |
|--------------------------|----------------------|
| 25-6-h.p. Rover | Mr. J. K. Starley. |
| 25-6-h.p. Hutton | Mr. S. F. Edge. |
| 25-6-h.p. Arrol-Johnston | Mr. E. A. Rosenheim. |
| 25-6-h.p. Arrol-Johnston | Mr. E. A. Rosenheim. |
| 25-6-h.p. Rover | Mr. Harry Smith. |
| 25-6-h.p. De Dion-Bouton | Mr. J. W. Stooks. |
| 25-6-h.p. Hutton | Mr. J. E. Hutton. |

AUTOMOBILE ACCIDENTS.

ON Saturday a motor-car containing Sir Charles and Lady Layard collided with a passing cyclist near the Upper Common at Tunbridge Wells. The latter was much hurt.

ON Monday evening two motorists, Major R. Williams and Mr. G. R. Saunders, of London, were touring in the Eastbourne district. They had supper at the Beachy Head Hotel and left there at 10.45 p.m., travelling in their car in the direction of Birling Gap. About two miles from Beachy Head they lost their way. The car ran off the road on to the grass and perilously near the edge of the cliff. The engines stopped and the occupants alighted. Major Williams turned the handle to restart the engine, when, it is reported, the car ran backwards to the cliffs edge. The rear wheels shot over, but the footboards at the side catching in the earth, the progress of the car was arrested. Tilted at a dangerous angle, the rear lights set fire to the petrol. The flames spread rapidly, ignited the footboards holding the car in position, and, with these destroyed, the burning mass toppled over the cliff to the sands below, a distance of 300 to 350 feet.

WITH reference to the Kenley motor case, which was before the public in January the Treasury intends to offer no evidence against Mr. B. E. Brown, who is due to appear at the next Guildford assizes. The verdict of the coroner's jury has already exonerated him in the matter, and accepted his denial that he was driving the car which caused the injuries to the man who subsequently died.

FROM Buick Motors, 45, Great Marlboro' Street, London, W., comes a copy of the latest catalogue of Buick cars, in which six models, ranging from 15-20-h.p. to 40-h.p., are fully illustrated and described. Users of Buick cars will be interested to learn that a stock of spare parts for the various types are being kept at the above-mentioned address.

CLUBS AND ASSOCIATIONS.

ROYAL.

New individual associates of the R.A.C. include the Earl of Cranbrook, the Bishop of Winchester, Sir W. H. Holland, Bart., M.P., Sir Christopher Furness, M.P., Lt.-Col. Walter Campbell, Miss Bertha Capron, Miss Florence Hammond, Mrs. Astley Jephson and Miss Jameson.

New members of the R.A.C. include Sir F. Cawley, M.P., Sir J. Mackay, G.C.M.G., Sir Murland Evans, Bart., Sir Harry Samuel, and Mr. Fred. Terry.

MOTOR UNION.

THE Motor Union has recently issued the following signs and notices:—Special caution boards at each end of Stony Stratford, four special school signs at Pembroke for the Pembroke County Council, two for school plates at Neascliffe, on the Holyhead road, at the instance of Mr. J. R. Grestorex and the Salop County Council.

Mr. C. H. Dodd, vice-chairman, and Mr. Rees Jeffreys, secretary of the Motor Union, left London on Saturday last to attend the annual Congress of the Ligue Internationale des Associations Touristes, to be held at Stockholm from June 24th to the 28th.

The following solicitors have been appointed in the districts mentioned:—Messrs. Baron and Smith, Darlington; Mr. J. Downes Powell, Wrexham.

The Union medal has been awarded for competition to the Kensington A.C., Cheshire A.C. and the Welsh A.C.



The Hon. Mr. Simon Fraser with his 40-h.p. Six-Cylinder Napier Car on a typical Australian mountain road, about twenty-five miles from Melbourne.

This road is very rough and rises twenty miles, having a gradient in many places of more than one in ten. Mr. Fraser, who is one of the most prominent motorists in Australia, and who has had his car over two years, writes that it is running as well now as when he first had it.

MOTOR CLUB.

THE Motor Club recently played a cricket match with the Savage Club on the London County Ground. A good game ended in a win for the motorists.

On the 15th inst. several members motored down to Kingston for the Thames Motor Boat meeting. In the evening over sixty sat down to a cheery little dinner at Nuthalls, Col. W. J. Bosworth and Admiral Sir William Kennedy, K.C.B., being amongst those present.

With reference to the Grand Prix at Dieppe, arrangements have been made for the fullest details to be continually wired over. These will be posted in the club on a plan specially drawn up for the purpose.

On Wednesday, July 15th, the club is holding a gymkhana at Hastings, and the meeting is entirely open so far as competitors are concerned, and there is reason to hope that several lady drivers will take part. Application forms for entry can be obtained from the secretary, Motor Club, Coventry Street, London, W.

MANCHESTER MOTOR.

THE Trials Committee of the Manchester Motor Club have declared the result of the three days' trials which were reported in our columns last week. Mr. H. Hollingdrake takes the first prize for the trade section and Mr. J. Higginson the prize for non-trade members. Special prizes for non-stop runs were awarded the following:—Messrs. E. J.

Chambers, F. C. Hunt, C. J. Antill, R. H. Carlisle, V. G. New, J. N. Aiken, and P. H. T. Butler.

Mr. E. J. Chambers consumed 13½ gallons of petrol in the full distance (396½ miles), his averages being 41.78 ton miles per gallon and 28.948 car miles per gallon. Eighteen cars started and finished in the trials. Appended are the details:—

| Owner and car. | Reliability. | Points for petrol consumption. | Points for hill test. |
|---|--------------|--------------------------------|-----------------------|
| H. Hollingdrake, 35-40-h.p. De la Buire ... | 500 | 95.66 | 100 |
| E. J. Chambers, 16-h.p. Bell ... | 500 | 100 | 77.97 |
| F. C. Hunt, 15-h.p. Humber ... | 500 | 90.99 | 75.2 |
| F. C. Hunt, 20-h.p. Humber ... | 500 | 71.62 | 88.86 |
| R. H. Carlisle, 14-16-h.p. Argyll ... | 500 | 79.12 | 79.61 |
| V. G. New, 14-20-h.p. Siddley ... | 500 | 88.36 | 69.51 |
| H. W. Cranham, 20-h.p. Scat ... | 500 | 66.76 | 87.82 |
| J. Higginson, 80-100-h.p. De la Buire ... | 499 | 84.11 | 69.17 |
| J. N. Aiken, 12-14-h.p. Gladiator ... | 500 | 81.77 | 69 |
| C. J. Antill, 14-16-h.p. Argyll ... | 500 | 71.8 | 78.17 |
| H. Brady, 8-h.p. De Dion ... | 495 | 66.19 | 80.8 |
| J. T. Ward, 8-h.p. Rover ... | 498 | 80.73 | 61.2 |
| P. H. T. Butler, 20-h.p. Bell ... | 500 | 74.46 | 54.53 |
| N. Crossland, 16-20-h.p. Calthorpe ... | 494 | 55 | 66.7 |
| A. B. Albert, 12-16-h.p. Riley ... | 454 | 58.9 | 45.35 |
| T. G. Whitaker, 10-12-h.p. Humber ... | 361 | 67.36 | 42.54 |
| E. H. Bennett, 12-16-h.p. Horbick ... | 339 | 72.48 | 29.27 |
| L. Swain, 10-h.p. Adams-Hewitt ... | 388 | 46.6 | — |

BURY AND WEST SUFFOLK.

ON Saturday, the 13th inst., the Bury and West Suffolk A.C. held a petrol consumption and speed-judging contest. Eight cars entered, and the speed-judging competition was over a course of 43 miles, the competitors having to average a certain pace throughout the run. The following table gives the number of miles per gallon, the figure of merit for petrol consumption, and the points lost for misjudgment of speed upon which the total figure of merit was based. The formula adopted in the petrol consumption test was as follows:—

The total weight of car including passengers in lbs. \div Numbers of points of petrol consumption. = Figure of merit.

The Hon. Sec., Mr. Kenneth Greene, had his time so fully occupied with weighing the cars before starting and measuring the petrol on their return, that he was unable to compete. Mr. Thurlow Champness acted as timekeeper. The following table shows the gross and detail results:—

| Owner. | Car. | Petrol consumption in consumption. | Figure of merit for petrol consumption. | Points lost for misjudgment of speed. | Total figure of merit. |
|----------------------|--------------------|------------------------------------|---|---------------------------------------|------------------------|
| Mr. J. R. Hargreaves | 22-28-h.p. Daimler | 11 | 269.8 | 1.2 | 267.4 |
| Dr. J. S. Kilner | 12-14-h.p. Argyll | 9½ | 255.6 | 2 | 253.4 |
| Mr. L. J. Hunter | 6-h.p. Rover | 6 | 252.0 | 3 | 249.0 |
| Mr. H. P. Collis | 12-14-h.p. De Dion | 11 | 239.2 | 14 | 225.2 |
| Dr. O. R. M. Wood | 12-14-h.p. De Dion | 11 | 247.0 | 26 | 221.0 |
| Rev. E. M. Bartlett | 6-h.p. Rover | 6½ | 237.0 | *18 | 219.0 |
| Rev. O. B. Packard | 10-12-h.p. Argyll | 15 | 183.0 | 22 | 161.0 |

* Mistook the route and went three miles out of his way.

BROOKLANDS.

BOTH the long and short records in the 26-h.p. standard class were broken on the 17th inst. by Mr. J. E. Hutton with a 25.6-h.p. Hutton. The previous records in this class were 71.605 miles per hour for the long distance (about 27 miles), by J. W. Stocks, on a De Dion, and the short (half-mile), one of 77.92 miles an hour, by F. Newton, on a Napier. Mr. Hutton beat them both. For the long record his speed rate was 76.59 miles an hour, while the short record was accomplished at 78.9 miles an hour. The rate of speed for the fastest lap (2 11-16 miles) was 79½ miles an hour.

THE MOTOR-CYCLING CLUB.

THE following names have been passed by the committee for awards in the recent competitions:—

London to Edinburgh.—Gold Medals: Capt. Sir R. K. Arbuthnot, Bart., R.N., D. S. Baddeley, L. A. Baddeley, J. L. Barratt, H. M. Bentley, R. G. Booth, Dr. E. W. Brewerton, A. T. Browett, A. J. Brown, J. F. Buckingham, P. C. Camparole, M. Campbell, W. Chater Lea, H. Childs, S. H. Clay, H. Collins, C. C. Cooke, H. Cowlin, T. F. Cox, F. Cozens, B. Cumberland, F. C. Dee, E. B. Dickson, J. O. M. Dixon, A. D. Draper, G. L. Fletcher, A. H. Forbes, H. S. Freeman, S. H. Fry, G. Gibson, W. Gunn, S. B. Hart Davies, J. S. Harwood, F. T. Heighton, Miss Muriel Hind, J. Van Hooydonk, A. de S. Hutton, W. A. Jacobs, W. G. James, P. Janson, C. F. Lacey, Lieut. Gerald Lane, R.N., W. H. Lane, J. P. Le Grand, H. P. Mays, A. B. McDonald, Dr. C. B. Moss-Blundell, C. G. Myer, H. S. Myer, — Mundy, A. D. Nicholson, V. Olsson, E. S. Parris, T. Pears, P. E. Quick, G. W. Raper, G. E.

Roberts, G. Rowden, W. A. Sale, H. C. Sayer, C. J. Seed, F. G. Smith, A. J. Sproston, A. M. Tatham, A. Walton, Stanley Webb, W. H. Wells, F. White, J. Winslow. Silver Medals: W. H. Bishop, H. Williamson.

Double Journey.—Gold Medals; H. P. Beasley, C. W. Brown, R. O. Clark, C. H. Crole-Rees, E. V. Fielder, S. G. Frost, E. Gwynne, O. C. Godfrey, F. J. Jenkins, A. S. Phillips, J. Platt Betts, A. G. Reynolds, O. L. Summers, Miss A. E. Wood. A few names have been held over for further consideration by the committee at the next meeting.

Mr. J. Platt Betts is the winner of the Schulte Cup on an 8-h.p. Rover car, and as he has now won the cup two years in succession it becomes his own property; Mr. S. G. Frost is second, only 1 mark behind, and Mr. A. G. Reynolds third. Mr. S. G. Frost is the holder of the M.C.C. Challenge Cup for the year.

Details are now being arranged for the Chas. Jarrott Cup London to Land's End and back competition. The competition is open only to members of the club, so that all motor-bicyclists who wish to take part in this event, and are not already members of the club, should at once apply to the hon. secretary, Mr. A. Candler, 1, Lime Grove, Shepherd's Bush, W., for forms of membership. The competition for the M.C.C. trophy for cars has been postponed from July 11th to July 25th, and the petrol consumption test will be held on September 12th.

THE MANCHESTER AND DISTRICT MOTOR AND CYCLE TRADES ASSOCIATION, LTD.

At an extraordinary meeting of the shareholders of the above association, held at the Palatine Hotel, Manchester, on Friday, the 19th inst., the resolution passed at a previous meeting, viz., "That the name of the company be changed from 'The Manchester and District Motor and Cycles Trades Association, Ltd.' to the 'Manchester and District Motor Trades Association, Ltd.'," was duly confirmed. At a meeting of the directors which followed, Mr. Charles Davies (of Messrs. Foden's, Ltd., Sandbach), was unanimously appointed president, and Mr. Frank Bullock vice-president, for the ensuing twelve months. The other directors are Messrs. H. Spurrier, jun. (Leyland Motors, Ltd.), Thos. Webb, Frank Smith (Empress Motor Co., Ltd.), E. Dook (Dook-Swain Tyre and Rubber Co., Ltd.), J. G. Looker, J. H. Wightman (J. S. Taylor and Co.), and Herbert Brady. Mr. W. H. Wheeler is the secretary.

THE ROADS IMPROVEMENT ASSOCIATION.

The Roads Improvement Association (Incorporated) is prepared to carry out official tests of any methods, apparatus or material that may be submitted to it connected with the repair and maintenance of roads, and especially for the prevention of surface dust, provided that the Council of the Association is satisfied that the results of such tests are likely to be of public service.

The general regulations and other particulars can be obtained on application to the hon. secretary, at 1, Albemarle Street, Piccadilly, London, W.

KENT.

On Saturday the Kent Automobile Club held a luncheon at the Burlington Hotel, Dover. Mr. Walter Emden, the Mayor of the town, presided, being supported by the Deputy-Mayor, Sir William Crundall, Sir Alfred Watkin, and others associated with the prosperity of the town. The club was welcomed by the Mayor, and in reply Dr. Charles Firth, the vice-chairman, said that the object of the association was to get together all motorists in the county with a view to securing the consideration to other users of the road and their own free use of the same. Mr. G. M. Kenyon proposed the health of the visitors, Sir William Crundall making response.

Following the lunch, a committee meeting was held, at which Mr. Walter Emden, J.P., Sir William Crundall, of Dover, Capt. E. S. Oliver, of Shorncliffe, Mr. G. H. MacGeagh, of Hadlow, and Mr. W. Woodward, of Bromley, were elected to the membership of the club.

LEICESTERSHIRE.

On Saturday, for the fourth successive year, a number of crippled children assembled at Bishop Street School, Leicester, for the outing given by the members of the Leicestershire A.C. The cars, twenty-nine in number, were ranged along the street, and their freight numbered almost a hundred. Mr. McAlpin, the hon. secretary of the club, had charge of the arrangements, and cars were sent by Miss Lane, Captain Byron, Messrs. T. C. Clarke, H. Burgess, Kennell, H. Marsden, T. C. King, J. A. Corah, H. J. Grace, Hull, J. Morton, the Rev. F. Jones, C. H. Preston, E. Healey, J. A. Doran, G. H. West, P. L. Baker, P. L. Baker, jun., J. A. Harper, F. Herbert, A. B. Partridge, J. Pennett, Dr. Phillips, Dr. Scott, K. Walker, Councillor Russell Frears, C. W. Warner, and Messrs. Richardson.

SHEFFIELD.

The Sheffield and District A.C.'s pace-judging run from the Maynard Arms, at Grindleford, on Saturday, evoked considerable interest. The course was from the Maynard by Fox House and Froggat Edge nearly to Calver and back by Stoke Hall to the starting point. Ten competitors drew speeds varying from fourteen to twenty miles an hour, and the competition showed how nearly the motorist is able to estimate

his pace without the aid of a watch or speedometer. Five out of the ten travelled over the course within a fraction of one mile per hour of the pace set for them by their cards, the winner just being 1-100th of a mile per hour short of the speed he drew. Results:—Mr. E. W. Hatfield, slow, 0.01 miles per hour; Mr. Percy Richardson, fast, 0.22; Mr. G. D. Flather, slow, 0.23; Mr. J. T. Stevenson, slow, 0.67; Mr. H. Beasley, fast, 0.93; Mr. A. Worrall, fast, 2.08; Mr. Harvey Foster, fast, 2.31; Mr. P. J. Benson, slow, 2.66; Mr. H. Adams, fast, 3.25; Mr. W. J. Slack, fast, 3.88.

KENSINGTON A.C.

On Saturday this club held its second gymkhana in the grounds of Chiswick House, when 100 members and their friends enjoyed the hospitality of the president, Mr. C. Moleworth Tuke.

The results were:—Bending Race.—Cars 9 ft. wheelbase and over, Miss M. Thompson; cars under 9 ft., 1, Dr. Harvey Hilliard; 2, J. H. Reeves.

Heads and Rings.—1, Dr. L. C. Dobson; 2, R. E. Haywood.

Costume Race.—1, A. Garcia; 2, Prof. V. Spiera.

Members' Paid Drivers.—1, Dr. E. Snape; 2, Mr. W. Curtis Thom; 3, Dr. L. C. Dobson.

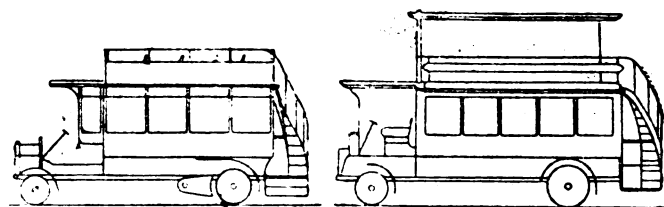
Crawling Race.—1, Mrs. Dobson; 2, Dr. L. C. Dobson.

Potato Race.—1, Miss M. Thompson; 2, Mrs. Montgomery Smith; 3, Mrs. Cox.

Musical Chairs.—1, Miss M. Thompson; 2, Dr. J. Atkins; 3, Miss W. Tuke.

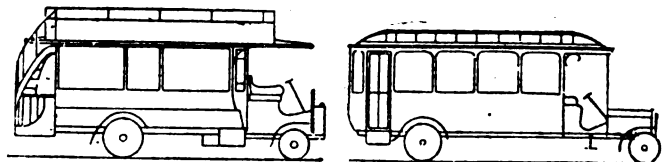
The winner of the Motor Union medal and holder of the challenge cup was Miss M. Thompson.

At the recent hill climb the winners were:—1, G. L. Eastes, 10-14-h.p. Star; 2, Dr. L. C. Dobson, 10-12-h.p. Humber; 3, E. Davidson, 24-h.p. Minerva.



London.

Paris.



Berlin.

Vienna.

Comparative Diagrams of the Motor-Buses in use in four Capitals.

HULL AND LINCOLNSHIRE.

VERS SCRAWBY GULL PONDS, near Brigg, Lincolnshire, have for 300 years been reserved for the sea-gulls for breeding purposes, and here many thousands of gulls are to be seen just now on this breeding ground. Motorists have come very long distances to witness the unique spectacle, and on Saturday there was a large attendance of the members of the Hull Auto-Cycle Club and of the Lincolnshire Motor-Cycle Club on the occasion of the second annual inter-club meet. The members of the two clubs spent much time in examining the haunts of these handsome birds, and then adjourned to the Angel Hotel, Brigg, for tea and chat.

SOMERSET.

The Somerset A.C. has held its first meet of the season at Cheddar, when about sixty members and friends spent a very enjoyable afternoon visiting the gorge and caves.

Subsequently the committee meeting was held at the Cliff Hotel, when it was decided to place three "drive with care" boards at dangerous places in the vicinity of Cheddar.

BRITISH MOTOR-BOAT CLUB.

For the British Motor Boat Club's annual race from Gravesend to Cowes, on Saturday, four vessels came to the starting line. The starters were Mr. S. F. Edge's Napier Major, Mr. Eric H. Cliff's Joan, Mr. T. D. Sanders's K.L., and Mr. Ernest H. White's Lethe. The start was from off the New Thames Yacht Club at Gravesend, and the finish a line between the flagstaff of the Royal London Yacht Club, at Cowes, and No. 3 Fairway Gas Buoy. The course was inside the Goodwins, and the calculated length of it was 175 sea miles. Under M.M.A. rating on this distance K.L. allowed Lethe 1 h. 12 min. 55 sec., Joan 2 h. 52 min. 5 sec., and Napier Major 6 h. 42 min. 47 sec. The race from London to

Cowes was won by Napier Major, which arrived on Sunday afternoon, completing the course in 23 h. 6 min. 37 sec., giving an average speed of $7\frac{1}{2}$ knots per hour.

MIDLAND.

By the kindness of Mr. Thomas Clayton, a member of the committee of the Midland A.C., the crippled children belonging to the Birmingham Crippled Children's Union have been taken for a drive through Packington Park (by permission of Lord Aylesford) and afterwards entertained to tea by Mr. and Mrs. Clayton at their residence, The Cedars, Castle Bromwich. About thirty members placed their cars at Mr. Clayton's disposal, and by means of these and a large motor-omnibus about 200 children were able to enjoy the drive.

Amongst the members of the Midland A.C. who were present were Messrs. W. Ballin Hinde, Clive Blewitt, E. L. Jacobs, C. P. Type, and G. H. Lancaster.

Mr. F. H. Carrillo having accepted an appointment on the Continent, has been obliged to relinquish the position of hon. secretary to the club. The committee have pleasure in stating that they have secured the services of Mr. Litchfield Meek, a member of the club, as the hon. secretary in his place.

INTER CLUB MEET.

An inter-club meet and gymkhana will be held in the Football Grounds, Buxton, to-day (Saturday) under the auspices of the Manchester Automobile Club, when the following automobile clubs will be repre-



The Coventry Humber Double Purpose Vehicle, with detachable bodies.

sented:—Barnsley, Blackpool, Cheshire, Derby and District, Halifax, Harrogate, Huddersfield, Hull, Liverpool, Lancashire, Midland, Mid. Stafford, North Eastern, North Wales, North Yorkshire, Nottingham, Sheffield, Shropshire, Wolverhampton, and Yorkshire.

The proceedings will include a gymkhana and dinner at the Empire Hotel.

THE Reliability Trial for the "Frederic Coleman Trophy," organised by the North Middlesex A.C., is fixed for Saturday, July 4th, starting from Barnet at 9.30 a.m.

Of the thirty competitors in the annual reliability run from Leeds to Edinburgh and back, promoted by the Leeds and Bradford motor clubs, eight completed the trip within the specified time.

ON the 13th inst. the Blackheath A.C. held a hill-climbing competition on a suitable hill about twenty miles from London. Six cars competed for the Challenge Cup presented by Mr. Alexander Duckham, the winner being Mr. W. F. Bitcher on his 12-16-h.p. Clement-Talbot. Prof. or Carlton Lambert and Mr. Hugh Beale acted as timekeepers.

THE Accrington and District Motor Cycle Club has been formed at a meeting held in the Town-Hall, at which eighteen motor-cyclists were

present. Mr. A. Bond, of Blackburn Road, Accrington, was elected secretary *pro tem.*, with Mr. Grainger, of Union Road, Oswaldtwistle, as treasurer.

ON Saturday last fifty members and friends of the Blackheath A.C. visited Cobham Hall, the seat of Lord Darnley, by whose permission they were enabled to look over the various reception rooms and picture gallery with its valuable and interesting collection. A picnic tea was afterwards held in the park.

CASES UNDER THE MOTOR CAR ACT.

EXCEEDING LEGAL LIMIT.

On the 18th inst. there were fifteen summonses for exceeding the speed limit heard at the Midhurst Petty Sessions, the fines ranging from £3 to £6. On the same day Miss Dorothy Levitt was fined £10 for a similar offence at Farnham. A special sitting of the Haywards Heath Petty Sessions has been held to deal with forty-seven cases against motorists, fines aggregating more than £300 being inflicted. One of the most interesting of the cases was that in which Mr. H. Woollen was summoned. He was defended by Mr. Rowland Harker, who submitted the evidence of the speedometer, which was accepted by the magistrates, who, however, inflicted the fine of £10 and costs. Notice of appeal was promptly given. The stipendiary magistrate at Dublin has intimated that he will fine no one less than £10 for exceeding the speed limit in the Phoenix Park, Dublin. A police trap has been established near the Phoenix Column, and the Marquis of Headfort has been caught therein, being fined £10. On Saturday four motorists who were alleged to have travelled over various traps in the vicinity at a rate ranging between twenty-five to twenty-nine miles per hour were fined £5 and costs at the Lancaster Police Court. Another who reached thirty miles an hour was fined £7 10s. and costs.

DANGEROUS SPEED.

At Marylebone on Tuesday a motorist whose car had driven into a Royal carriage smashing its panels was summoned for driving at a speed dangerous to the public and fined £5 and costs. A similar fine was inflicted on Lord Compton at the same court for driving a motor-car beyond the speed limit of ten miles an hour in Regent's Park.

A case against a motorist summoned for dangerous driving at Littlehampton was dismissed at the local petty sessions on Monday. Ten other motorists summoned at Arundel on the same day were less fortunate.

ROAD REPORTS.

PORTSMOUTH.—The police of Portsmouth have been given instructions to deal more vigilantly with motor-car, and particularly motor-'bus' traffic in the town.

LANARKSHIRE.—The Chief Constable of Lanarkshire has communicated with the Motor Union to the effect that he will be compelled to place "controls" on the road if motorists from England do not desist their alleged reckless driving.

CLITHEROE.—A circular issued by the Lancashire Automobile Club states that two police-traps have been commenced in the Clitheroe district. One is on the Chatburn road and the other on the road leading to Low Moor and further on to Whitewell and Lancaster, *via* the Trough of Bowland.

MACCLESFIELD.—The Chester road is under repair from Prestbury Road to Broken Cross. Motorists are advised by Mr. C. W. Stubbs, the Borough Surveyor, to turn to the north at Fallibroome Road and then proceed to Macclesfield *via* Victoria Road and Prestbury Road. Cars should be driven with care at Broken Cross, where the Fallibroome Road meets Chester Road.

BEDFORD.—At Clapham, on the way from Bedford to Rushden, the road has been macadamised and tarred, to the obvious lessening of the dust caused by motor-cars.

LUTON.—Attention has lately been drawn to some dangerous cross-roads in the county of Bedfordshire, notably in the district of Luton. One is in the centre of the borough, where a considerable amount of traffic is usually round. Care should also be exercised on the Midland and Old Bedford Roads as well as where Cottle and Windsor Streets cross, the ordinary dangers of both places having been increased by the inauguration of the tramway system.

MESSRS. MANN AND OVERTONS, LTD., have lately supplied a Unic motor-van to Messrs. E. and R. Garrould, Edgware Road, London, N.W.

MESSRS. LOADDER, of 30, Kennington Park Road, London, S.E., are making a speciality of supplying duplicates of broken parts. They are well-equipped for carrying out all kinds of motor repairs.

RENOID motor chains were fitted to the vehicles which were classed first, third and fifth in the recent Industrial Vehicle Trials in France. Of the twenty-four vehicles to which awards were made, twenty had chain transmission, thirteen of which, or 65 per cent., had Renoid's.

MR. H. C. BELL, of Finchley, has written to United Motor Industries, Ltd., stating that he has used the "D" oil sold by this firm for the last five years with the greatest satisfaction. "One of the principal features of the oil is its lasting qualities, hence it is very economical in use."

FORTHCOMING EVENTS.

JUNE.

- 27th (Sat.).—Saltburn beach races.
Buxton meet of the Manchester, Sheffield, and Lincolnshire clubs.
Members of the Cheshire A.C. will participate in the Gymkhana of the Manchester A.C.
Visit of the Essex C.A.C. to Audley End.
Meet of the Kent A.C. at Holwood by permission of the Earl of Derby.
- 28th (Sun.).—Southend M.C. run to Grand Hotel, Clacton.

JULY.

- The Land's End to John o' Groat's Trial of the Auto C.C. will be held.
- 4th (Sat.).—Derby A.C. challenge cup competition.
Meet of the Kent A.C. at Gravesend.
Brooklands A.R.C. meet.
Cheshire A.C. gymkhana.
- 6th (M.).—Grand Prix A.C.F. (Voiturette section).
- 7th (Tu.).—Grand Prix A.C.F. on the Dieppe Circuit.
- 8th (W.).—Meet of the Cambridge A.C. at Wareley Park by invitation of Col. Duncombe.
- 9th (Th.).—Meet of the Ladies' A.C. at Hanworth Park, Middlesex.
- 10th (F.).—Start of tour of motor factories in the Midland by the I.I.A.E.
Welsh A.C. motor-car reliability trials.
- 11th (S.).—Provincial meet of the R.A.C. at Hereford. Lunch at the Green Dragon Hotel; visit to Ledbury Park, and dinner at the Assembly Rooms.
Essex C.A.C. gymkhana at Brentwood.
Aston Hill climb of the Hertfordshire C.A.C.
Essex M.C. gymkhana at High Beech.
Leicester A.C. hill climb at Kettleby.
- 16th (Th.).—Club meet of the Netts A.C. at the Hop Pole, Ollerton.
- 18th (Sat.).—Annual Gymkhana of the Herts C.A.C. at The Grove, Watford, by permission of the president, the Earl of Clarendon.
Gymkhana of the Kent A.C. at Maidstone.
Meet of the Liverpool and Cheshire A.C.'s at Delamere.
New Forest and Dorset A.C.'s joint hill climb.
Hill Climb of the Essex C.A.C.
- 20th (M.).—Entries close for the O'Gorman trophy.
- 20th and 21st.—The R.A.C. dust trials.
- 23rd (Th.).—Gymkhana of the Cambridge A.C. at Chippenham Park.
Hill climbing competition of the Hull and East Riding A.C.C.
- 25th (Sat.).—Petrol Consumption Tests of the Motor Cycling Club.
Annual Open Hill Climb of the Midland A.C. at Shalsley Walsh.
Committee meeting of the Kent A.C. at Herne Bay.
Motor Union Provincial meet.
Cheshire A.C. hill climb.
Leicester A.C. gymkhana.
Lancashire A.C. open hill climb.
- 26th (Sun.).—Southend M.C. run to Coach and Horses, Quendon.

AUGUST.

- 1st (Sat.).—Brooklands A.R.C. meeting.
- 2nd-3rd.—Newcastle and District M.C.C. reliability.
- 3rd (M.).—Brooklands A.R.C. meet.
- 8th (Sat.).—Visit of the Kent A.C. to Brasted Chart.
- 12th (W.).—A.C. of Belgium—Circuit des Ardennes and the Liedekerke Cup race.
- 22nd (Sat.).—Annual race meeting of the W.A.C.
Invitation of Sir D. Salomons to the Kent A.C. to visit Tunbridge Wells.
- 23rd (Sun.).—A. C. du Rhone Mont Pilat trial.
- 29th (Sat.).—Meet of the Lincolnshire Motor Club at Lincoln.
Mont Ventoux hill climb of the A.C. Vaclusien.
- 30th (Sun.).—Southend M.C. run to Great White Horse Hotel, Ipswich.

SEPTEMBER.

- 4th and 5th.—Reliability Consumption Trial of the Essex C.A.C. at Norwich in connection with the R.A.C. provincial meet.
- 5th (Sat.).—Aston Hill climb of the Herts C.A.C.
Provincial meet of the R.A.C. at Norwich.
- 12th (Sat.).—Brooklands A.R.C. meet.
- 17th (Th.).—Touring car competition of the A.C. of Holland through that country.
- 19th (Sat.).—Provincial meet of the Motor Union.
North Middlesex A.C. 100 miles reliability run.
Manchester A.C. reliability run for small cars.

LIGHTING-UP TIMES—LONDON.

| | | | | | | |
|----------------|-----|-----------|---|---------------|-----|----------|
| June 27th—9.19 | — | 29th—9.19 | — | July 1st—9.19 | ... | 3rd—9.18 |
| " 28th—9.19 | ... | 30th—9.19 | — | " 2nd—9.19 | ... | 4th—9.18 |

To find the approximate lighting-up time in June for Birmingham 13 minutes should be added to the above times, 17 for York, 21 for Manchester, and 43 for Glasgow.

COMPANY NEWS.

"SHELL" TRANSPORT AND TRADING.—The report for 1907 states that, including the balance brought forward, but after deduction of the cost of issuing the additional capital, management, legal, and other expenses, there is a credit to profit and loss account of £713,817. The directors recommend a final dividend for the year of 5 per cent. (making 15 per cent. for the year), leaving £63,817 to be carried forward to the current year. Up to date this year's trading has been satisfactory, and an interim dividend of 5 per cent. (i.e., at the rate of 10 per cent. per annum) will be paid on July 1st.

SMEDDLE AND KENNEDY, LTD., has been registered with a capital of £3,000 to take over the business of motor-car proprietors carried on by Messrs. Smeddle and W. J. Kennedy at St. James' Street, Newcastle-on-Tyne, as Smeddle-Kennedy Motors. There will be no initial public issue.

UNIVERSAL MOTOR CAB COMPANY.—£50,000. Agreement with A. Clarke, and to carry on the business of proprietors and manufacturers of and dealers in motor-cabs, &c. Whitehall House, Charing Cross, S.W.

BUSINESS NEWS.

FROM the United Motor Industries, Ltd., Poland Street, W., comes a copy of a show-card they have just issued of the Simplex speedometers, for which they are sole wholesale distributors. The show-cards are issued in a variety of colours, and the firm will be pleased to send a supply to any members of the trade on application.

MR. I. J. HOBDEN, of Salisbury, writes that he has had an E.I.C. sparking plug in use since 1902. He first had it on a motor-bicycle, then on a 4½-h.p. car for nearly three years, and afterwards on an 8-h.p. vehicle.

THE COVENTRY CHAIN COMPANY, LTD., inform us that Nazzaro used "Coventry" chains on his car when he made his wonderful record on Brooklands track.

HIS ROYAL HIGHNESS THE DUKE OF CONNAUGHT has purchased from the Daimler Company two 42-h.p. chassis. An order has also been received from Lady Mollrath, through Messrs. F. W. Heilgers and Co., 22, Great St. Helen's Place, London, E.C., for a 42-h.p. landaulet.

As a sign of the increasing popularity of the new 12-h.p. Sizaire-Naudin car, Messrs. Jarrott and Letts send us a long list of names of motorists who have placed orders for the new model. Among them we note Lady Campbell, Lord Camoys, Major Jervis, Captain James-Trevor, and Captain Creyke.

THE PENDLETON RADIATOR COMPANY have removed their works from Brunswick Street to larger premises at Claremont, Bolton Road, Pendleton, Manchester.

MR. A. J. DEW, late of the New Speedwell Motor Company, Ltd., has started business on his own account as a manufacturers' agent at 8, Hart Street, High Holborn, London, W.C., where, under the style of Messrs. A. J. Dew and Co., he is dealing in all classes of motor-cars and accessories. In addition, he is keeping a stock of spare parts for Speedwell and Serpollet cars.

COMPLAINT is being made by the local authorities of the motor char-a-bancs running from Worthing.

MR. J. E. LAWES has a fine garage in a central position in Aldershot, where he has put down plant for vulcanising tyres, recharging accumulators and generally assisting motorists on tour.

TO CORRESPONDENTS.

All communications intended for insertion in this Journal or relating to Editorial matters should be addressed to THE EDITORIAL DEPARTMENT, MOTOR-CAR JOURNAL, 27-33, Charing Cross Road, London, W.C., and must be written on one side of the paper only. Letters must in all cases be accompanied by the name and address of the writer, as no notice will be taken of anonymous communications.

To insure insertion communications and contributions must be in the Editor's hands by Tuesday forenoon of the week in which the same are intended to appear. Disappointment may be caused by non-compliance with this rule, and to avoid this earlier receipt, if possible, is necessary.

Photographers, both professional and amateur, are invited to send photographs of current events or of motoring scenes and incidents. The fee, if any, required for reproduction should be stated in each case, otherwise no liability will be accepted.

The Editors cannot undertake to return MSS. or drawings, although every effort will be made to do so in the case of rejected communications. Where such are regarded as of value, correspondents are requested to retain copies.

The Editors do not hold themselves responsible for the opinions expressed by their correspondents, or for statements and facts which do not appear in the editorial columns.

The Editors and Publishers beg also to state that they will accept no responsibility for unsolicited contributions, even if used, unless payment for same is directly specified in forwarding, and the terms arranged before publication.

THE Motor-Car Journal.

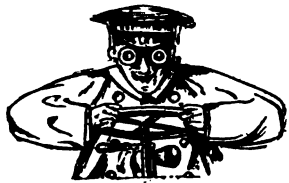
VOL. X.]

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[No. 487.]

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COMMENTS.



THE official report, in which is embodied the performances of the various cars entered in the Irish A.C.'s Reliability Trial in May last, comes to hand as we go to press. We gave the results of this competition in our issue of the 6th ult., and it only remains to be said that the very complete way in which the officials of that event have done their work will be appreciated by motorists on this side of St. George's Channel. With the conclusion of the trials in Scotland and Ireland of adequate duration, and in England of unreasonable length, the trade may now settle down to its business of selling cars, while the prospective motorist need no longer wait until he becomes confused by the different results of the many trials and tests that have been carried out this year.

Cleansing the Streets.

SUPPLEMENTING the information recently given in our columns with regard to the difficulties attendant on cleansing the streets of great cities such as Westminster, the speech of Mr. J. Stopher, the late chairman of the Streets Committee of the Corporation of the City of London, at the annual conference of the Institute of Cleansing Superintendents, on Tuesday, was full of interesting facts. Last year 83,054 van loads of refuse were removed from the streets, and 77,424,000 gallons of water were used in washing streets apart from the watering of the same. In this connection the experience of those authorities who have employed motor-wagons is of general concern, and Councillor Thomson Lyon, of Westminster, was able to assure the Conference that his City Council had employed motor wagons for eight years with unqualified success. On the other hand, Alderman Roberts gave figures showing the cost of collecting at Liverpool to be 2s. 6d. per ton with the self-propelled vehicles, as against 1s. 8d. per ton with the horsed vehicle. Mr. W. J. Heavey, the superintendent for the City of London, gave it as his opinion that the motor could not yet rival the horse for the economical carting and collection of refuse. Evidently some of the authorities that have adopted mechanical traction in this connection have much to learn from the modern methods of the ancient city of Westminster.

The Motor-'Bus Again.

NATURALLY such a gathering could not take place without reference to the motor-'bus, and it seemed to be generally agreed that since the advent of the motor-omnibus considerable additional work had been entailed in keeping the streets in a proper state of cleanliness, owing to the large quantity of oil deposited upon the surface of the carriage ways. The evil was originally due to the want of trays on the omnibuses to intercept the oil, but the nuisance still existed, owing to neglect to empty the trays now provided. The Corporation have recently summoned several drivers of motor-omnibuses who had been convicted in each case, but it would be necessary to take some more effectual proceedings against the companies, in order to abate this dangerous nuisance. The asphalt companies, too, were all agreed that the deposit of oil on the pavements was most

detrimental to the life of the material. Owners of cars as well as members of the general public are agreed as to the necessity of improvement with regard to motor-buses, and the neglect with regard to the emptying of trays at regular intervals on the main routes is one of simple remedy that should be among the first cares of the newly amalgamated motor-'bus companies of the Metropolis.

After the Trials.

How languid was the interest taken in the 2,000 Mile Trial was clearly demonstrated on the Brooklands track last week. From the day that the cars set out towards Nottingham for the initial stage of their long jaunt the public concern had been dropping, and the results of the expenditure of money, loss of time, worry of business, and general associations of the long-drawn-out event will not find compensation in the publicity and prestige gained—even by the cars that have come out with almost unblemished escutcheons. Before the Trial began we expressed the view that it was too long and tiresome for the trade, coming at a time when its members should be acting as salesmen instead of car pilots over a prescribed route. The confusion of a double event in the northern part of the kingdom emphasized our view, and the tame proceedings with which the Trial came to an end proved its correctness. The run round Brooklands was to be a kind of spectacular glory from which the victors were to emerge with such prestige and distinction that the whole automobile world would be at their feet. Instead of which it has produced a series of articles in the daily Press in which the writers give their impressions of its monotony, and the sun seems to have been the only bright spot observable in the proceedings. Rumours of yet another Trial next year are already in the air, and given with such show of substantiality that we would seriously ask the trade to consider its attitude ere it is too late to draw back. Several firms are now congratulating themselves that they did not enter for the event just concluded; many more will probably hold aloof from promise of participation in that yet to come.

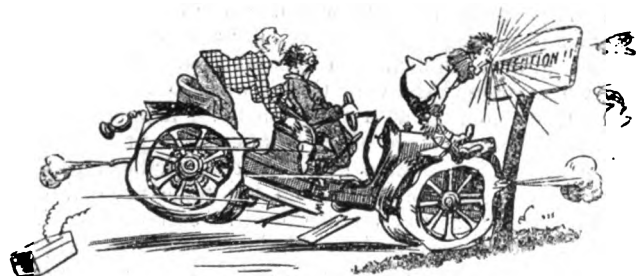
The Imports of Petrol.

At the annual meeting of the Shell Transport and Trading Company, Ltd., held in London on Tuesday, Sir Marcus Samuel, the chairman, made reference to the imports of petrol into the United Kingdom. For the year ending June 15th no less than 10,400,000 gallons came from the East Indies as against 1,600,000 gallons from the United States. He went on to say that although starting long after the Continent, Great Britain was at the present time the largest consumer of petrol in Europe. In 1904 the consumption for the United Kingdom was 30,000 tons, in 1905 56,000 tons, in 1906 85,000 tons, and in 1907 100,000 tons, while in the present year it is expected to reach 120,000 tons. In France the consumption has remained practically stationary. Sir Marcus went on to observe that motorists need be in no apprehensive mood whatever with regard to the future, as good supplies were forthcoming to meet any demand that might arise. In the discussion which followed the chairman's speech, Sir Fortescue Flannery remarked that the petrol from the Borneo fields was proving its value for motor purposes, both for pleasure and commercial vehicles, and he hoped

that motorists would become interested in the company which was supplying "Shell" motor spirit, a petrol which has won distinction in the recent trials. In the Scotch contests, for instance, the Albion car that won the silver cup for the least petrol consumption and also three winners of gold medals used this motor spirit. The record attained on Saturday at Saltburn was also on "Shell" spirit, while in the R.A.C. trials the first in no fewer than seven classes were also users of the same brand of petrol.

The Clashing of Events.

APPARENTLY motor racing on the sands is more popular than speedy travelling on the track, and the annual race meetings of the northern clubs are always attractive to the sporting instincts of Yorkshiremen. Those who went to Saltburn on Saturday saw the Hon. Lee Guinness accomplish a run of 120.26 miles per hour over a 1,100 yards course—thus equalling the world's flying kilometre record established by Marriott in the United States. Away in Derbyshire many of the northern clubs were also represented at the gymkhana at Buxton—an annual event of such interest that its promoters and those responsible for the Saltburn races should have tried to avoid a clashing of dates that was probably as unavoidable, this year, as regrettable. We publish in our Forthcoming Events an early anticipation of the leading fixtures, and secretaries who keep us informed of their arrangements as soon as made will be able to let others know of fixtures likely to clash with their own.



A Story Without Words.

From a Sketch]

[in La Locomotion Automobile.

Tests for Paraffin Carburettors.

APPARENTLY the Motor Union is about to extend its scope of activities to include the organisation of tests of mechanical apparatus in connection with automobilism. It probably arises from the interest which it has shown in connection with the fuel question, for we learn that invitations are to be extended to the leading makers of industrial motor vehicles as well as to the general firms employing such machines in their business to take part in tests of paraffin carburettors under the auspices of the Motor Union. This decision was come to at the last meeting, when it was also announced that the total number of individual members of the Union now exceeded the total for the whole of last year.

A Prohibition Withdrawn.

AFTER being in operation for some months, the prohibition on motor-car traffic over some of the most frequented roads in the county of Argyll, which was instituted by the Secretary for Scotland at the instigation of the County Council, has been withdrawn. The Council which obtained the prohibition has seen the folly of its ways and has itself sought the removal of the ban on motor-cars. True, it has compounded the "prohibition" for a ten m.p.h. speed limit from the Stronhan Bridge to (1) Salen cross roads, and (2) Arundel Wood Gate; from Salen to the junction with the Kilchoan road, and from Shiel Bridge to Ardtoe Pier; but the point remains that, after being in operation for some time, those who wished for the Pro-

hibition Order have desired its withdrawal. This action suggests that where, in the future, prohibition Orders are allowed, they should be granted only on the understanding of a possible revision by the central authorities after the lapse of a year or two. Already some of the authorities in England that have secured such Orders would probably be glad to secure their withdrawal—if such could be obtained without loss of supposed official dignity.

Aiding and Abetting.

MONDAY was another big day for motorists at the Sussex Courts. At the Steyning Petty Sessions three motorists were fined £68, at Arundel and elsewhere heavy impositions were the rule. One of the most interesting cases was at Haywards Heath, a place that is not beloved of motorists, for over the Courthouse they would write "All hope abandon ye who enter here." A chauffeur was summoned for driving to the danger of the public at Slaugham, the owner of the car sitting by his side on the occasion in question. He pleaded guilty, the solicitor representing his employer, Mr. J. N. Dracopolis, and himself adding that the defendant had to do as he was told. The owner was then summoned for aiding and abetting the driver of a motor-car to the danger of the public. For the police Mr. Lawson Lewis said there might have been a difficulty in the case, but if he established that the owner of the car sat by the side of the driver, and permitted the driver to commit the offence and did not interfere, he was guilty of aiding and abetting in the commission of the offence. The Chairman said the magistrates considered it a very bad case of dangerous driving, and they were sorry they could not imprison the owner of the car. They had decided to inflict a fine of £20 in the case of the chauffeur, and costs £1 11s. 6d., or in default three months' imprisonment, the licence to be suspended until the close of its term. The owner of the car would be fined £20, and costs £3 14s. 6d., or in default three months' imprisonment. His licence would be suspended to the end of its term, and defendant would be disqualified from obtaining another licence for two years after the termination of the present licence. The Chairman added the magistrates thought it was a case in which the owner should pay the fine for the chauffeur.

A Legal Opinion Wanted.

WITHOUT attempting to justify or extenuate the offence complained of in the foregoing, instance, we would direct attention to the conviction of two persons for what was obviously one offence. Granted that the Report of the Royal Commission on Motor-Cars expressed the view that "when an owner or hirer or any person in a car can be shown to have been abetting the driver in offences under Section 1 of the Motor-Car Act of 1903, he should be equally liable to fine or imprisonment, to withdrawal of licence and to suspension of registration of his car," this, however, does not constitute a legal decision, and the R.A.C. or M.U. should certainly look into the matter and ascertain exactly the present legal position of the owner who is on the car at a time when his chauffeur commits an alleged offence.

To-day at Brooklands.

THE Grand Prix has cast its shadow before, and the result is a lessened entry for the Brooklands meet to-day (Saturday). We understand that half-a-dozen of the original events have been cancelled owing to lack of entries, but the Ladies' Bracelet Handicap, the third All-Comers' Handicap Sweepstakes and the July Trophy Handicap should provide an interesting programme. The fashion of naming cars is growing steadily, "Little Dorrit," "The Gollywog," "Pobble" and "Bambo" being among the entrants. There are eight competitors in the ladies' race, fifteen in the July handicap and twenty-six in the All-Comers' sweepstakes, notable cars engaged being the 48.6-h.p. De Dietrich of the Hon. Lyndhurst Bruce; Mr. A. Gaal's 35.7-h.p. Westinghouse;

Mr. R. Reynold Jackson's 62-h.p. Jackson; Sir Duncan Hay's 41.9-h.p. Daimler; Mr. C. Copper's Metallurgique; Mr. J. Keele's 19.6-h.p. Belsize; Mr. H. Taylor's 20.1-h.p. Clement-Talbot; Mr. G. Bullough's 44.6-h.p. Junior; Mr. R. Creyke's 8.9-h.p. Sizaire; Mr. Clement Hobson's 48.6-h.p. Brasier; and Mr. G. Russell Miller's De la Buire.

The Scottish Trial.

| Class. | | | | | Gold Medallist. |
|--------|-----|-----|-----|-----|------------------------------|
| A. | ... | ... | ... | ... | 10-12-h.p. Swift. |
| B. | ... | ... | ... | ... | 12-14-h.p. Argyll. |
| C. | ... | ... | ... | ... | 16-h.p. Bell. |
| D. | ... | ... | ... | ... | 12-16-h.p. Vauxhall. |
| E. | ... | ... | ... | ... | 25-35-h.p. Darracq. |
| F. | ... | ... | ... | ... | 35-h.p. Deasy. |
| G. | ... | ... | ... | ... | 40 h.p. Armstrong-Whitworth. |

WITH characteristic promptitude the awards in the Scottish Reliability Trial concluded a few days ago have just been made known, the gold medals being awarded as follows:—

and Southend Railway Company, the owners of the ferry, and in addition to the proposals made from an engineering stand-point it is suggested that a revision of the present charges of 4s. per car (5s. return), plus 2d. per passenger, can profitably be adopted. The scheme is one of importance to the general trade of the district, for the ferry is used by carts as well as by cars, and if the proposed improvements are carried out the ferry will probably be utilised extensively by all traffic between the Eastern Counties and Kent.

A Compromise.

THAT motorists are not the unreasoning persons some of their opponents would seek to represent them was shown at the Hertford inquiry into the desire of the County Council for a ten-mile speed limit in the town and some neighbouring urban districts. At the outset of the proceedings the counsel for the application announced that it had been agreed with the representatives of the R.A.C., the M.U., and the North Herts A.C.

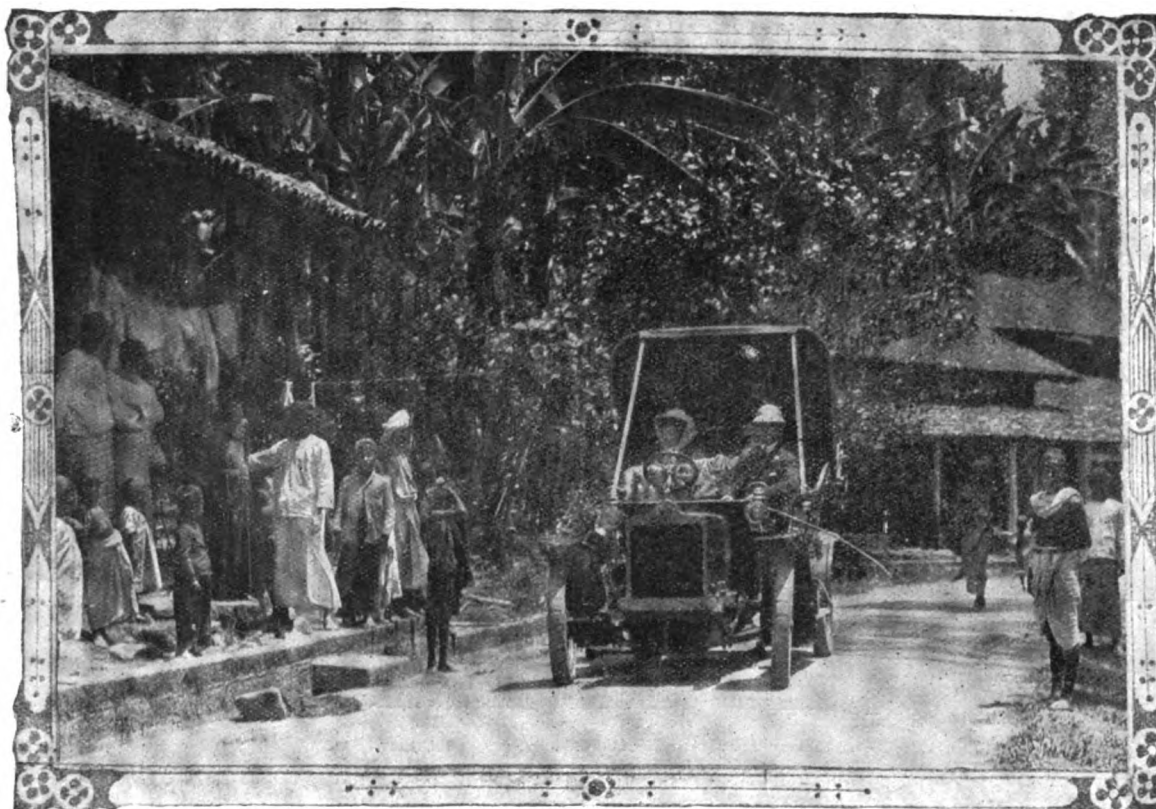


Photo by]

Motoring in Ceylon.—A View near Gampola.

[Mr. C. Frieswell.

For the lowest petrol consumption in the Trial a silver medal has been awarded to the 24-h.p. Albion car. A detailed report is in course of compilation and will shortly be issued. Meanwhile the participants will be interested in this declaration of the results and also in the official *communiqué* from Mr. R. J. Smith, which we publish in our Club Intelligence this week.

Difficulties at Ferries.

EVIDENTLY the Motor Union is taking up the question of the facilities provided at ferries for motor-cars with commendable energy, and we trust their efforts will be uniformly successful. Since the February meeting of the General Committee, a sub-committee, consisting of Col. Holden, Mr. R. W. A. Brewer and Mr. P. A. Sharman, has prepared a scheme for improving the facilities for motor-cars at the Tilbury-Gravesend ferry and its approaches, concerning which numerous complaints have been made by motorists. Plans and a report have been submitted by the Union to the engineer of the London, Tilbury

that the County Council should abandon certain portions of the original areas which were asked for, and the opposing parties had agreed to an Order being made for restricting the speed in the various other parts mentioned in the application.

A SMART piece of work in connection with the Trials has been achieved by Mr. R. T. Lang on behalf of the Humber cars—both Coventry and Beeston—in the publication of an illustrated souvenir of the Trial, giving an illustrated account of the daily runs of the four Humber cars engaged in the event. The success of the Humber quartette was certainly noteworthy.

MOTORISTS generally will join with us in wishing happiness to Mr. E. M. C. Instone and his bride, Miss Florence Greaves, of Market Harborough, who, married on Thursday of last week, are now touring in France. Mr. Instone is known throughout the country in connection with the Daimler Motor Co., and St. George's, Hanover Square, had quite a motorists' congregation on the occasion of the wedding. Mr. Charles Hardy acted as best man.

B

SOME OF THE DRIVERS IN THE A.C.F. GRAND PRIX RACE.



Thery (Brasier).



Cagno (Itala).



Duray (Lorraine-Dietrich).



Lancia (Fiat).



F. ERLE.

HEMERY.
The Benz Team.

HANRIOT.



Hautvast (Clement-Bayard).



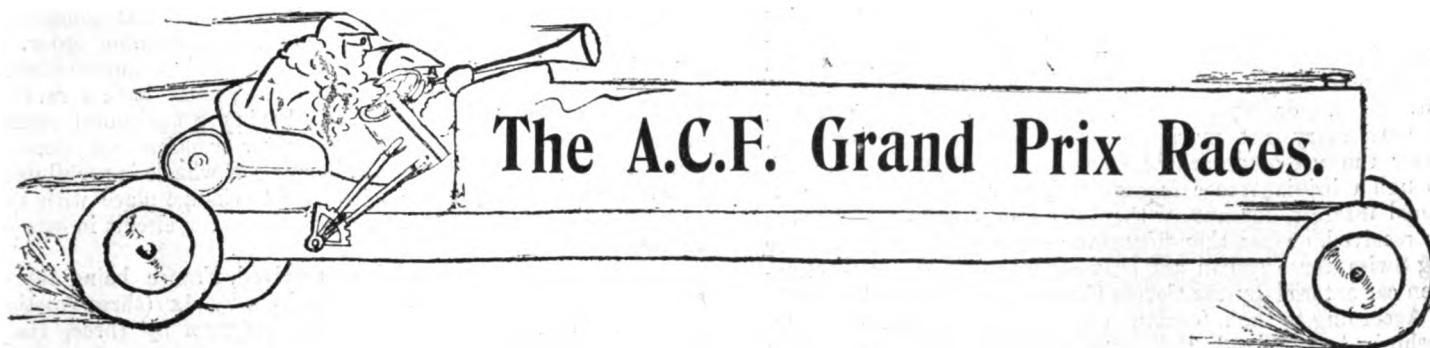
Gabriel (Clement-Bayard).



Rougier (Lorraine-Dietrich).

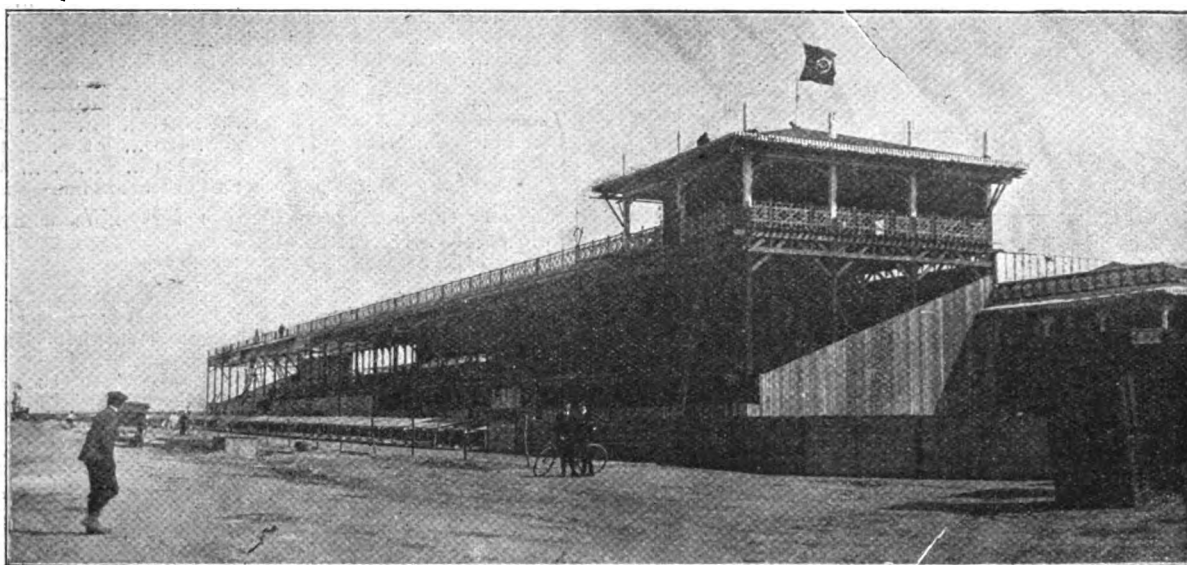


Jenatton (Mors).



THE eyes of the motoring world are now centred on France, where on Monday and Tuesday next the two great international races organised by the Automobile Club of France will be held. The Seine-Inférieure circuit has again been adopted as the scene of operations, but the starting point has been altered and is this year located on the other side of, and about half a mile from the fork near Dieppe, on the way to Envermeu and Londinière. The grand stand and car enclosures, at the starting point, show considerable alteration from last year. The "re-victualling" stations of each of the competitors are directly in front of the grand stand, but located in a long pit in such a way that their sloping roof is only slightly

road is narrow, being at some points less than fifteen feet in width. From Envermeu to Londinières the road runs alongside a light railway, there being no fence between it and the road. The railway is crossed at a right angle just before reaching Londinière, after which there is a sharp winding ascent for two kilometres, from which point, until the little town of Eu is reached, is the fastest part of the course, it being a switchback and practically a straight road. At Eu the competitors will pass through the principal square of the town, and, turning sharply to the left, enter upon the last angle of the course. From Eu to Criel good running may be expected, and thence to Tocqueville the cars will pass along a fine stretch, the road being wide and



The A.C.F. Grand Prix Race.—The Grand Stand near Dieppe.

above the track, the latter forming, as it were, a shelf on to which the attendants may place any tyres or other articles required by drivers. In front of the grand stand there are practically two tracks side by side and separated by a railing. If a competitor does not need to stop when completing a circuit he will travel straight along. If he has to halt for any supplies he will run into the re-victualling track. In this way the spectators will have an excellent opportunity of watching every phase of the great race.

As will be seen from the accompanying sketch map, the course, which measures 76·988 kilometres, is triangular in shape, having as points the three towns of Dieppe, Londinières and Eu. The starting point, where quite a little town, comprising a grand stand, cafés, buffets, garages, &c., has sprung up, is located about a mile and a half from Dieppe. Thence the course runs in a south-easterly direction through Envermeu to Londinières, when it turns sharply to the north, passing Sept Meules, to the little town of Eu, and thence, *via* Criel-sur-Mer, following the coast line back to Dieppe. While the circuit has some fine stretches of level open road where fast running may be attained, there are one or two portions between Dieppe and Londinières where the

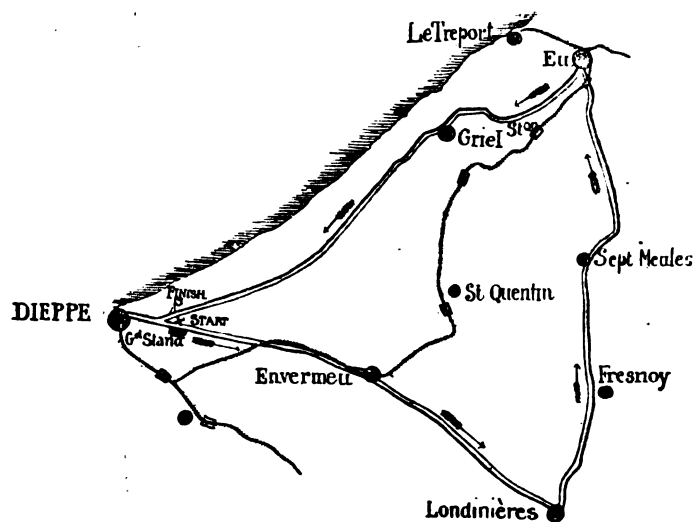
straight, and affording opportunities for excellent racing. Altogether the circuit is considered an unique one from the point of view of absence of natural difficulties, and the passage of the cars in front of the grand stands about every half-hour will afford an element of excitement from a spectacular standpoint. A good deal of money has been spent in getting the course in good condition and in rendering it free from dust. Foot-bridges have been constructed across the track at different places for the convenience of the public, for the protection of whom it is estimated that 8,000 soldiers and police will be employed. An innovation is the erection of streamers across the course giving the drivers warning of approaching dangerous turns and level crossings. The warnings take the form of signals very similar to those employed in connection with the recent Briarcliff Trophy contest in the United States, and of which illustrations were given in the *M.C.J.* of June 6th last.

Le Grand Prix des Voiturettes.

Le Grand Prix des Voiturettes, which takes place on Monday, will be over a distance of 462 kilometres, or about 288 miles, and will consist of six laps. The event is confined to cars

with engines of a maximum cylinder dimension as follows:—Single-cylinders up to 100 mm. bore, two-cylinders up to 78 mm., three-cylinders up to 68 mm., and four-cylinders up to 62 mm. The cars must weigh, in running order, but not including water, spirit, tools, or spare parts, a minimum of 600 kilog., and must carry not more than two persons side by side. Neither the use of detachable rims nor wheels will be allowed. Although a brilliant race is expected, there is not much international interest, for out of the sixty-four entries which have been received, no less than fifty seven are French vehicles, three being Swiss, three Italian, and only one British, a Certus friction-driven car entered by the Certus Company, Ltd., London.

According to the information at present available, the Isotta Fraschini, Ampere and Rolland-Pilain will be the only three vehicles fitted with four-cylinder engines with the limited bore of 62 mm. There will be no three-cylinder motors and probably not more than 25 per cent. of the entrants will have two-cylinder engines; the great majority will be single-cylinder cars with the maximum bore of 100 mm. The favourites for the race are the three Sizaire-Naudin vehicles; they are fitted with single-cylinder engines with the maximum bore allowed and a stroke of 6.2 in. Gregoire, one of the two-cylinder champions, has three cars of this type, each one with a bore of 3.07 in. and stroke of 5.9 in. Only one make of vehicle in the race is fitted with side



Map of the Seine Inferieure Course on which the A.C.F. Grand Prix Races are to be held.

chains, this exception being the Lion-Peugeot. The starting order for the sixty-four vehicles is as follows:—

| Order of Starting Nos. | Car. | Order of Starting Nos. | Car. |
|------------------------|-----------------|------------------------|-------------------|
| 1, 29, 49 ... | Delage. | 15 ... | Stabilia. |
| 2, 30, 50 ... | Martini. | 16 ... | Passe-Partout. |
| 3 ... | Foullarion. | 17, 40, 58 ... | Werner. |
| 4, 31, 51 ... | Gregoire. | 18, 41, 59 ... | Isotta Fraschini. |
| 5, 32, 52 ... | Alcyon. | 19, 42, 60 ... | Rolland-Pilain. |
| 6, 33, 53 ... | Le Metais. | 20, 43, 61 ... | Buston. |
| 7, 34, 54 ... | Demeester. | 21 ... | Certus. |
| 8 ... | Vulpes. | 22, 44 ... | Taine. |
| 9, 35 ... | Thieulin. | 23 ... | Truffault. |
| 10, 36, 55 ... | Lion-Peugeot. | 24, 45, 62 ... | GuilleminleGui. |
| 11, 37, 56 ... | Ampere. | 25, 46, 63 ... | Sizaire-Naudin. |
| 12, 38 ... | Bailleau. | 26 ... | Arrian. |
| 13 ... | De la Rouliere. | 27, 47, 64 ... | Corre. |
| 14, 39, 57 ... | Aries. | 28, 48 ... | Monnier. |

The Grand Prix.

It is on Tuesday the race—that in which the big cars will compete—will be decided. The contest is this year being run on new lines—a restriction in cylinder dimensions as against the fuel allowance basis, 30 litres per 100 kilometres equal to 9.47 miles to the gallon, of last year. The race will consist of ten circuits, equal to a distance of from 770 kilometres or approximately 480 miles. All motors taking part in the race are to be of a bore of 155 mm. for four cylinders, or the equivalent in the case of

one, two, three, six or eight cylinder cars. The competing machines must be of a minimum weight, in running order, of 1,100 kilog. The employment of oxygen, &c., in connection with the carburettor is forbidden. All vehicles must have a reverse motion and be fitted with silencers having a horizontal outlet. All repairs are to be made by the driver or *mécanicien*; detachable rims may be used, but the changing of wheels is prohibited. It will be permitted for the *mécanicien* to change place with the driver at the end of any lap, but only on the circuit in case of urgent necessity.

Forty-nine entries have been received, France being represented by twenty-four cars, Great Britain by six (three Austins and three Weigels), Germany by nine, Belgium by three, Italy by six, and the United States by one.

The appended table gives the leading particulars of the different vehicles:—

DETAILS OF COMPETING VEHICLES.

| Car. | Bore and Stroke. | b.p. | Ignition. | No. of speeds. | Trans- mission. |
|-----------------------|------------------|------|-----------------|----------------|-------------------|
| Austin* ... | 127 by 127 mm. | 100 | h.t.m. | 4 | chain and cardan. |
| Mercedes ... | 155 by 170 mm. | 120 | h.t.m. | 4 | chain. |
| Motobloc ... | 155 by 170 mm. | 120 | h.t.m. | 4 | chain. |
| Renault ... | 155 by 160 mm. | 115 | h.t.m. | 3 | cardan. |
| Lorraine-Dietrich ... | 153 by 180 mm. | 123 | l.t.m. | 4 | chain. |
| Benz ... | 155 by 165 mm. | 118 | h.t.m. | 4 | chain. |
| Fiat ... | 155 by 175 mm. | 123 | l.t.m. | 4 | chain. |
| Brasier ... | 155 by 160 mm. | 115 | l.t.m. | 3 | chain. |
| Porthos* ... | 125 by 125 mm. | 95 | h.t.m. | 3 | cardan. |
| Opel ... | 155 by 160 mm. | 115 | h.t.m. | 4 | cardan. |
| Clement-Bayard ... | 155 by 185 mm. | 125 | h.t.m. | 4 | cardan. |
| Itala ... | 155 by 160 mm. | 115 | h.t.m. | 4 | cardan. |
| Weigel ... | 150 by 120 mm. | 100 | h.t.m. and acc. | 3 | cardan. |
| Mors ... | 155 by 170 mm. | 120 | h.t.m. | 3 | chain. |
| Thomas ... | 153 by 138 mm. | 100 | h.t.m. | 4 | chain. |
| Panhard ... | 155 by 170 mm. | 120 | h.t.m. | 4 | chain. |
| Germain ... | 155 by 153 mm. | 120 | h.t.m. | 3 | chain. |

* Six-cylinder engines; all others are four-cylinder.

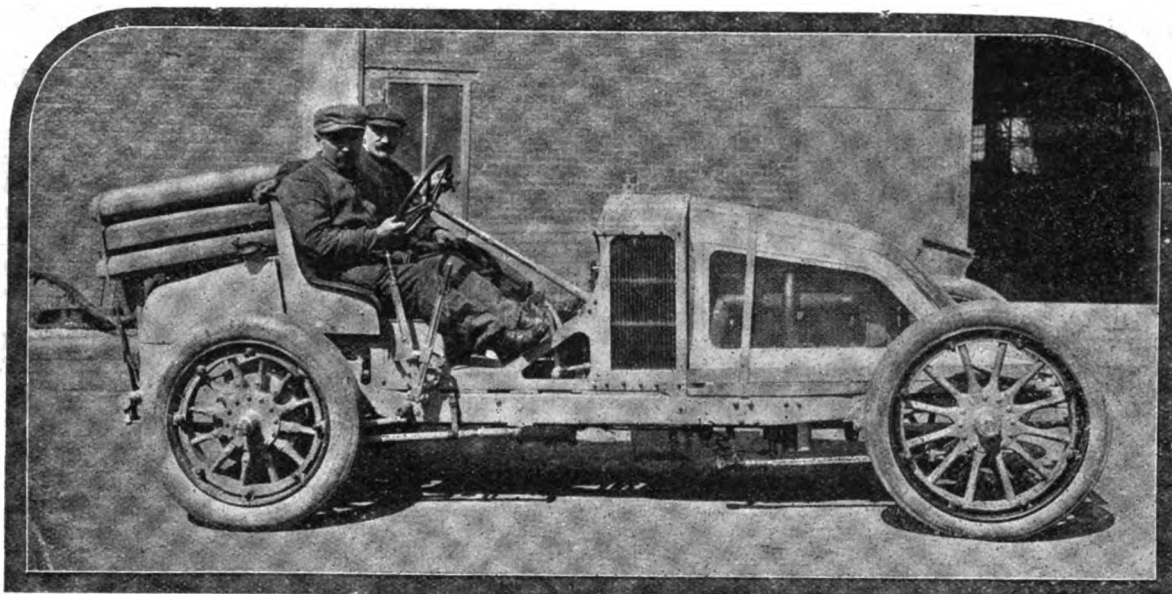
The starting order for the forty-nine competitors is as follows:—

| Order of starting Nos. | Car. | Drivers. |
|------------------------|------------|---|
| 1, 18, 34 ... | Austin | D. Resta, Warwick Wright, Moore-Brabazon. |
| 2, 19, 35 ... | Mercedes | Poëge, Salzer, Lautenschlager. |
| 3, 20, 36 ... | Motobloc | Courtade, Pierron, Garcet. |
| 4, 21, 37 ... | Renault | Sisz, Caillols, Dimitri. |
| 5, 22, 38 ... | Dietrich | Duray, Rougier, Minoia. |
| 6, 23, 39 ... | Benz | Hémery, Hanriot, Erle. |
| 7, 24, 40 ... | Fiat | Lancia, Nazzaro, Wagner. |
| 8, 25, 41 ... | Brasier | Théry, Baras, Bablot. |
| 9, 26, 42 ... | Porthos | Stricker, Gaubert, Simon. |
| 10, 27, 43 ... | Opel | Opel, Jorns, Michel. |
| 11, 28, 44 ... | Clement-B. | Rigal, Gabriel, Hautvast. |
| 12, 29, 45 ... | Itala | Cagno, Fournier, Piacenza. |
| 13, 30, 46 ... | Weigel | Laxen, Harrison, Weigel. |
| 14, 31, 47 ... | Mors | Jenatzy, Jarrott, Lanson. |
| 15 ... | Thomas | Strang. |
| 16, 32, 48 ... | Panhard | Heath, M. Farman, Cissac. |
| 17, 33, 49 ... | Germain | Degrais, Roch-Brault, jun., Perpère. |

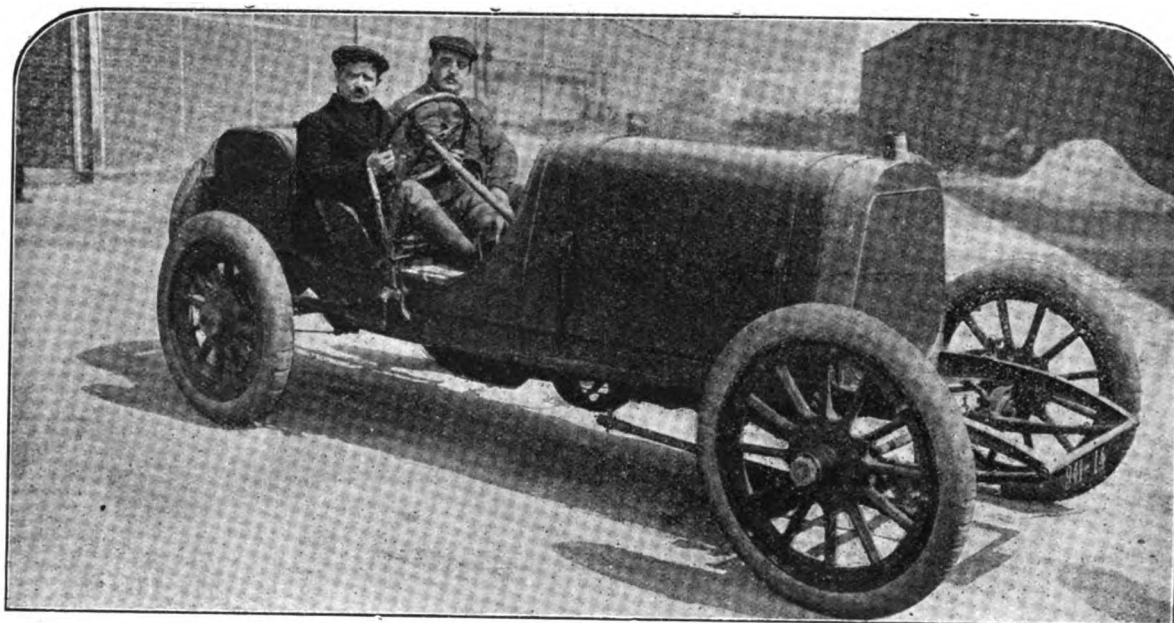
The weighing-in operations are taking place on Friday and Saturday of the present week, at the official shed near the starting point; the cars will be placed over a bed of sawdust and the engine run at full speed for a few minutes in order to verify the exhaust. If the sawdust is disturbed the exhaust pipe will have to be altered, until no disturbance is created, or if that is impossible the car will be disqualified. Where the maximum weight of 1,100 kilos is not obtained by the vehicle with its lightest set of tyres, without water, oil, petrol or spare parts, the amount must be made up by the addition of a bag of ballast attached to the car by a lead seal. At the end of the race the cylinder dimensions of the first four cars will be verified and their carburettor and inlet pipe examined to ascertain that no "doping" has taken place.

The races will commence at 6 a.m., the course being closed to traffic an hour before that time. It is expected that the lap record, 38 m. 16 sec. made by Nazzaro last year, will be lowered on Tuesday.

THE A.C.F. GRAND PRIX RACE.



Sis at the Wheel of his Renault.



Rigal and his Clement-Bayard.



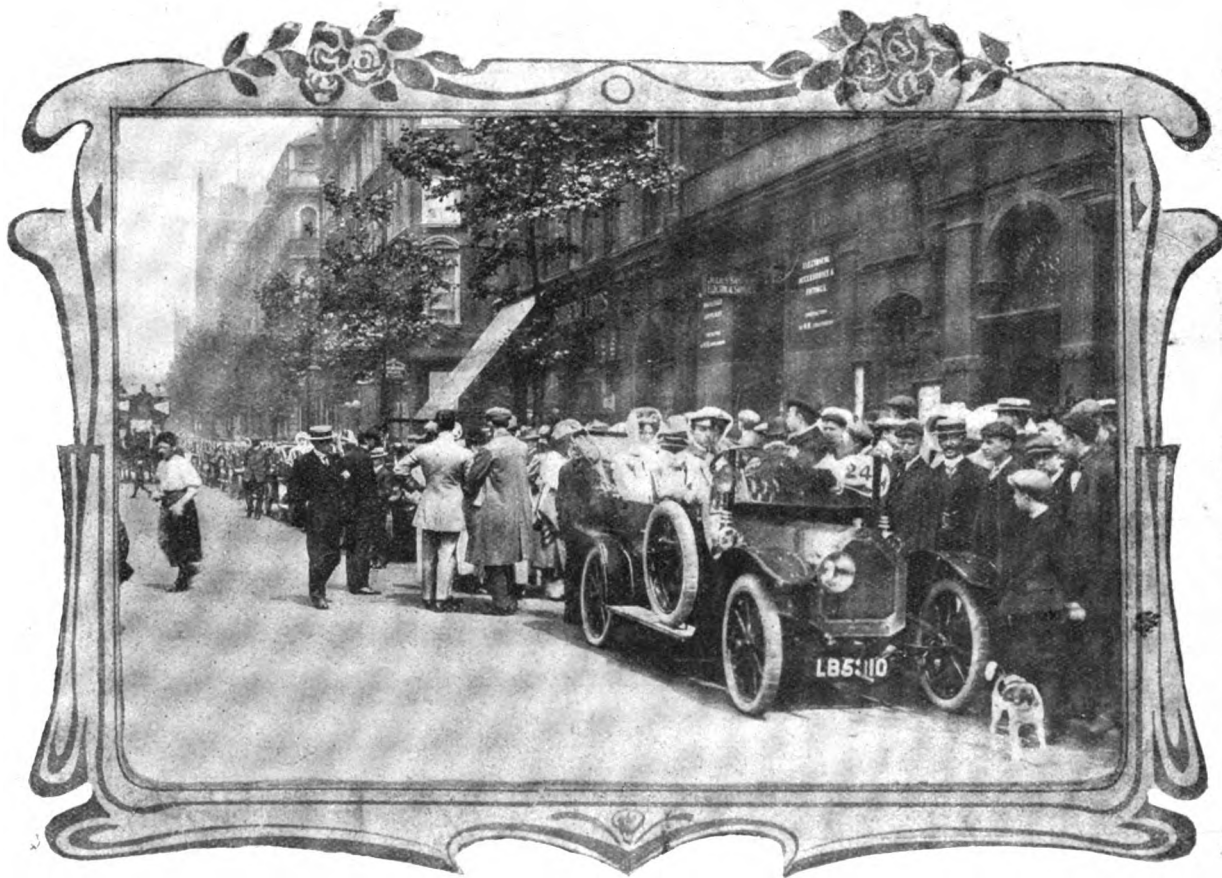
Rosta on his Austin.

THE TREK OF THE "WATER RATS."

THE dust rose high on the Brighton road last Sunday, for the Water Rats had swarmed *en masse* from their metropolitan lair, and were migrating—just for the day—to the seaside, as though drawn unquestioningly thither by some new Pied Piper of Hamelin. The Water Rats, be it known, are members of a social fraternity of music-hall celebrities, who delight in doing all they can for their own professional charities. This latter principle was the inspiration of Sunday's "day out," when from 150 to 200 of them rallied for a big motor excursion, that seems to have been as barren of incident as it was fruitful of pleasant experience. True, one car upset a cyclist on the way down, with consequences said to be rather grave to the victim. And Marie Lloyd and her husband, Alec Hurley, of coarser comedian fame, got hung up with tyre trouble a few miles from their destination, and narrowly escaped

Ryland and party were the first arrivals, at 2.20 p.m. The rest whirled in in twos and threes during the next hour and a half. Mr. A. M. Hobson, in a fine Decauville, brought Pat Doherty, Jack Collinson, Madame Dixon and others, and Joe O'Gorman and Bert Nolan came in a Standard, lent and driven by Mr. Guy Lewin.

Three charming girls in big lawn sun-bonnets, whose youthful "Panhard" driver tried to take them right over the pavement into the Royal York vestibule, were the Misses Annie and Maudie Lloyd and Miss Marie Gros—and then there was "little Marie," as everyone called her, otherwise Mrs. Ayling, Marie Lloyd's daughter. The famous Marie herself, who had Mr. Dick Burge as well as her husband with her in a fine Panhard driven by her brother, Sidney Wood, got in safe and sound eventually—quite ready for luncheon. Mr. Crossman, at the wheel of a 75-h.p. flier, brought in Mr. J. W. Wilson, Miss Nellie Waring, Mrs. Julian Rose, and Mrs. Wm. Lee, while



The Start of the Run of the "Water Rats" to Brighton.

being late for lunch. Another car, too, with Will Oliver and some ladies aboard, broke down so completely that its occupants gladly availed themselves of one of the relief cars.

A start was made soon after eleven o'clock from the headquarters of the Vaudeville Club, and one condition of the run was that the legal limit should be zealously respected. A general halt was called half-way at Crawley, which those near the tail-end of the long procession multiplied freely later on, for the sun was a regular "scorcher," and the Brighton road—never good at the best of times, and bereft of rain for three weeks and more—flung dense clouds of dust, part of which had to be swallowed.

Some of the Rats had their own cars, others had friends to drive them, several hired equipages for the occasion, and about a dozen "taxis" were chartered. Altogether the procession of cars (each with a cardboard rodent slung in front of the bonnet) was over sixty strong, led off by the "King Rat," Mr. W. H. Clemart, in a six-cylinder car. No attempt was made to stick to any order of going, and Julian Rose, the new Hebrew comedian, and his brother, Wm. Lee, in a Mass car, and Cliff

Dave O'Toole and Dave Carter, in a "taxi," are reported to have fixed up a match *en route* for settling, once and for all, the vexed question as to which of them can sing the toppest top note. Harry Tate came with Mr. Sidney Girling, a well-known racing motorist and a Gordon Bennett racer, in a six-cylinder Darracq, and though Eugene Stratton and Walter Kelly had to be expelled ignominiously from fifteen or sixteen cars in succession, before the start, because they would not take the trouble to find the one partly reserved for them, they managed to get to Brighton some time during the afternoon. Mr. Hurst drove Tom Wootwell in a six-cylinder "Hurst," and Mr. W. H. McCarthy, the "Scribe Rat," and Mr. T. Case, the secretary of the Vaudeville Club, were two of a "Renault" party. Miss Victoria Monks, dashing as ever, helped to adorn a handsome "Mercedes," and Rosie Hamilton, Claire Romaine, and Fred Larola were others of a gay and festive party. Of course, they all grouped themselves before the camera after luncheon, and returned home more or less independently to escape the dust during the cool of the evening.

SAXONIAN.

The 2,000-miles Trial.

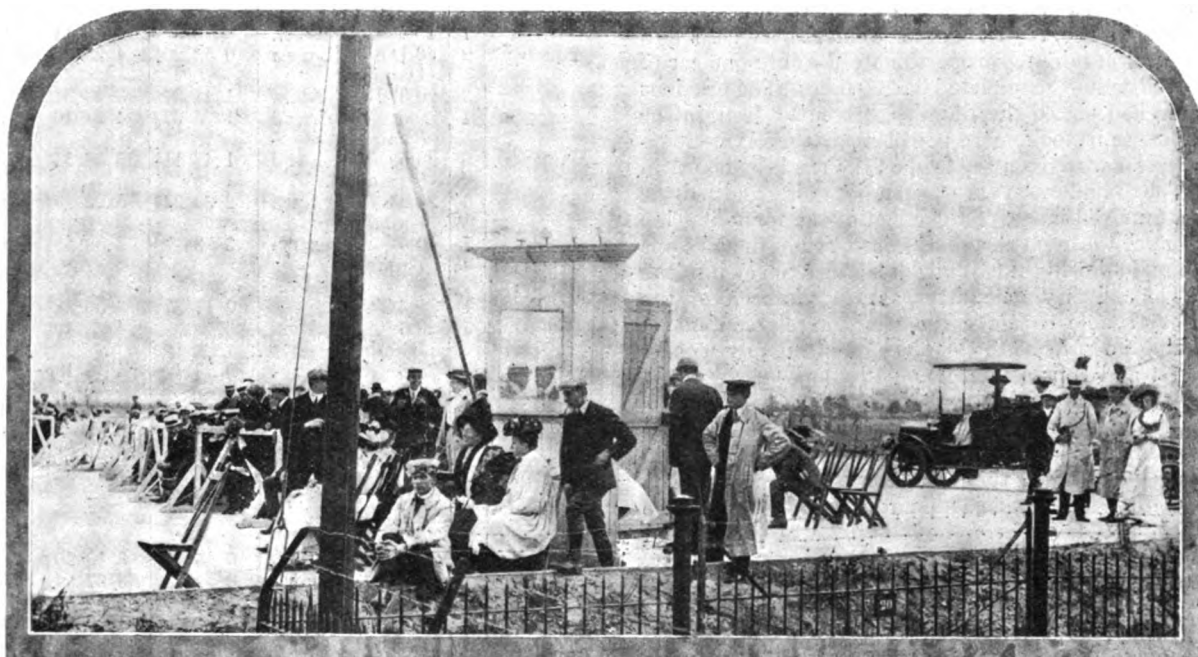


AS a popular spectacle the last stages of the Reliability Trial of 1908 were not great; in fact, they proved monotonous to the enthusiasts, and those who do not become excited over motor racing left them alone. Apart from the attendance of those interested in the firms engaged in the event, the Pressmen whom duty called, some ladies who enjoyed the bright weather, and the officials, only a few hundreds were present during the two days at Brooklands. Still the hours spent on the track were not without their pleasant moments for those who had been round the Trials, and the comparison of incidents and chat of struggles o'er again whiled away time that might otherwise have hung somewhat heavily.

Following our previous chronicles, we have to report that thirty-four cars reached Brooklands on the Thursday and that

extent of 33 min. 28 1-5 sec. in connection with the road trials, and many anticipated its ability to make them up on the track. Unfortunately a blockage in the petrol pipe when the Zedel was on the course meant a delay of four minutes, with the result that she lost to the 10-h.p. Cadillac by 1 min. 14 sec., the latter's time being 4 h. 49 min. 38½ sec. At the outset of the race the Zedel was a minute a lap quicker than its opponent, and when only five laps from the finish the Cadillac had but three-quarters of a lap to spare.

Class D provided a study for the curious rather than a spectacle for the motorist to enjoy. A trio of cars had survived the ordeal—the 15·8-h.p. Singer, the 15·8-h.p. Zedel, and the 15·4-h.p. Shamrock—the two latter of which had lost several hours. Accordingly the Singer was sent off on its journey of



The 2,000 Miles Trial.—Some of the Spectators at Brooklands.

drivers and officials were up early on the morning of the 26th ult. to prepare for the race upon the track—a form of motoring with which all the drivers were not perfectly familiar.

In order to secure the finish of the Trial within reasonable time it was decided by the judges to reduce the 200 miles of running on the track in the case of the smaller cars, so that Class A was let off with 80 miles, Class B with 100 miles, and Classes C and D with 150 miles.

The little De Dion accomplished its 80 miles in 2 h. 48 min. 12 3-5 sec., or at the rate of 26 m.p.h., and, being the only competitor, was acclaimed the victor; then, in the B class the 8·9-h.p. Adler—a car whose merits were introduced to the public at last year's Cordingley Show, when we were able to pronounce a favourable verdict upon its running—travelled its 100 miles in 2 h. 49 min. 38 2-5 sec., at the rate of 34·98 m.p.h. The agents for this car, Messrs. Morgan and Co., of London and Leighton Buzzard, are to be congratulated upon its performance, both on the road and on the track. Had there been other competitors in its class the result would most probably have been the same.

The third event produced something like tension and threatened to provoke an excitement which had been lacking during the morning. In Class C there were two competitors over the 150 miles. The 12·8-h.p. Zedel had been penalised to the

150 miles, which it accomplished in 4 h. 47 min. 55 sec. The result was it had concluded its trial ere the others were due to begin. Only a breakdown on the part of the Singer could have given either of the other entrants a chance, and, as that did not occur, they had no need to start on the track.

Then followed the race in Class E, of which the 20·5-h.p. Vauxhall was leader, and started first, maintaining its lead throughout the race. The most interesting feature of this contest was the close running of the two De Luca Daimlers, which ran well together and well deserved the second place obtained by one of them, the very fast speed of the Talbot running it into third position, followed by the chain-driven Panhard.

On Saturday the races for Classes F, G, H, J, K and L took place, those of J and L being, however, walks-over for the 45·8-h.p. Ariel and the 59-h.p. Ariel respectively.

Commencing with Class F, the Talbot car showed a similar speediness to that of its smaller "stable" companion in Class E, and quickly overhauled the start it had to allow its competitors. The first on the track was the 25·6-h.p. Beeston Humber, which was sent off at 7 a.m. As soon as the handicaps had been timed out, the others were started in the following order:—25·6-h.p. Talbot, the 23·8-h.p. Coventry Humber, the 24·79-h.p. Panhard, the 24·79-h.p. Junior, the 25·6-h.p. Minerva and the 24·79-h.p.

Brown. At the end of the first hundred miles the Beeston Humber was leading by three laps and travelling about 48 m.p.h. The Talbot and the Coventry Humber were second and third respectively. In the end the former ran into first place and won by 3 min. 24 1-5 sec. from the 25-6-h.p. Beeston Humber, which was second, and the Coventry Humber, the smallest in the class, being third, with the 24-8-h.p. Panhard only 3 min. 17 1-5 sec. behind.

In Class G an interesting contest took place, the 31-h.p. Adler travelling at about 62-77 m.p.h., quickly getting beyond the leader, and winning in good style no fewer than eleven laps ahead of the second car. In fact, it made the fastest time of the day in all classes, despite the fact that a rim and tyre was changed on the track. Its time was 3 h. 10 min. 29 4-5 sec. The 27-8-h.p. Nagant-Hobson was second, the 27-3-h.p. Deasy was third with 196 miles completed at the expiration of the maximum racing handicap allowance, the 32-4-h.p. Beeston Humber being unfortunate enough to have several tyre troubles, including a couple of punctures on the track.

Class H was productive of several mishaps, and, as will be seen from the table, in which we set forth the winners in clear fashion, showing the order of running on the road—here indicated by taking the cars with the fewest negative marks as zero and adding to the others in minutes proportionately—only one car of the five that started actually completed its 200 miles. The previous travel on the road had placed the Daimler, driven by Ison, in the premier place, but, as it took more petrol than the Armstrong-Whitworth, the latter was given the lead on the track by less than two minutes. The Daimler, however, soon got going and led the way for nearly a hundred miles. At the end of the forty-first lap the universal joint of the propeller shaft seized, rendering all hope of success futile and allowing the White steam car to get into the second place. The driver of the latter, assuring himself of the position, did not trouble to make the pace, merely contenting himself with taking no risks as to the place he ultimately won.

Classes J, K, and L presented no outstanding features, and it remains but to be chronicled that during the afternoon the four cars that had got so far behind as to be unable to start before the first in their classes had finished were allowed to run three laps in proof of their ability to perform the task. It was evident, although the officials pointlessly omitted to give the times, that the speeds of these, the 52-h.p. Lorraine Dietrich, the 25-6-h.p. Thornycroft, the 15-8-h.p. Zedel and the 15-4-h.p. Shamrock, were extremely good, those of the Lorraine Dietrich being noticeably fast.

The prizes, which had been on view in the paddock, were distributed to the winners at the conclusion of the races by Mrs. Locke-King on behalf of the R.A.C., and a vote of thanks to the lady brought the event of 1908 to an end.

TWENTY-THREE cars—exactly one half of the starters—completed the distance on the Brooklands Track within the maximum time limit allowed, those attaining a speed of more than fifty miles an hour being:—

| | | | | | |
|---|-----------------------------|-----|-----|-------|--------|
| 1 | 30-h.p. Adler... | (G) | ... | 62-99 | m.p.h. |
| 2 | 40-h.p. Armstrong-Whitworth | (H) | ... | 55-98 | " |
| 3 | 48-h.p. Deasy | (K) | ... | 55-57 | " |
| 4 | 27-8-h.p. Nagant-Hobson | (G) | ... | 55-58 | " |
| 5 | 48-6-h.p. Rolls Royce | ... | ... | 53-59 | " |
| 6 | 20-8-h.p. Talbot | (E) | ... | 53-22 | " |
| 7 | 25-6-h.p. Minerva | (F) | ... | 51-31 | " |
| 8 | 25-5-h.p. Talbot | (E) | ... | 51-8 | " |
| 9 | 59-5-h.p. Ariel | (L) | ... | 50-89 | " |

The average weights of the cars in the various classes in the trials were as follows:—

| | | ... | ... | ... | cwt. | qr. | lb. |
|---|----------------|-----|-----|-----|------|-----|-----|
| A | up to 6-4-h.p. | ... | ... | ... | 13 | 1 | 10 |
| B | " 9-4-h.p. | ... | ... | ... | 15 | 2 | 15 |
| C | " 13-h.p. | ... | ... | ... | 14 | 15 | 3 |
| D | " 16-h.p. | ... | ... | ... | 19 | 3 | 18 |
| E | " 20-8-h.p. | ... | ... | ... | 23 | 3 | 3 |
| F | " 25-6-h.p. | ... | ... | ... | 27 | 1 | 0 |
| G | " 32-4-h.p. | ... | ... | ... | 30 | 0 | 10 |
| H | " 40-h.p. | ... | ... | ... | 30 | 3 | 24 |
| J | " 46-4-h.p. | ... | ... | ... | 36 | 1 | 19 |
| K | " 52-8-h.p. | ... | ... | ... | 36 | 22 | 0 |
| L | " 60-h.p. | ... | ... | ... | 37 | 3 | 12 |

The results of the Trial are given in the following table, the figures under the class being the maximum h.p. by the R.A.C. rating allowed in that category.

| Class. | Final Position in Class. | H.p. Car. | Handicap on Track based on R.A.C. Performance. | Time actually on Track. | Time behind Winner. | Speed of cars completing the official distance. |
|----------------|--------------------------|---------------------------|--|-------------------------|---------------------|---|
| | | | H. m. s. | h. m. s. | H. m. s. | M.p.h. |
| A 6-4-h.p. | 1 | 6-2 De Dion ... | Zero. | 2 54 12½ | — | 27-6 |
| B 9-4-h.p. | 1 | 8-9 Adler ... | Zero. | — | — | — |
| C 13-h.p. | 1 | 10 Cadillac ... | Zero. | 4 49 38½ | — | 30-94 |
| | 2 | 12-8 Zedel ... | 0 33 28½ | 4 17 24½ | 0 1 14½ | 34-9 |
| D 16-h.p. | 1 | 15-8 Singer ... | Zero. | 4 47 55 | — | 31-13 |
| | 2 | 15-8 Zedel ... | 11 23 2 | — | — | — |
| | 3 | 15-4 Shamrock | 12 43 17½ | — | — | — |
| E 20-8-h.p. | 1 | 20-5 Vauxhall ... | Zero. | 4 19 11½ | — | 46-09 |
| | 2 | 20 De Luca Daimler. | 0 52 20½ | 4 23 33 | 0 56 41½ | 46-16 |
| | 3 | 20 Talbot ... | 1 44 37 | 3 43 51½ | 1 9 16½ | 53-22 |
| | 4 | 20-5 Panhard (chain). | 1 5 37½ | 4 33 40 | 1 20 5½ | 43-24 |
| | 5 | 20-5 Panhard (live axle). | 1 43 11½ | 3 56 55 | ran 174 m. | — |
| | 6 | 20-08 De Luca Daimler. | 2 38 34½ | 3 22 20½ | ran 154 m. | — |
| | 7 | 19-6 Coventry-Humber. | 3 3 9½ | 2 58 45½ | ran 135 m. | — |
| F 25-6-h.p. | 1 | 25-5 Talbot | 0 14 37½ | 3 50 38½ | — | 51-8 |
| | 2 | 25-6 Beeston-Humber. | Zero. | 4 8 40½ | 0 3 24½ | 48-05 |
| | 3 | 23-8 Coventry-Humber. | 0 33 42½ | 4 8 18½ | 0 36 44½ | 46-3 |
| | 4 | 24-79 Panhard ... | 0 41 56½ | 4 3 21½ | 0 40 1½ | 49-09 |
| | 5 | 25-6 Minerva ... | 1 19 58 | 3 57 5½ | 1 11 6½ | 51-31 |
| | 6 | 24-79 Junior ... | 1 7 40½ | 5 1 21½ | 2 3 4½ | 39-82 |
| | 7 | 24-79 Brown ... | 1 48 5½ | 4 46 53½ | 2 29 42½ | 41-81 |
| | 8 | 25-6 Thornycroft. | 12 20 40½ | — | — | — |
| G 32-4-h.p. | 1 | 30 Adler ... | 0 45 19½ | 3 10 29½ | — | 62-99 |
| | 2 | 37-8 Nagant-Hobson. | 0 49 3½ | 3 37 4½ | 0 30 19 | 55-28 |
| | 3 | 27-8 Deasy ... | 0 54 2½ | 4 6 15½ | ran 195 m. | — |
| | 4 | 32-4 Beeston-Humber. | Zero. | 4 57 34 | ran 156 m. | — |
| H 40-h.p. | 1 | 40 Armstrong-Whitworth. | Zero. | 3 34 21½ | — | — |
| | 2 | 38-1 Daimler ... | 0 1 45½ | 2 7 9½ | ran 113 m. | — |
| | 3 | 37 White Steam | 2 7 26½ | 2 41 6½ | ran 83 m. | — |
| | 4 | 40 Hillman-Coatalen. | 3 55 10½ | 1 3 17½ | ran 47 m. | — |
| | 5 | 38-1 Daimler ... | 4 23 14½ | 0 37 49 | ran 39 m. | — |
| J 46-4-h.p. | 1 | 45-8 Ariel ... | Zero. | 3 59 44 | ran 185 m. | 46-37 |
| K 52-8-h.p. | 1 | 48-6 Rolls-Royce | Zero. | 3 43 55½ | — | — |
| | 2 | 48-4 Deasy ... | 1 1 0 | 2 59 8 | ran 166 m. | — |
| | 3 | 52-49 Lorraine-Dietrich. | 5 40 42½ | — | — | — |
| L 60-h.p. | 1 | 59-5 Ariel ... | Zero. | 3 55 46 | — | 50-89 |

At one time on Saturday morning no fewer than fourteen motor-cars were running on the track.

In the Scottish and Royal A.C. Trial the Dunlop tyres were again remarkably conspicuous, receiving first places in no less than sixteen classes.

MOTERING NOTES FROM TUNBRIDGE WELLS.

THE determination of motorists to avoid the "trap"-ridden roads leading to many resorts on the South Coast has been all for the good of Tunbridge Wells, which is now enjoying an excellent season from a motoring point of view. A method of reaching Brighton and other resorts on the coast which finds great favour among car owners is to travel from town through some of the exquisite Kentish scenery found between the fringe of the Metropolis and Tunbridge Wells, and then continue the journey over the Sussex Downs to Brighton, Hastings, Eastbourne, or wherever else is the destination. That this is a route now almost as popular as the more direct roads may be gathered from the fact that what is practically a procession of cars passes through the town in each direction during the week end, while on ordinary days the numbers are distinctly larger than in any previous summer.

A MAGNIFICENT piece of road has been tar-paved from one end of the town to the other. It leads over the highest part of the borough, overlooking the Common on one side, and passing the principal hotels on the other. The temptation to stop and spend a few hours in such delightful surroundings is irresistible, while as a week-end centre Tunbridge Wells now commands a great amount of attention. The fact that several of the principal seaside towns on the South Coast are within thirty miles has not been lost sight of by many motorists, the numbers putting up over Sunday being of an increasing character. A factor, too, which adds to the popularity of the town is the reasonable attitude assumed by the police, both in Tunbridge Wells and the district about. Traps are rarely heard of, and the long-distance variety has certainly not made its appearance at present.

THERE is a distinct feeling of friendliness towards the motor industry in Tunbridge Wells, where the number of privately owned cars is remarkable. It is computed, indeed, that in proportion to the population the number is as high as that in any town in England. Moreover, Tunbridge Wells takes a special pride in the knowledge that it was within her borders the first show of horseless carriages was held, through the instrumentality of Sir David Salomons, who arranged this remarkable attraction at the local agricultural show. To those who witnessed the modest procession of cars on that occasion the growth of the motor industry is nothing short of astounding.

It is rumoured that at the Spa Hotel the company contemplates building a very fine up-to-date garage. Among the visitors last week were Mr. and Mrs. Pearson, Mr. Powell and party, Capt. Hindes Howell with an Iris car, Mr. Scrase Dickens on a Germain, Sir Charles Wyndham on an Argyll, and Mr. John Gilmore on an Iris. Other hotels report an increasing clientèle among motoring tourists.

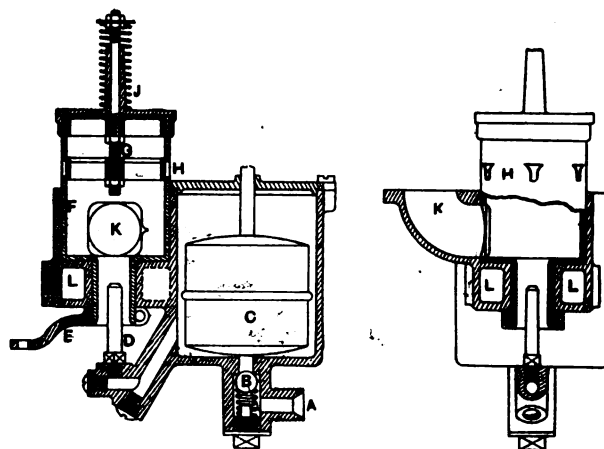
RECULVERS.

THE 400 Mile International Road Race for the grand prize of the Automobile Club of America will be held at Savannah, Georgia, on November 26th. American and foreign cars are eligible to compete, but not more than three vehicles of any one make can be entered. The foreign entries should be made through the recognised automobile club in the country in which the car is manufactured. The entry fees are £150 for one car; £260 for two of the same make, and £350 for three. The list will close on October 1st, but additional entries will be accepted up to November 1st upon payment of an extra fee of £50 per car. All vehicles taking part in the contest must have a motor comprising four cylinders, with a bore of 155 millimeters maximum, or in the case of engines with six or eight cylinders the equivalent in effective surface. Cars in running order, but without water, petrol, tools or spare parts, must weigh at least 1,100 kilos.

THE COVENTRY-SIMPLEX CARBURETTOR.

WE give herewith two sectional views of the new carburettor which has lately been put on the market by the Coventry-Simplex Engine^{rs}, Ltd., of East Street Works, Coventry, and for which special claims are made in the way of simplicity and accessibility. Petrol, passing through a filter, enters at A through the ball valve B, which, depressed by the weight of the float C on the spindle allows the requisite quantity of spirit to enter. The outlet from the float chamber to the jet D is drilled above the level of the bottom of the same, so that even if any foreign matter escapes the filter it will be precipitated and not carried to the jet. The latter can be removed without disturbing any other part, enabling any change in the size of the same to be readily made. The throttle is opened and closed by means of the lever E, which rotates the sleeve F. As the throttle is opened the increased suction from the engine draws down the extra air device, consisting of two pistons, the lower perforated one serving to uncover the air ports, while the upper one acts as a dash-pot, steadying the action of the extra air valve.

The adjustment of the carburettor is particularly simple and is entirely effected from the outside. The tension of the spring J to the extra air is adjusted with the engine in operation so that it will just hold the valve up when the motor is



running at its slowed speed. The jet supplied with the carburettor is, if anything, made slightly smaller than is necessary, this being done so that it can, if found desirable, be broached out.

The makers inform us that the new carburettor has proved itself very efficient in practice, giving twenty-five to thirty miles per gallon with a 20-h.p. engine. By depressing the air valve it can always be easily seen whether the mixture is right.

MOTORISTS in the Crystal Palace district will find a well-equipped establishment at the Lansdowne motor garage, Lansdowne Place, Belvedere Road, Upper Norwood, S.E. The business is now entirely controlled by Messrs. Lefeaver, who, in addition to keeping a large stock of petrol, oil, &c., are able to carry out repairs of all kinds. The firm have issued a handy vest-pocket list of routes with mileage to all the most important places in the country, a copy of which they will be glad to send to any motorist on application.

THE Anglo-American Oil Company, Ltd., with the view of preventing any water getting in the tins of Pratt's Motor Spirit, have fitted up an apparatus at their filling station for cleaning the inside of the cans under pressure; in addition, every can is very carefully inspected with an electric torch before it is re-filled. Although the company recommend, as a precaution, that a gauze funnel should be used in emptying spirit into the tank, motorists may be assured that cans containing Pratt's are free from impurities when they leave the works.

GOSSIP FROM PARIS.

AFTER having their cars overhauled for the last time, most of the French drivers who will figure in the Grand Prix utilised the few days left them before going to Dieppe in "exercising" their machines. They are all satisfied with them, and even the outsiders are full of hope. One of them, who will pilot a racing car which is not exactly a favourite with the betting community, told me, with a significant smile, that I must be prepared for a big surprise. So far as that is concerned it seems to me that it will be a surprise whoever wins. In any case, the contest will be hot, and if only the weather keeps fine the crowds that are preparing to flock to Dieppe to witness it will be larger than last year. The race will be more thoroughly international than on any previous occasion. Twenty-four French cars will be matched against twenty-five foreign racers of the highest renown. The French naturally hope to win the great race, but it must be admitted they have competitors worthy of their metal, such as Fiat, Mercedes, Itala, Thomas, Weigel, Austin, Benz, Germain, &c., any one of whom may capture the coveted trophy wrested from the hands of the French by Nazzaro on his Fiat in 1907.

AMONG the well-known drivers taking part in the event is Jenatzy, who led the Mercedes car to victory in the fourth



The Members of the Baden Parliament recently made an excursion by motor-bus in the South of the Black Forest. The above illustration shows the party at St. Blasien.

Gordon Bennett race, run in Ireland, and who this time will pilot one of the Mors cars. They, who on a Brasier car brought back to France the Gordon Bennett cup which he wrested from the hands of the Germans in 1904, and who kept it in France by his victory in the Auvergne the following year, will again figure in the race on a Brasier racer. Fournier, the victor in the Paris-Berlin contest, will take the steering-wheel of one of the Itala cars. Sis, who in 1906 gained the first Grand Prix for the Renault firm, will again pilot one of their cars, while Nazzaro, faithful to the Fiat he steered to victory in last year's Grand Prix, will take part in the contest. Maurice Farman, who has gained many a victory, and who would have come in second in the Paris-Berlin race had it not been for a collision when he was entering the German capital, will again steer a Panhard car. Then there are Baras, Gabriel, Heath, Cissac, Lancia, Hemery, Weigel, Duray, and Rigal, who will no doubt repeat the remarkable performances which already stand to their credit. The other drivers in the Grand Prix, though less universally known, are all men capable of carrying off the prize—that is to say, they belong to the elite of their fraternity.

If "a cat has nine lives," an aviator must have at least a

dozen. Delagrange had come to the ground, breaking his machine a good many times, before he started on his tour in Italy, and at both Rome and Milan he was thrown with such force that every one who witnessed the accident expected to have to pick him up with at least a broken arm or leg if not a broken head. Yet on each occasion he got up without a scratch and went with a smile on his face to meet those who were running to assist him. A couple of weeks ago Esnault-Pelterie fell with his aeroplane from a height of some 150 feet without sustaining any injury. It would be useless to try to remember all the accidents which have happened to Bleriot. Almost every time he has mounted his aeroplane he has come to grief in such a manner that it is little less than a miracle he has not been already killed a dozen times, if it were possible. Even Henry Farman, who is perhaps more prudent than most of his confreres in aviation, was caught by a gust of wind and thrown so heavily to the ground that he was for a moment stunned. But, though his machine was completely wrecked, he suffered so little injury that the very next day he went to the theatre. Santos Dumont has also come to grief many a time, but, if his machine was on each occasion demolished completely or disabled, he has come off scot free. Even the Wright Brothers, with their system for insuring the constant equilibrium and stability of their aeroplane, had an accident in America not long ago. Wilbur Wright's nose was severely scratched, leaving a mark which was still visible when he arrived in Paris some three weeks later, but that was all. He was safe and sound though his machine was disabled.

It is to be hoped that this series of good fortune in bad will not be interrupted, or rather that Wilbur Wright will be able to demonstrate to the world by his experiments at Le Mans that he and his brother have really solved the problem of maintaining the equilibrium and stability of aeroplanes even in a strong wind. If he does, he will be carried in triumph by the French aviators, who will be glad enough to pay him or his company for the right to employ his patented system, which will insure their safety and give such an impetus to the science of aviation. Since Wilbur Wright brought his machine to France and commenced putting it together, the scepticism of those who still refused to believe has been considerably shaken, and the failure of Wilbur Wright to keep his oft-repeated promises will cause great disappointment. It is consequently with the deepest interest that everybody is looking forward to the experiments which are announced for the second fortnight in July at the latest.

FOREIGNERS touring in France have a just grievance against the authorities. They must either violate the law and expose themselves to all sorts of penalties, including imprisonment, or submit to vexatious delays which are often long. No one, be he a Frenchman or a foreigner who almost always possesses a driver's licence issued by the authorities of his own country, can on the territory of the French Republic legally take the steering wheel of an automobile without having a French driver's licence in his pocket. All sorts of steps have been taken to induce M. Barthou, the Minister of Public Works, to facilitate the driving of cars in France by motoring visitors, either by recognising the validity of the licences issued in foreign countries, or by the prompt delivery of the French driving licence. But till now the Minister has been obdurate; like most Frenchmen he was always very polite to the personages who approached him on the matter, and made all sorts of promises which were never kept. At last, however, there seems some chance of a satisfactory solution being arrived at. The new régime cannot, however, be established before the end of the present motoring season. Having, as he told a friend of his who repeated it to me, been "bothered out of his life about those foreign motorists," M. Barthou has, by the intermediary of M. Pichon, the Foreign Minister, proposed that an international conference should assemble in Paris "to regulate and facilitate automobile traffic from one country to another." It is proposed that this conference should be held in October simultaneously with the International Road Congress.

MARNEY.

DURING the next five years the New Zealand Government propose to spend a million pounds on the improvement of the roads of the Colony.

SIR REGINALD OAK has recently taken delivery from Messrs. Warwick Wright, Ltd., of a 26-h.p. Metallurgique limousine, intended for use in Egypt; the Earl of Carnarvon has also recently purchased a 32-h.p. Metallurgique car.

New works in the Copland Road, Ibrox, Glasgow, have just been erected for Messrs. Terrac and Co., who have designed several good types of motor houses.

THE Chairman of the Education Committee of the L.C.C., Mr. Cyril Jackson, is endeavouring to arrange for the teachers of London elementary schools to warn children of the risks they run in crossing busy thoroughfares.

THE Coventry Motor Fittings Company, Coventry are, in addition to their ordinary trade, making a special feature of repairs to any make of radiator—especially the honeycomb type—a special department having been established to deal with the same.

AT a meeting of traders held in Putney, a general consensus of opinion has been expressed that the agitation recently conducted by many of the local public men against the alleged excessive speed of motor-buses in the district has had a good effect in lessening the same.

A MOTORIST at Aix-la-Chapelle has devised and patented a new steering wheel, the rim of which consists of a hollow elastic ring arranged between rigid rings in such a manner that when these are pressed together the air pressure thereby created may be utilized for operating an acoustic signal or other warning apparatus.

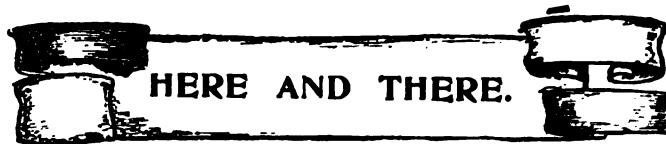
As mentioned in a recent issue, we have reprinted the table giving the details of the setting of valves of petrol motors, published in the *M.C.J.* of the 6th ult. Being mounted on stiff card it should prove a handy means of reference in motor repairing establishments, and we shall be glad to send a copy gratis to any motor-car agent and repairer making application for the same.

Two motor-bicycles are now employed in the borough of Queens, New York, U.S.A., by the Milk Inspection Bureau. The inspectors are obliged to go about in the early morning hours, watching for dealers who sell adulterated milk, and confiscating any found to be below standard. The use of the motor-cycles will enable them to cover a much greater area than before in the same length of time.

AT the south-eastern end of East Croydon station, and only about 100 yards from the booking office, there is a garage for about a score of cars. This is under the proprietorship of Mr. G. Vedast, who also lets motor-cars out on hire, and who will be glad to be of service to motorists in the locality driving to the station in their cars and wishing to have them looked after until their return from town in the evening.

MR. A. RIVETT, whose motor works at 236, High Road, Leytonstone, and the Steele Road, in the vicinity, are well known to the motorists of the eastern suburbs, is charging accumulators by yearly contract, repairing tyres according to a settled scale of charges, supplying petrol, oils and spare parts to many of the car owners in the district, and generally interesting himself in the development of automobilism. In addition to the repair works at Leytonstone, Mr. Rivett has depots at 147, High Street, East Ham, and at 212, High Road, Ilford.

MESSRS. S. F. EDGE, LTD., have sent us a photograph of the silver plaque given to Miss Dorothy Levitt by the Kaiserlicher Automobile Club for her performance on a 45-h.p. six-cylinder Napier in the Prince Henry of Prussia touring car competition. For the second year in succession in the big German contest she has made an absolutely non-stop run from start to finish, and in the general classification beating over 100 competitors. Her speeds on a genuine touring car, with luggage and full equipment of passengers, were slightly over 60 kilometres per hour for the hill climb, and nearly 100 kilometres for the speed trial.



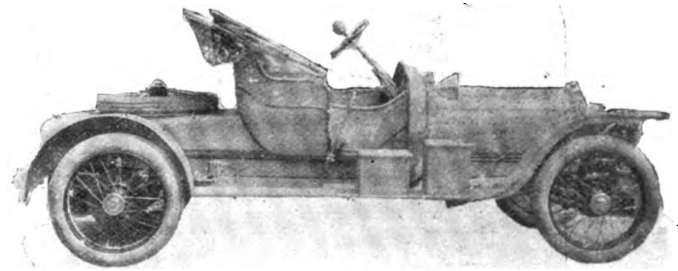
THE motor-car that is being utilised by one of the Methodist bodies in connection with a centenary touring celebration is now in Scotland.

BETWEEN Brighton and the picturesque village of Rottingdean, with its associations of Burne-Jones, William Black, and Mr. Rudyard Kipling, a motor-bus service is now running.

MOTOR-CARS have made their advent into the ore mining districts of Northern Wisconsin, Minnesota and Upper Michigan, U.S.A., they being employed between the various range cities in transporting miners, supplies, and even ore.

THE new garage facing the Windsor Castle Hotel, at Carshalton, has been established by Mr. W. Cheesman, who has installed the necessary machinery for effecting repairs to motor-vehicles.

A CASE illustrating the jealousy with which motor trade secrets are guarded was heard at the Old Bailey on Saturday, when Frederick Holt, lately assistant draughtsman employed by Napier and Son, Ltd., was found "not guilty" of inciting to steal. It was alleged that he promised to make it "worth the while" of a certain man, who had special inside knowledge of the firm's work, to disclose information about a new motor-car. Defendant denied the allegations, and was discharged.



A 45-h.p. Six-Cylinder Sheffield-Simplex Car recently delivered to the order of the Russell Engineering Company, Manchester, for Mr. Watkinson.

The car, which is equipped with Rudge-Whitworth detachable wheels, is interesting as being of the now popular high-powered "runabout" type, and being finished in a flat French grey without varnish presents a very smart and racy appearance. The vehicle was sold under a guarantee, as regards petrol consumption, of fifteen miles to the gallon, and passed a satisfactory test before delivery over an extended route along the Great North Road with three passengers up, when the desired mileage was easily attained without any special adjustment of the standard carburettor. In view of the dimensions of the six-cylinder engine— $4\frac{1}{2}$ in. bore by $4\frac{1}{2}$ in. stroke—such a low petrol consumption is extremely satisfactory.

A FEW days ago a fleet of motor-cars conveyed the members of the committee of a political association at Stroud for a trip of 100 miles into the Wye Valley. The journey was planned by the Rev. T. A. Ward, who as chairman of the Bristol and Gloucester A.C. has done much to promote the motoring movement in the West of England, and who, according to one account, "is as much at home in his car as he is in the pulpit." Those who lent cars for the enjoyable trip were Messrs. A. W. Clifford, H. Workman, M. Grist and H. E. Steel, as well as the Rev. T. A. Ward.

A NEW device known as the Auto-Syphon, for readily transferring petrol from the tins to the car tank, has lately been put on the market by Mr. W. De la Williamson, of Spring Road, Orrell, Wigan. As the title implies, it consists of a syphoning arrangement. To empty a tin of petrol it is only necessary to attach the apparatus by means of the screw cap, which is of a convenient shape for tightening by hand, and then press in the sides of the tin. A very slight pressure only is required to start the syphoning, after which the tin is emptied automatically. It is impossible to lose any petrol by splashing or otherwise where the Auto-Syphon is employed, and all particles of dust, &c., which may be in the spirit are effectually prevented from entering the tank by means of a filter. A set of adapters is being made to enable the fitting to be used in connection with the tins of the various petrol-supplying firms.

CONTINENTAL NOTES.

Some Motoring Proverbs.

"Le Gaulois" in a recent issue published some "new style" proverbs for motorists by M. Michel Zamoccois, from which we take the following:—

Dis-moi le prix de ton auto, je te dirai qui tu es.
L'automobilisme:

Qui que tu sois, voici ton maître,
Il l'est, le fut, ou le doit être.

Partir est bien, revenir est mieux.

Le pneu est l'ennemi du bien.

Bien qu'il n'aime pas le panache, l'automobiliste ne voyage qu'avec pompe.

L'homme propose . . . un itinéraire, et le moteur dispose.

French Motor-car Imports and Exports.

Returns just issued show that the value of the foreign motor-cars and parts imported into France during the five months ending with April last amounted to £142,400, as compared with £131,640 in the corresponding period of last year. On the other hand the exportation of French motor-cars and parts continues to exhibit a serious shrinkage. The aggregate exports during the five months lately ended only totalled £2,147,640, as contrasted with £2,665,000 in the similar period of 1907.

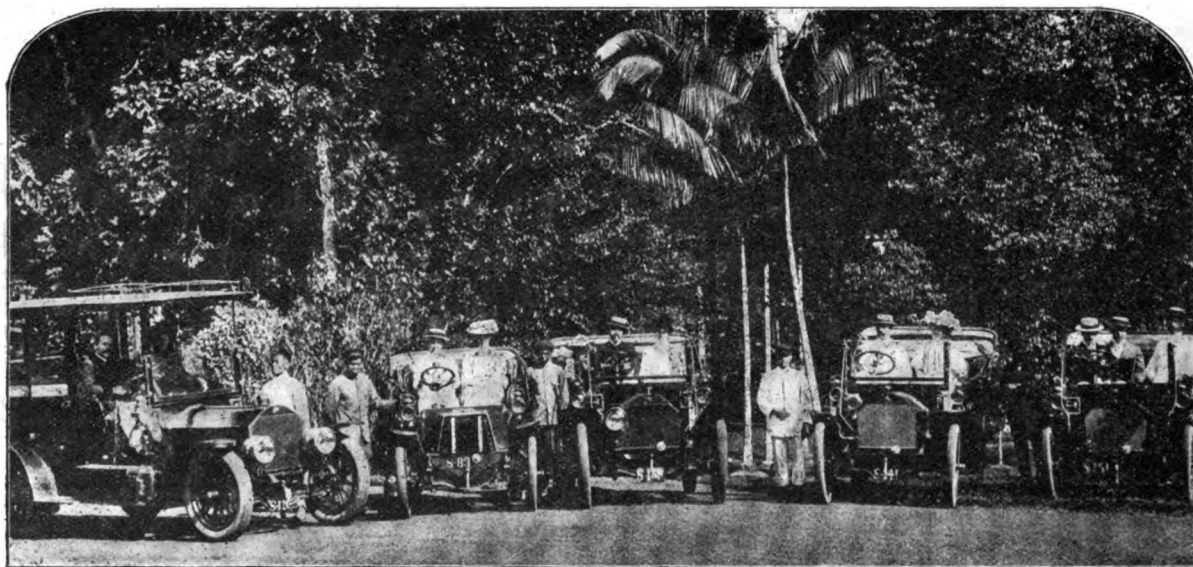
the familiar locale, the Grand Palais. The first show, which will extend from November 28th to December 13th, will be devoted to touring and pleasure cars, cycles and motor-cycles, accessories and components; as soon as the huge building has been emptied of these, the exhibits of industrial motor vehicles, motor-boats and allied industries will be substituted, this display being open to the public from December 22nd to the 29th.

The Reliability Trials in Denmark.

The three days' reliability trial organised by the Danish Automobile Club was brought to a successful conclusion on the 23rd ult. The first place was taken by H. Frins on a 10-14-h.p. Adler, C. Christiansen being second on a 22-h.p. Delaunay-Belleville and Ehrlich third on a 35-40-h.p. Hexe.

The Mont Ventoux Hill Climb.

The Automobile Club Vauclusien has decided to hold the annual hill climbing competition up Mont Ventoux on the 29th and 30th August next, the first five classes being run on the first day and the remaining six on the second. The course, which measures twenty-one kilometres in length, has an average gradient of from one in eight to one in ten, with one or two stretches as stiff as one in six.



MOTURING IN SINGAPORE.

The above illustration depicts a group of Star Cars in Singapore. Reading from left to right they include:—A 30-h.p. six-cylinder limousine, an old pattern 7-h.p. two-cylinder four-seater, a 12-h.p. four-cylinder car and a 9-h.p. two-cylinder three-seater.

With the exception of Russia, Turkey, and Algeria, there has been a falling off in the shipments to practically all the leading markets, the decline in the case of England being from £1,117,960 to £985,320.

British Motorists in France.

Recent British motoring visitors to France include Mr. and Mrs. Kendrick, of Birmingham; Mr. and Mrs. Ared, of London (40-h.p. Daimler); Lady Talbot (75-h.p. Itala); Mr. and Mrs. E. M. Griffith, of London (30-h.p. Austin); Mrs. N. H. Vickery, (40-h.p. Daimler); Mr. H. S. Cook, of London; and Miss Little, of London (40-h.p. Delaunay-Belleville).

The Paris Salon.

Some important changes in the arrangements with regard to the Paris Salon have just been decided upon. For several years past the industrial vehicle section has been held in an annexe, at first in the horticultural buildings on the banks of the Seine and later in extensive temporary premises erected on the Place des Invalides. This arrangement has, however, not altogether proved satisfactory, and at the same time it necessitated considerable expense. Consequently it has been resolved to this year hold two separate exhibitions, both taking place in

Hill Climbing Competitions in France.

Several hill-climbing competitions were held in France on Sunday last. The most important was that organised by the "Provence Sportive" of Marseilles; the event took place on the Platrières Hill, over a distance of 500 metres. The best time of the day (39½ sec.) was made by Rossyno on a Berliet. Much interest was centred in the motor-bicycle event, in which a little boy of six took part. In the Val Suzon hill-climb, organised by the Automobile Club Bourguignon, the honours of the day fell to the Rossel car driven by Vitalis, his time being 3 min. 1½ sec.

Miscellaneous Items.

Two eighteen-seated "sight-seeing" cars are about to be put in service in Munich.—The Crown Prince of Germany has ordered a Protos 36-50-h.p. six-cylinder car.—La Société des Motor-Cabs Franco-Scandinave is the name of a company which has just been formed in Paris, with a capital of £48,000, to introduce motor-cabs into Scandinavia.—The Austrian Automobile Club has just held a three days' light car reliability trial, during which a distance of 715 kilometres was covered. In the single and double-cylinder category the first place was taken by Siercke on a Puch car, and in the four-cylinder section by Furst on a F.N. vehicle.

Correspondence.

[Letters to the Editor should be addressed to the offices, 27-33, Charing Cross Road, London, W.C.]

THE PRINCE HENRY OF PRUSSIA TOURING COMPETITION.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—I enclose herewith copy of a letter which I am forwarding to the secretary of the Royal Automobile Club. This letter explains itself. Briefly put, the rules of the Prince Henry Cup race laid it down that only touring bodies were to be used on competitors' cars. Owing to the extreme latitude allowed to certain competitors in interpreting these rules, entrants who acted in accordance with the spirit of the same found themselves at a serious disadvantage. I have, therefore, in the interests of all future competitors, lodged the enclosed protest with the Royal Automobile Club.—Yours truly,

S. F. EDGE.

COPY.

The Secretary, The Royal Automobile Club, 119, Piccadilly, W.
23rd June, 1908.

Dear Sir,—With reference to the Prince Henry competition in Germany, I wish your committee would very seriously consider the great scandal arising out of the manner in which the rules of this trial have been allowed to be interpreted by some of the competitors without the committee of this competition raising any objections. It was set out clearly beforehand that these trials were touring car trials pure and simple, and it was said that the organisers of the same would be very particular in ensuring that only touring cars should compete, and, in view of the failure of the Herkomer regulation on this point, it was stated that Prince Henry himself would see to it that the rules should be very much stricter in this competition, whereas in fact (as shown by attached illustrations) far from the regulations in any way compelling competitors to use ordinary touring cars, racing cars were admitted so long as they had racing bodies with seating accommodation for three or four people.

I sent over a genuine six-cylinder Napier touring car, and I think it exceedingly unfair that my car should have to compete with cars which were nothing less than racing machines. If I had not been led to believe that racing cars were barred in this competition, I would have sent over a racing Napier.

I consider that the R.A.C. should lodge a strong protest with the Kaiserlicher Automobile Club on behalf of British competitors, as the latter were undoubtedly misled as to the character of the competition. The point is that either the terms of the competition were misleading or the rules of the competition were indifferently interpreted.

Of course a very simple remedy for individual British competitors is to refuse to enter in these international competitions, but I consider that the interests of sport would be better served by the R.A.C. if the latter were to take up a firm stand and enter a strong protest against the manner in which this competition was conducted.—Yours truly,

S. F. EDGE.

P.S.—I believe if someone in authority were to bring the matter before Prince Henry himself, it would have a beneficial effect upon subsequent competitions.

THE END OF THE TRIAL.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—If the R.A.C. really intended the conclusion of their much-boomed trial to have an educational value, why did they not provide against the ignorance of the spectators on Friday and Saturday last? There was no chance of knowing how matters were proceeding, and the issue of a slip giving the names of the cars and drivers, and the system of handicapping, &c., would have been welcome. But apparently the omission was in keeping with many other happenings. They manage these things better in Scotland.—Yours truly,

A SPECTATOR.

THE NAPIER-FIAT MATCH.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—There is surely something very much wrong with the Brooklands electrical timing apparatus as demonstrated by the official timing published in relation to the above. To every one present at Brooklands on Whit-Monday the following very rough calculation will be obvious. Brooklands track is approximately 5,000 yards to the lap. The "official" times showed the Fiat to be approximately at least 7 per cent. faster than the Napier. Granting the above, then the Fiat should have gained 350 yards in each lap, or 700 yards in the first two laps. I believe that every eye-witness of the above race will agree with me when I say that the Napier was at least 100 yards in front of the Fiat at the end of the second lap. If, however, the official timing is correct, the Fiat should have led the Napier at the end of the second lap by at least 700 yards, less whatever lead (if any) it may be admitted the Napier gained in the first few hundred yards before the official timing commenced. I understand it is officially stated that the electrical timing commenced 400 yards from the

start. If, therefore, the Napier gained 250 yards (that is travelling twice as fast as the Fiat) over this first untimed distance, it should have been 450 yards behind the Fiat at the conclusion of the second lap, instead of which it was leading.—Yours truly,

PERPLEXED.

THE UNJUST STEWARD.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—With regard to the letter in the *M.C.J.* complaining that a driver had asked for a supply of petrol, together with a receipt for double the quantity and cash, I should like to point out that to offer or to give, to ask for or to receive, a secret commission is a criminal offence. It is equally criminal to give to a driver, or for a driver knowingly to use with intent to deceive his principal, any receipt, account or other document false or defective in any material particular. I shall be glad if any of your readers who are anxious to prevent corruption will supply me, at 3, Oxford Court, Cannon Street, E.C., with any facts relating to breaches of the Prevention of Corruption Act, with a view to a prosecution being instituted.—Yours truly,

THE SECRETARY.

Secret Commissions and Bribery Prevention League, Incorporated.



The 10-cwt. Motor Van just supplied by Messrs. Dennis Bros., Ltd., to Messrs. Woolland Bros., of Knightsbridge, S.W.

A MOTOR TOUR ON THE CONTINENT.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—I have recently returned from a most enjoyable motor tour on the Continent, and for the benefit of fellow motorists I send you the following brief outline of the route followed, which combines perhaps as many and as varied attractions as it is practicable to devise in a tour of its length—the level and beautiful reaches of the chateau district, the magnificently scenic course of the Savoy Alps, the smiling plains of Piedmont and Lombardy, and a glimpse of the lovely Italian lakes.

Taking Paris as the starting point, the first day's run is to Orleans, a distance of 100 miles. The route lies through Fontainebleau, with its famous castle and forest. Orleans itself is an interesting town, made famous by its associations with Joan of Arc, and has a choice of two or three good hotels. Blois, forty miles below Orleans, may be regarded as the gateway of the chateau region, of which Tours, another forty miles, is the centre. Several days may be profitably spent at Tours, each with its interesting motor excursion. Touring now in a south-west direction, one travels in easy stages extending over two days by Bourges and Moulins to Vichy—a lively little resort, and a good place for another brief stay. Then comes Lyons, a hundred miles farther; and, following that, Grenoble, seventy-five miles, where the level part of the tour ends for a time. The town of Grenoble is superbly situated, and in its vicinity are some extremely fine hill courses winding into the heart of Alpine scenery. Close by, too, is the venerable monastery of the Grande Chartreuse.

From Grenoble, a spin of another seventy-five miles takes one to Briançon, and sixty more to Turin. This is a route of fine views, some of the most striking peaks of the Italian Alps being continually in sight. The hundred-mile ride to Milan, along the flat, fertile plains, may prove rather warm, but the city itself will offer ample compensation in its numerous sights, its cool cathedral, and its airy and gay galleries.

From Milan a delightful day's trip should be made to the Certosa di Pavia.

The route now leads northward to Como, perhaps the most captivating of Italian lakes. Next should come Lake Maggiore, reached on its western side at Pallanza, by way of another pleasing spot, Varese. Pallanza is a hundred miles from Milan. The great diligence highway of the Simplon, now just superseded by the new railway, runs from Pallanza to Domo d'Ossola, whence the road to be followed turns southwest, by way of Biella, to Aosta, a hundred and sixty miles. Now begin some more fine hill climbs, as the car pushes on to Pré St. Didier, and then to one of the finest view resorts in the Southern Alps, Courmayeur. This mountain village, a favourite spot with Italians, but little visited by British travellers, lies almost at the foot of the southern precipices of Mont Blanc, whose huge bulk, towering above the Allée Blanche between, is far more impressive as seen from this side than from Chamonix. Finally, the route leads out of Italy, high over the pass of the Little St. Bernard, and down through the French military post of Bourg St. Maurice, to Aix-les-Bains, a hundred and fifty miles from Aosta. Some of the hills, especially those on the latter part of this attractive itinerary, are somewhat steep, and the car must be fitted with powerful brakes. On the mountain routes, high speeds should not be indulged in, especially at places where the prospect ahead is interrupted by sudden turns in the road. Carts and other slow-moving vehicles are constantly met, plodding slowly along, and one never knows what may be suddenly encountered.—Yours truly,

TRAVELLER.

LICENCES FOR ALL DRIVERS.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—I am a motorist, and have travelled some thousands of miles. I am therefore well aware of the troubles and dangers incurred on the roads owing to carelessness, and even wanton ill-behaviour, of many drivers of horse vehicles, both in town and country.



A New Public Service in Austria.

The above illustrations are reproduced from snapshots taken on the route of the public service which has lately been inaugurated between Klosterneuburg and Weidling, a distance of about three miles. The electrical vehicles employed, which were built by the Austrian Daimler Company, take their current from an overhead conductor, similarly to electric trams.

(Allgemeine Automobil Zeitung.)

These men drive on the wrong side of the road, stubbornly hold the centre of a somewhat narrow way, risk "narrow shaves" in passing, or suddenly "pull up" without warning, utterly indifferent to what may be following on the road.

In such cases all the trouble and risk of avoiding accidents are thrust upon motorists. These habits seem to be practised by carters with impunity.

I suggest that drivers of horse vehicles should be licensed in the same way as motorists, and that the vigilant eyes of the police should be as watchful of one as the other. Licences costing a trifling sum per annum (say 2s. 6d.) would meet the case, and while these would yield an additional income towards repair of the roads, the fact of drivers holding them would impress them with responsibility.—Yours truly,

W. VERNON.

THE NAPIER-FIAT MATCH.—Mr. S. F. Edge has sent us a copy of a long letter he has addressed to the secretary of the R.A.C. with regard to the speeds attained in the recent race between a Fiat and a Napier car on the Brooklands Track. In it he remarks that "It must be apparent to everyone that some considerable error has been made in the timing."

CLEANING OUT SILENCERS.—The Rover Company, Ltd., write:—"We have noticed that on several cars returned to us for overhauling the silencers have been badly choked up, causing loss of power and overheating. This is principally caused by over-lubrication or the use of inferior oil. To obtain the highest efficiency it is very necessary that occasionally the silencer should be taken down and cleaned. The cleaning process is most easily accomplished; on the Rover car the removal and replacement of the silencer is a very simple operation consisting of the manipulation of a few nuts only."

CLUBS AND ASSOCIATIONS.

ROYAL.

FOR the makers' class in the Dust Trials of the R.A.C. the following entries have been received:—Mr. A. Gaal's 25.6-h.p. Westinghouse, Mr. W. T. Clifford-Earp's 48.6-h.p. Thames, Mr. Colin Defries' 30-h.p. Porthos and 20.1-h.p. Porthos, Mr. A. Gaal's 25.6-h.p. Renault, Mr. Frank Lanchester's 25.6-h.p. Lanchester, Mr. L. Carle's 45-h.p. Mors and 30-h.p. Mors, and Mr. R. W. A. Brewer's 20-h.p. Decauville.

MOTOR UNION.

A GENERAL meeting of the Motor Union was held at the Hotel Cecil, London, with Mr. W. Joynson Hicks, M.P., in the chair. It was proposed to contribute towards the cost incurred by Dr. McKay in meeting the unsuccessful effort of the Corporation of Harrogate to reverse the decision of the Knaresborough magistrates to the effect that the authorities are not entitled to ask an extra charge for the water used in the washing of motor-cars belonging to doctors. A report was made that certain financial matters between the R.A.C. and the M.U. had been adjusted.

SHEFFIELD AND DISTRICT.

ARRANGEMENTS have been made to take 120 crippled children to day (Saturday) for an outing to Haddon Hall, where tea will be provided by the club. The cars will meet at Leopold Street, Sheffield, at 2.30 p.m. and start about 3 o'clock for Haddon Hall, via Baslow and Bakewell.

The hill climb for members of the club will be held under the closed competition rules of the R.A.C. on Saturday, the 18th inst. The competi-

tion will be divided into three classes, viz.:—Class 1.—Single-cylinder car competition for challenge cup, presented by Mr. Harvey Foster, open to all members who own one-cylinder cars. Class 2.—Competition open only to members not connected with the trade. Prizes given by Mr. E. F. Coupe and Mr. A. Davidson. Class 3.—Annual competition for challenge cup presented by Mr. Harvey Foster.

WEST SURREY.

MEMBERS and friends to the number of over eighty met at St. Mary's, Godalming, on the 27th ult., by invitation of Mr. and Mrs. R. W. Buttemer. Much amusement was caused during the afternoon by an "Odorographic Competition," in which it was clearly evidenced that motoring has no tendency to blunt the olfactory perceptions. The successful competitors, Mrs. Pullman and Mr. R. Crothers, made sixteen successes out of a possible twenty, the test objects including such substances as asafetida, carbon disulphide, and amyl alcohol as well as more agreeable scents.

Members are reminded that the club gymkhana will take place at Compton, Godalming, on Saturday, July 25th, and are requested to send in their entries as soon as possible.

NEW FOREST.

ON Saturday the New Forest A.C. and Hampshire Motor Union held its hill-climbing competition at Beaulieu, when an interesting afternoon was spent. Mr. C. J. Haddon, of Westover Chambers, Bournemouth, was the hon. secretary of the meet, and Lord Montagu acted as judge. Messrs. F. Straight and J. H. Burley were time-keepers and starters. Class 1, for cars up to 10-h.p., was won by Mr. J. W. Davis on his 6-h.p. Jackson car, Mr. C. H. Braun on a 9-h.p.

Sizaire being second. In Class 2, Mrs. M. Ellis had entered a 13.7-h.p. Peugeot, which was second to the 11.2-h.p. Gladiator of Mr. Ironside-Bax. In the class for cars between 20 and 30-h.p. two Clement-Talbot vehicles were first and second respectively, these being entered by Messrs. H. Scorer and W. Mackintosh. Class 4, for cars of 30-h.p. and over, was won by Mr. C. J. Haydon on his 38.4-h.p. Napier, Mr. H. E. Acklom's 30.1-h.p. De la Buire being second. There were twenty-two entries in the class for cars up to 25 6-h.p. R.A.C. rating, and the results of Class 1 were repeated, the 6-h.p. Jackson and 8-h.p. Sizaire being first and second respectively, followed by the 8-h.p. Rover of Mr. H. Simmons and the two Clement-Talbot cars which were successful in Class 2.

MOTOR CYCLING CLUBS' RUN.

THE annual inter-team trial held under the auspices of the Motor Cycling Club took place on Saturday, over a twenty-five miles out and home course, which had to be covered four times—a total distance of 100 miles. The route was from Daventry, twelve and half miles along the road to Banbury, and was completed by twenty-nine competitors, made up as follows:—Coventry, 5; Manchester, 4; Yarmouth, 4; Sheffield, 4; Bocardo, 3; Birmingham, 3; M.C.C., 3; Southern, 2; North West London, 1. The Coventry Motor Club won the trial with a mileage of 536.

SCOTTISH.

THE Trials Committee of the Scottish A.C. desire to express their acknowledgments to the numerous firms and individuals who have rendered them service in the conduct of the trial. In particular, they wish to thank the Kennedy Motor Company, Ltd., Claud Hamilton (Aberdeen), Ltd., Messrs. McCrae and Dick, Inverness, and The Glasgow Corporation Tramways Department, who placed their premises gratuitously at the disposal of the Club for the storage of the cars; to the Caledonian Railway Company, Oban, and to Dr. Anderson, of Pitlochry, for the free use of ground for the erection of storage marquees; to Argyll Motors, Ltd., Albion Motor-car Company, Ltd., Sunbeam Motor-car Company, Ltd., Deasy Motor-car Manufacturing Company, Ltd., New Arrol-Johnston Car Company, Ltd., A. Darracq and Co., Ltd., Humber, Ltd., and Magnetic Clutches, Ltd., and members of the Club and other gentlemen, for placing cars at the disposal of the committee for the use of the officials and the Press; to the county and burgh police throughout the route, who rendered valuable assistance in controlling the traffic and directing the drivers; to the road surveyors throughout the route for carrying out various road improvements, and for ensuring that no loose metal or road-rolling operations were present during the progress of the trial; and to the many gentlemen who acted as marshals and honorary observers.

THE Northamptonshire A.C. has resolved not to compete in the forthcoming dust trials of the R.A.C.

THE Automobile Club of North Wales has held a most successful meet at the Bethesda Quarries, by permission of Lord Penrhyn.

PERMISSION has been granted by the local council to the South Wales A.C. to hold a hill-climbing competition on the Buttrill road at Barry.

THE Leicestershire Automobile Club's gymkhana, which was to have been held on the 25th inst., has been postponed until August 20th.

MR. M. A. BOND has been elected secretary of the newly-formed Accrington Motor Club, an organisation intended to be of service to the eighty local motor-cyclists.

MR. A. BRAMPTON has been re-elected chairman of the Tyre and Accessories Committee of the Society of Motor Manufacturers and Traders.

THE Automobile Club of South Africa has just held its first hill-climb on the Groot Schuur Estate, owing to the good offices of Dr. Jameson, who is the vice-president of the club.

ON Saturday the annual hill-climb of the Derby and District A.C. took place at Ambergate, when Mr. M. Ross Browne, driving his 15-h.p. Mass car, took the silver medal. As he was adjudged not strictly an amateur driver, the challenge cup goes to Dr. R. F. Hogarth, who drove his 25-h.p. Clement-Talbot.

THE Leicestershire A.C. has issued its rules, list of members, officers, &c., in a neat form for the waistcoat pocket. The provincial programme of events is also included, as well as marks of identification, a speed table, lighting up times, and a warning to members to drive slowly through villages and towns.

THE Birmingham Motor-cycle Club have had a hill climb at Farlow Hill, about 12 miles from Bewdley. This is stated to have a gradient of one in four-and-a-half, and few of the competitors reached the summit. Mr. E. C. Evans on his 5-h.p. Rex was a most successful entrant.

THE competition for the De Pre Challenge Cup will take place at Kettleby Hill, near Melfn Mowbray, on the 11th inst. and will be confined to the members of the automobile clubs of Leicester, Nottingham, and Derby. Kettleby Hill is on the main road from Nottingham to Malton Mowbray, and the starting point is just beyond the fourteenth milestone from the former town.

THE whole of the Works and Staff of the Stepney Wheel Company, Manely, visited London on the 20th ult. for their annual outing, and a most enjoyable day was spent.

MOTOR GYMKHANA AT BUXTON.

It is not often that Buxton is inundated with motorists to the extent it was on Saturday, on the occasion of the Manchester Automobile Club's Inter-Club meet and Gymkhana, on the Silverlands, the playing ground of the Buxton Football Club. The ways to the Silverlands are numerous, and it required a special contingent of police to act as "guides, philosophers and friends" to automobilists unacquainted with the locality. This assistance was rendered the more necessary as the route specified in the programme issued by the organisers of the fete was out of the "beaten track," its selection being evidently influenced by a desire to reduce to a minimum the risk of collision with horse-drawn vehicles, but, with all the precautions, there were one or two slight mishaps, none of which, however, involved serious injury to person or property. Many cars arrived overnight, with the result that every garage in the town was filled to its utmost capacity. From about one o'clock there was an almost continuous procession of cars of well-nigh every make on to the ground, and the officials had an arduous task, especially with the later arrivals, in allocating positions. The ladies were well to the fore amongst the spectators, and most of them had exchanged the not too picturesque costume of lady automobilists on the road for more attractive attire. Amongst others present to witness the gymkhana were Mr. Slimmond (a New Zealand gentleman, who is touring the "Old Country" on a "Swift" for a holiday), Mr. J. H. Davies, Cheadle (Delaunay Belleville), Mrs. Parry, Didsbury (Reynolds), Mr. L. D. Broadbent, Stalybridge (Daimler), Mrs. Briggs, Wilmslow, Mr. Croesley, Ripley (Allday), Mr. Fred Smith, Bowden, Mr. Morris, Bowden (Belsize), Mr. Noel Smith, Manchester (Belsize), Mr. W. E. Moss, Liverpool (Mercedes), Mr. W. K. Poulson, Liverpool (Darracq), Mr. J. Deakin, Sheffield (Minerva), Mr. Cawood, Sheffield (Wolsley), Mr. Cope, Sheffield (Panhard), Mr. J. Barber, Sheffield (Belsize), Mr. Harvey Foster, Sheffield (Wolsley), Mr. C. Dixon, Sheffield (Napier), &c. There were, of course, other makes of cars represented, the Humber and the Argyl predominating.



The Inter-Club Meet at Buxton.—A View of the Enclosure.

As to the contests, they were simply an exhibition of skill in the three "S's," namely, starting, steering and stopping, in all of which both car and driver were put to very severe tests. It is unnecessary to describe the various competitions, which were of the usual kind to be seen at any ordinary motor gymkhana. One novelty, so far as Buxton is concerned, was introduced in the shape of a blindfold race, won by Mrs. E. A. Riley, of Accrington, and which caused no small amount of amusement to the spectators.

The clubs invited included Barnsley, Blackpool, Bradford, Cheshire, Derby and District, Halifax, Harrogate, Huddersfield, Hull, Lancashire, Lincolnshire, Liverpool, Midland, Mid-Staffordshire, North-Eastern, North Wales, North Yorkshire, Nottingham, Rotherham, Sheffield Shropshire, Wolverhampton and Yorkshire.

Amongst the most successful of the competitors was Mr. A. E. Crowdy, manager of the Wolsley Co.'s Manchester depot, who, as a gentleman remarked to our representative, is "an old hand at the game," and took advantage of the opportunity of showing his skill in handling a 40-h.p. car made by his own firm.

All praise is due to Mr. J. B. Thistlethwaite, the courteous and obliging secretary of the Manchester Automobile Club, for the clever manner in which he engineered the meeting, the success of which was, to a large extent, due to his untiring and energetic efforts. Results:—

Obstacle Race: A. E. Crowdy, Manchester (61 1.5 sec.) 1; T. Hooydonk, Manchester (63 4.5 sec.) 2; Mrs. E. A. Riley, Accrington (71 sec.), 3.

Starting and Stopping Race: F. C. Hudson, Manchester, 1; A. E. Crowdy, 2.

Ladies' Passengers Race: A. E. Crowdy, 1; E. A. Gadd, Manchester, 2.

Bomb Race: J. L. Tattersall, Manchester, 1; F. C. Hudson, 2; A. E. Crowdy, 3.

Musical Chairs: Mrs. E. A. Riley, Accrington, 1; Mr. C. F. Bell, Manchester, 2.

Manchester Stakes: F. C. Hudson. The other competitors were disqualified for having more than two wheels across the line.

Mr. Hudson won the silver medal for the best aggregate performance. During the afternoon the Buxton town band submitted a choice programme compiled from the works of the most popular composers.

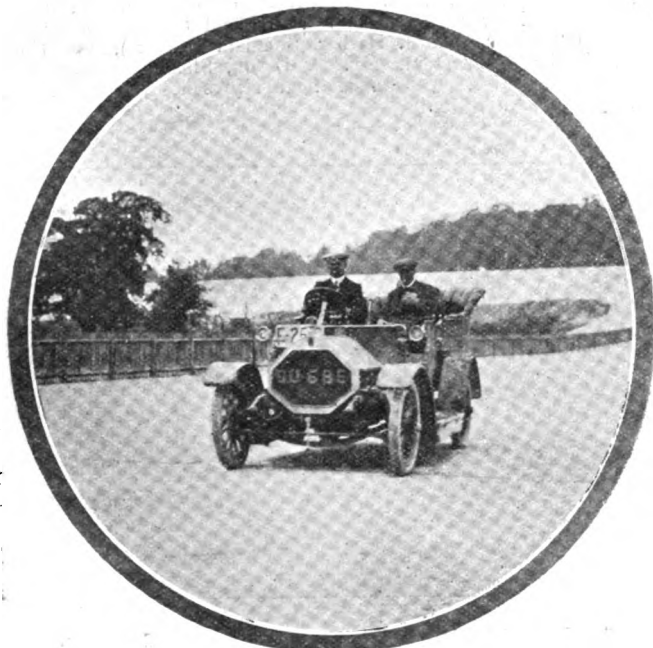
In the evening, after dinner at the Empire Hotel, Mrs. A. E. Jones, wife of the president of the Manchester Automobile Club, presented the prizes to the successful competitors.

Such gatherings are useful in affording opportunities to the officials of the various clubs to meet and compare notes—occasions which too seldom present themselves.

RACING AT SALTBURN.

ON Saturday the third annual speed trials of the Yorkshire A.C. were held on the sands at Saltburn. There was a slight breeze, and spectators and competitors alike found the weather in ideal condition. A course of a kilometre in length was marked out on a two mile stretch between Agar's Gap and Marske, and a start was made at the early hour of 8.30 a.m.

Mr. C. P. Wilson was the hon. secretary of the meeting, other officials being:—Judges, Messrs. A. H. Briggs, J. Constantine, G. Scoby-Smith, W. Penrose-Green, E. Gordon-Learoyd, and A. Fowler; marshal-in-chief, E. H. Hepper; timekeepers, A. Fattorini, J. A. Walker, J. E. Rhodes, and J. B. Hyland; starter, T. E. Booker.



(— The 2,000 Miles Trials.—The 15-h.p. Coventry Humber which secured third place in Class F.

Photo by]

[A. J. Campbell.

The results were as follows, the names of drivers being given in brackets where the owners did not drive their cars:—

CLOSED COMPETITIONS.

Single-cylinder touring cars (max. bore 115, max. rating 8.2):—1, T. H. S. Atkinson, 6-h.p. De Dion (C. P. Wilson); 2, Guy Barrett, 6-h.p. De Dion.

Two, three, and four-cylinder touring cars (max. bore 111, 91 and 81 and max. rating 15.3, 15.3 and 16.2):—1, J. E. Hutton, 14-h.p. Berliet; 2, H. E. Catton, 12-14-h.p. De Dion.

Two, three, and four-cylinder touring cars (max. bore 131, 106 and 91, and max. rating 21.2, 20.8 and 20.5):—1, T. H. Woollen, 18-h.p. Talbot (T. H. S. Atkinson); 2, T. H. Woollen, 15-h.p. Talbot (J. Mortimer).

Two, three and four-cylinder touring cars (max. bore 142, 117, and 102, and max. rating 24, 25.4, and 25.7):—1, J. E. Hutton, 23-h.p. Hutton; 2, T. H. Woollen, 20-h.p. Talbot.

Touring cars, divided into two classes, for cars whose rating does not exceed 21, and cars whose rating exceeds 21 but not 42. In the first class Mr. T. H. Woollen's 15-h.p. Talbot (T. H. S. Atkinson) beat Mr. Woollen's 15-h.p. Talbot (J. Mortimer). In the second class Mr. H. R. Kirk's 40-h.p. Metallurgique (G. R. Smith) beat Mr. A. Farnell's 30-h.p. Daimler. In the final (on handicap terms) Mr. Woollen's car beat Mr. Kirk's.

Touring cars, four and six cylinders, max. bore 160 and 130, max. rating 63.2 and 62.8:—1, G. S. Barwick, 58-h.p. Daimler; 2, Cecil Edge, 60-h.p. Napier (F. G. Cundy).

Touring cars, the chassis price of which does not exceed £200:—1, H. R. Kirk, 15-h.p. Ford (G. R. Smith); 2, R. Winn, 15-h.p. Ford.

Touring cars, the chassis price of which does not exceed £300:—1, A. Masser, 15-h.p. Mass; 2, C. H. Holgate, 16-20-h.p. Calthorpe (R. F. Fletcher).

Touring cars, the chassis price of which does not exceed £400:—1, W. J. Masser-Horniman, 20-h.p. Mass; 2, C. McAdams, 25.6-h.p. Humber (G. Brown).

Touring cars, the chassis price of which does not exceed £600:—1, J. E. Hutton, 26-h.p. Hutton; 2, H. Pickles, 40-h.p. Austin (L. Hands).

Touringsteam cars, the price of complete car not to exceed £700:—1, H. Galloway, 20-h.p. Stanley; 2, T. N. Muller, 20-h.p. Stanley (Mr. E. R. Pearson).

OPEN COMPETITIONS.

Touring cars, the chassis price of which does not exceed £800:—1, G. S. Barwick, 58-h.p. Daimler; 2, H. R. Kirk, 40-h.p. Metallurgique (G. R. Smith).

Racing cars not exceeding in weight 1,000 kilos—A. Lee-Guinness, 200-h.p. Darracq, 121.06 miles per hour.

Racing cars of any weight—S. F. Edge, 90-h.p. Napier (Mr. F. Newton), 102.61 miles per hour.

Racing cars of any weight—1, A. Lee-Guinness, 200-h.p. Darracq; 2, S. F. Edge, 60-h.p. Napier (F. Newton).

Naturally the open competition, in which the Hon. A. Lee-Guinness was attempting record-breaking, aroused considerable interest. Last year he had attained a speed of 111.84 miles per hour. This time he made three successful attempts to beat this on his 200-h.p. Darracq, the fastest being at the rate of 121.06 miles per hour, the others at 120.26 and 117.03 miles per hour, respectively.

ROAD REPORTS.

ALDERSHOT.—Motor-cars are now forbidden to travel over the Government roads at Aldershot at a pace exceeding ten miles per hour. The main roads in the neighbourhood are being treated with tar spraying, for obvious reasons.

FARNHAM.—For the present year the estimated cost of maintaining the main and the district roads about Farnham (Surrey) is £3,537 and £7,870 as compared with £843 and £2,686 respectively in 1896. The mileage of the main roads has remained the same, and of the others only about one mile increase has been recorded in the period.

NEWHAVEN.—Application has been made to the L.G.B. by the East Sussex County Council for an Order reducing the speed of motor-cars to eight miles per hour upon that part of the main road from Brighton to Eastbourne which lies within the borough of Newhaven.

LEEDS.—A police "control" is often in operation across Woodhouse Moor.

SURREY.—As is usual on race days, the police were busy with their notebooks on the roads about Kingston, Esher and Hersham on Friday of last week. But caution seemed to have come over the motorists, and catches were few.

LLANDRINDOD.—Police traps are now a frequent feature of the landscape in the district of Llandrindod.

MORPETH.—There is a police control 700 yards in length at Morpeth. It is in fairly frequent operation.

DERBYSHIRE.—The Derbyshire County Council, which has not been so ready to erect warning signs as the contour of its district demands, may be interested in the erection of four signs on a dangerous bit of road between Stony Middleton and Baslow by the Sheffield A.C.

COWDENBEATH.—Inquiry was held at Cowdenbeath on Saturday into an application by the Cowdenbeath Town Council for an Order for the restriction of speed in certain streets of the borough to ten miles an hour.

CARLISLE.—At Kingston, on the main road north from Carlisle, a measured distance has been marked out for the purpose of timing motorists.

COVENTRY.—A trap worked by the police on the Kenilworth road, at Coventry, has lately proved so remunerative that its more frequent operation may now be anticipated.

SALTASH.—Police traps are now reported from Saltash (Cornwall).

GRANTOWN.—Signs limiting the speed of motor-cars to ten miles per hour in the burgh of Grantown-on-Spey—that delightful little town visited during the Scottish Trial—have now been fixed near the entrances to the place and also on the cross roads therein.

MESSRS. H. J. CHAPMAN AND COMPANY, LTD., 104, Park Street, Regent's Park, N.W., have been appointed official repairers to the R.A.C. for the year 1908.

MR. J. E. YOUNG, whose 10-12-h.p. Argyll won the Hertfordshire County A.C.'s Consumption Trial, used the Shell motor spirit of the British Petroleum Company, Ltd., on that occasion.

MR. F. F. WELLINGTON, who for many years was manager to the British Automobile Syndicate, has now taken up the position as sales manager to the Sueddeutsche Automobilfabrik, of Gaggenau, Baden, Germany, who are opening a London branch at 14, Baker Street, W. A range of "Gaggenau" motor-cars, vans and lorries will be on view at the new depot, and a large stock of spare parts kept on hand; a repair department is also being established.

CASES AGAINST MOTORISTS.

SEQUEL TO A COLLISION.

After a protracted enquiry a coroner's jury at Nottingham has returned a verdict of manslaughter against Edward Dould, in connection with the death of Harold Stone, who was fatally injured in a motor-car collision at Adam Hill, near Nottingham, early on the morning of May 10th.

THE NECESSITY OF ENDORSEMENT.

At the Woking County Bench, Lieut.-Col. Mark Mayhew was fined £5 for exceeding the legal limit. On being asked to produce his licence for endorsement, Colonel Mayhew said he wished to take legal opinion as to whether this would be necessary, in view of the fact that the Act was originally passed for three years, and that the two previous convictions occurred during that period. Defendant was allowed a week in which to obtain advice.

EXCEEDING THE SPEED LIMIT.

A number of motorists were fined one day recently for exceeding the speed limit in Arundel. At Leeds, four motorists have been fined £3 for driving beyond the legal maximum of speed. Eight motorists have been fined sums ranging from £3 to £5 and costs at the Epsom Petty Sessions for exceeding a speed of thirty miles an hour in the London Road, Cheam.

The magistrate at the Woking County Bench has fined Mr. S. F. Edge £5 for exceeding the speed limit. Mr. Edge wrote that at first he was under the impression that the police had made a serious mistake, as his speedometer showed a maximum speed of twenty miles, but on examining it subsequently he found it had jammed.

Fines of £2 and costs have been inflicted on sixteen motorists at the Morpeth Petty Sessions.

Large numbers of motorists have lately been fined for exceeding the speed limit at Coventry, Cambridge and Corwen.

At the Guildford County Petty Sessions, on Saturday, Lord Russell was fined £10 and costs. Several other motorists were summoned at the same court on the same day, the total fines amounting to nearly £72. Ten motorists have been fined £50 at Woking in one day. At Kingston a day's haul of motorists has resulted in seven motorists being fined £5 and costs each.

FINDING A DRIVER.

At Lancaster, on Saturday, Herbert Gordon, of the Junior Carlton Club, Pall Mall, and 41, Wimpole Street, S.W., was charged with driving a motor-car at Galgate at a dangerous speed on May 7th, and also with failing to give such information as it was within his power to give for the identification and apprehension of the driver.

Evidence was called proving that the car was driven at an excessive speed through the village just after noon, when the school children were on their way home. The number of the car was taken by a roadman because of the speed at which it travelled. All applications by the police for information had been unanswered, and no reply was received to the summons. The police subpoenaed the secretary of the club and hall porter to prove the receipt of the notice, and it was stated that until this was done no information of a satisfactory nature could be obtained. The secretary admitted that the defendant was a member of the club and that any communication sent to the club for him would be forwarded to him at an address in Cornwall, but he had not been there since March. Having heard the evidence, the Bench adjourned the case for a fortnight, and intimated that they would ask the clerk to send a registered notice to all the defendant's addresses with an intimation that if he did not appear a warrant would be issued against him.

IS LUBRICATING OIL "FILTH."

At the Mansion House (London) on Tuesday, the General Motor Cab Company, Ltd., were summoned before Alderman Sir James Ritchie by the Corporation of London for an infringement of a bye-law, under the Public Health (London) Act, 1891, in causing to be cast certain "filth," in the form of thick black oil, on a public roadway. Mr. Marshall-Hall, K.C., and Mr. Gilbert Beyfus appeared for the company and pleaded not guilty.

Mr. Vickery (Assistant City Solicitor) stated that recently proceedings had been taken against a number of drivers of motor vehicles for dropping oil on the roadway to the discomfort and danger of pedestrians and others, and the magistrates expressed an opinion that, in the future, owners, as well as drivers, should be proceeded against. A constable proved that he saw oil dripping from a motor-cab belonging to the company, but Sir James Ritchie thought there was no case against the owners.

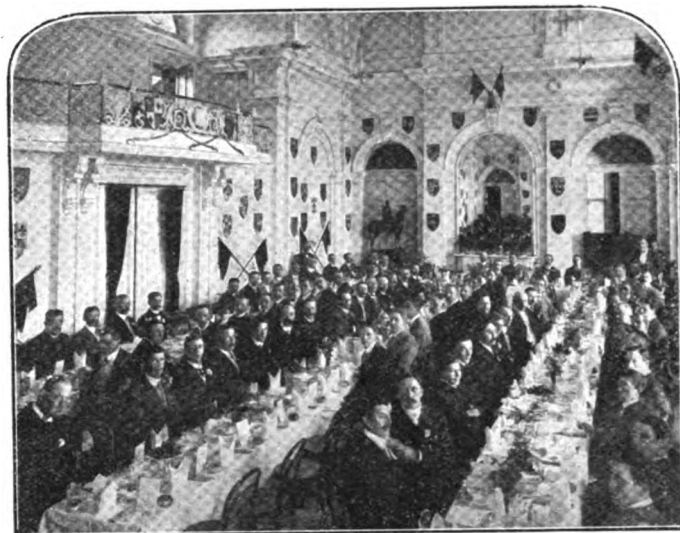
A summons against Patrick Ryan, the driver, for a similar offence was next called. He admitted an accidental leakage.

Sir James Ritchie said he had grave doubts whether this oil came under the term "filth." If the charge was gone on with, he should dismiss it on the facts, but would state a case for the decision of the High Court if the Corporation desired. He thought "filth" meant something detrimental to the public health—something noxious.

Mr. Vickery read a dictionary definition of filth as "foul matter, anything which soils or defiles, dirt, nastiness," but Sir James Ritchie did not think lubricating oil came under any of these definitions. Mr. Vickery said, having regard to that expression of opinion—with which he entirely disagreed—and to the fact that the driver had given evidence in the case, he should withdraw the summons against him.

THE BEESTON HUMBER ANNUAL OUTING.

LAST week end the extensive works of the Humber Company, at Beeston, presented anything but its ordinary appearance, for in place of the usual scene of bustle and activity all was quiet. This was due to the holding of the annual outing of the employees, who, to the number of about 400, were conveyed in two special corridor trains from Nottingham early on the morning of Saturday, the 27th ult., to Yarmouth. During the day excursions were made to the places of interest in the neighbourhood, most complete arrangements having been made in order that the visitors should thoroughly enjoy themselves. Mr. Edward Powell, the chairman of Humber, Ltd., presided at the staff dinner, which took place in the evening at the Norfolk Artillery Mess House, when about 100 were present. Mr. T. C. Pullinger, the popular manager of the Beeston works, was unfortunately unable to be present, he being detained in London in connection with the completion of the 2,000 miles trials. The musical programme which followed the dinner was interspersed with a number of toasts which were duly honoured. The Chairman, in a brief but interesting speech, replied for "The Firm," proposed by Mr. M. Rallinshaw, and in doing so referred with pleasure to the fact that the two Beeston Humbermen went through the Scottish and 2,000 Miles Trials without a stop. He also announced that he had received a telegram from Mr. Pullinger that the 25.6-h.p. car had secured second place in Class F., but that the 35.4-h.p. vehicle in Class C., on which they had placed great hopes, seeing that on arriving at Brooklands it held the first place by a good lead, had experienced a most remarkable run of bad luck in the way of tyre troubles, which prevented it finishing the distance in the allotted time. The return journey was commenced shortly before midnight, Nottingham being safely reached about 4 o'clock on Sunday morning. The arrangements were of the most complete character.



The Beeston-Humber Outing to Yarmouth.—The Scene at the Staff Dinner. (Tallop.)

acter, and reflected much credit on the organising secretary, Mr. H. Gray, to whom a special vote of thanks was accorded at the staff dinner. We may add that the Midland Railway undertook the task of conveying the large party to and from Yarmouth, carrying it through with a degree of promptness and comfort which was greatly appreciated.

COMPANY NEWS.

PERRINS' PATENT DETACHABLE MOTOR WHEEL SYNDICATE, LTD.—Capital £10,000. Objects: To adopt an agreement with H. Perrins, to acquire the rights in the patent detachable motor wheel referred to therein and to carry on the business of manufacturers of motor and other wheels, motor-cars and other vehicles, parts and accessories, &c. Registered office, 55, Newhall Street, Birmingham.

ETABLISSEMENTS SELBACH, LTD.—Capital £12,500. To carry on the business of contractors, designers, mechanical and electrical engineers, builders and proprietors of motor-cars, motor-boats, engines, carriages and launches, &c., and to adopt an agreement with P. Piellat and O. C. Selbach. Registered office, 77, Camomile Street Chambers, E.C.

FROM the Société des Automobiles Sinpar, of Courbevois, Paris, comes a copy of their new catalogue of the Sinpar voiturette, a neat little vehicle, fitted with a De Dion 4½-h.p. single-cylinder engine.

We learn from the "Tormo" Manufacturing Company, 67-68, Bunhill Row, London, E.C., that the winning car in the Prince Henry of Prussia touring competition was fitted with the "F. and S." ball bearings.

FORTHCOMING EVENTS.

JULY.

- 4th (Sat.).—Derby A.C. challenge cup competition.
Meet of the Kent A.C. at Gravesend.
Brooklands A.R.C. meet.
Cheshire A.C. gymkhana.
Herts C.A.C. meet at Berkhamsted.
Hull and East Riding A.C.C. hill climb.
Manchester A.C. gymkhana.
N. Middlesex A.C. reliability trial for the Frederic Coleman trophy.
Sheffield A.C. crippled children's run.
- 6th (M.).—Grand Prix A.C.F. (Voiturette section).
7th (Tu.).—Grand Prix A.C.F. on the Dieppe Circuit.
8th (W.).—Meet of the Cambridge A.C. at Waresley Park by invitation of Col. Duncombe.
9th (Th.).—Meet of the Ladies' A.C. at Hanworth Park, Middlesex.
10th (F.).—Start of tour of motor factories in the Midland by the I.L.A.E.
Welsh A.C. motor-car reliability trials.
11th (S.).—Provincial meet of the R.A.C. at Hereford. Lunch at the Green Dragon Hotel; visit to Ledbury Park, and dinner at the Assembly Rooms.
Essex C.A.C. gymkhana at Brentwood.
Aston Hill climb of the Hertfordshire C.A.C.
Essex M.C. gymkhana at High Beech.
Leicester A.C. hill climb at Kettleby.
- 15th (W.).—Hastings Automobile Meeting organised by the Motor Club.
Motor parade at 11 a.m.; gymkhana at 2.30 p.m.
16th (Th.).—Club meet of the Netts A.C. at the Hop Pole, Ollerton.
18th (Sat.).—Annual gymkhana of the Herts C.A.C. at The Grove, Watford, by permission of the president, the Earl of Clarendon.
Gymkhana of the Kent A.C. at Maidstone.
Meet of the Liverpool and Cheshire A.C.'s at Delamere.
New Forest and Dorset A.C.'s joint hill climb.
Hill Climb of the Essex C.A.C.
- 20th (M.).—Entries close for the O'Gorman trophy.
20th and 21st.—The R.A.C. dust trials.
23rd (Th.).—Gymkhana of the Cambridge A.C. at Chippenham Park.
Hill climbing competition of the Hull and East Riding A.C.C.
- 25th (Sat.).—Petrol Consumption Tests of the Motor Cycling Club.
Annual Open Hill Climb of the Midland A.C. at Shelsley Walsh.
Committee meeting of the Kent A.C. at Herne Bay.
Motor Union Provincial meet.
Cheshire A.C. hill climb.
Lancashire A.C. open hill climb.
- 26th (Sun.).—Southend M.C. run to Coach and Horses, Quendon.

AUGUST.

- 1st (Sat.).—Brooklands A.R.C. meeting.
2nd-3rd.—Newcastle and District M.C.C. reliability.
3rd (M.).—Brooklands A.R.C. meet.
8th (Sat.).—Visit of the Kent A.C. to Brasted Chart.
12th (W.).—A.C. of Belgium—Circuit des Ardennes and the Liedekerke Cup race.
22nd (Sat.).—Annual race meeting of the A.C.U. at Shepherd's Bush.
Invitation of Sir D. Salomons to the Kent A.C. to visit Tunbridge Wells.
23rd (Sun.).—A.C. du Rhone Mont Pilat trial.
29th (Sat.).—Meet of the Lincolnshire Motor Club at Lincoln.
Mont Ventoux hill climb of the A.C. Vauclusien.
Leicester A.C. gymkhana.
- 30th (Sun.).—Southend M.C. run to Great White Horse Hotel, Ipswich.

SEPTEMBER.

- 4th and 5th.—Reliability Consumption Trial of the Essex C.A.C. at Norwich in connection with the R.A.C. provincial meet.
5th (Sat.).—Aston Hill climb of the Herts C.A.C.
Provincial meet of the R.A.C. at Norwich.
12th (Sat.).—Brooklands A.R.C. meet.
17th (Th.).—Touring car competition of the A.C. of Holland through that country.
19th (Sat.).—Provincial meet of the Motor Union.
North Middlesex A.C. 100 miles reliability run.
Manchester A.C. reliability run for small cars.
- 20th (Sat.).—Meet of the Hull Auto Cycle Club and the Lincolnshire Motor Cycle Club at Brigg.
Annual Hill Climb of the Bristol and Gloucestershire A.C.
Lunch of the Kent A.C. at Dover.
Herts C.A.C.'s climb for cars at Aston Hill.

LIGHTING-UP TIMES—LONDON.

- July 4th—9.17 6th—9.16 8th—9.15 10th—9.13
" 5th—9.16 7th—9.15 9th—9.14 11th—9.13

To find the approximate lighting-up time in July for Birmingham 13 minutes should be added to the above times, 18 for York, 22 for Manchester, and 45 for Glasgow.

IMPORTS OF MOTOR-CARS AND PARTS.

In the monthly return issued by the Board of Trade only the totals of the imports of foreign motor-cars and parts into this country are given, no indication being afforded as to the quantities received from the different countries. We are this week able to publish a table giving this detailed information.

Imports of motor-cars into the United Kingdom.

| From. | 1907. | 1908. |
|--------------------------------|-----------|-----------|
| | £ | £ |
| Germany | 48,005 | 152,950 |
| Holland | 51,629 | 51,552 |
| Belgium | 181,549 | 319,816 |
| France | 1,614,995 | 1,764,809 |
| United States | 176,527 | 192,715 |
| Other foreign countries | 3,850 | 3,155 |
| British Possessions | 3,711 | 1,340 |

£2,080,266 £2,486,337

Imports of parts.

| | | |
|------------------------|-----------|-----------|
| Germany | 451,393 | 250,593 |
| Holland | 13,214 | 17,995 |
| Belgium | 484,541 | 276,498 |
| France | 1,490,795 | 1,322,673 |
| United States | 27,082 | 16,586 |
| Other countries | 5,495 | 978 |

£2,472,520 £1,885,323

Total of cars and parts ... £4,552,786 £4,371,660

BUSINESS NEWS.

THE Kempshall Tyre Company of Europe, Ltd., have an interesting display of their tyres at the Franco-British Exhibition. Included in it are two tyres which have both been running on the driving wheels of a taxi-cab. One is a "Kempshall" with a mileage of 4,370 to its credit, while the other is a steel-studded tyre of a well-known make, having run only 2,700 miles. Compared with the latter the excellent condition of the Kempshall is noteworthy, and it would appear that it is still capable of a further two or three thousand miles.

MOTORISTS are often considerably surprised, on opening the Bowden petrol strainer for cleaning purposes, to find what a considerable quantity of dirt has been arrested on its way to the carburettor. The accumulation is sometimes so great that were it allowed to lodge on the straining gauzes it would soon completely choke them. In the Bowden device this is avoided by causing the petrol to flow upwards, so that the dirt, being arrested by the under surface of the gauze, drops off into the well provided, where it is harmless.

THE amalgamation of the General Motor Cab Company and the United Motor Cab Company has been announced.

AN exciting experience to a motor-cyclist whilst riding from Alton to Farnham is reported. The rider discovered his clothes to be ablaze, and, hurriedly dismounting, rolled himself on the road, over which a water cart had passed a few minutes previously. In that way he prevented himself from being seriously burned. The fire was due to a box of matches getting alight.

TO CORRESPONDENTS.

All communications intended for insertion in this Journal or relating to Editorial matters should be addressed to THE EDITORIAL DEPARTMENT, MOTOR-CAR JOURNAL, 27-33, Charing Cross Road, London, W.C., and must be written on one side of the paper only. Letters must in all cases be accompanied by the name and address of the writer, as no notice will be taken of anonymous communications.

To insure insertion communications and contributions must be in the Editor's hands by Tuesday forenoon of the week in which the same are intended to appear. Disappointment may be caused by non-compliance with this rule, and to avoid this earlier receipt, if possible, is necessary.

Photographers, both professional and amateur, are invited to send photographs of current events or of motoring scenes and incidents. The fee, if any, required for reproduction should be stated in each case, otherwise no liability will be accepted.

The Editors cannot undertake to return MSS. or drawings, although every effort will be made to do so in the case of rejected communications. Where such are regarded as of value, correspondents are requested to retain copies.

The Editors do not hold themselves responsible for the opinions expressed by their correspondents, or for statements and facts which do not appear in the editorial columns.

The Editors and Publishers beg also to state that they will accept no responsibility for unsolicited contributions, even if used, unless payment for same is directly specified in forwarding, and the terms arranged before publication.

THE Motor-Car Journal.

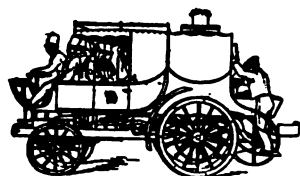
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COMMENTS.



SOME idea of the comparative number of horse and motor vehicles plying for hire in the streets of the Metropolis is furnished by the Home Secretary in a statement supplied to Mr. Henniker Heaton, M.P., who is watching the noisy motor-bus with a keenness almost equalling that with which he was wont to regard high rates of postage. In London there are now 13,932 licensed vehicles. It appears that there are still 2,281 horse drawn omnibuses in actual service as compared with 1,046 motor-buses. Hansoms number 5,329 and four-wheeled cabs also drawn by horses total 3,768, whilst 1,508 is the official number of motor-cabs on the streets. Of course in the West End the latter number seems hardly in accordance with actualities; but it must be remembered that in the City and in the outer regions the horse still ambles along in his old-fashioned way. Applications for the registration of 1,162 motor-cars, 48 heavy cars, and 367 motor-cycles were dealt with by the London County Council from March 1st to April 30th. The total number of such registrations in London is now 20,114 cars, 1,870 heavy cars, and 8,508 motor-cycles. Changes of ownership in 563 cases were dealt with, the aggregate of such changes since the commencement of the Council's administration being 5,242 cars and 3,539 cycles. The number of licences to drive motor-cars and motor-cycles issued from March 1st to April 30th was 5,290, making 77,233 in all.

Reliability Assured.

WHEN we gave the results of the Irish A.C. trials remark was made that they had demonstrated anew the reliability of the modern motor-car; this view was again forced to the front by the running of the cars in the 2,000-mile Trial; it is emphasised again by the detailed marking in connection with the Scottish Trial, which we publish on another page of the present issue. The fact that so many cars made non-stop runs, and that an even larger number failed in that particular owing to some trivial cause, establishes the point we have frequently made in these columns, viz., that the reliability trial *per se* has become old-fashioned, and will soon be declared obsolete. So much for the running on the road; it is equally true of the ability to start and stop. On the last day of the Trial all the vehicles were stopped at a line on a gradient of one in ten, were required to run back several yards to another line and again stop, and from the moment of their wheels being at rest were allowed thirty seconds in which to resume running. All the vehicles passed the test satisfactorily; and their performances generally should convince the organisers of the Trials that the need for similar tests on identical lines is no longer present.

Road-making.

In his inaugural address at the meeting of the Incorporated Association of Municipal and County Engineers of Nottingham, Mr. E. Purnell Hooley, the president, had some frank and timely criticism of the attitude of the general public towards motorists and the roads on which they travel. There is a great deal of grumbling with regard to the former,

and much tarring is being done to the latter, but until the county authorities recognise that the modern traffic requires a new class of roadway satisfaction is not likely to ensue to either party. As Mr. Hooley pointed out, large sums are being spent in vain attempts to remedy the dust nuisance that arises from other traffic as well as from automobiles, and yet the roads continue to be made in the old way, apparently encouraging the perpetuation of the nuisance. If Mr. Hooley and his colleagues among the engineers would agree as to the proper system of road making as distinct from maintenance, it would prove an important factor in effecting a settlement of the matter; and we would appeal to road authorities to encourage practical experiments by the experts with a view to getting down to the basis of the trouble.

Taxing Motor Drivers.

RURAL councillors suggest heavy additional taxes on motor-cars; county surveyors like Mr. E. P. Hooley would impose a revised scale of charges upon the drivers. Recognising that some people use the road more than do others, and that there must be some sort of discrimination in the matter, he would divide drivers into three categories, and tax them the amounts that are set forth in the following classification:—

- (1) The drivers of vehicles used *locally* for commercial and public purposes, £1 5s.
- (2) Drivers using cars partly for pleasure and partly for business within their own county or area, £5 5s.
- (3) Drivers who use their cars for touring purposes generally, £10 5s.

Mr. Hooley estimates that such an imposition would yield a return of nearly one and a half million pounds—a sum that would go far in solving many of the present difficulties. Apparently the scheme is based on the idea that the motorist must pay—at any cost.

A Chief Constable's Warning.

THE Chief Constable of Lanarkshire is sending out a circular letter to every schoolmaster in the county, asking him to warn children as to the folly and danger of throwing stones at motorists as they pass them on the road. It would be well if all having association with education could impress upon the teachers the necessity of discouraging this abominable practice, which is far too frequent, especially in some of the urban districts. Unfortunately the younger generation is a long time realising that motorists are not merely targets for their well-aimed shots, and, even at the expense of apparent reiteration, we would express the hope that every Chief Constable will follow the admirable example of the chief of police in this Scottish county.

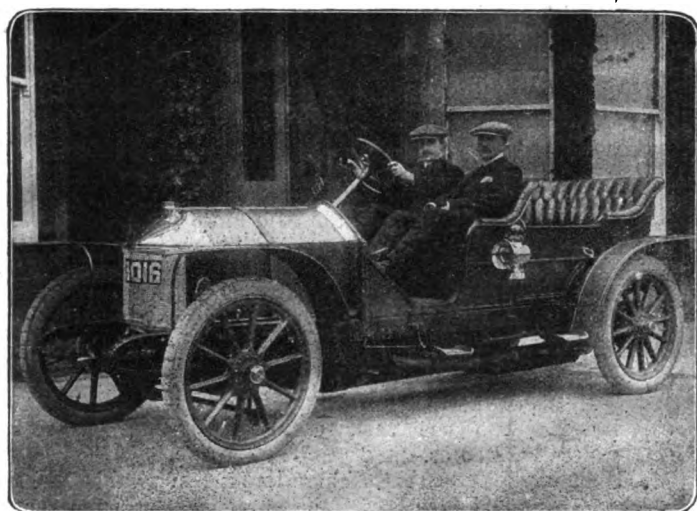
Danish Visitors in Scotland.

RECENTLY a deputation of Danish farmers has been visiting Scotland with the view of investigating the conditions of agriculture north of the Tweed. In order to facilitate their journey the Scottish Motor Trade Association, Ltd., arranged to convey the officials of the Scottish Chamber of Agriculture and their Danish guests on a motor tour through East Lothian. Ten cars were available, each of a different type; and on Thursday

morning of last week the procession left the Royal Hotel, Edinburgh, proceeding to Dalkeith Palace and grounds. From thence way was made to Gosford House, and subsequently the party proceeded to North Berwick and Dunkar, arriving at Barley Hill Farm for luncheon. Other farms were visited, and on returning to Edinburgh the whole party dined together, when thanks were tendered to the Edinburgh members of the Scottish Motor Trade for their contribution towards the pleasure of the visit.

Ladies at Brooklands.

Place aux Dames. The way in which the ladies handled their cars on Saturday at Brooklands elicited tributes of admiration from critical observers. Although they are not allowed to enter into competition with men on the Track they are evidently to be allowed the excitement of racing with each other. On some of the road trials Mrs. Gerald Loder, Mrs. Manville, Mrs. E. A. Riley and Miss Dorothy Levitt have won distinction, and now Mrs. Locke-King, Miss Muriel Thompson, Miss Christabel Ellis and Miss Ridge-Jones have shown the capacity of ladies to drive with unerring nerve on the track at Brooklands.



Mr. H. B. Kirk's 40-h.p. Metallurgique Car, which secured two gold medals at the Saltburn Speed Trials.

The vehicle made the fastest time for the standing start kilometre open to touring cars. Mr. Kirk, the owner, is seated at the side of the driver.

Speedometers on Public Vehicles.

IN the House of Commons a member has asked the Home Secretary whether he would consider the advisability of making a regulation to the effect that mechanically-driven vehicles, such as motor-cars, motor-omnibuses, and the like, should carry speedometers; a proposal which has previously been made by metropolitan magistrates, who have rightly pointed out that such a provision would save many endorsements of licences, and consequent trouble to men who otherwise have no opportunity of gauging the actual speed at which they drive their vehicles. Mr. Gladstone, however, has consulted the Commissioner of Police, Sir Edward Henry, on the subject, and has come to the conclusion that it is not desirable to make the use of speedometers one of the conditions of granting a public carriage licence. This is apparently an endorsement of the view of the Royal Commission on Motor Cars, who would not recommend making the use of such appliances compulsory by law. Evidently the Home Secretary is of opinion that the provision of a speedometer would be an encouragement to the drivers to attain maximum speed as nearly and as often as possible, whilst the present uncertainty may cause them to exercise a wise caution in the matter.

A Tyre Destroyer.

A CORRESPONDENT in the Potteries District sends us a peculiarly-shaped object with four sharp corners, constituting a dangerous element to be found on the road. His letter, which is published on another page, is none too strong, having in view the character of the destructor he forwards, and we hope that publication of his communication may lead to a watchful eye being kept for the detection of the person or persons whose antipathy to motorists leads him or them to such wanton ways. Those who drive cars already incur sufficient risks without having to travel over barbed surfaces.

General Booth, Motorist.

THE Bishop of Hereford is a vice-president of the M.U., the Rev. R. J. Campbell an Associate of the R.A.C., and now General Booth should join the A.A. He is one of the most persistent travellers by motor-car in the country, and his several organised tours have given him a real insight into the difficulties of the position. After motoring many hundreds of miles he has come to the conclusion that police traps on the clear highways are a ridiculous device of the official mind for the undoing of unwary men and women. The public are, to use the General's own phrase, "very sheepish and need educating by repeated announcements." Unfortunately some may get hurt before the warning has reached their ears a sufficient number of times to take effect. Once a week the children in the schools should be taught how to cross roads, and the police, too, should be instructed in regarding the motor-car as inevitable despite their machinations. Certain street corners and central positions should be declared dangerous and the police force increased at such points with a view to preventing accidents. That would be better than allowing them to play at hide and seek in the hedge-rows.

Lord Rosebery on Police Traps.

LORD ROSEBERY has, in a speech to a City Company, given his reason for liking police traps. He is a Surrey ratepayer, and "cared but little what inconvenience and what sense of injustice might be caused to them, for every £5 note they paid to Surrey was by so much reducing his rates." He went on to say that "they had seen the police not grouped as they ought to have been at dangerous corners, but in ambush along their longest, straightest and safest roads, provided with the best stop-watches the government of Surrey could provide. These officers were ready at a moment's notice to swoop out on the harmless traveller and collect £5 notes from him, not in the manner of the highwaymen that used to beset their heaths, but in the name of law and order, in which so many odd things had been done." Surely, when he is in a less facetious mood, Lord Rosebery recognises the injustice of many of their proceedings.

The L.G.B. and Armoured Tyres.

THE suggestion that the use of armoured tyres on motor-cars should be prohibited upon roads has reached the ear of the Local Government Board, with the result that that authority has communicated with some of the automobile associations, pointing out that it has been represented to them that much damage is done to the roads by the use of such tyres on motor vehicles, and asking for suggestions or information bearing on the point. This communication was considered at the last meeting of the Motor Union and it was referred to the Executive Committee to draft a reply. The Royal A.C. has also referred the matter to its Technical Committee. Apparently the county surveyors in different parts of the country are urging upon those responsible for local government the damage which they allege such non-skids inflict upon the road surface. Probably, however, motorists themselves will be able to give to the various motoring organisations their own experience with a view of

showing that whilst they are anxious to assist in securing an efficient and economical system of road maintenance they do not desire to restrict the area of experiment so as to discourage those who are now at work in seeking to promote the welfare of an industry that means much for the future prosperity of the country.

Duplicate Numbers.

BEFORE the Justices of the Kingston Petty Sessional Division a statement has been made that many motor-cars are being driven about the country bearing duplicate numbers. A motorist appealed against a conviction, and not only denied that he was near the spot where the alleged offence was committed on the day in question, but his counsel stated that a car with his registered number had been seen in the West End of London a few days before. Recently our attention has been called to two or three similar instances where motorists have actually been supplied with a summons by the police, which has been withdrawn

late Motor Volunteer Corps, and that the suggestions of the Federal Government of Australia are undoubtedly based upon the conditions of service with the motor corps in this country, which was founded owing to the energy and initiative of Lt.-Colonel Mark Mayhew.

A Magnum Opus.

OUR old friend the Highways Protection League has now a collaborator in the Road Union, and these two associations have produced a *magnum opus*, which extends to thirty-six pages—including three blanks—and costs sixpence. The secretary of the Road Union has been good enough to favour us with a copy gratis, so that the information we have gained from the pamphlet has cost nothing, and motorists who want to reassure their friends with regard to the position of motoring should take advantage of the offer of the R.U. to supply copies for distribution on reduced terms, i.e., less than the sixpence. First the "social revolution" effected by the motor-car, and which



The A.C.F. Grand Prix Races.—The Scene at the Weighing in.

on the discovery of the mistake. Such suggestions are extremely disconcerting to motorists, for they add considerably to the uncertainty which already prevails when they go out driving, and we trust the case mentioned at the Kingston Court is practically an isolated one.

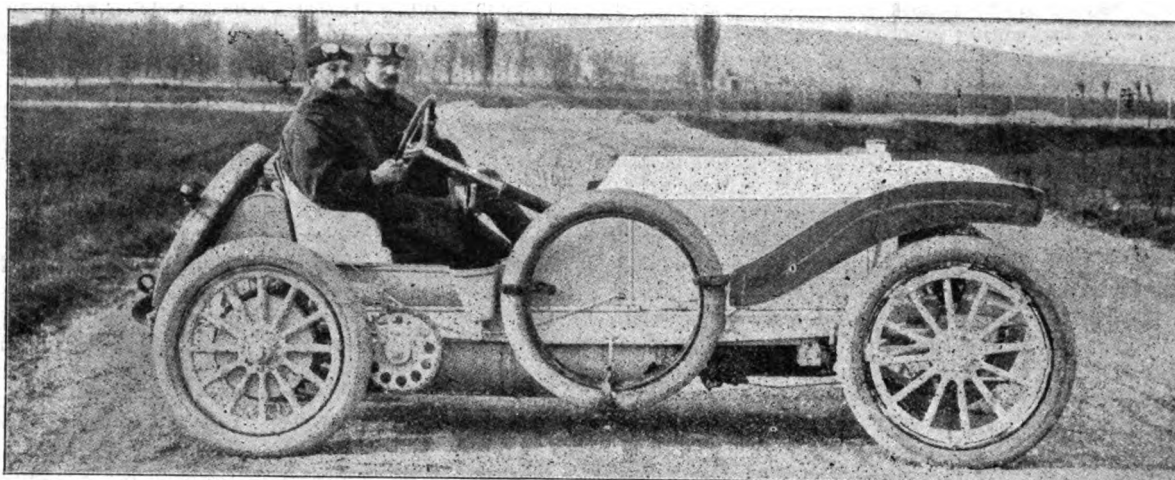
Motor Volunteers.

INSPIRED by the announcement that Australia is about to institute a motor volunteer corps, a writer in the London "Daily Chronicle" asks, "Has Mr. Halldane thought of such a motor corps for this country?" and then proceeds to detail the lines upon which the Australian force is to be formed, every member being an officer from lieutenant to major and also the owner of a serviceable car. Reference is also made to the recompense for personal expenses, cost of petrol, &c., with a view, apparently, of informing the British War Minister. It may be news in Fleet Street to know that the Army Motor Reserve of officers was created in August two years ago, replacing the

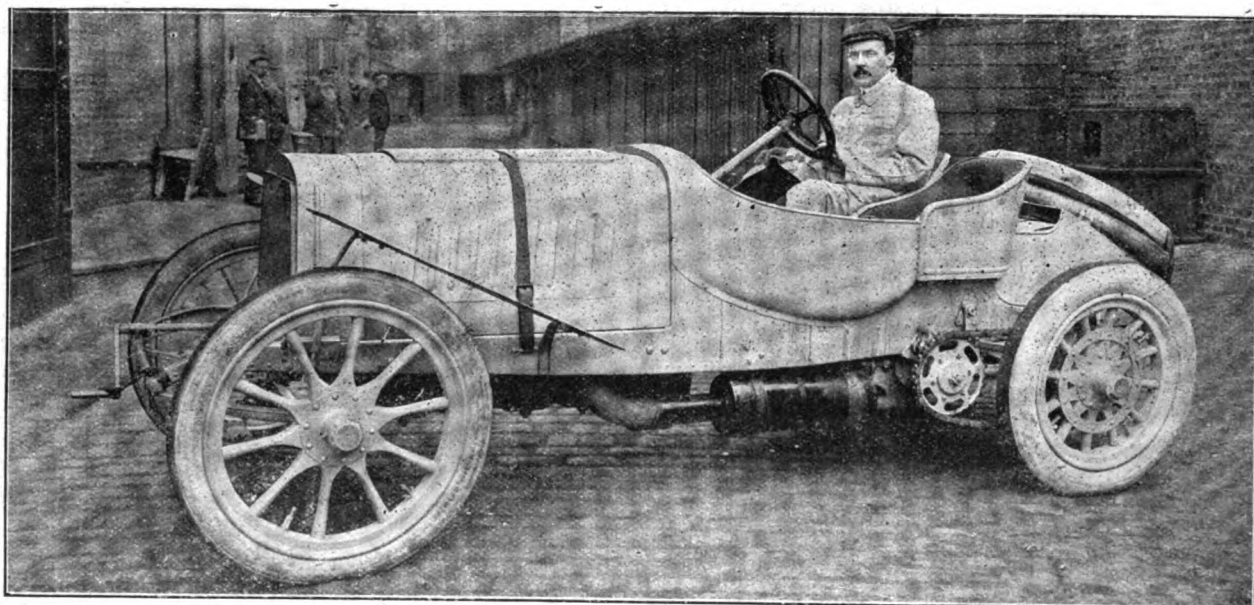
was first pointed out by the late Lord St. Heliers—earlier known as Sir Francis Jeune—is acknowledged. Then we are told that the "motor-car is a powerful and ubiquitous engine," and wonder if the word "has" should be substituted for "is." Testimony is borne to the fact that the motor-car industry is a great one and that the automobile renders some services to the country and will render more in course of time. Then follow some official figures with regard to accidents, a re-hash of some of the evidence before the Royal Commission, and some choice flowers of rhetoric which we will publish at a later date. Matters of greater importance render it impossible to attend to them just now.

A CONFERENCE of representatives of the various national automobile clubs was held at Dieppe on Monday, when the most important matter brought forward was a proposal by Italy to formulate a standard for touring car contests. It was decided to take a vote on the subject at the next meeting, to be held in Paris in October next.

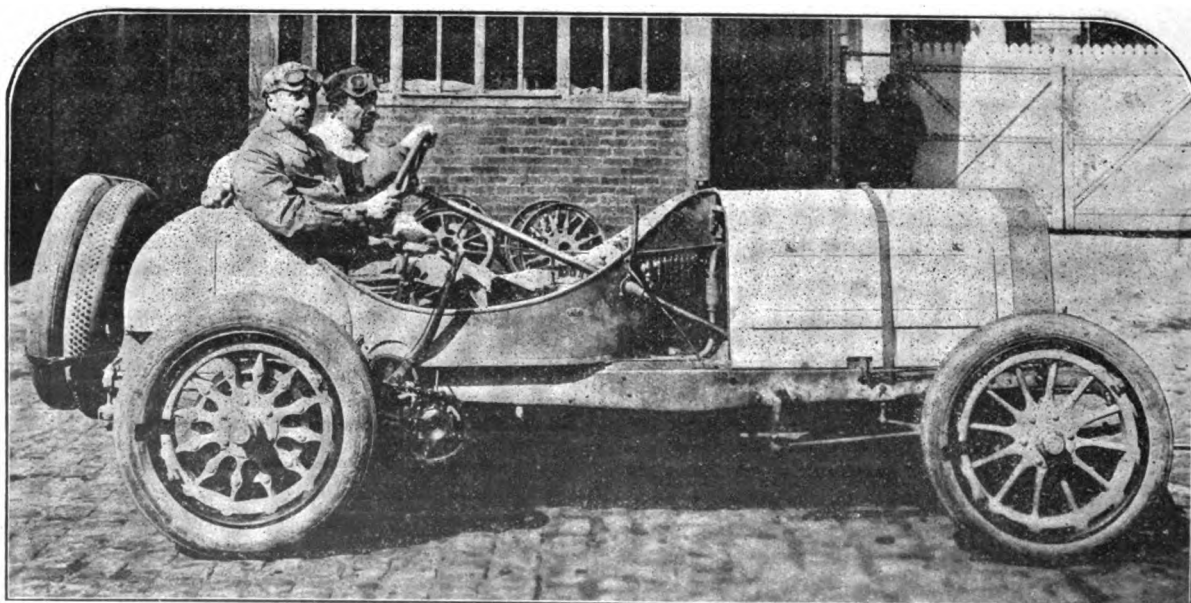
THE A.C.F. GRAND PRIX RACE.



Lautenschlager, the winner of the race, on his Mercedes.



M. Farman and his Panhard.



Jenatzky at the Wheel of his Mors.



DIEPPE has for the past week or so been practically *en fete*. On Thursday and Friday, the 2nd and 3rd inst., cars were arriving at every minute ready for the weighing-in operations, which took place on Saturday and Sunday. Unfortunately the meeting was attended by a fatal accident to a British motorist, Mr. Ernest R. B. Hall Watt, of Bishop Burton, near Hull, Deputy-Lieutenant and magistrate of the East Riding. The deceased, in company with Mr. Kennedy, the works manager of the Weigel Company, was driving one of last year's Renault racing cars on the road between Dieppe and Rouen, when, in order to avoid a collision, the brakes had to be suddenly applied, and a tyre burst, causing the vehicle to capsize, throwing out the occupants. They were conveyed to hospital, where it was discovered that Mr. Watt had fractured his skull, death ensuing during the night without his having recovered consciousness. An accident also occurred on the 1st inst. to Mr. Dario Resta whilst driving his Austin racer. He was going round a bend when he met two carts right in the middle of the road, and to avoid a collision turned his vehicle into the bank at the side, with the result that it was completely overturned. Fortunately, Resta and his mechanic were thrown out into the road, without serious injury. By a stroke of bad luck Resta when driving a sister vehicle on the following day again met with an accident, this time with such serious results that it was at first thought he would not be able to take part in the race. The vehicle, too, was badly damaged, but by working night and day the Austin staff at Eu were able to practically construct a new racer out of the two damaged vehicles.

THE GRAND PRIX DES VOITURETTES.

The Grand Prix des Voiturettes contest was run off on Monday. As stated in our last issue, this was confined to cars with engines of a maximum cylinder dimension as follows:—Single-cylinders up to 100 mm. bore, two cylinders up to 78 mm., three-cylinders up to 68 mm., and four-cylinders up to 62 mm. The cars had to weigh, in running order, but not including water, spirit, tools, or spare parts, a minimum of 600 kilog. Out of the sixty-four entries, forty-eight were weighed in on Saturday and duly faced the starter on Monday morning. The absentees included fifteen French vehicles (a Fouillaron, a Vulpes, three Ampere, a Stabilia, a Passe Partout, three Bustoms, a La Joyeuse, three Corres, and an Arrian), and the Certus friction-driven vehicle, the only English entry, which had met with trouble during the preliminary trials. The start took place at 6 a.m., the following vehicles being sent off on their 288 mile journey (six laps) at minute intervals.

| Nos. | Car. | Nos. | Car. |
|------------|---------------------|------------|-----------------------|
| 1, 29, 49 | ... Delage. | 14, 39, 57 | ... Aries. |
| 2, 30, 50 | ... Martini. | 17, 40, 58 | ... Werner. |
| 4, 31, 51 | ... Gregoire. | 18, 41, 59 | ... Isotta Fraschini. |
| 5, 32, 52 | ... Alcyon. | 19, 42, 60 | ... Rolland-Pilain. |
| 6, 33, 53 | ... Le Metais. | 22 | ... La Joyeuse. |
| 7, 34, 54 | ... Demeester. | 23 | ... Truffault. |
| 9, 35 | ... Thieulin. | 24, 45, 62 | ... Guillemin le Gui. |
| 10, 36, 55 | ... Lion-Peugeot. | 25, 46, 63 | ... Sizaire-Naudin. |
| 12, 38 | ... Bailleau. | 28, 48 | ... Monnier. |
| 13 | ... De la Rouliere. | | |

Guyot (Delage), who was the first away, was also the first to complete the initial round, his time being 56 min. 59 sec., equal to just over 50 miles per hour. Second fastest was Naudin, on a Sizaire-Naudin (59 min. 4 sec.); Sizaire, on a similar car, being third (59 min. 30 sec.). The premier round was disastrous for many of the competitors. Martin, on a Demeester, ran into the railway bridge at Eu and injured himself and his car too seriously to continue; Charles, on a Truffault, took the turn under the railway bridge at Ancourt too fast. Beck on his Martini broke a wheel, and Sauvico, on the third vehicle of the same make, collided with the railway bridge at Eu and had to be carried to the hospital. The La Joyeuse, driven by Menard, broke down at Sept-Meules, while Farcy (Bailleau) ran into a bank. Naudin was leading at the end of two rounds (1 hour 56 min. 16 sec.), Guyot being second, one minute behind, and Sizaire third.

At the half-distance the first four were:—Naudin (Sizaire-Naudin), 2 h. 46 min. 58 sec.; Guyot (Delage), 2 h. 52 min. 12 sec.; Goux (Lion-Peugeot), 2 h. 55 min. 23 sec.; and Boillot (Lion-Peugeot), 3 h. 0 min. 18 sec. Meaux and Perret, both on Aries cars, retired owing to damaged wheels, while one of the Guillemin le Gui cars overturned. The end of the fourth lap saw Guyot leading in 3 h. 49 min. 22 sec., Naudin having fallen to third place, Goux being second, and Boillot, on the Lion-Peugeot, fourth. The struggle was very keen between these four competitors; Guyot, however, held his lead, and finished in 5 h. 45 min. 30 sec. at an average speed of fifty miles per hour, a wonderful performance for so small a vehicle.

Appended are the times for the 32 cars which finished:—

| Order. | Driver. | Car. | Time. |
|--------|----------------|------------------|----------|
| | | | H. M. S. |
| 1 | Guyot ... | Delage ... | 5 45 30 |
| 2 | Naudin... | Sizaire-Naudin | 5 52 0 |
| 3 | Goux ... | Lion-Peugeot... | 5 58 2 |
| 4 | Boillot ... | Lion-Peugeot ... | 6 5 25 |
| 5 | Thomas ... | Delage ... | 6 18 50 |
| 6 | Thieulin ... | Thieulin ... | 6 26 44 |
| 7 | Barriaux ... | Alcyon ... | 6 32 37 |
| 8 | Buzzio ... | Isotta-Fraschini | 6 36 32 |
| 9 | Lebous ... | Sizaire-Naudin | 6 36 57 |
| 10 | Beck ... | Martini... | 6 37 28 |
| 11 | Zetwoog ... | Thieulin ... | 6 38 40 |
| 12 | Lucas ... | Delage ... | 6 38 52 |
| 13 | Vallee ... | Werner... | 6 40 37 |
| 14 | Maserati ... | Isotta-Fraschini | 6 42 38 |
| 15 | Giuppone ... | Lion-Peugeot... | 6 50 40 |
| 16 | Pilain ... | Rolland-Pilain | 6 51 28 |
| 17 | Rivierre ... | Guillemin ... | 6 58 46 |
| 18 | Sizaire ... | Sizaire-Naudin | 6 58 48 |
| 19 | L. Molon ... | Werner... | 7 2 2 |
| 20 | Duanip ... | Gregoire ... | 7 17 3 |
| 21 | Demeester ... | Demeester ... | 7 19 30 |
| 22 | Domilique ... | Alcyon... | 7 35 41 |
| 23 | Pernette ... | Le Metais ... | 7 49 16 |
| 24 | Louison ... | Rolland-Pilain | 7 49 28 |
| 25 | Haubourdin ... | Le Metais ... | 7 52 29 |
| 26 | Marnier ... | Rolland-Pilain | 7 53 37 |
| 27 | De Marne ... | Gregoire ... | 7 58 18 |
| 28 | Roisant ... | Alcyon ... | 8 10 56 |
| 29 | Molon ... | Werner ... | 8 12 38 |
| 30 | Gaste ... | Gregoire ... | 8 29 35 |
| 31 | Birnbaum ... | Le Metais ... | 8 36 26 |
| 32 | Pizzagalli ... | Monnier ... | 8 45 42 |

THE GRAND PRIX.

It was on Tuesday that the big car race was decided. The contest this year was run on new lines—a restriction in cylinder dimensions as against the fuel allowance basis, 30 litres per 100 kilometres, equal to 9.47 miles to the gallon, of last year. The race consisted of ten circuits, equal to a distance of 770 kilometres or approximately 480 miles. All motors taking part in the race had to be of a bore of 155 mm. for four cylinders, or the equivalent in the case of one, two, three, six or eight cylinder cars.

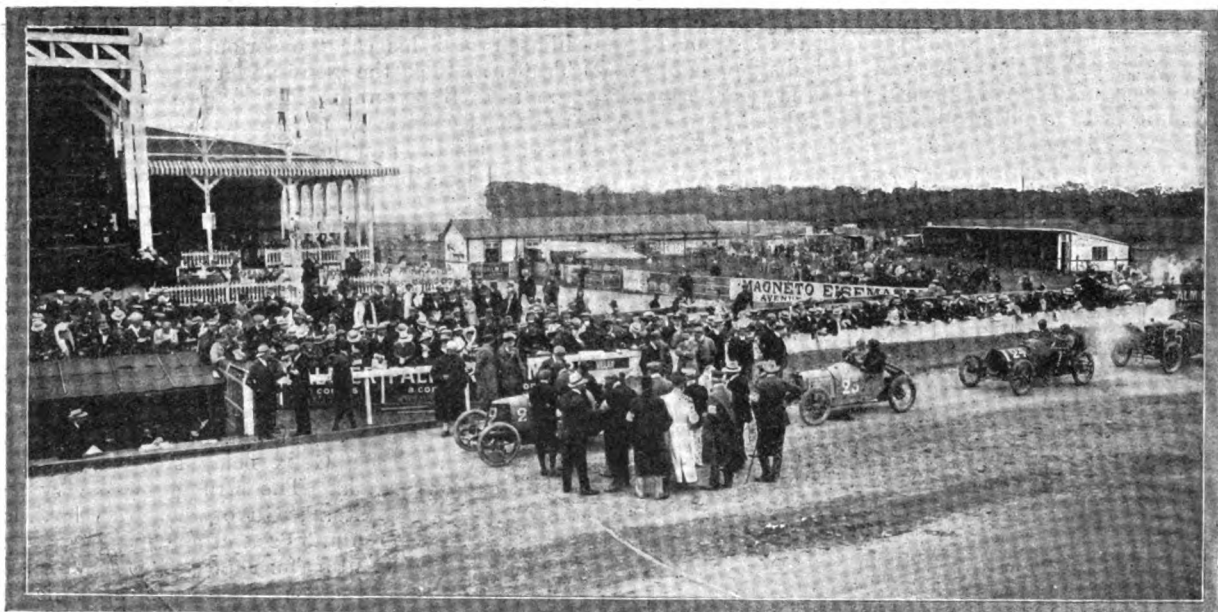
Forty-nine entries had been received, France being represented by twenty-four cars, Great Britain by six (three Austins and three Weigels), Germany by nine, Belgium by three, Italy by six, and the United States by one. Of these all but one duly put in an appearance. The absentee was the Mors car, which was to have been driven by Jarrott, but whose place was taken last week by Robin. The latter in practising met with an accident at St. Valéry-en-Caux, his vehicle overturning, and being too damaged to be repaired in time. Five substitute cars were also weighed in—two Mercedes, an Opel, a Clement-

even to a large open-air garage, in which were collected more cars than we have ever before seen together. Just before six the work of clearing the course was commenced by the soldiers and the police, and the boom of a cannon announced that the long anticipated hour had arrived.

Of the forty-nine entries as given in the last issue of the *M.C.J.*, forty-eight duly faced the starter, the only absentee being one of the Mors vehicles. The start took place at 6.1 a.m., Resta being despatched amidst the cheers of the British spectators, the others following at minute intervals in the following order:—

Order of starting.

| Nos. | Car. | Drivers. |
|---------------|--------------|---------------------------------------|
| 1, 18, 34 ... | Austin ... | Resta, Moore-Brabazon, Warwick Wright |
| 2, 19, 35 ... | Mercedes ... | Pöge, Salzer, Lautenschlager. |
| 3, 20, 36 ... | Motobloc ... | Pierron, Garoet, Courtade. |
| 4, 21, 37 ... | Renault ... | Sisz, Cailliois, Dimitri. |
| 5, 22, 38 ... | Dietrich ... | Duray, Rougier, Minoia. |
| 6, 23, 39 ... | Benz ... | Hemery, Hanriot, Erle. |
| 7, 24, 40 ... | Fiat ... | Lancia, Nazzaro, Wagner. |
| 8, 25, 41 ... | Brasier ... | Théry, Baras, Bablot. |
| 9, 26, 42 ... | Porthos ... | Stricker, Simon, Gaubert. |



The A.C.F. Voiturette Race.—The Scene at the Start.

Bayard, and an Itala. The colours fixed for the various nations were as follow:—Germany, white; America, white and red; England, green; Belgium, yellow; France, blue; and Italy, red. New-comers in the contest included the Mors, Opel, Benz, Austin and Thomas firms; while those who abstained this year comprised Corre, Dufaux, Christie, Gobron, Aquila and Darracq, the last named being the most notable. Quite a number of new drivers were seen at the wheels of cars in the contest, while many of the old brigade were found driving under fresh colours. Thus Thery made his re appearance on a Brasier, while Jenatzy was no longer included in the Mercedes team, but was driving a Mors. The Clement-Bayard trio was made up of Rigal, Gabriel, who has hitherto been with the De Dietrich Company, and Hautvast, the old Pipe driver. At the last moment Shannon took the place of Weigel on the third Weigel car.

The scene on the way to the Tribunes in the early hours of Tuesday was a memorable one—a long continuous stream of vehicles of every kind, from a rambling horse-drawn wagon conveying people at 5 francs a head to the powerful racing motor-car—while at the grand stand itself the crush of traffic was so great that it seemed an almost impossible task to evolve any order out of the chaos. The starting point was about a mile and a-half from Dieppe, and here quite a little town had sprung up, every convenience having been provided for the spectators,

| | | |
|----------------|----------------|--------------------------------------|
| 10, 27, 43 ... | Opel ... | Opel, Jorns, Michel. |
| 11, 28, 44 ... | Clement-B. ... | Rigal, Gabriel, Hautvast. |
| 12, 29, 45 ... | Itala ... | Cagno, Fournier, Piacenza. |
| 13, 30, 46 ... | Weigel ... | Harrison, Laxen, Shannon. |
| 14, 31 ... | Mors ... | Jenatzy, Landon. |
| 15 ... | Thomas ... | Strang. |
| 16, 32, 48 ... | Panhard ... | Heath, M. Farman, Cissac. |
| 17, 33, 49 ... | Germain ... | Degrais, Rosh-Brault, jun., Perpère. |

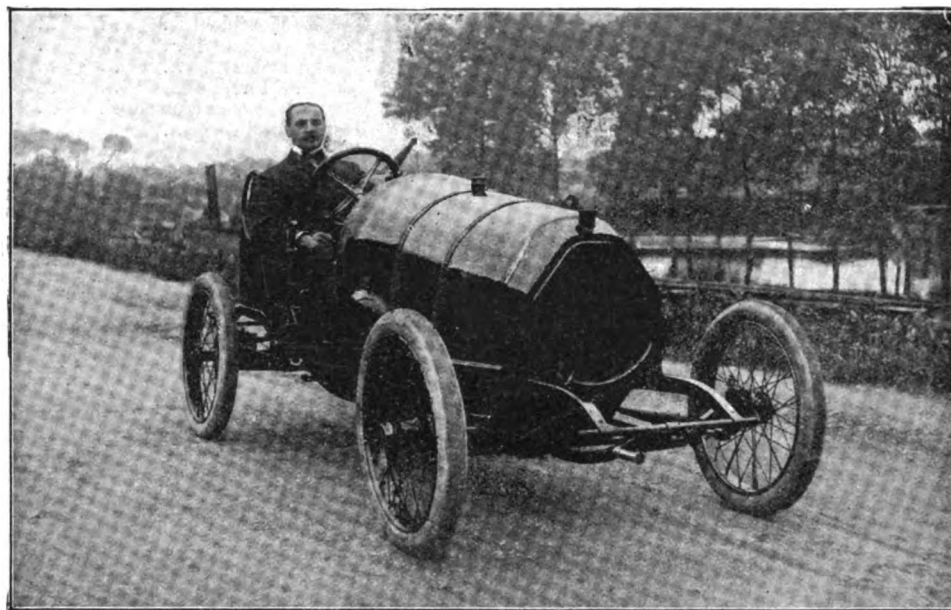
There were still about a dozen cars to be despatched when the appearance of a vehicle after completing its first circuit was heralded. This proved to be Pöge (Mercedes), who had started second. The fastest time in the initial lap was, however, made by Salzer (Mercedes), 36 m. 31 sec.—the fastest of the day—Bablot (Brasier) being second in 36 m. 40 sec., Thery (Brasier) and Sisz (Renault) tying for third place in 37 m. 6 sec. Gaubert (Porthos) was the only one who failed to complete the round, he being held up by a broken wheel. Nazzaro (Fiat) made a fast circuit, bringing him into first place at the end of the second lap, his time being 1 h. 15 m. 55 sec., Lautenschlager following in 1 h. 16 m. 55 sec., and Thery (Brasier) third in 1 h. 17 m. 17 sec. Laxen (Weigel) had a nasty skid at Eu, but continued, although his front axle and radiator were somewhat damaged. Four cars fell out of the running in the second circuit, viz., Lancia (Fiat), Rougier (Lorraine-Dietrich), Minoia (Lorraine-Dietrich), Piacenza (Itala). The first-named is said to have broken a piston, while

Rougier is credited with clutch troubles. No explanation was forthcoming as to the reason of the withdrawal of the other two.

The completion of the third lap saw Wagner (Fiat) leading, his time being 1 h. 56 m. 25 sec., two minutes ahead of Hemery (Benz), Lautenschlager being third in 1 h. 58 m. 20 sec. Siz

Lautenschlager was second, Hanriot third and Thery fourth. Those who failed to finish this circuit included Pierron (Moto-bloc), who ran into a tree, and Wagner (Fiat), who is reported to have suffered from engine troubles.

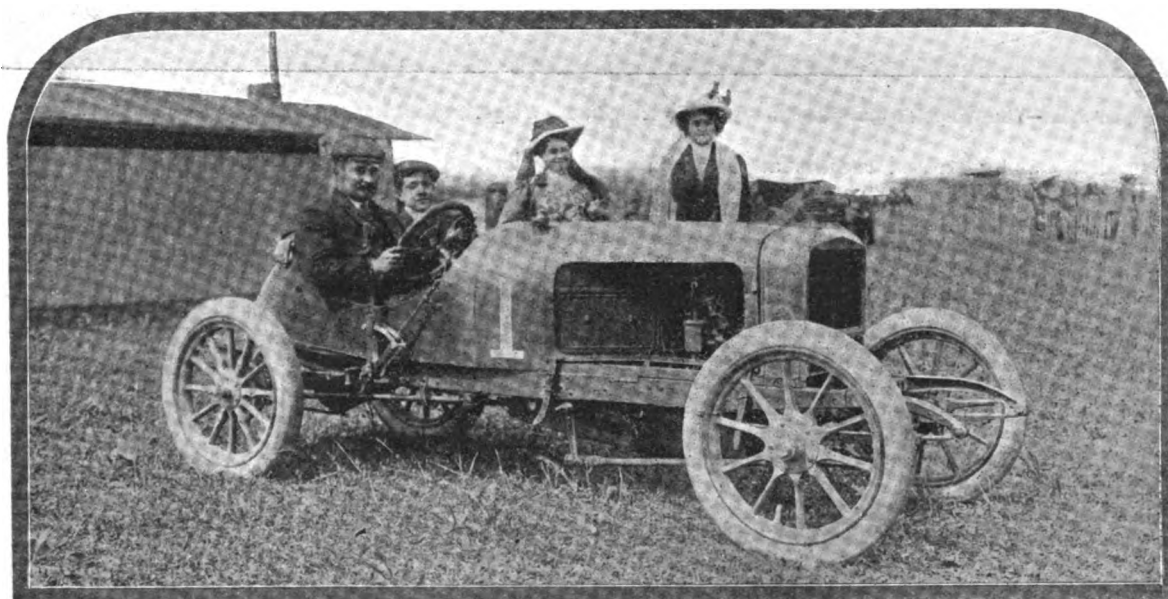
It was on the fifth circuit that Lautenschlager, who eventually



The A.C.F. Voiturette Race.—Perrot at the wheel of the Aries Car.

retired in this round owing to his left rear rim coming off, due to sudden application of the brakes rendered necessary by the driver finding an overturned car in front of him. Duray (Lorraine-Dietrich) withdrew with a seized bearing, while others who fell out of the running included Salzer (Mercedes), Baras (Brasier), Simon (Porthos) and Shannon (Weigel). Hemery ran into the first place in the fourth round with 2 h. 39 m. 58 sec. to his

proved the winner, secured the leading position, he covering the half distance in 3 h. 22 m. 16 sec., Hemery being second in 3 h. 24 m. 29 sec. and Hanriot third in 3 h. 26 m. 35 sec. There was considerable excitement when it was found that Nazzaro, the last year's winner, had retired—the cause not being stated. Thus the hope of the Italians was being diminished all the three Fiats being now out of the contest.



The A.C.F. Voiturette Race.—Guyet, the winner, at the wheel of his Delage Car.

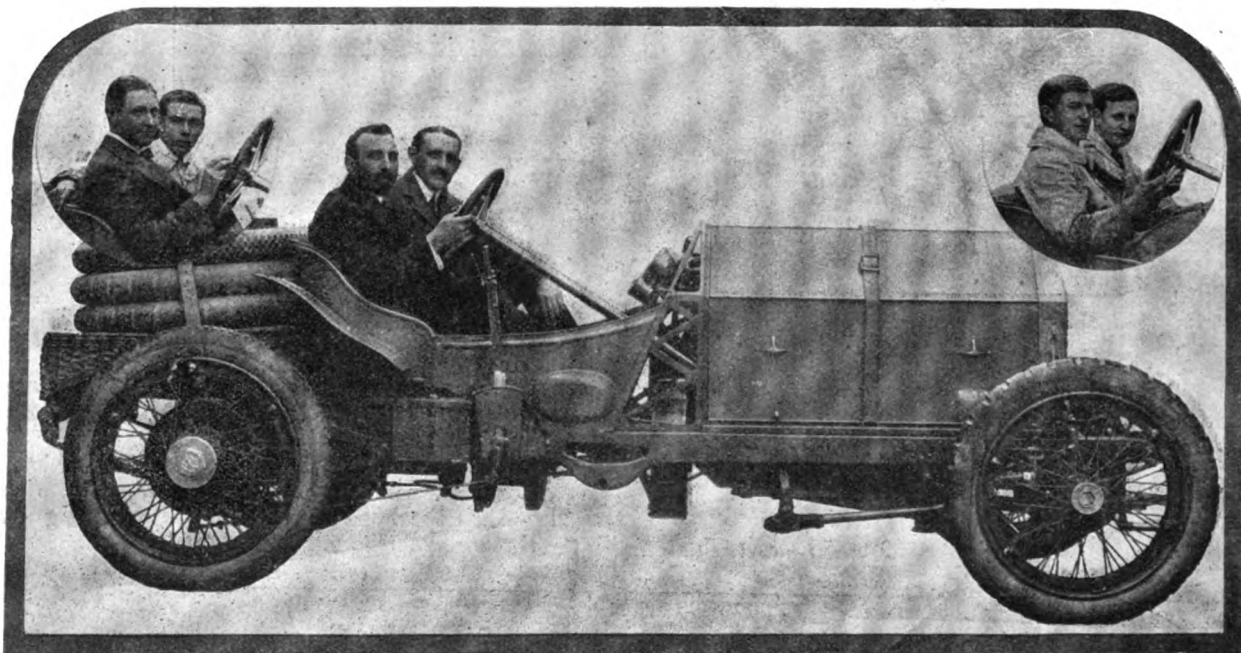
credit; he, however, met with an accident to his eyes owing to a stone being cast up from the ground smashing the glass of his goggles. The fragments so injured one of his eyes that he temporarily, at all events, lost the sight of it, and although he had the use of only one eye, and was suffering great pain, he continued to drive at a speed of about 69 miles an hour.

The completion of the sixth lap saw the order of the first three unchanged, while the position was the same at the end of the seventh circuit. Hemery had, however, gained several minutes on Lautenschlager, who was only about a minute in front. Laxen and Pryce Harrison, both on Weigels, met with accidents on this round, the latter car overturning at Eu, necessitating the driver's

removal to hospital. Warwick Wright (Austin) also retired, owing to lubrication troubles. Lautenschlager made another fast lap—the eighth—which brought him four minutes in front of Hemery, Hanriot still being third and Thery fourth. Hautvast (Clement-Bayard) gave up, his car having sustained damage to one of the rims. In the penultimate round the order was unchanged, but Lautenschlager, whose Mercedes was going grandly, increased his lead to nearly ten minutes. This lap was unfortunately marred by an accident to the third Panhard, which resulted in the death of the driver, Cissac, and the *mechanicien*, Schaubé. The car was travelling down the hill at Sept Meules, between Londinieres and Eu, when the front tyre burst. The car, which got out of hand, knocked down two trees by the side of the road, turned a somersault and was completely wrecked. Cissac was found underneath the machine terribly crushed. The mechanic was hurled through the air and fell on his head. Cissac, who was making his debut as a motor-car racer, was well known in the motor-cycling world,

| | | | |
|-----------------------------------|---|----|----|
| 6 Joerns (Opel) | 7 | 39 | 40 |
| 7 Erle (Benz) | 7 | 43 | 21 |
| 8 Dimitri (Renault) | 7 | 54 | 12 |
| 9 Heath (Panhard) | 7 | 55 | 36 |
| 10 Perpère (Germain) | 7 | 59 | 7 |
| 11 Cagno (Itala) | 8 | 7 | 56 |
| 12 Gabriel (Clement-B.) | 8 | 11 | 44 |
| 13 Courtade (Motobloc) | 8 | 12 | 43 |
| 14 Garcet (Motobloc) | 8 | 19 | 56 |
| 15 Caillois (Renault) | 8 | 19 | 56 |
| 16 Jenatzy (Mors) | 8 | 24 | 44 |
| 17 Landon (Mors) | 8 | 39 | 20 |
| 18 Moore-Brabazon (Austin) | 8 | 42 | 50 |
| 19 Resta (Austin) | 8 | 46 | 50 |
| 20 Fournier (Itala) | 8 | 47 | 20 |
| 21 Opel (Opel) | 9 | 8 | 11 |
| 22 Degrais (Germain) | 9 | 13 | 34 |
| 23 Farman (Panhard) | 9 | 24 | 40 |

Of the twenty-three cars which finished, two were Italian, ten French, seven German, two British and two Belgian.



The A.C.F. Grand Prix.—The Welgel Team: Messrs. Pryce Harrison, D. M. Welgel (replaced at the last moment by Shannon) and Laxon.

and will be remembered as having created records at Brighton and Blackpool. He was only thirty years old. Thery, the old Gordon Bennett champion, gave up in this circuit owing to the rims of one of his wheels coming off. This brought Rigal (Clement-Bayard) into the fourth place, this order being maintained through the final circuit.

A scene of great excitement prevailed when Lautenschlager crossed the line the winner by about nine minutes. The race was not quite so fast as last year, when it was won by Nazzaro on a Fiat in 6 hrs. 46 min. 33 sec., equal to just over 70 miles per hour. Lautenschlager's average speed works out at about 69 miles. The honours of the race this year fall to Germany. The Mercedes, one of the earliest greyhounds of the motor world, has again shown its prowess, while the Benz firm, in securing second and third places, thus well follows up its victory in the Prince Henry of Prussia touring competition. It is worthy of more than passing notice that the works which are so intimately connected with the first petrol cars should have produced the speediest vehicles of 1908. Altogether twenty-three cars out of the forty eight which started completed the whole race, the order of merit at the conclusion being as follows:—

| Name. | H. | M. | S. |
|------------------------------------|----|----|----|
| 1 Lautenschlager (Mercedes) | 6 | 55 | 43 |
| 2 Hemery (Benz) | 7 | 4 | 24 |
| 3 Hanriot (Benz) | 7 | 5 | 13 |
| 4 Rigal (Clement-Bayard) | 7 | 30 | 36 |
| 5 Poge (Mercedes) | 7 | 32 | 31 |

The only concerns whose complete teams finished the great international contest were the Benz (three) and Mors (two).

THE Rev. Dr. Percival, Bishop of Hereford, has been elected a Vice-President of the M.U.

EFFORTS are being made to form the Airway Motor Club, which will devote itself to the encouragement and development of air-ships of the heavier-than-air type. Mr. F. H. Grix, of 83, Mortimer Street, London, W., is interesting himself in the scheme.

AT the 10 m.p.h. speed limit inquiry held at Watford the opposing parties agreed that the application so far as the portion from the Plough along Ware Road and round by Railway Place to the Great Eastern Railway station should be abandoned, and therefore the limit will commence a few yards on the east side of the Plough. In West Street it has been agreed to cut out the whole of that street excepting a few yards before the corner of Castle Street is reached, the limit commencing at the brewery. In Peg's Lane the limit has been placed a little way above the cottages; and in Queen's Road only sufficient distance to clear the corner was required, so that the limit has been placed at Bayley Hall. Counsel has agreed to abandon a great deal of the road in North Crescent, and to fix the limit just before reaching the Cold Bath Inn. In Hertingfordbury Road the limit is to commence at Cross Road; in Port Vale just beyond the railway bridge; and on Port Hill at the Warren Lodge, the whole of Bengoe Street is being abandoned.

CONTINENTAL NOTES.

Motor Vehicles in the French Military Manœuvres.

It is reported that the French War authorities intend to make some further trials with the use of motor vehicles in connection with the commissariat department during the forthcoming military manœuvres, and that manufacturers are again to be asked to lend vehicles for the purpose. In this connection it is rumoured that some dissatisfaction amongst makers exists; each year they are asked to furnish motor lorries in the anticipation of orders being placed, but which have so far not materialised. The question is consequently being asked whether the time has not arrived when, before lending their machines, some definite agreement should not be arrived at as to the purchase of those which fully meet the military requirements.

Italian Motor-Car Imports and Exports.

A decline took place during the first two months of the current year in the importation of motor-cars and lorries into Italy, the returns showing a total of only £33,110 as contrasted with £54,504 in the corresponding two months of last year. On the other hand, the exports from Italy during the same period increased from £60,520 to £85,496.

Industrial Vehicle Trials in Italy.

Great interest is being taken in the industrial vehicle trials which will take place at Piacenza next September. The Italian War Office will buy at once several of the vehicles competing in the trials, and a good number will, we understand, be ordered afterwards. Many English builders have lately been trying to secure orders from the Italian military authorities, but the contracts to be given out will depend on the results of the Piacenza trials, and if manufacturers do not wish to be left outside the business, they should participate in the competition. Several British firms have, we are informed, already entered.

A Motor Meet at Boulogne.

The Boulogne and Calais section of the Automobile Club du Nord de la France is organising a two days' motor meet at Boulogne for the 17th and 18th inst., which promises to be an interesting gathering. The first day will be devoted to a series of seven kilometre speed trials with flying start on the Coquelles-St. Inglevert road, for the Franchomme challenge cup. Classes for all types of touring cars are available, a certain speed being fixed for each category. Those which attain this will be given 100 marks, 10 points per kilometre being added or deducted for any speed in excess or below the standard. Saturday, the 18th, will be a busy day. At 8.30 a.m. there will be a 3-kilometre touring car speed trial (standing start) for the Caraman-Chimay Cup, on the Colombert-La Capelle road; at 10.30 a.m. a hill-climbing competition on a mile course at Bainethun, and at 4 p.m. a 300-metre hill climb in the Rue Porte Gayole at Breguereque. Entries should be sent before the 14th inst. to the secretary of the Boulogne section of the A.C.N., 18, Rue Thiers, Boulogne-sur-Mer.

Renard Road Trains in Russia.

The Renard road train which was sent to Moscow in May last has been purchased for the Imperial garage by order of the Czar. The train was employed in the transport of the baggage of the Imperial Court to Peterhof, and from Peterhof to the departure station for Reval, during the visit of the Czar to King Edward VII. Negotiations are proceeding for an additional Renard train, which is likewise intended for the service of the Russian Court.

German Motor-car Imports and Exports.

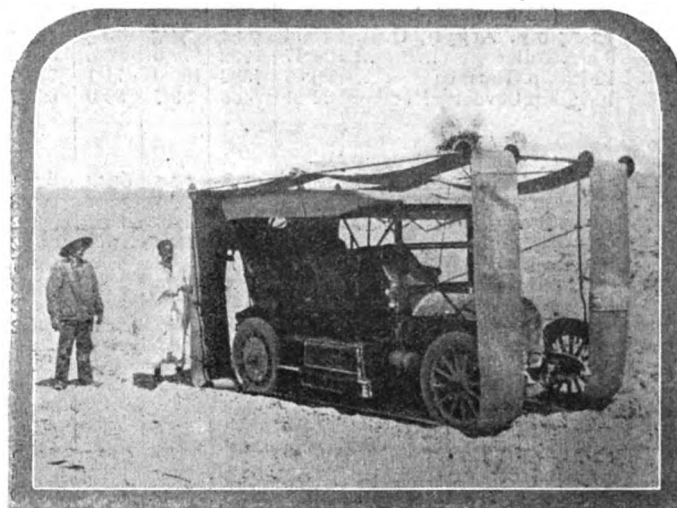
An extremely quiet state of affairs continues to prevail as regards the exports and imports of motor-cars by Germany. The imports of pleasure and industrial motor vehicles and chassis into the country during the five months ending with May last only attained a value of £275,599, as compared with £448,577 in the corresponding five months of 1907. During the same periods the value of the similar exports from Germany declined from £318,280 to £285,285.

Aeroplane Trials in France.

M. Bleriot and Mr. H. Farman competed at Issy-les-Moulineaux, on Monday, under the auspices of the Aero Club, for the prize of £400 offered by M. Armengaud to the first aeroplane to remain in the air for a quarter of an hour. M. Bleriot succeeded in effecting a flight of 10 min. 23 sec. without touching ground. Mr. Farman made a flight which lasted 20 min. 20 sec., according to the official timing, and thus won the prize. During the time he covered about 18 kilometres. It is announced that Mr. Farman will shortly sail for America, taking his aeroplane with him. He is to make a three months' tour, giving demonstrations in the principal cities in the United States. M. René Gaanier is putting the finishing touches to a new flying machine at Bouchemaine, near Angers. The apparatus is said to be entirely different from those at present before the public; it is V-shaped, over 24 ft. in length, and is worked by a 50-h.p. motor.

Motoring on Sandy Deserts.

A French motorist, M. G. Liegeard, who has lately been motoring in Southern Algeria and Tunis, devised the somewhat novel method shown in the accompanying illustration of travelling across the sandy desert. The car—a 28-h.p. Peugeot—with its full outfit weighed about two tons, and to prevent the wheels sinking in the sand he rigged up a sort of travelling track made



of cocoanut fibre about 19 in. wide. In this way not only was M. Liegeard able to keep up a fair speed, but, during a journey of over 600 kilometres, no tyre troubles were encountered.

British Motorists in France.

Recent British motoring visitors to France include Mr. and Mrs. Watson, of London (50-h.p. Mercedes); Mr. Saunders (60-h.p. Fiat); Mr. Brereton (40-h.p. Humber); Mr. Keyser (45-h.p. Daimler); Sir Edward Green (85-h.p. Napier); Mrs. Rudd, of London; Mr. Phillips (35-h.p. Panhard); and Mr. Turnwell (20-h.p. Renault).

Miscellaneous Items.

Messrs. Laurin and Klement, of Jungbunzlau, Bohemia, are building ten more motor-tricycles for the Mexican postal authorities.—A Renard road train service has been established between Lamballe and Le Val-Andre and between St. Brieux and Pleneuf, Brittany.—The Austrian Government is organising a public motor-car service between Troppau and Beneschau and has ordered five 24-30-h.p. vehicles for the same.—A company has just been formed in Berlin to be known as the Berliner Elektromobilfabrik Gesellschaft, to manufacture and operate electric motor vehicles in the German capital.—The Mid-German Automobile Club, of Eisenach, is organising a three-day international reliability trial of touring cars to be held in Thuringia from September 3rd to 6th next.—To mark the completion of the 60th year of his reign the Austrian Automobile Club has offered two military motor vehicles to the Austrian Emperor, who has graciously accepted the same.

The Scottish Reliability Trial.

Below we give the markings awarded in connection with the Scottish Reliability Trial supplementary to the awards published in our last issue and indicated in the following table. The highest number of marks possible was 1,000:—800 for Reliability, 100 for Fuel Consumption, and 100 for Hill Climbs.

SUMMARY OF RESULTS—IN ORDER OF TOTAL MARKS GAINED.

| Official No. | Description of Car. | Car miles per Gallon. | Marks for Reliability. | Marks gained for Fuel Consumption. | Marks gained for Hill Climbs. | Total Marks Gained. | Official No. | Description of Car. | Car Miles per Gallon. | Marks for Reliability. | Marks gained for Fuel Consumption. | Marks gained for Hill Climbs. | Total Marks gained. |
|---|--------------------------------|-----------------------|------------------------|------------------------------------|-------------------------------|---------------------|-----------------------------------|---------------------------------------|-----------------------|------------------------|------------------------------------|-------------------------------|---------------------|
| CLASS A (not exceeding £200). | | | | | | | CLASS E (£425 to £525). | | | | | | |
| 1-A | 10-12-h.p. Swift, G.M. | 33.22 | 800 | 100 | 99.2 | 999.2 | 55-E | 25-35-h.p. Darracq G.M. | 19.8 | 790 | 96.6 | 86.2 | 978.8 |
| 4-A | 10-12-h.p. Chambers ... | 32.65 | 800 | 94.5 | 88.4 | 982.9 | 57-E | 26-h.p. Metallurgique... .. | 21.19 | 800 | 85.6 | 87.3 | 972.9 |
| 6-A | 10-h.p. Adams ... | 27.43 | 750 | 83.3 | 85.3 | 918.6 | G-45-E | 30-h.p. Beeston Humber ... | 13.39 | 800 | 74.2 | 98.4 | 972.6 |
| C-2-A | 10-h.p. Cadillac ... | 28.44 | 758 | 85.1 | 55.5 | 898.6 | E-53-E | 15-20-h.p. Panhard (Chain Drive) ... | 20.19 | 798 | 100.0 | 69.6 | 967.6 |
| CLASS B (£200 to £250). | | | | | | | E-54-E | 20-h.p. De Luca-Daimler... .. | 23.19 | 798 | 96.4 | 58.4 | 952.8 |
| 8-B | 12-14-h.p. Argyll, G.M. | 17.14 | 714 | 74.5 | 88.7 | 877.2 | 46-E | 20-h.p. Sunbeam ... | 13.58 | 796 | 67.0 | 74.9 | 937.9 |
| B-11-B | 9-h.p. Adler ... | 24.47 | 732 | 78.6 | 26.6 | 837.2 | F-48-E | 25-30-h.p. Brown ... | 11.8 | 790 | 59.9 | 64.8 | 914.7 |
| 10-B | 10-12-h.p. Darracq ... | 29.06 | 582 | 100.0 | 71.1 | 753.1 | G-49-E | 25-h.p. Deasy ... | 17.02 | 767 | 82.6 | 59.3 | 908.9 |
| E-7-B | 10-12-h.p. Coventry Humber | 22.11 | 488 | 99.7 | 80.0 | 667.7 | 51-E | 25-h.p. Atholl ... | 16.46 | 767 | 76.0 | 53.5 | 896.5 |
| CLASS C (£250 to £325). | | | | | | | H-50-E | 25-h.p. Hillman-Coatalen ... | 15.76 | 634 | 74.7 | 71.2 | 779.9 |
| 18-C | 16-h.p. Bell, G.M. | 28.67 | 798 | 100 | 69.4 | 967.4 | E-52-E | 15-20-h.p. Panhard (Live Axle) ... | 17.99 | 289 | 85.3 | 65.9 | 440.2 |
| F-25-C | 15-h.p. Coventry Humber ... | 18.89 | 794 | 75.4 | 97.4 | 968.8 | CLASS F (£525 to £650). | | | | | | |
| 15-C | 14-16-h.p. Argyll ... | 21.95 | 800 | 78.6 | 83.6 | 962.2 | K-65-F | 35-h.p. Deasy, G.M. ... | 16.4 | 785 | 87.2 | 98.1 | 970.3 |
| 17-C | 15-h.p. Mass ... | 15.8 | 781 | 63.4 | 98.8 | 943.2 | 62-F | 24-h.p. Albion, S.C. ... | 21.16 | 800 | 100 | 67.2 | 967.2 |
| 22-C | 16-18-h.p. Vulcan ... | 19.43 | 785 | 67.2 | 76.5 | 908.7 | 69-F | 25-30-h.p. Maudslay ... | 17.16 | 800 | 85.8 | 79.5 | 965.3 |
| 19-C | 14-16-h.p. Darracq ... | 23.75 | 780 | 77.9 | 41.7 | 899.6 | 71-F | 50-h.p. Darracq... .. | 13.39 | 800 | 65.6 | 76.6 | 942.2 |
| 13-C | 16-h.p. Bentall ... | 15.29 | 481 | 60.4 | 33.9 | 575.3 | E-85-F | 18-h.p. Benz ... | 16.52 | 800 | 55.5 | 57.4 | 912.9 |
| D-20-C | 12-h.p. Star... .. | 16.32 | 469 | 60.9 | 34.3 | 564.2 | F-70-F | 18-24-h.p. Panhard ... | 14.73 | 792 | 65.6 | 52.4 | 910.0 |
| D-21-C | 12-h.p. Shamrock ... | 19.33 | — | 62.1 | 26.2 | — | 66-F | 18-24-h.p. Piccard-Pictet ... | 12.16 | 800 | 50.2 | 57.1 | 907.3 |
| 14-C | 12-16-h.p. Vinot ... | 20.19 | — | 68.7 | 41.8 | — | H-63-F | 38-h.p. Daimler ... | 22.65 | 712 | 92.9 | 79.2 | 884.1 |
| CLASS D (£325 to £425). | | | | | | | 64-F | 35-50-h.p. Vinot ... | 14.4 | 715 | 64.2 | 74.8 | 854.0 |
| E-28-D | 12-16-h.p. Vauxhall, G.M. | 26.04 | 798 | 93.6 | 99.3 | 990.9 | J-72-F | 30-40-h.p. Ariel ... | 14.61 | 604 | 75.9 | 92.9 | 772.8 |
| F-24-D | 20-h.p. Beeston Humber ... | 24.59 | 800 | 100.0 | 88.8 | 988.8 | G-73-F | 30-h.p. Adler ... | 18.16 | 595 | 74.3 | 74.7 | 744.0 |
| 27-D | 18-24-h.p. Swift ... | 25.14 | 800 | 98.4 | 88.5 | 986.9 | 67-F | 40-h.p. Argyll ... | 18.78 | 562 | 92.9 | 78.0 | 732.9 |
| E-37-D | 20-h.p. De Luca-Daimler ... | 25.56 | 800 | 96.2 | 72.1 | 968.3 | CLASS G (£650 to £800). | | | | | | |
| 30-D | 14-16-h.p. Argyll ... | 19.2 | 800 | 72.1 | 71.7 | 943.8 | H-79-G | 40-h.p. Armstrong-Whitworth, G.M. ... | 15.43 | 800 | 100 | 71.9 | 971.9 |
| F-41-D | 22-h.p. Junior ... | 14.21 | 796 | 64.0 | 70.5 | 30.5 | 80-G | 35-45-h.p. Maudslay ... | 12.66 | 794 | 91.6 | 61.7 | 947.3 |
| D-33-D | 12-14-h.p. Singer ... | 20.65 | 798 | 71.3 | 56.1 | 925.4 | 78-G | 40-50-h.p. Ariel ... | 12.02 | 752 | 80.0 | 100.0 | 932.0 |
| 35-D | 20-h.p. Bell ... | 16.89 | 790 | 65.6 | 65.8 | 921.4 | H-76-G | 30-h.p. White Steam ... | 8.56 | 714 | 59.4 | 64.8 | 838.2 |
| 39-D | 20-h.p. Cadillac ... | 14.01 | 796 | 51.8 | 53.0 | 900.8 | | | | | | | |
| F-38-D | 18-h.p. Minerva ... | 18.9 | 683 | 77.5 | 72.5 | 833.0 | | | | | | | |
| 31-D | 16-20-h.p. Argyll ... | 18.87 | — | 80.2 | 59.4 | — | | | | | | | |

G.M.—Gold Medal.

S.C.—Scottish Cup.

All vehicles receiving full marks for Reliability and printed in block type have qualified for Non-Stop Certificates.

SIR EDWARD GREEN has just returned to London from a motor tour through Switzerland.

AT the Aston Lower Grounds, Birmingham, on Saturday, C. R. Collier secured the five mile motor-cycle record in 6 min. 31½ sec.

THE chairman of the Blairgowrie District Committee of the County Council objects to the money received from the fining of motorists going to the Exchequer, and would prefer it should be given to the local authorities, as is the case south of the Tweed.

WE learn that the Brasier Company, of Paris, have been experimenting for the last six months with a cab chassis which, besides meeting all the requirements of Scotland Yard, and being as nearly fool-proof as possible, will be of thoroughly sound material and construction. The vehicle is fitted with a two-cylinder engine, giving 15-h.p. on the brake. Messrs. Mann and Overtons, Ltd., who hold the sole concession for the Brasier cabs, and who intend to place them on the market at a moderate price, expect to have the first one over in about a week's time.

THE Turkish Government has decreed that motor-cars shall not be allowed to pass through the public thoroughfares of Constantinople and the suburban districts.

THE Hon. J. W. Blair, Attorney-General of Queensland, has recently accomplished a record trip on his Panhard car in Central and North Queensland. The run, which was over very rough and sandy country, including water courses not previously traversed by motor, extended to about 3,000 miles.

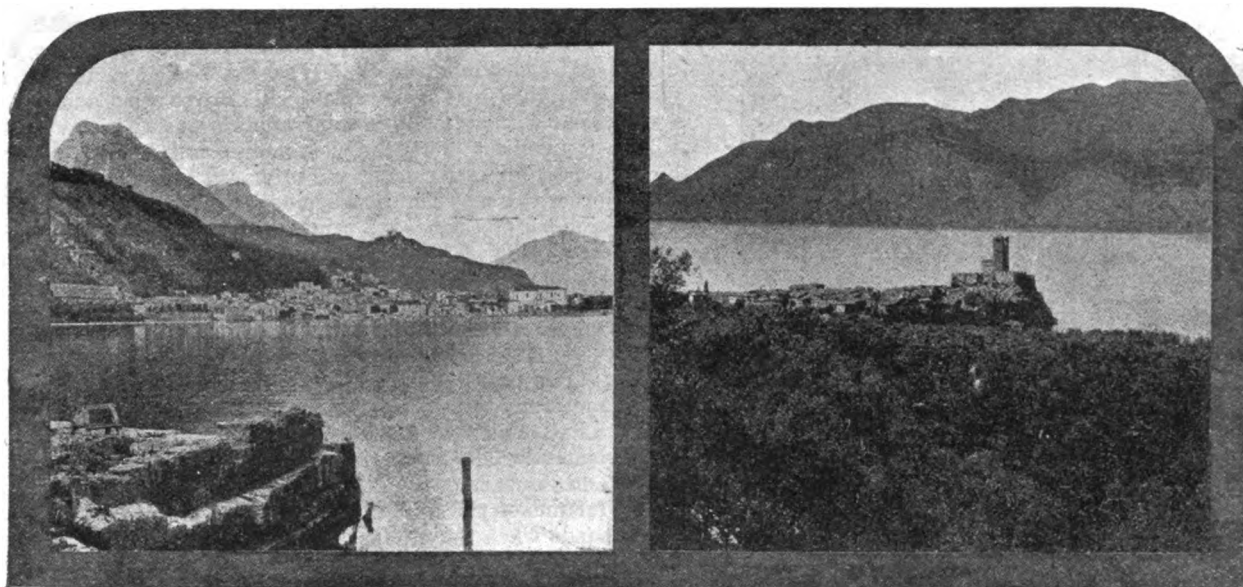
THE exterior of the motor garage of Messrs. Boon and Porter, Ltd., in Castlenau, Barnes, S.W., is familiar to all motorists who have driven over Hammersmith Bridge. The firm have a long association with the industry, and their experience in repair work and the estimation of cars gives a welcome confidence to clients. They are also greatly interested in the tyre branch of the business and carry a large stock of tyres of every description. At the present time Messrs. Boon and Porter, Ltd., have a good assortment of motor covers which should prove of interest and profit to traders in the provinces.

GOSSIP FROM PARIS.

THE reason why there are so many people in France interested in the automobile industry who affirm that the organization of great international speed races is no longer of any use is, as the French say, the "secret de Polichinelle." The races were, they admit, perhaps useful in the infancy of the new means of locomotion, but now they are not needed to draw attention to the advantages of horseless vehicles. At least that is what a French motor-car builder told me the other day when I met him at Dieppe just before the Grand Prix. He had come to the circuit because he had cars engaged in the international contest, but if he had spent a lot of money in building three new racers it was not that he liked it, but simply because he feared being left out in the cold. He affirmed the race cost too much and could be of no real use to the automobile industry. The divulgement of the "secret de Polichinelle" then came out naturally. "No, no. What have we French manufacturers to gain by the race? If one of our cars wins it only confirms the already well-established superiority of our industry. And if by chance we are beaten by a foreign car, the uninitiated are led to believe that the foreign-made vehicles are just as good if not better than ours."

to the mechanism. Fortunately, Bleriot had a charmed life, and always escaped without serious injury. It can easily be imagined that he is greatly elated at his final victory, and that his joy is shared by the other numerous French "monoplanists," who see in his performances a great encouragement for them to persevere in the construction of their machines. There are some half-dozen monoplanes which, according to their inventors, will be ready for trial within ten days or a fortnight. And then we are promised the battle of the monoplanes against the biplanes or cellular aeroplanes! "Those cellular machines will be nowhere by the end of the year" was the prediction made to me by a more enthusiastic than prudent "monoplanist," who is making a machine which "cannot turn over." It is to be hoped it will not, but neither did his old machine turn over; it, however, refused to leave the ground.

AMBITIOUS gendarmes always look forward with hope to the touring season in France. It furnishes them with an excellent opportunity of making a great show of zeal without either much trouble or danger, and of obtaining promotion at the expense of motorists. They lie in ambush in some secluded and convenient spot, and when by chance an innocent automobilist, seeing the road clear before him, puts down the accelerator and goes at full



Maderno.

Malcesine.

TOURING IN ITALY.—TWO VIEWS ON LAKE GARDA..

WHAT an enormity! A foreign car as good as a French automobile. Of course the fact of the racing car of any particular manufacturer, be he French or foreign, winning the Grand Prix does not necessarily prove that the same maker can turn out good touring or town cars. However, though my friend tried to speak as if he believed the superiority of the French-made automobiles was still recognised all over the world, it was very evident his hostility to great international races was based on the desire to avoid drawing attention to cars of foreign make which he knows as well, and perhaps better than most people, are very often just as reliable and cheaper than those he offers to the public.

BLERIOT's success with his monoplane has created immense sensation among the French aviators. The persevering inventor, who had previously been so unfortunate, has at every lull in the strong wind which has been blowing steadily for so many days been flying about over the Issy les Moulineaux parade ground with remarkable steadiness. Each of his numerous former machines had been wrecked in its first flight. They were all so greatly wanting in stability that they either capsized or turned a somersault in the air, with disastrous consequences

speed, he suddenly perceives the threatening form of a gendarme spring into the middle of the highway summoning him to stop. It is useless to try to convince the obdurate official that there was no harm in going at full speed on a deserted road. A "procès verbal" is soon drawn up and the unfortunate driver is in a few days condemned to pay a fine. He may appeal if he likes, but that entails trouble. In some parts of the country this practice has become so common that the police magistrates can scarcely find time to do anything else but fine motorists. Last week no fewer than two hundred were condemned at the Boissy-Saint-Leger police court in one day. They were all accused of violating the speed regulation on the road close to Montgeron, in the Seine et Oise, where a couple of gendarmes had simply taken down the numbers of their cars as they passed without the occupants having any idea they were to be prosecuted. The question arises whether the ambitious gendarmes who thus succeed in obtaining 200 condemnations in one day, should receive their coveted promotion or a severe reprimand.

MARNEY.

PRINCE PARAMGIT SINGH has been successful in the R.A.C. examination for driving certificate.

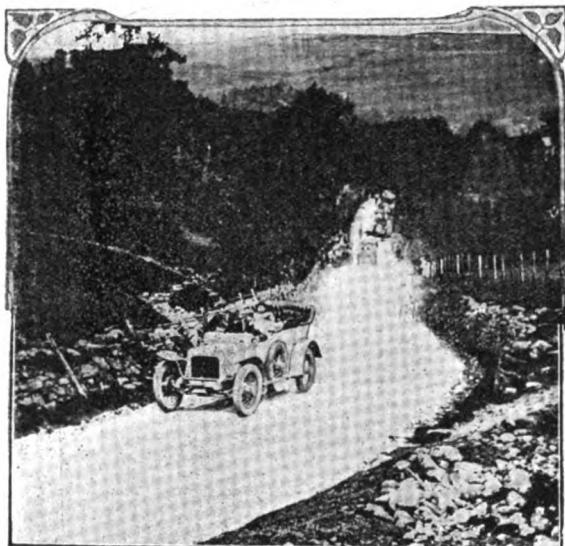
SOME USEFUL NOTES.

ALWAYS be sure that the hole in the filter cap of the petrol tank is clear, otherwise a mysterious stop may be experienced owing to the petrol not reaching the carburettor.

JOINTS which have copper asbestos washers should be put down with a paste of black lead and boiled oil. Care must be taken not to get this paste in a screw thread, as the utmost difficulty will be experienced in shifting it after it has set.

To tackle a valve replacement single-handed when you have not a valve-lifting device is not very easy until one knows how! There is, however, a simple way of doing it. Simply interpose a piece of packing (almost anything will do) between the valve cap and valve head; refix the valve cap and then the packing will prevent the valve rising. It is then comparatively easy to lift the spring and take out the cotter, etc.

It is wonderful the difference a good wash-out will make to an engine. This should be done about once every two months in the case of a car that is run a fair distance daily. The dirty oil should be drained off, and the crank chamber plugs replaced, then plenty of paraffin should be poured in the engine, which



A Reminiscence of the Scottish Trials.—The 38-h.p. Daimler making the fastest ascent of Trinafour Hill.

should be started up and run for one minute. The paraffin should then be drained off and fresh oil put in the base chamber.

THE slipping out of gears of the gate-change type is usually due to loss of tension on the locking springs. In nearly all these types of gears the locking device consists of either a V or a ball piece dropping into a groove in the draw-bar under pressure of a spring. If the slipping out is not due to the loss of tension of the springs, it may be due to wear of either the notch in the draw-bar or of the V piece. Of course, very bad wear on the teeth will also cause a gear to slip out.

THE bending of exhaust valves is a trouble which occasionally occurs, and is rather mystifying. The symptoms are not necessarily loss of compression, because although the valves may be bent, there may be places where they seat completely, but, when running, they may turn a little and not seat properly, and consequently cause loss of power. Bent valves may usually be ascribed to—(i.) Weak valves coupled with overheating of the engine; (ii.) the guide valves not being central with the seating; (iii.) the valve guides being too short. Practically, all these causes are faults in design, and can only be permanently remedied by a practical engineer.

NOTES FROM BOURNEMOUTH.

MOTORISTS travelling south to Bournemouth have been experiencing of late more than their usual share of discomfort and inconvenience through the dust-laden roads. Those who have journeyed over the large section of road which has been experimented upon with tarred and gravel surface, through Christchurch, can testify to the advantages of the treatment, which has been found to be not only a blessing and a boon to automobilists, but tradesmen, residents, and pedestrians have also realised that the dust nuisance has at last been reduced to an appreciable minimum. The treatment has been carried out under the personal supervision of the Christchurch borough surveyor (Mr. C. Farmer), and he is certainly deserving of the thanks of the general public.

ONE cannot help being struck with the large number of motor vehicles which are now being used by business firms in Bournemouth for the transit of goods, and also with the luxurious and handsomely fitted motor-omnibuses for the conveyance of visitors to and from the stations by the large hotels and boarding-houses. These are significant indications that Bournemouth desires to keep abreast of the times. Yet the taxi-cab has not so far made its appearance as a licensed vehicle on the ranks. The motor-cab has, however, made its acquaintance with the town, but not for the purposes of public hire. At present there is a disinclination on the part of the licensing authority to interfere with the arrangements in regard to horsed vehicles. They, however, recognise that taxicabs will have to come, and have intimated their willingness to consider applications when any of the existing licences for horse-drawn vehicles fail to get renewed. This system of introducing motor-driven cabs has been adopted in other towns. The Bournemouth cabmen—or at all events a good number of them—are said to be preparing themselves for the new order of things by making themselves acquainted with motor driving, so that, should necessity suddenly arise, they will experience no difficulty in passing an official examination to qualify for a licence.

THE past few weeks have been marked by a singular dearth of motoring visitors to Bournemouth, and the principal garages have exhibited much bare space, a fact leading to no little lament. The truth is that all roads lead to London just now, and Bournemouth in this neglect is but sharing the common misfortune of the watering-places. Probably ample amends will be made when the interest in the Franco-British Exhibition begins to diminish. *Apropos* of visitors, it is interesting to note the growing use of mascots by owners of motor-cars. The figure of St. Christopher is commonly seen on cars, and the manager of Mr. Morant's garage at Bournemouth assured me that fully half of the cars that come under his notice bear mascots. One hopes that the charm is fruitful of safety.

WESSEX.

TOWARDS the end of last summer the Avon India Rubber Company, Ltd., of Melksham, Wilts., submitted to us for trial a pair of their Avon motor tyres, which we fitted to the rear wheels of a small car, and which have since given great satisfaction. We have not kept an exact record of the mileage that has been made on the covers, but it must be fully 2,500 miles, and it is a pleasure to be able to record that not only have we been entirely free from puncture troubles, but that the tyres are remarkably clear of cuts or other signs of wear, notwithstanding that the car is of a relatively old type and consequently somewhat heavier than modern vehicles of equal power. The covers in question are of the plain round tread variety, but the firm also make tyres with square treads, as well as studded non-skid covers. Although not so well known as some other makes, the Avon tyres are enjoying a steadily-increasing popularity amongst motorists, the special points in their favour being the great durability and relatively low price, a combination of advantages which naturally tends to economy in the tyre portion of the cost of running a car.

A GARAGE is being provided for the service of motorists attending the Water Tableaux at Guisborough Abbey, on August 3rd and 4th.

THE Licensing Committee of the Town Council of Bradford have granted a number of applications to motor-cab drivers for licences to p'y for hire in that town.

THE examination for the scholarships offered by the Irish A.C. amongst the scholars of the Pembroke (Dublin) Technical Schools for Automobile Knowledge was held on the 3rd inst.

ACCORDING to Mr. John Burns there were 1,133 prosecutions of motorists in the Metropolitan area in the first three months of the present year, as compared with 418 in the corresponding period of 1907.

THE deputation from the City of London to various Government Departments in connection with motor-buses will include the Lord Mayor, Alderman Sir T. W. Ellis, Sir Theodore Martin, K.C.B., Messrs. D. J. Morgan, J.P., and B. S. Straus, M.P.

AN outbreak of fire occurred at 62, Fleet Street, Bury, late on Saturday night. The shop is occupied by Mr. Arthur Holder, and it is reported that that gentleman was filling the tank of his motor-bicycle with petrol when an explosion occurred and set fire to the shop.

THE Duke and Duchess of Manchester, motoring from Badminton to Fishguard, Pembrokeshire, on Sunday, had a breakdown on the road at Christchurch, near Newport, Mon., the differential shaft breaking. The car was towed into Newport, and after a four hours' wait for repairs the Duke and Duchess continued their journey to Fishguard.

THE entries for the "four inch" Speed Race in the Isle of Man include the following types of cars, viz.:—Rover (two), Hutton (two), Arrol Johnston (two), De Dion Bouton, Darracq (three), Hillman-Coatalen, Seat, Vulcan, Coventry Humber, Beeston Humber (two), Métallurgique (three), and Berliet (two). All these cars are 25.6 h.p. (R.A.C. rating), except the two Berliets, which are 24.8 h.p.

FROM Messrs. Thomas Boornn and Co., 35, Elliott Road, North Brixton, S.W., comes a sample of the special packing for the glands of water-circulating pumps which they have lately introduced. The feature of the material, which is made of hemp, is a lead wire core, which is claimed to add strength and also to act as an extra lubricant. The packing, which is being used by a number of leading motor-car manufacturers, is made in various sizes from $\frac{1}{8}$ in. to $2\frac{1}{2}$ in in diameter.

IN connection with the forthcoming Dust Trials, it has been decided that as many different cars as possible be obtained fitted with Messrs. Wayman and Matthews' device; that cars provided with Cape hoods be tested; that a car with a free curtain at the back be tried; that steam cars be run again on the second day; and that the devices on the experimental cars be made removable, in order that the vehicles may be tried without them.

MOTORISTS are naturally interested in "overalls," whether as engineers or drivers, and more especially in the former connection. The "Wescot" overalls of the Engineers' Universal Supply Stores deserve a passing thought. These are made by the firm at their factory at 27, Sumner Street, Southwark, S.E., and there is ample evidence of the fact that only the best materials and most improved methods are employed. Now that the dust season is with us motorists and all who frequent garages will have need of such excellent overalls as the Wescot.

WE had a visit the other day from Mr. C. G. F. Loder, the husband of the lady who took part in the 1905 and 1906 Scottish reliability trials, and who is now a partner in the firm of Messrs. Loder and Jarlet, motor-car and accessory agents, Melbourne. Among the agencies they hold are those for the Cottin-Desgouttes and Delage cars, the Auto-roche lamps, S.M.A. horns, &c. Mr. Loder reports a growing interest in automobiles in Australia, but states that the business has to be carried on under quite different conditions to those which obtain in this country, it not being unusual to take a car 800 miles to give a prospective customer a trial run.

HERE AND THERE.

THE Frome's Hill Climb has been abandoned, as the entries sent in do not justify the expenses which would be incurred by the event.

At Fulford Barracks, York, several soldiers who have been trained as motor-car drivers have been examined by the R.A.C. Driving Certificate Department.

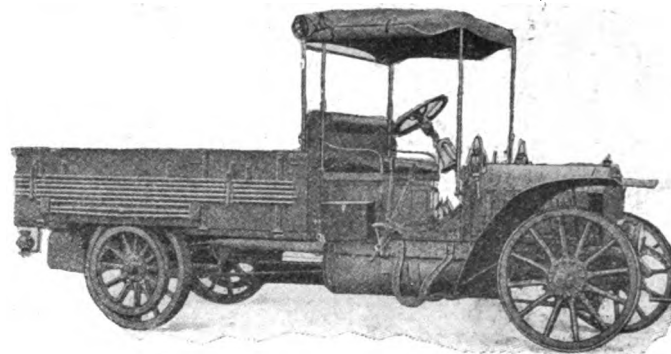
THE proposed parade of commercial motor vehicles at Manchester has been postponed till the autumn.

ON the 1st inst. the old four-horse mail-coach from Chatham to London was replaced by a motor service.

MOTOR-CARS are now prohibited from that part of the road leading by the coast from Malahide to the Velvet Strand; this is the first prohibition that has been notified in Ireland.

A SERVICE of motor-cars has been established between Ilkley, Bolton Abbey, Harrogate and York, and a forty-mile tour over the Yorkshire moors is now being organised on three days of every week.

THE Sheffield-Simplex Motor Works, Ltd., have received an order from the Earl of Mar and Kellie, of Alloa House, Alloa, N.B., for a Sheffield-Simplex 45-h.p. six-cylinder car with limousine-landaulet body by Hamshaw. Mr. R. Stafford Charles, of Stanmore, one of the oldest motorists in England, has also placed an order for a 45-h.p. limousine.



The Graft and Stiff Four-Cylinder Motor Lorry recently supplied to the Austrian Military Authorities.

The vehicle, which has a capacity of from 30 cwt. to 2 tons, is fitted with a body which can readily be transformed into an ambulance vehicle. Attention may be drawn to the large diameter road wheels and to the fitting of a winding drum to the outer sides of the driving wheels to enable the vehicle to extricate itself from difficult positions when travelling over bad roads or soft land.

THE many foreign users of the H.F. vulcanizing appliances are appreciating the convenience of being able to read in their own tongue the instructions for using these excellent appliances. Messrs. Harvey Frost and Company, Ltd., 39, Great Eastern Street, London, E.C., the manufacturers and patentees, have issued their various books of instructions in French, German, Italian, Spanish, Danish, and practically every language that is freely spoken.

A PLEASURABLE day was spent by the members of the Accrington "Observer and Times" staff the other day, when they were invited to a motoring picnic by Mr. R. S. Crossley, jun., in celebration of his recent marriage. The party was conveyed in a Critchley-Norris motor char-a-banc, supplied by Messrs. Groome, Ltd., of Whalley, and quick progress was made through Whalley, to Worston, Chatburn and Sawley, with the formidable Sawley Brow, for a delightful afternoon in the country.

THE Bishop of Winchester (Dr. Ryle) has been presented with a cheque for £710 7s. 3d., contributed from all parts of the diocese, for the purpose of providing him with a motor-car as a personal convenience and a help to him in his work. Dr. Ryle is ordering a motor-car that is "entirely of British construction, and that may be especially trustworthy in hill-climbing, and silent, without being conspicuously swift in movement." Apparently the Bishop does not want to be "conspicuously swift," so that he may avoid a summons to a secular court in his diocese.

Correspondence.

[Letters to the Editor should be addressed to the offices, 27-33, Charing Cross Road, London, W.C.]

DANGEROUS DOGS ON THE ROAD.

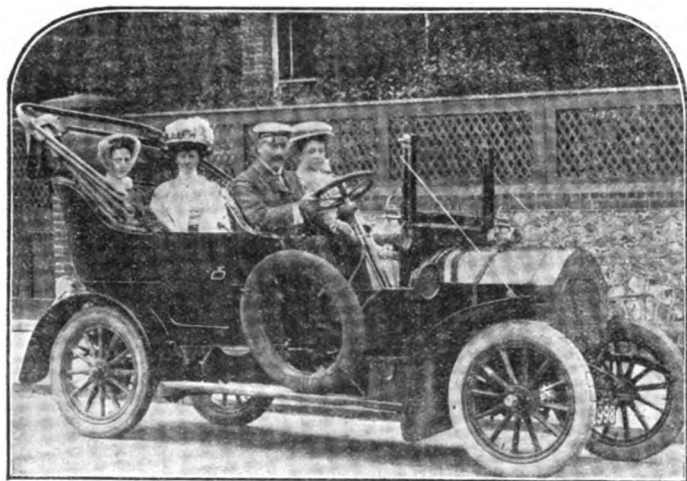
To THE EDITOR OF *The Motor-Car Journal*.

SIR,—On Sunday last I had a curious experience. I was taking a short motor ride with a few friends, and on returning from Shoreham to Worthing, via Lower Lancing, a dog chased my car, and I had the greatest difficulty to avoid running over him. I considered the dog a perfect nuisance, and as there was a policeman on point duty at hand, I reported the matter to him. While doing so the next car that came along ran over and killed the dog. Needless to say I returned to the spot, also the policeman. I spoke to the owner of the car and informed him that I had just reported the dog as a nuisance, and he said that they could not avoid running over the animal, as it kept on running in front of the car. I am writing this as I think it the duty of motorists to report such matters to the police, as it saves others from blame.—Yours truly,
W. A. HEWER.

THE SCOTTISH TRIALS.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—Various reports have been published as to the reasons of the withdrawal of the Sheffield-Simplex car from the Scottish Reliability Trials, one in particular being that it was owing to the heat generated by one of the rear wheel brakes being so great as to set the spokes of the wooden wheel on fire. As this is not at all correct, and as the entrant



Mr. W. A. Hewer, of Worthing, at the wheel of his 10-12-h.p. Jackson Car.

and driver of this car, I should like to correct same. The true reason was that, owing to the spokes in one wheel being made of unseasoned wood, they shrank to such an extent as to get dangerously loose, and in consequence I thought it would be better and safer to withdraw and prevent the risk of what might be a nasty accident, than to continue.

Unfortunately, as it happened, the wheels of this car were re-built at the last moment, and altered from the standard, so as to have detachable rims fitted. I may say that the spokes showed signs of becoming loose right at the commencement of the trials, but it was then too late to do anything to remedy the matter, so I decided to drive the car carefully and endeavour to get it through, but, unfortunately, it continued to get worse, which necessitated the withdrawal. This, I may say, explains to a very great extent the comparatively slow times the Sheffield-Simplex made in the hill-climbs, as in not one single instance did I care to risk opening out the engine for fear of tearing out the loose spokes of the wheel. I do not wish this letter to be looked upon as an excuse. I merely state facts, and can only take it as a misfortune of war, but in driving my car several thousands of miles I have found that the arrangement of the brakes is excellent; in fact, in the long hills of Scotland they have, in ordinary driving, not shown the slightest tendency to overheat. I have several times felt them with my hands after a particularly long and arduous descent in which the brakes have had to be freely used, and they have not been more than warm.—Yours truly,
W. E. TOWNSEND.

TAR AND THE CAR.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—Recently I was motorizing to Tunbridge Wells, and on passing Green Street Green I found the road, for about two miles, covered with fresh tar. No gravel or sand had been put on, and as there was not

sufficient space on either side of the road free from tar, two wheels were always running on the latter, which resulted in the panels and the under-part of the car being covered with this substance. On passing through Sevenoaks we came across about another half-mile of road having the tar freshly laid on.

For the benefit of your readers, I would like to suggest that a very good thing to prevent the tar sticking, and for removing it before it has dried, is to put some grease on the more exposed parts, when it will be found that at the end of a run the tar can be easily removed by rubbing off—after washing off the grit—with a cloth. Unfortunately, in this instance I was myself without any grease, which accounts for the state of the car after the journey.—Yours truly,

ALFRED L. BOWER.

THE EMISSION OF SMOKE.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—In replying to Mr. Reid's letter in your issue of the 27th ult. I thank him for the courteous spirit in which he received and acted upon my protest, the strength of which did not exceed that of the effluvia which the occupants of my car had been the recipients of for some time. Of course accidents will happen, and I accept the explanation your correspondent gives.

At the same time may I be allowed to say that as it is impossible for motor-cars to be other than obnoxious in a certain degree on account of dust when on dry roads, and the slight smell from the exhaust, the oil and smoke nuisance can and should be prevented. The streets of London are getting a disgrace in this respect on account of the motor-buses, and private cars are also very often at fault.—Yours truly,
P. 19.

A REMINDER.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—I lent a gentleman a motor-tyre recently in order to help him on his way. The number of his car was known, and as he did not return the cover I tried to get his name and address from the L.C.C. registry, but they say they cannot help me.

In future I shall not lend anything to a motorist without deposit, as the number is apparently of little service. I write to you, as your paper has such a large circulation, in the hope you may be able to assist me in finding the gentleman who has not returned the cover.—Yours truly,
T. BUTLER.

[We trust, if this should meet the eye of the motorist referred to, he will communicate with our correspondent, at Green Street Green, near Orpington.]

THE QUESTION OF GEARS.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—It is not an easy matter to strike upon a car which is geared correctly for everything; in fact, it is most difficult to do so. Motorists who live in a general sort of district, where the steepest gradient is 1 in 9, or perhaps 1 in 8, and who do not go very far afield, will find no hill-climbing difficulty with the average modern car. It is when we come to hills of extreme steepness that the difficulty is apparent. The reason is simple. A large number, in fact we may say the average modern cars are too highly geared on the bottom speed, and consequently such hills as Porlock, or the one between Lynmouth and Lynton, prove a severe stumbling block. Nothing could have been more clearly illustrated than this in the recent trials in Scotland, where several cars came to grief on a particularly steep ascent. Now this is where the designer is at fault, as a bottom speed of a modern car should be for starting purposes and emergencies only; the second speed should be the ordinary steep hill-climbing gear. Such hills as Porlock may be fairly accurately described as "emergencies," and surely we do not mind dropping on to a very low gear to surmount a gradient of 1 in 6 or 1 in 5, so long as we get up easily and without shedding passengers?

I am not dealing with either competitions or the individuals who wish to simply annihilate distance in the shortest possible time. I am dealing with the rational people who wish to have a modern car which they can always depend upon to carry them and their full load up any hill, not excluding the "emergency" ones. It is a fact, though many may not credit it, but there are very few standard cars in the 12-h.p. to 20-h.p. class—value, say, £250 to £450—that will take their load up the hill between Lynton and Lynmouth. The manufacturer's answer to this deficiency is what might be expected, seeing that his patterns are made and alterations are costly. He says, "If you are going about precipitous parts of the country, you must have your car geared two teeth lower on the driving bevel." And this means that the car is ridiculously undergeared for everywhere except the precipitous parts. It may be mentioned, *en passant*, that the much-abused chain drive distinctly scores here, because it is a reasonably simple matter to change the

sprockets when necessary; and really, while admitting the drawbacks to the chain drive, such as noise, wear and tear, &c., on chains, for all-round touring the chain drive wants a lot of beating.

Three speeds, with direct drive on the top speed, with a flexible engine, should be quite enough for anyone, though a four-speed box with a direct drive on the third speed is very nice, as it gets over that occasional drawback to the three speeds, viz., the hill which is just too much for the top gear, but much too little for the second. I should be glad to hear the views of other motorists on this subject.—Yours truly,

BRIXHAM.

HEDGE CUTTING.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—It is very necessary in the interests of the safety of the public that hedges, at corners and cross-roads, should be cut or trimmed so as to give drivers and others a view of the approaching traffic.

The Motor Union appeals, therefore, to local authorities to exercise their powers under Section 65 of the Highway Act, 1835, to cause any tree or hedge that obstructs the view at cross and side roads to be cut or pruned. Members of the public are requested to draw the attention of occupiers and the local authorities to cases where such action is necessary.—Yours truly,

W. REES-JEFFREYS.

A TYRE DESTROYER.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—I enclose some invention of the Evil One. Hundreds of these vile tyre destructors are strewn on the Wolverhampton road, about a mile from Stafford, also on the main road going out to Stone and the Potteries.

It is obvious that these articles have been manufactured solely for the purpose of tyre destruction, and I trust that you will publish this as a warning to the many motorists who travel this way.

I should rejoice to hear of the capture of the unscrupulous cad who is responsible for the dastardly trick.—Yours truly,

JOHN HOLDING.

DETACHABLE RIMS v. DETACHABLE WHEELS.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—Among the useful information I gather from your most valuable journal, I read in a recent issue a statement signed by R. Flint, "That a detachable rim, known as the F.P., was being patented; that it took only one minute to take off the tyre, or to take out the tube and put in a new one of any make, to take off the rim and fix it again in three minutes, making a complete change in four minutes." I should like to know if such a rim is on the market. If this should catch the eye of R. Flint, perhaps he will be able to inform us, as it seems to me that a rim of that sort would be highly appreciated; provided it made the tyre perfectly secure, it should also make it more durable.—Yours truly,

ANXIOUS.

THE PIONEERS.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—It would be interesting to have the experiences of some of the early pioneers of motoring—particularly of those owners of cars who have kept to their original possessions and have watched the steady development of the automobile movement all these years.

During the recent 2,000 miles Trial there was a gentleman at Kendal who was said to have owned the first automobile in the county of Westmorland. He marvelled at the way in which the vehicles on the trial behaved in Lakeland and talked with delight at the improvement. He remembered how the first year he had his car "My life was a misery. Every horse upon sight of my car in the Lake District bolted, and the wonder of it all is that one-half of the local population was not killed off." Now all is changed. The horse that will not behave in the presence of a motor-car is an exception, and people generally recognise the value of the car.

Ere it is too late, it would be interesting if some of those motorists who, in small towns and quiet neighbourhoods, adopted the motor-car and so pioneered the way for progress, were to place on record their impressions of those days of trial.—Yours truly,

A. A. A.

THE HIRE OF CARS.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—Recently I was in one of the Eastern suburbs of London and came across a progressive motor-car agent who is doing much to further the progress of motorism in his part of the world. A circular he has just issued in connection with his motor-car hiring business is interesting. A day's hire of a car seating four persons in addition to the driver is three guineas for the racecourses at Windsor or Lingfield;

three sovereigns for Epsom, Brooklands, Kempton or Hurst Park, and £3 10s. for Ascot; Henley can be reached for four guineas, a rate also quoted for Goodwood, Newbury, Newmarket, Brighton and Eastbourne.

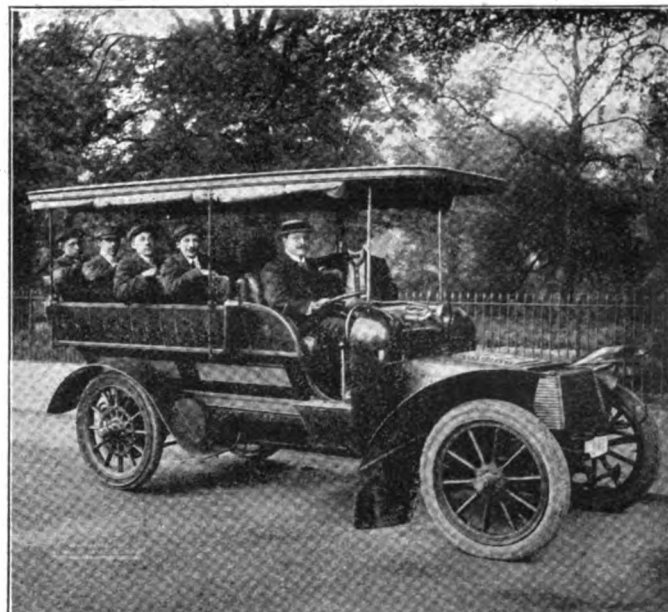
But, apart from this interesting tariff, the comparison of cost by the usual methods in going to Newmarket races with that of the motor-car is equally interesting, and works out as follows, the motor-car charge being obtainable from the foregoing list:—

| | £ | s. | d. |
|---|-----|----|----|
| Expenses to London terminus | — | 0 | 4 |
| Four 1st class fares (about) | ... | 4 | 0 |
| Cab to racecourse (usual charge) 5s. per head ... | ... | 1 | 0 |
| Cab back to station | ... | 1 | 0 |
| | £6 | 4 | 0 |

Thus there is a distinct gain in going by motor-car, (while the further advantages are set out by Mr. A. Rivett—the enterprising motorist in question—as follows:—No train to miss; no crushing or crowding—a most enjoyable drive instead; you can take your own hamper and picnic quietly by the way; no cab fares to and from racecourse at an extortionate price; you drive all the way to and from your own door; you have a day's outing that does you good.

Probably other motorists who travel about may pick up similarly interesting items of news; for a general publicity on such matters will be to the common advantage.—Yours truly,

T. WALKER.



The above illustration depicts the 20-28-h.p. Daimler Shooting Brake which has lately come into the possession of Messrs. H. J. Chapman & Co., Ltd., Regent's Park, N.W. As may be observed by the crest on the side, the vehicle was originally the property of His Majesty the King. Mr. Reed, the secretary of the Company, is at the wheel, and Mr. Chapman by his side.

THE UNAUTHORISED USE OF CARS BY DRIVERS.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—The number of serious accidents that occur to cars taken out by chauffeurs without the knowledge or consent of the owners has increased to such an extent that in my opinion it is quite time something drastic should be done to put a stop to the practice. The use of an employer's car by a paid driver for his own pleasure and against the wishes of the owner must be stopped; honest chauffeurs are as much interested in legislation to this end as are the owners employing hired drivers.—Yours truly,

R. T. S.

A PROPOSAL to establish a motor camp on the south coast comes from a well-known motorist, to whom we shall be pleased to send any communications from interested readers.

BRIGHTENING ALUMINIUM.—"R. T." writes:—"While aluminium does not become dirty or tarnished in the same sense that other metals do, after a certain time it takes on a dull appearance. I should be glad if any reader of the *M.C.J.* could tell me a method of restoring the bright appearance of aluminium."

RACING AT BROOKLANDS.

SEVERAL elements conspired against public interest being greatly aroused by the proceedings on the Brooklands Track on Saturday. After a spell of stability the weather gave way on Friday night and Saturday morning, damping the spirits of motorists and allaying the dust in corresponding great degree. The imminence of the Grand Prix races robbed the meeting of many notable competitors, so that there was some uncertainty with regard to the programme. The result was a greatly lessened attendance compared with recent meets, and the Ladies' Race was undoubtedly responsible for the presence of many who might otherwise have been far from Brooklands.

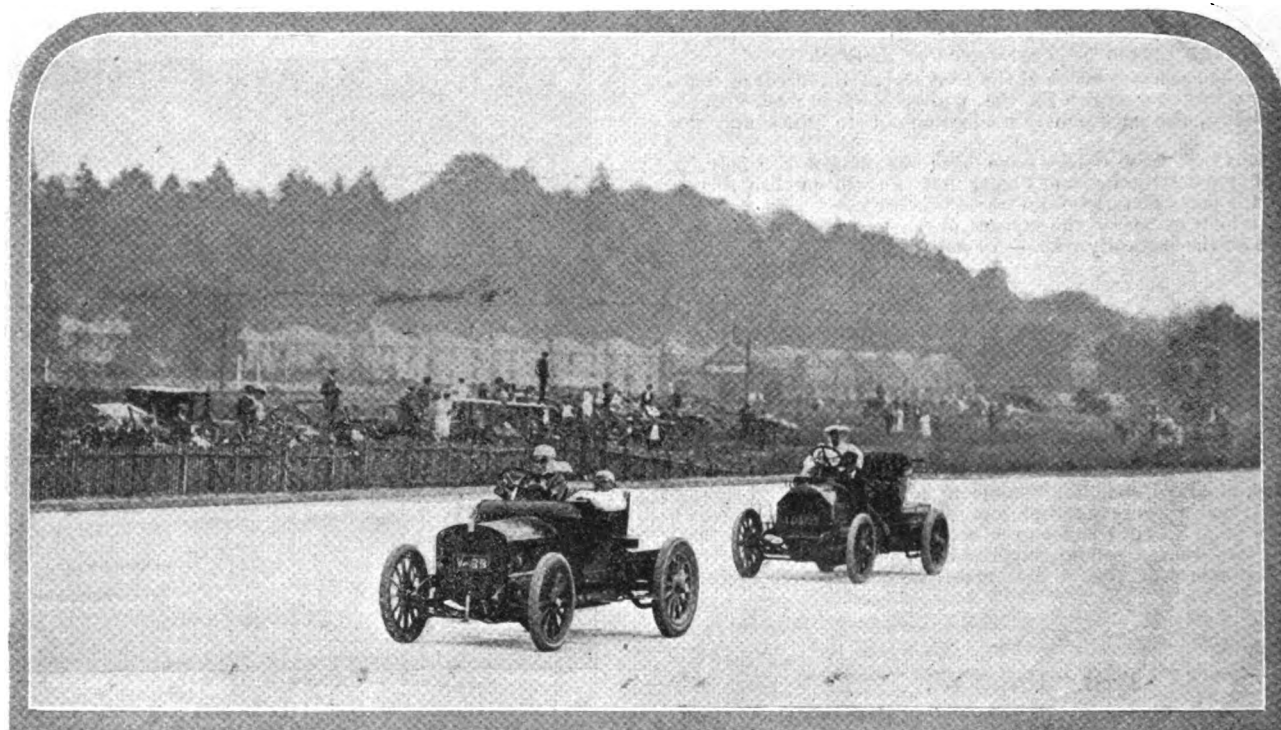
The programme commenced with the Third All-comers' Handicap Sweepstakes over a 5½ mile course. This produced twenty-six entrants, who were divided into two heats. In the first there were eleven starters, and a good race resulted in the following six qualifying for the final, the times following the names of the cars being the handicap allowances:—Sir George Abercromby's 58.1-h.p. Fiat, 1 m. 22 s.; T. Faulkner's 24.8-h.p. Mercedes, 2 m. 18 s.; A. F. King's 30-h.p. Mass, 1 m. 10 s.; O. S. Thompson's Austin "Pobble," 1 m. 28 s.; G. C. G. Moss's Arrol Johnston, "Guarded Flame," 1 m. 46 s.; O. Cupper's Metallurgique "Gollywog," 18½ s. Sir George Abercromby won by 200 yards, half a mile dividing second and third.

The second heat brought out another field of eleven, and a good race gave Mr. J. Keele the first position by about a quarter of a mile, Sir Duncan Hay being only a few yards behind Mr. H. S. Nalder, the

Interest quickened as the lady drivers began to parade their cars in the paddock. The fair motorists were identified by differently coloured scarves, most of which fluttered in the breeze as they reached the track. One, Miss Christabel Ellis, had, however, carefully guarded against the wind resistance of such a decorative piece of finery by securing its ends from any wayward tendencies. She drove the "Guarded Flame" of Mr. C. G. Moss, who accompanied her as mechanic. The vehicle was stripped for racing and was thus distinguished from the bodies of the other cars. "Pobble," "Bambo," "Sunbeam" and an unchristened vehicle also got well into the stride as they were driven up the straight to the starting point. The race was a Bracelet Handicap over a three mile run, ending along the straight, and the field was as follows, the competitors finishing in the order given:—

| | Start. |
|---|-------------|
| Mr. O. S. Thompson's Austin "Pobble," Miss Muriel Thompson | m. s. 0 3 1 |
| Lord Montagu's Itala "Bambo," Mrs. Locke-King | scratch 2 |
| Mr. G. C. G. Moss's Arrol-Johnston "Guarded Flame," Miss Christabel Ellis | 0 12 3 |
| Mr. A. Ridge-Jones's 17.5-h.p. Sunbeam, Miss N. Ridge-Jones | 0 37 4 |
| Mr. A. R. Peat's 6.3-h.p. De Dion, Mrs. J. Roland Hewitt | 1 45 5 |

Lady Muriel Gore-Browne, with Colonel H. Gore-Browne's 22.5-h.p. Humber, and Mrs. Ada Billing, with Mr. C. L. Woodward's 22.4-h.p. Mass, did not start.



Racing at Brooklands.—The Finish of the Ladies' Race.

six to qualify being as follows:—J. Keele's 41.9-h.p. Weigel, 1 m. 23 s.; H. G. Nalder's Berliet Grayling, 0 m. 46 s.; Sir Duncan Hay's 41.9-h.p. Daimler, 1 m. 32 s.; D. Pigot's 35.7-h.p. Berliet, 58 s.; J. Keele's 19.6-h.p. Belsize, 2 m. 22 s.; G. P. Bliss's 41-h.p. Vinot, 1 m. 22 s.

There were a dozen starters in the final for this Handicap Sweepstakes, and a capital race gave the victory to Sir George Abercromby, who, on his 58.1-h.p. Fiat, came along the finishing straight ten lengths ahead of Mr. J. Keele's Weigel, which reached home but a few feet in front of Mr. T. Faulkner's 24.8-h.p. Mercedes. Mr. O. Cupper on the Metallurgique "Gollywog" travelled well from the back-mark, but was unable to make up all the leeway necessary to get into premier position.

The July Trophy, over a five-mile course, was a handicap for private competitors, and attracted thirteen entrants, who were divided into two heats, which resulted as follows:—First heat, F. Ballough's 44.5-h.p. Junior, 11 sec.; Sir Geo. Abercromby's 58.1-h.p. Fiat, 23 sec.; Sir Duncan Hay's 41.9-h.p. Daimler, 42 sec.; C. Hobson's 48.6-h.p. Brasier, scratch. Second heat, T. Faulkner's 24-h.p. Mercedes, 1 min. 22 sec.; O. S. Thompson's Austin "Pobble," 38 sec.; H. G. Nalder's Berliet "Grayling," 2 sec.; G. C. G. Moss's Arrol-Johnston "Guarded Flame," 54 sec.

The final was regarded with more than average interest, as the 58.1-h.p. Fiat, by winning the Third All Comers' Sweepstakes earlier in the afternoon, had incurred a 10 sec. penalty. Eventually it resulted as follows:—Mr. Faulkner's Mercedes, 1; Mr. Thompson's Austin "Pobble" 2; Sir Geo. Abercromby's Fiat, 3. The race was won by eighty yards, a hundred yards separating second and third.

Mrs. Hewitt got away first, followed by the Sunbeam, and then Miss Ellis changing gear too soon, stopped her engine just beyond the starting line. Mr. Moss jumped out and restarted, when the "Guarded Flame" shot ahead, leaving the mechanic behind. She raced after "Pobble" and "Bambo," who were trying hard, but was unable to get nearer than 400 yards, while Miss Thompson won a splendid race by a couple of lengths, providing one of the most interesting moments of the day.

The final event was a private match of 50 sov. between Mr. S. F. Edge's Napier Firefly and Mr. J. W. Stocks' 25.6-h.p. De Dion over a distance of ten and a half miles. A capital race—one of the type that would do much to popularise Brooklands—was begun as Mr. Edge led the way from the start until he was a good distance ahead. Then his rival went to the front in the second lap, the Napier forged along on the third, the two cars, however, entering the homeward path together, and the De Dion winning by about a length at an average speed of seventy-one miles an hour.

The Small Car race was cut out of the programme owing to the number of entries not being sufficient, although eight owners of Sizaire-Naudin cars entered for the event.

For the August meeting several interesting events are promised, including the Brooklands Grand Prix, a match between Messrs. S. F. Edge and C. Jarrott, and a Journalists' Handicap.

THE Ross brand of Motor Spirit was used in the Scottish Trial by Mr. H. Keenely, who drove a 50-h.p. Darracq car.

CLUBS AND ASSOCIATIONS.

ROYAL.

At the meeting of the members of R.A.C. on Wednesday next the chairman, H.S.H. Prince Francis of Teck, will make a statement with regard to the scheme for the erection of a club house on the site of the War Office now demolished in Pall Mall, S.W. Plans of the new building will also be available for inspection.

The sub-committee responsible for the acceleration tests is now engaged in preparing the regulations, and it is understood that the trials will be carried out on the Brooklands track some time next month.

MOTOR UNION.

DURING the month of June 341 individual members were enrolled, an increase of over 42 per cent. as compared with June, 1907. The number of individual members who have paid the subscription for 1908 is 4,936, as against 3,793 for the corresponding period last year, an increase of over 30 per cent. Including affiliated members the total membership is about 15,500.

It has been decided not to proceed further with the proposed tour in the Loire Valley.

AUTOMOBILE ASSOCIATION.

THE handbook of the A.A. for 1908 has just been issued, and in its convenient size for the pocket will be a useful touring companion. In addition to setting forth the objects of the Association and explaining the merits of the patrol system on roads, there is a useful list of agents in the various towns and villages, with particulars as to their capacity for repair work, supply of tyres, &c., as well as other practical points upon which the motorist in distress will be glad of definite knowledge. Members of the A.A. will welcome the publication of the handbook; those not already within the ranks, catching a glimpse of this capital compilation, will have a desire to join forthwith.

MOTOR.

MEMBERS of the Motor Club found the visitors' enclosure at Phyllis Court, Henley, a great convenience during the regatta.

The gymkhana which is being organised for Wednesday next at Hastings promises well. Mr. R. E. Edmondson, the secretary, will be pleased to send particulars to motorists visiting that south coast resort.

LINCOLNSHIRE.

ON Wednesday of last week a motor gymkhana, promoted by the Lincolnshire A.C., was held in Lincoln, the proceeds being devoted to the County Hospital. The results were:—Starting and stopping race: C. H. Gilbert (Lincoln), on an 18-h.p. Siddeley, was the only competitor who stopped within the specified lines. Musical chairs: 1, Miss Wright (Lincoln); 2, Miss Chapman. Tying the knot race: 1, Mr. C. H. and Miss J. Gilbert (Lincoln); 2, Mr. R. M. and Miss Wright. Ball race: 1, Mr. W. R. and Miss Chapman (Horncastle); 2, Mr. R. M. and Miss Wright. Whistling competition: 1, Mr. and Mrs. C. H. Gilbert; 2, Mr. and Miss G. E. Sanders (Scampton). Heads and Posts: 1, Mr. T. W. Mays (Bourne); 2, Mr. G. E. Sanders (Scampton). Motor Union gold medal for best performance: 1, Mr. T. W. Mays.

BRITISH MOTOR-BOAT CLUB.

THE Ramsgate regatta of the British Motor Boat Club was held on Friday and Saturday. In the contest for boats exceeding ten knots, Brooke II., the scratch boat, covered the fifteen miles at an average speed of 22½ knots, but lost on time to Defender, which beat Fleurette by 1 min. 54 sec. for first prize. Hole I. was third.

In the cabin cruiser race, over a twelve miles course, Napier Major had to allow Lethe 10½ min., and the latter won by more than 7 min.

In the handicap for boats exceeding fifteen knots, for the British Motor Boat Club's silver cup, Brooke II. had to give long starts to Scarlet Runner, Fleurette II., Hole I., and Defender, but early in the race the Brooke, Fleurette, and Scarlet Runner gave up, and Defender won easily from Hole I. by nearly 13 min.

In the handicap for boats not exceeding fifteen knots, Napier Major and Lethe had a close race between themselves, but the prizes went to long start boats in Dorette and Dorothy.

MOTOR CYCLING.

THE following additional names have been passed for awards in the recent London-Edinburgh twenty-four hours' run. Gold medals:—W. Adam, H. G. Bell, A. Carpmuel, jun., H. C. Hanrott, W. Pratt, P. H. Trotman. Silver medals:—H. G. Cove, F. Mussell, J. H. H. Robinson, C. Truscott.

WELSH.

THE Welsh A.C. is holding a 266 mile penalty run for motor-cars under the competition rules of the Motor Union on July 10th and 11th. There are sixteen entries, as follows:—Captain D. Hughes-Morgan (40-h.p. Weigel), Messrs. B. W. Valentin (30-h.p. Beeston Humber),

T. J. Williams (23-h.p. Daimler and 12-14-h.p. De Dion), H. G. Davies (12-h.p. De Dion), A. A. Jones (14-h.p. Argyll), W. T. Farr (30-h.p. Beeston Humber), T. D. W. Drummond (14-h.p. Belsize), M. Whittington (28-32-h.p. Mercedes), G. Ace (39-h.p. Coventry Humber), E. H. Leader (29-25-h.p. Simms-Welbeck), F. E. Jacob (30-h.p. Daimler), E. F. Sutton (16-18-h.p. Darracq), G. A. Taylor (15-h.p. Coventry Humber), and W. Morris (16-18-h.p. Darracq).

SOUTH WALES.

THE annual hill-climbing competition of the South Wales and Monmouthshire Automobile Club took place at the Buttrills Hill, Barry. Major J. J. Galloway, R.E., officiated as judge; Principal E. H. Griffiths, as referee; Messrs. T. Butt Ekins, N. Evans, and W. Eastabrook, clerks of the course; Mr. Farrant Good, marshal; Mr. J. Sloggett, clerk of scales; Mr. F. J. Lidger, timekeeper; Mr. J. Thompson Willows, secretary; and Mr. J. MacTaggart had charge of the telephonic timing arrangements.

In the class open to gentlemen driving their own cars, a time record over this course was created by Mr. W. Graham with his 35-h.p. Daimler, the distance being covered in 45 2-5 sec.

Mr. William Graham received a gold medal. The other results were:—

Amateur members' cars, driven by owners or members of their families: gold medal, Mr. H. West (8-h.p. De Dion); silver medal, Mr. Leigh Jones (8-h.p. De Dion); bronze medal, Mr. J. G. Morel (12-14-h.p. De Dion.)

Amateurs members' cars, driven by their own paid drivers: gold medal, Mr. H. West (8-h.p. De Dion); silver medal, Mr. William Graham (35-h.p. Daimler); bronze medal, Mr. R. E. Morel (35-45-h.p. Gladiator).



The Manchester Cripple Children's Outing.—Some of the Children on Mr. C. E. Holme's Car.

Amateur members' cars, driven by ladies: gold medal, Miss May Morel (8-h.p. De Dion); silver medal, Mrs. C. H. Bailey (28-36-h.p. Daimler); bronze medal, Mrs. R. W. Hunter (12-14 h.p. Daimler).

Any car or cars nominated by professional members: 1st (silver cup), Mr. J. Ayliffe (12-14-h.p. De Dion); 2nd, Mr. W. Parker Thomas (14-h.p. Argyll); 3rd, Mr. James Thomas (20-h.p. Humber.)

SCOTTISH.

THE Chief Constable of Lanarkshire has given the Scottish A.C. a list of all the "controls" established by him in the county, and also the times of seventy-six cars which passed through these on a certain specified day. These have been fully considered by the Club Committee, with the result that they are satisfied that many of the cases justified the official view that disregard for the comfort and convenience of residents on the highway has been shown in many instances. Warning letters to the offenders who are residents in Scotland have been sent by the Club, and this friendly interchange of views between the police and automobilists should do much to secure a mutual good feeling north of the Tweed.

SCOTTISH MOTOR TRADE ASSOCIATION.

THE following is a list of the fleet of motor-cars which were supplied, free of charge, by Edinburgh members of the Scottish Motor Trade Association, Ltd., to convey the officials of the Scottish Chamber of Agriculture and their guests on the motor tour through East Lothian referred to in our Comments:—40-h.p. Napier, driven by Mr. W. L. Sleight (R.o.s.

teigh, Ltd., Edinburgh); 45-h.p. Sheffield Simplex, driven by Mr. W. E. Townsend (Middleton and Townsend, 50, Belford Bridge, Edinburgh); 30-h.p. White steam car, driven by Mr. Reginald R. Smith (The White Company, 7, Devon Place, Edinburgh); 30-h.p. Beeston Humber, driven by Mr. K. Henderson (the Scottish Automobile Company, Ltd., Edinburgh); 18-24-h.p. Austin, driven by Mr. Roy Chalmers (A. Donaldson and Co., Ltd., Westfield Avenue, Edinburgh); 18-h.p. Adams, driven by Mr. A. Ogilvie (King and Co., Leith Electric Works, Leith); 16-h.p. Albion, driven by Mr. W. G. Maxwell (A. Donaldson and Co., Ltd., Westfield Avenue, Edinburgh); 14-20-h.p. Renault, driven by Mr. H. Clelland (H. and D. Clelland, Belford Bridge, Edinburgh); 14-16-h.p. Argyll, driven by Mr. Baxter (Argylls (Edinburgh), Ltd., 16, Shandwick Place, Edinburgh); 10-12-h.p. Coventry Humber, driven by Mr. David A. Fairley, C.A., secretary to the Scottish Motor Trade Association, Ltd.

IRISH.

THE Irish Automobile Club having found that its existing garage in Dawson Street, Dublin, is too small to accommodate the constantly growing number of cars taken to it, has decided upon a new garage in Lower Belford Street, Dublin. The premises also have openings at Ely Place and Winlor Place, and are within a stone's throw of the famous Shelbourne Hotel on St. Stephen's Green. The new establishment covers not less than 2,000 square feet, and at first only a portion will be utilised, the other being, however, intended to be used as soon as the membership of the club requires the additional accommodation.

DUBLIN AND DISTRICT MOTOR-CYCLE CLUB.

ON Saturday the Dublin and District Motor-cycle Club held a reliability trial from Dublin to Maryborough and back, a distance of about 100 miles. Seven competitors faced the starter, Mr. Chambers, the hon. secretary of the club, starting at 2 o'clock, and the others at intervals of two minutes each, as under:—D. J. Quirke (24-h.p. Ariel), T. A. Batey (24-h.p. F.N.), W. Reilly (2-h.p. F.N.), F. J. Walker (5-h.p. twin-cylinder Rex), J. Br. wne (34-h.p. Triumph), R. H. Taaffe (34-h.p. Triumph). The first arrival at the finishing point was T. W. Batey, who completed the course without loss of marks within 2 min. of the expiration of the minimum time, fixed at twenty miles per hour. He was the only competitor who qualified for a silver medal. H. Taaffe had a two minutes' stop, caused by a short circuit in the thunderstorm, while F. J. Walker had two stops to pump up his tyres.

MR. E. T. HOOLEY has been elected to membership of the Nottinghamshire A.C.

THE Society of Engineers, 17, Victoria Street, Westminster, S.W., is being amalgamated with the Civil and Mechanical Engineers' Society.

ON Saturday last the members of the Kent A.C. were hospitably entertained by Dr. Firth (vice-president of the club) and Mrs. Firth at their residence, Cromer House, Gravesend.

TWO 12-h.p. Stars secured the second and third places in the hill-climbing contest lately held by the Transvaal Automobile Club, a gold medal being awarded for best general results.

IN the 150 mile reliability trial of the North Middlesex A.C., on Saturday, Messrs. C. Smith on his 12 h.p. Darracq, and C. T. Cutler on his 15-h.p. White steam car, were bracketed together for first place.

ROAD REPORTS.

CO. WICKLOW.—An inquiry has been held in Co. Wicklow concerning an application for a speed limit of 10 m.p.h. on about ten miles of the roads of the county.

LISKEARD.—The police have established a trap near the school at West Tap House.

RICHMOND PARK.—The Richmond Park authorities are trapping the roads through there for any motorists who may be exceeding the ten miles per hour limit. We are informed that the keepers place themselves behind the trees, and in one case were on a down gradient.

SUSSEX.—We are informed that Sergeant Waghorn is stationed on John's Cross Hill, three miles north of Battle. Cars are being stopped and the licences of drivers examined. Cars going to Hastings are also being timed and drivers travelling in the vicinity of Battle are urged to be careful, especially on Saturday and Sunday afternoons, when police are about.

HEREFORD.—Those who attend the Hereford meet of the R.A.C. should beware of the dangerous hill known as "Chance's Pitch." It lies between the British Camp (top of the Malverns) and Ledbury. There is a sudden drop and a sharp turn at the bottom, faced by a stone wall. A warning triangle exists, but is reported to be too near to the danger spot to allow time for any driver unacquainted with the road to take full advantage of it.

ON one day in last week a silver bowl, a silver cup, two gold medals, two silver medals and a bronze medal were won by the Daimler motor-cars at various club meets.

OWING to increasing business the British Motobloc Syndicate, Ltd., have removed to more commodious premises, comprising offices and showrooms at 85, Shaftesbury Avenue, London, W., where the latest types of Motobloc cars will be displayed.

CASES AGAINST MOTORISTS.

EXCEEDING LEGAL LIMIT.

Several batches of motorists have been fined for exceeding the speed limit within the last few days at Beverley, Sleaford, Southam, Selby, Coventry, Kingston, Penkridge, Spittlegate (Grantham), Colchester, Belfast, Godalming, and Saltash.

A man who went for a ride on another person's motor-cycle near Chesterfield has been fined 2s. 6d. for not having a licence and 10s. for furious driving, as well as costs in both cases.

Nineteen summonses against motorists, fifteen of which were for exceeding the speed limit, were down for hearing at the Chichester County Bench on Saturday. Fines ranging from £2 to £10 were imposed. At Hoveham on the same day ten cases were heard, fines being inflicted in every instance.

NOT PROVEN.

In the Stirling Sheriff Court three cases of too fast motor-car driving have been heard. In one the chauffeur of the deputy chairman of the Highland Railway Company was charged with having driven a car at 22½ m.p.h. over the police trap at Drymen. The case resolved itself into a comparison of a stopwatch possessed by a policeman and a chronometer owned by the driver. In the end the Sheriff found the case not proven.

DISMISSAL.

At the Barmouth (Merioneth) Petty Sessions, W. R. K. Mainwaring, of Mold, was summoned by Inspector Owen (Barmouth) for contravening Section 9 of the Motor Car Act, 1903, by driving a motor-car at a speed exceeding twenty miles per hour. Mr. D. Guthrie Jones (Dolgelly) appeared for the police, and Mr. T. M. Keene (Keene and Kelly, Mold) was instructed for the defence. According to the information the offence was alleged to have been committed on June 6th, 1908, at the parish of Llanaelidwyn. At the outset it was contended for the defence that the case for the informant must fail. It was a condition precedent to a prosecution for an offence against Section 9 (1) of the Motor Act, 1903, that warning of the intended prosecution should be given at the time the said offence was committed, or written notice subsequently sent to the defendant in compliance with Section 9 (2) of the Act. The objection was not a mere technicality, for the omission to comply with the sub-section had inflicted a hardship on the defendant. For the informant it was urged that necessary notice had been given, but the Bench upheld the objection and dismissed the case.

At the Beaconsfield Police Court, on Monday, a charge against a motorist was dismissed and the defendant awarded five guineas costs against the police. The accused, Mr. Edward Gillett, of Gillett's Motor Works (Ltd.), Inverness Road, Hounslow, was charged with failing to comply with a summons to produce his licence for endorsement after a third conviction for exceeding the speed limit, and he was defended by Mr. Wilfrid Firth. The police stated that on May 3rd last Mr. Gillett was fined £25 and costs for driving at a speed of fifty-two miles an hour. He was ordered to produce his licence for endorsement, but failed to do so, and a summons was issued which was also ignored. Mr. Wilfrid Firth, on behalf of the defendant, said that immediately his client received the summons he wired to the Bench saying his licence had already been endorsed, but this was followed by the issuing of a warrant for his arrest. Mr. Firth said his client was brought on a warrant for not forwarding a licence to be endorsed when that licence had already been endorsed by the clerk. The Bench dismissed the case, and awarded five guineas costs against the police.

At the High Wycombe Borough Sessions, Clive Bowring, of Saxonbury, Ditton Hill, was summoned at the instance of Head Constable Sparling for driving a motor-car beyond the legal limit in the borough, on June 21st. Mr. Gilbert Beyfus appeared for defendant, and pointed out that defendant had been summoned in the name of "Bowring Clive," but he would not raise any objection to that, agreeing to the summons being amended. Mr. Beyfus then proceeded to raise a point of law, contending that defendant had not received proper notice. The notice which defendant received from the police was: "Motor-car P. 1,091. Dear Sir,—On Sunday, June 21st, the above car was driven over a measured distance of two miles: 733 yards in this borough at a rate of speed found to be twenty-five miles 350 yards per hour." As defendant was not stopped, he had not a clear idea of the offence with which he was charged. The Mayor: Have you any evidence of identification?—Head Constable Sparling: No, sir. Mr. Deacon: You admit the car was there? Mr. Beyfus: Yes. Mr. Deacon: The car was there if defendant was not. Mr. Beyfus: But he cannot be held responsible for what his car does. The magistrates dismissed the case.

The case against the chauffeur of Mr. J. W. Orde, summoned at the Bromley Petty Sessions for driving to the danger of the public, has been dismissed.

Dr. Ethel Williams, of Newcastle, was summoned on Tuesday at Hexham Petty Sessions for having driven a motor-car at a speed dangerous to the public at Horsley village on June 27th. Mr. Clark said that Miss Williams did not deny that she was going seventeen miles an hour, but she was driving carefully. She apologised for having transgressed the law, and as she was the first lady who had come before them asked that they should dismiss the case on payment of costs. The chairman said the majority of the Bench had agreed to the suggestion, and defendant would be dismissed on payment of costs.

AN ACQUITTAL.

At Notts Assizes, on Tuesday, Edward Dould was indicted for the manslaughter of Harold Stone. While the accused was driving the deceased and another workman named Peters in a motor-car late on the night of May 9th, the car came into collision with a cab. The occupants of the motor-car were thrown into the road, and Stone was so seriously injured that he died shortly after admission to hospital. For the defence it was urged that the speed had been exaggerated, and that the cab was on the wrong side of the road. The accused was acquitted.

THE LIABILITY OF CAR OWNERS.

In the City of London Court, George Mower sued Major Arthur Pirie for £23 15s. for damage done to his car in Oxford, on August 4th, when the defendant's car collided with it. It seemed that the major's car was being driven by the chauffeur without his master's knowledge. Owing to the collision the car could not be returned until two days later. Mr. Hogg contended that as the chauffeur was out on a jaunt of his own the defendant was not responsible for the man's negligence. The chauffeur said that the carburettor had been altered, and the car had to be tested. That was why he took the car out.

Mr. Glasgow, for the plaintiff, argued that the chauffeur had an implied authority to test the car, and therefore he was mainly on his master's business. He could consequently have taken the housemaid and the cook too without freeing the master from responsibility. The jury found for the defendant, and his costs were allowed.

AN EARLY MORNING DRIVE.

A motorist summoned for driving a car in New Street, Birmingham, at 1.30 in the morning recently, has had his case dismissed at the Birmingham Police Court, his solicitor pointing out that the thoroughfare was quite devoid of traffic at the time mentioned and that there were excellent lights on his car.

DAINGEROUS DRIVING.

Mrs. Hallworth, of Mansfield, has been charged with driving a motor-car in Bridge Place, Worksop, in a manner dangerous to the public. The solicitor for the police said that not only had they taken stringent measures, but they also had civilians on the watch in order to stop reckless driving. The Bench said this was defendant's first offence, but it occurred in the most dangerous part of Worksop, and they could not impose a fine of less than £5.

At Abervele, on Saturday, a charge of reckless motor-car driving at Llanddulas was dealt with. The defendant, who did not appear, was described as Harold D. Balfour, motor-car driver, London. Constable R. Wlands, of Llanddulas, stated that on May 24th, near a dangerous curve below the village, he saw a car coming down the hill from the direction of Colwyn Bay. It was travelling at such a rate that he jumped to one side and held up his hand for it to stop. The driver reduced the speed a little, but then went on again as fast as before. The carriage and pair of the Bishop of St. Asaph then came by, and the Bishop complained to the witness of the reckless manner in which the car had passed him. The Bench imposed a fine of £15 and costs.

WITHDRAWAL OF A SUMMONS.

With reference to the case at Lancaster, when Mr. Herbert Gordon, of the Junior Carlton Club, Pall Mall, S.W., was mentioned as defendant, we understand that the police have withdrawn the summons. On the same day he was alleged to have been in Lancaster he sold his car in London, and had, as a matter of fact, never been in the northern town in his life. This disposes of the matter, and should suggest to the police generally the necessity of avoiding such mistakes, which are displeasing to the motorists concerned and unsatisfactory all round.

THE FOUR-INCH RACE.

THE undermentioned cars have been entered at the ordinary fee, the powers being according to the R.A.C. rating:—25·6-h.p. Rover (two), J. K. Stanley; 25·6-h.p. Hutton (three), S. F. Edge; 25·6-h.p. Arrol-Johnston (three), Ernest A. Rosenheim; 25·6-h.p. De Dion-Bouton, J. W. Stocks; 25·6-h.p. Darracq (three), A. Rawlinson; 25·6 Hillman-Coatalen (two), L. Coatalen; 25·6-h.p. Scat, J. Newton; 25·6-h.p. Vulcan, Thomas Hampson; 25·6-h.p. Coventry-Humber, Walter Phillips; 25·6-h.p. Beeston-Humber (two), T. C. Pullinger; 25·6-h.p. Metallurgique (three), Warwick Wright; 24·8-h.p. Berliet (two), J. E. Hutton; 25·6-h.p. Thornycroft (three), Tom Thornycroft; 25·6-h.p. Vinot (two), Gordon Usmar; 25·6-h.p. Calthorpe (two), G. W. Hands; 25·6-h.p. Deasy (two), Philip Graham; 25·6-h.p. Westinghouse (two), A. Gaal.

The entry list finally closes on August 1st, at 12 noon. Of the entries already received twenty-one are of British origin and fourteen of foreign origin. The race will probably be held on Thursday, September 24th.

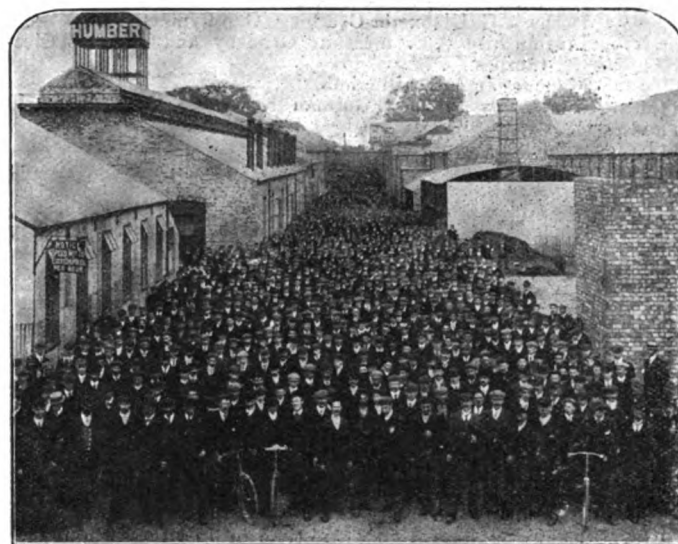
FROM the Mansfield Motor Body Company, Ltd., of Victoria Works, Mansfield, comes a copy of their new catalogue of motor body designs. The firm are well laid out for this class of work and are able to turn out bodies to suit any particular chassis.

MR. F. GRAHAM FAIRBANK has written to the United Motor Industries, Ltd., stating that the "Bousfield" Silencer recently fixed to his 10-12-h.p. two-cylinder car has considerably reduced the noise of the exhaust, the vibration or thud of the engine being also markedly lower, without in any way increasing the back pressure.

COVENTRY HUMBER ANNUAL OUTING.

IF any sign were wanting of the prosperity of the motor trade in Coventry it was amply afforded in so far as the Humber Company was concerned when on Saturday morning last some 1,500 of their employees took train, under the happiest conditions, for Llandudno. The weather was perfect throughout the day, with a calm sea for the trip to Bangor, Beaumaris, and Menai Bridge in the afternoon. Mr. Walter Phillips, the works manager, with his able lieutenant, Mr. Napier, accompanied the party, and under the management of the joint organising secretaries, Mr. T. Harrison and Mr. C. Willson, the entire day's proceedings passed off without a single hitch. A pleasant little ceremony took place on board the "Marguerite" when Mr. J. R. Dixon, the hon. treasurer of the outing, in the name of the staff and a few friends, presented their chief with a handsome ring. In the evening the executive staff and guests were entertained by Mr. Phillips at the Grosvenor Hotel. At the conclusion of the dinner, and after the loyal toasts had been honoured, Mr. C. J. Band proposed the Humber Company, and, dilating upon the boundless energy of their president, Mr. Phillips, said their works were now capable of executing orders to any extent the trade could provide. Mr. Phillips, who on rising was received by a demonstration of the greatest enthusiasm, thanked the members of his staff for the friendship they expressed towards him, and gave evidence of the perfect understanding existing between them.

Thus terminated a most successful and enjoyable outing, and it was a merry and contented party that found its way, at 10 p.m., to the station for the return journey to Coventry.



Some of the employees at the Coventry Works of Messrs. Humber, Ltd.

The photo from which the accompanying illustration was reproduced was taken at 6 a.m. on a recent Tuesday morning, and shows the workmen passing through one of the main avenues, which is about one-third of a mile in length. Mr. W. Phillips, the manager, is seen standing in the front row, fourth from the left.

COMPANY NEWS.

ARGYLL MOTORS, LTD.—A circular has been issued to the shareholders of the Argyll Motors, Ltd., summoning an extraordinary general meeting at Glasgow on Tuesday next to consider the advisability of securing a voluntary winding up of the company. A circular to agents adds that the directors do not anticipate any stoppage in the business, and express the hope that a suitable scheme for reconstruction may soon be evolved. Meanwhile agents are asked not to relax their efforts to effect sales. The company was registered March 11th, 1905, to take over as a going concern the Hoxier Engineering Company (Limited), which was registered March 31st, 1900. The authorised capital is £650,000.

DELAHAYE AND CO., LTD.—On Tuesday the second ordinary general meeting of Delahaye and Co., Ltd., was held at the Great Eastern Hotel, London, E.C., when the chairman, Mr. A. A. Campbell Swinton, reported that the gross profits had increased to £29,035, and the net profits amounted to £21,604, as against £15,283 for the previous year. The capital of £165,000 is now all fully paid, and the stock in hand £70,768. £5,000 is carried to general reserve, and after payment of dividends on the preferred ordinary shares a return of 6½ per cent. on the ordinary shares has been approved, with £3,674 to be carried forward. The turnover for the past year amounted to £210,840, and for the first five months of 1908 a progress of 13 per cent. over the business for 1907 was made. Agencies have been established with Messrs. Holmes, 37, Margaret Street, Cavendish Square, London, W., and of Derby, and also with Messrs. Hobson, Ltd.

FORTHCOMING EVENTS.

JULY.

- 11th (S.).—Provincial meet of the R.A.C. at Hereford. Lunch at the Green Dragon Hotel; visit to Ledbury Park, and dinner at the Assembly Rooms.
Essex C.A.C. gymkhana at Brentwood.
Aston Hill climb of the Hertfordshire C.A.C.
Essex M.C. gymkhana at High Beech.
Leicester A.C. hill climb at Kettleby.
Berks A.C. meet at Ascot.
Bristol and Glos. A.C. dinner at Cheltenham.
Derby and District A.C. compete for the Du Pré Cup.
Hull and East Riding A.C. reliability trial to Scarborough.
Leicestershire A.C. Kettleby hill climb.
Lincolnshire A.C. meet at Crowland.
Wolverhampton A.C. hill climb at Coalport Hill.
13th (M.).—Entries close for R.A.C. dust trials.
13th-13th.—A.C.U. Land's End to John o' Groat's Trial.
15th (W.).—Hastings Automobile Meeting organised by the Motor Club.
Motor parade at 11 a.m.; gymkhana at 2:30 p.m.
16th (Th.).—Club meet of the Netts A.C. at the Hop Pole, Ollerton.
18th (Sat.).—Annual gymkhana of the Herts C.A.C. at The Grove, Watford, by permission of the president, the Earl of Clarendon.
Gymkhana of the Kent A.C. at Maidstone.
Meet of the Liverpool and Cheshire A.C.'s at Delamere.
New Forest and Dorset A.C.'s joint hill climb.
Hill Climb of the Essex C.A.C.
Derby A.C. Uttoxeter Challenge Cup Competition.
Lincolnshire A.C. meet at Grimsby and drive to Cleethorpes.
Manchester A.C. hill climb.
20th (M.).—Entries close for the O'Gorman trophy.
20th and 21st.—The R.A.C. dust trials at Brooklands.
23rd (Th.).—Gymkhana of the Cambridge A.C. at Chippenhams Park.
Hill climbing competition of the Hull and East Riding A.C.C.
25th (Sat.).—Petrol Consumption Tests of the Motor Cycling Club.
Annual Open Hill Climb of the Midland A.C. at Shalsley Walsh.
Committee meeting of the Kent A.C. at Harne Bay.
Motor Union Provincial meet at Harrogate.
Cheshire A.C. hill climb.
Lancashire A.C. open hill climb.
North Yorkshire A.C. gymkhana at York.
West Surrey A.C. gymkhana at Godalming.
26th (Sun.).—Southend M.C. run to Coach and Horses, Quendon.
29th (W.).—Lincolnshire A.C. at Skegness.

LIGHTING-UP TIMES—LONDON.

July 11th—9.13 13th—9.11 15th—9.10 17th—9.8
 " 12th—9.12 " 14th—9.11 " 16th—9.9 " 18th—9.7

To find the approximate lighting-up time in July for Birmingham 13 minutes should be added to the above times, 18 for York, 22 for Manchester, and 45 for Glasgow.

AUTOMOBILE ACCIDENTS.

A TAXI-CAB and a cyclist collided in Manchester, and as a result the steering gear of the cab became locked. The driver lost control of the cab, and it ran on to the footpath and knocked down a woman, who was taken to St. Mary's Hospital, where she was detained.

A SERIOUS motor-car mishap, which resulted in two persons sustaining serious injuries, has occurred near Nantwich. The occupants of the car were Mr. Harry Creighton, of the firm of Moore and Creighton, motor-car agents, Nantwich, Mr. Horace Woodrow, of Nantwich, and a local postman, who was picked up on the road. The car was being run on a trial trip, and when approaching Hamor Green, going towards Nantwich, the tyre of the back driving-wheel burst. The wheel collapsed, and the occupants were shot out on the road. Mr. Creighton's leg was severely gashed and he is suffering from concussion and internal contusions.

AN inquest was held at Dorking on Saturday on the body of Miss Bertha Hayler, who died from injuries received in a collision with a motor-car from Streatham. Evidence was given to the effect that Miss Hayler, during a run with her club, was turning a corner into the main road, and was unable to avoid the car, which was travelling at a speed of from ten to twelve miles an hour. She was thrown on to the bonnet of the car, and fell beneath the wheels. The jury returned a verdict of "Accidental death," and exonerated all parties from blame. They expressed the opinion that the under-carriage of motors generally was too close to the ground, and recommended that a danger signal should be erected near the corner where the accident occurred.

MR. CHRISTIAN C. JACOBSON, a member of the Suffolk County Council, had just started for home on Tue-day, after attending a Council committee meeting in Ipswich, when his motor-car collided with a cyclist, who fell on to his head. Mr. Jacobson got out to render the injured man assistance. As soon as he resumed his seat in the motor-car he appeared to faint, and expired. Death is attributed to heart failure as the result of shock from witnessing the accident.

EXPORTS OF BRITISH MOTOR-CARS AND PARTS.

IN our issue of January 18th last we published some figures showing the total shipments of motor-cars and parts from the United Kingdom during the past two years. We are now able to give a table indicating the various countries to which the shipments were made:—

EXPORTS OF BRITISH MOTOR-CARS.

| To | 1907. | 1908. |
|----------------------------------|---------|--------|
| | £ | £ |
| Holland | 14,397 | 9,994 |
| Belgium | 9,209 | 3,420 |
| France | 18,314 | 15,081 |
| Italy | 44,162 | 20,686 |
| Egypt | 7,847 | 8,433 |
| United States | 29,370 | 36,507 |
| Argentina | 13,225 | 22,534 |
| Other foreign countries | 100,285 | 45,400 |
| Cape of Good Hope | 24,021 | 17,310 |
| Natal | 16,381 | 14,183 |
| Bombay | 107,410 | 59,693 |
| Madras | 16,029 | 7,198 |
| Bengal | 51,237 | 30,653 |
| East Bengal and Assam | 935 | 379 |
| Burmah | 8,607 | 8,273 |
| Australia | 168,706 | 89,281 |
| New Zealand | 123,428 | 62,453 |
| Other British Possessions | 104,084 | 43,931 |

£857,647 £495,399

EXPORTS OF MOTOR-CAR PARTS.

| To | 1907. | 1908. |
|----------------------------------|---------|---------|
| | £ | £ |
| Germany | 12,612 | 3,711 |
| Belgium | 17,653 | 12,958 |
| France | 213,424 | 179,839 |
| Egypt | 428 | 1,275 |
| United States | 16,344 | 8,605 |
| Other Foreign Countries | 58,262 | 21,366 |
| Cape of Good Hope | 12,411 | 11,591 |
| Natal | 9,672 | 12,930 |
| India | 59,222 | 32,912 |
| Australia | 23,648 | 12,058 |
| Canada | 6,293 | 11,004 |
| Other British Possessions | 37,340 | 15,146 |

£467,311 £313,395

Total of Cars and Parts. £1,324,958 £818,794

BUSINESS NEWS.

SIR LINDSAY LINDSAY HOGG has purchased a Daimler 42-h.p. limousine.

DURING the progress of the hill climbs in connection with the recent trials the manner in which Dunlop grooved tyres enabled competitors to get away, owing to the superior grip they afforded as compared with plain rubber tyres, was the subject of common comment.

THE Coventry Chain Company, Ltd., are now devoting attention to the production of spur-wheels and pinions for the motor trade. The illustration they have sent us to indicate their capabilities in this department shows gears ranging from a few inches in diameter up to nearly six feet the latter having 137 teeth.

ANOTHER instance of the continuous reliability of Humber cars has been provided by Mr. W. Marshall, of Stanford Cottage, Bowden, Cheshire, who has been running a 15-h.p. Coventry Humber landaulet since August, 1906. During this time it has covered over 40,000 miles, and has never been laid up for repairs.

ON Wednesday the London and Paris Exchange Motor Agency, Ltd., held an auction sale of cars, tyres, &c., at 55-59, Shaftesbury Avenue, W.C.

THE Kempshall Tyre Co. of Europe, Ltd., have evidently found the advertisement which they obtained by sending their sandwichmen by coach to the Derby to be of the right type, as we noticed they were in evidence at Henley, appearing alternately in the town and along the towing path to the Reach, each with his tyre as usual.

AN exceptionally good opportunity to secure a genuine second-hand car is offered by the Ariel Motor Company, Ltd., 101, New Bond Street, W., who take any make of vehicle in part payment of Ariels. They have at the show-rooms some forty modern cars of various makes, which they are offering at low prices.

IN the provisional results in the Scottish Trial, Mr. Warwick Wright's 26-h.p. Metallurgique car, No. 57 in Class E, was not given a non-stop run on the second day, but he has now received a letter from the secretary, Mr. R. J. Smith, to the effect that that run of the Metallurgique is also to be allowed as a non-stop. This will now make a complete non-stop for the Metallurgique throughout the Scottish Trials, and, taken in conjunction with the fact that the car obtained the "fastest time" four days out of five in the hill-climbs, and was second on the second day, constitutes a good record.

THE Motor-Car Journal.

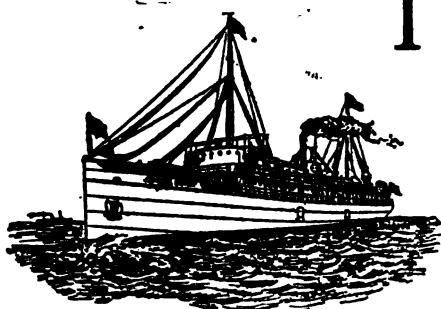
VOL. X.]

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COMMENTS.



THE Ferries Committee of the Birkenhead Corporation has decided to run a Sunday service of luggage boats from the Prince's Landing Stage, Liverpool, to Woodside, Birkenhead. The boats will run hourly from 10 a.m. to 10 p.m. and double the ordinary tolls will be charged on these steamers. While the luggage vessels are running motor-cars will not be conveyed in the passenger steamers. The ordinary rates for the ferriage of motor-cars by luggage steamers are 8d. for cars not exceeding 11 ft. in length; 1s. for a maximum of 14 ft., 1s. 6d. for those not more than 17 ft., and 2s. for the cars beyond that measurement. For motor-buses and charr-a-banc the charge is 3s. On passenger steamers the rates for motor-cars are from 2s. to 3s. 6d. and the vehicles must not exceed 6 ft. 3 in. in height and 6 ft. 5 in. in breadth over all. We understand that this improvement in the arrangements for motor-cars crossing the Mersey is due to the well directed efforts of the Liverpool A.C. and Self Propelled Traffic Association.

Motor Traffic in London.

MUCH has been said and written in advance of the deputation to the Home Secretary from the City of London. This was received on Tuesday, and, as became its representative character, was most respectfully welcomed by Mr. Gladstone. The Lord Mayor took the right line in disclaiming any feeling of hostility to the motor industry, but was none the less emphatic in asking for protection from the noise caused by the growing motor traffic. On this point we would refer the local authorities to an article in the current issue of the "Industrial Motor Review," in which the writer shows that this particular nuisance of noise is greatest in the narrow streets, and that when Fleet Street was recently closed to such traffic motor-buses were sent along the Embankment with a lessened noise that gave rise to no complaints. This matter has evidently been considered by the Home Office, but Mr. Gladstone is averse to the police incurring all the odium of diverting motor-bus traffic from one street to another. One interesting fact disclosed by Mr. Gladstone was that motor-buses are now carrying passengers at the rate of 200,000,000 a year, and that people who used them daily had gained half an hour or an hour of additional home-life by means of the rapid transit which they provided. The total number of motor-buses running on April 13th, 1908, was 1,137. During the year the police reported 2,105 for dropping oil, 188 for emitting smoke, 936 for defective brakes, 362 for defective steering apparatus, and 4,862 were reported as being unfit for traffic on account of noise. The police reported a total number during 1907 of 8,507. That, of course, did not represent so many separate buses, as the same vehicle might be reported several times, but the figures showed the energetic way in which the police had been dealing with

defective vehicles. During the present year 1,876 had been reported on account of noise. The outcome of the deputation seems to have been a suggestion from Mr. Gladstone that the L.C.C. and the Corporation of the City of London should act in unison in putting Section 10—relating to the restriction of speed or prohibition from particular highways—of the Motor-Car Act into operation.

Fines at Haywards Heath.

FINES have ruled high at Haywards Heath Police Court this week, and on Monday the magistrates managed to clear off most of the Easter and Whitsuntide cases—many of which were caught in the long distance trap of which much has lately been heard. P.-s. Waghorn has now been joined by P.-s. Huntley and P.-s. Bugden, and the trio had as area of observation the road from Patcham to Slaugham at Easter, and from Newtimber to Bolney and Pitshead Crossways, Cuckfield, at Whitsuntide. Despite one motorist's protestations of sorrow he was fined £15 and costs—a sum which, as he feelingly told the Bench, adds materially to the upkeep of a small car. Fines ranged from £5 to £15—substantial enough to worry the motorist of moderate means, who takes his trips without any desire to inconvenience other people and would wish to be allowed to go his way unmolested by a system of police espionage that is neither desirable nor useful.

Common sense and the Bench.

NOT often do magistrates discriminate between the cases where speed is urgent and those where it is indulged in merely in wantonness and thoughtlessness. At Greenwich, however, a doctor, who was summoned recently for exceeding the legal limit at Catford, raised the defence that he had been called to a patient who was very ill. This, the magistrate agreed, was one of these occasions when discretion might be exercised; in fact, he could not take upon himself the responsibility of fining the defendant. The doctor was therefore released from the case on payment of the costs of the summons.

Motor-car Imports and Exports.

A RENEWAL of activity in the imports of foreign motor-cars and parts into this country has to be recorded for the past month, the returns for June showing an increase as compared with the corresponding month of 1907 of £25,166. Of complete cars only 372 were imported during the month, of the value of £133,999. The number of chassis imported was 309, valued at £113,157, while parts were responsible for £180,022, giving a combined total for June of £427,178, as against £402,012 in the corresponding month of last year. The gross imports of cars (2,303 in number), chassis (1,576), and parts during the first six months of the current year amounted to only £2,187,098, as contrasted with £2,488,902 in the corresponding period a year ago. Turning now to the section relating to the exports of British automobile productions, these show a slight decrease—from, in the aggregate, £84,040 in 1907, to £83,993 last month. Altogether 138 complete cars (£48,567) and 7 chassis (£3,697) were despatched from this country in June, as well as parts to the extent of £31,729. The gross ship-

ments during the six months ending with June are returned at £580,019, which contrasts with £583,706 in the similar half of last year.

No Favour for Doctors.

HITHERTO the medical profession of New York have been favoured with regard to the speed of their motor-cars whenever they have been carrying a red cross sign provided by the police authorities. This has secured them a passage in crowded traffic when engaged professionally, and has enabled them to have a privilege which has been partially suggested by some metropolitan magistrates for doctors in the City of London. Now, however, no further signs are to be issued, and the police department of New York intends to disregard any that may be used when carrying out traffic regulations, so that the only vehicles able to claim right of way during processions, &c., will be those of the police, fire department and postal service. Apparently no reason has been given for the change in policy, and we should be pleased to hear from some of our readers in the States as to whether the authorities have attempted to justify their action—a new policy which hardly seems in accord with the enlightened plan that has hitherto prevailed.



Taking the Orphans at Hartford Conn., U.S.A., for a motor excursion.

The Speed Limit.

AN avalanche of questions with regard to the motor traffic in the country was asked of the Local Government Board in the House of Commons by several M.P.'s, on Monday, prominent among whom were Messrs. Straus, Cathcart Wason, and Harold Cox. A suggestion was made as to whether the Motor Car Act, 1903, should not be excluded from the Expiring Laws Continuance Act this year, and although the Speaker disallowed the question without notice, we understand it is likely to be raised again by the member for the Orkney and Shetland Isles. Mr. Cox was concerned as to the mechanical limitation of the speed of motor vehicles, and also as to the distance of the under-carriages of motor-cars from the ground. On both these points Mr. Burns was obdurate; with regard to the former he was able to call the Royal Commission for Motor Cars to witness in his favour, and declared that he could not see his way to adopt any such proposal. Neither is he sanguine with regard to the probability of the latter suggestion. The result of the catechism was an important declaration when the president of the Local Government Board declared against any maximum speed limit being imposed, his view being, that the enforcement of Clause 1 of the present Act was sufficient to meet the case.

Further he professes that he is rather afraid to approach the Motor Car Act on that account, as the speed limit would probably be "knocked out altogether," a course that would probably arouse the ire of many of the present supporters of the right honourable gentleman. Replying to another question with regard to the increased costs of the maintenance of main roads, he intimated that no promise could be given to introduce legislation relating to motor traffic during the present session of Parliament.

Motorists to Pay for the Roads.

AT the last meeting of the Brompton (Cumberland) Rural District Council a resolution was received from a similar body at Dalton-in-Furness asking for support to a resolution in favour of an adequate re-imbursing tax on motor-driven vehicles, the proceeds of such to be employed in the maintenance of the highways. When it was first suggested that motorists should express agreement with the idea of increased taxation with a view to the addition being applied to the maintenance of the roads, we expressed a view that ere long some local Council would go even further and suggest that motorists should be taxed so as to pay for the difference between the cost of up-keep at the time when only horse-drawn vehicles were on the road, and now when the automobile is playing a growing part in the locomotion of the country. The Dalton Council is evidently anxious that this should be done, and the fact that the authorities of Brompton have endorsed their opinion shows how attractive the idea will be to those who have to collect the rates of the country. At the same time we would emphasise the fact that this is a disastrous policy and one that is not likely to be tolerated by Parliament; in fact, the time is coming when motor traffic will be in the ascendant, and it will be futile for local councils to suggest the imposition of such a tax, which could only have the effect of retarding the progress of a really great national industry.

Signposts at Hythe.

WE do not understand the attitude of the Town Council of Hythe with regard to making the way through the town plain to strangers visiting this country. For some time a reciprocal movement has been considered for placing signposts on the road from Boulogne to Paris and also from Folkestone to London for the convenience of motorists. The matter has gone well forward and has just come up at the Hythe Town Council, when application was made for permission for the signposts to be erected in Hythe. The Borough Surveyor suggested that the presence of such signs would tend to accelerate the speed of cars through the town, and various councillors speaking to the same effect, the proposal was negatived. But surely such discourtesy to French visitors is not likely to be appreciated in the town; all that was wanted was that they should be guided on their way without the uncertainty that often is associated with journeying in a strange place. Evidently the Council has felt somewhat ashamed of its attitude, for, on the suggestion of the Mayor, it has been decided to give permission for three small posts to be erected in and near the town.

The A.A. in Scotland.

RADIATING from the south, the Automobile Association has made its way to the north; from Manchester it has served a large portion of the country, and now the development of interest in its work has carried it beyond the Tweed. The arrangements were made with the usual A.A. celerity—once the policy had been decided. On Thursday of last week Mr. Stenson Cooke went to Manchester for a northern conference, meeting at the headquarters in Lancashire. At 9 a.m. on the following morning he met Col. W. J. Bosworth, the chairman of the Association, at Glasgow. Together they inspected 120 miles of Scottish roads, attended a meeting of the Scottish Patrol Com-

mittee, engaged and fitted up offices in Glasgow for the Scottish branch of the A.A., and had an important interview with a neighbouring Chief Constable on the behaviour of motorists in his county—all in one day's work.

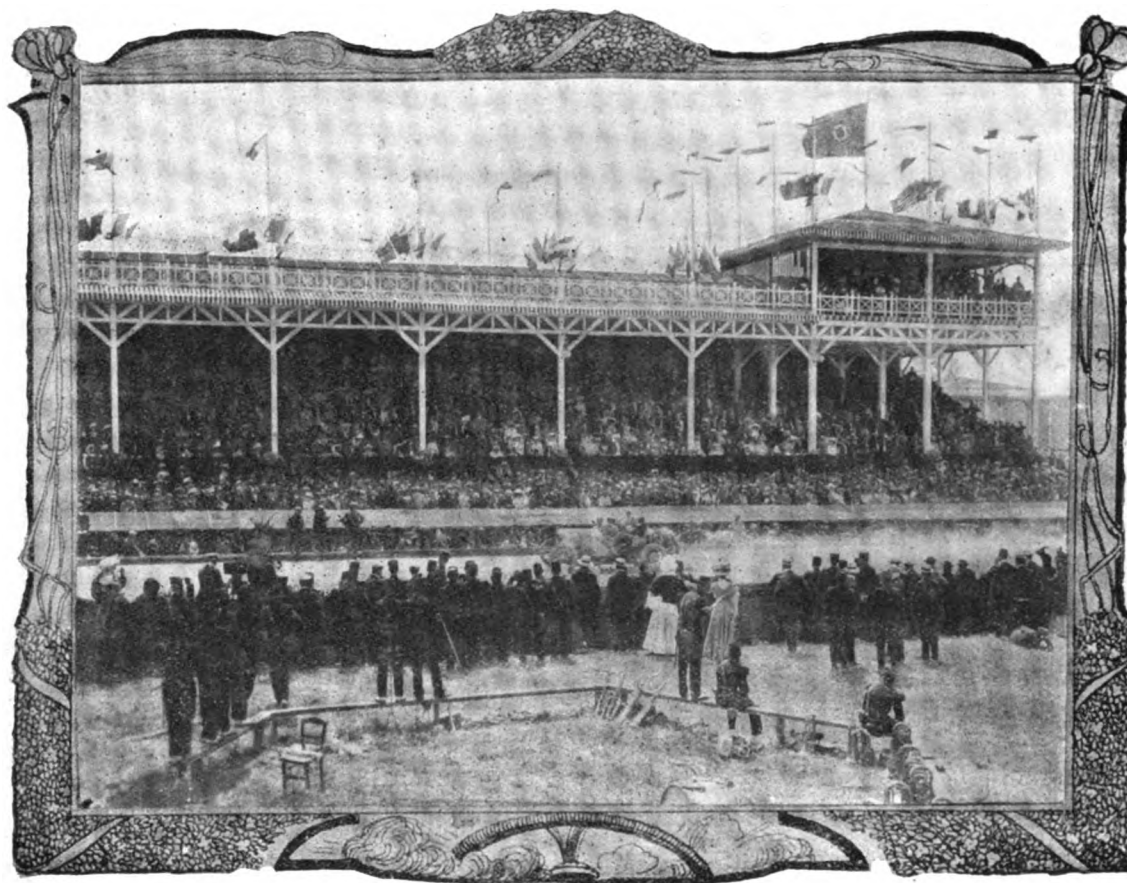
The Dust Trials.

It is officially intimated that the statement which has been published by the R.A.C. that the manufacturers of steam cars consent to their cars running *hors concours* for the Dust Trials, and therefore to their not being allowed to compete for the prizes, was made under a misapprehension. The Dust Committee of the Club, however, in order to encourage improvements in the petrol car as regards dustlessness, has decided to adhere to the original Regulations for the 1908 Dust Trials. That relating to this matter is as follows:—In 1907 the steam cars showed as a class such good results for dustlessness

defines very rudimentary matters. The little book is divided into five parts, dealing with the petrol engine, the transmission and the chassis, tyres, the duties of a driver, and the laws and regulations to be observed if acquaintance with the police court is to be avoided. As an introductory guide to the subject Mr. Knight's catechism is to be welcomed.

Traps in Scotland.

AN esteemed correspondent in Scotland, who is both a motorist and a J.P., writes to inform us that the Kirkcudbrightshire police are now busy having distances measured and watching motorists and stopping them to examine drivers' licences. Our correspondent was stopped recently and his driver's licence was examined, while other motorists were also stopped in a similarly harassing fashion. There is a police trap on the Dumfries-Castle Douglas road between Crocketford and



The A.C.F. Grand Prix Race.—The Scene on the arrival of Hemery, who was the first to complete the full distance.

that the Committee decided that this year the Competition should be limited to petrol cars only. In order, however, that steam cars should obtain full public credit for their dustlessness, it was decided that they should run *hors concours*, and be bracketed with the actual competitors. Forty-one entries have been received for the trials, which will take place at Brooklands on Monday and Tuesday of next week.

A Catechism.

A WELL-KNOWN contributor to the M.C.J., Mr. John Henry Knight, of Farnham, is responsible for a new "Catechism of the Motor Car" just published by Messrs. Crosby Lockwood and Co. Within nearly a hundred pages about 320 questions and answers are given in explanation of the construction and working of a modern motor-car—in a form useful alike for owners, drivers and students. It does not aim at learned disquisition, but is couched in simple language and

Dumfries. Another on the Castle Douglas-Kirkcudbright road after crossing the river Dee at Threave Bridge, about two and a half miles from Castle Douglas, and towards Kirkcudbright, a trap is also on the Dumfries-Castle-Douglas road, at the ten-mile limit warning post into the town of Castle Douglas. Traps on the Dalbeattie-Corsock road between Bridge of Ure Post Office and towards Corsock, close to the Bridge of Ure Post Office, will be worked on Wednesdays—being the Dumfries market days.

A HOLIDAY camp for motorists is being organised by a well-known East Anglian motorist at Heacham near Sandringham Norfolk. It opens to-day (Saturday).

ON Wednesday the motor gymkhana and carnival organised by the Motor Club in conjunction with the Local Entertainments Committee took place at Hastings before a good assembly of visitors. Many well-known motorists competed in the several events, a large party having left London on Tuesday, travelling by road from the Motor Club.

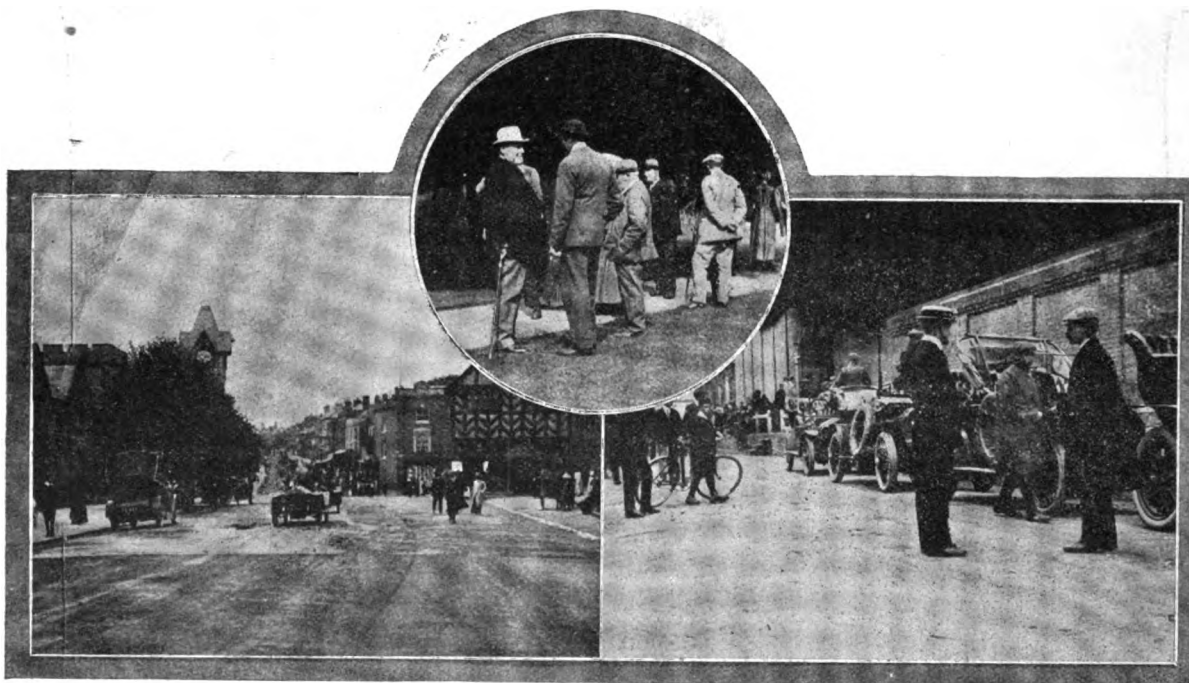
THE R.A.C. AT HEREFORD.

MANY times during recent years motor-cars have enlivened the streets of the ordinarily quiet city of Hereford. In connection with the famous Light Car Trials and also the Frome's Hill climb—the latter abandoned for the present year—the automobile has visited the ancient place in numbers. Civic welcomes have been cordial, the police have been friendly, the road surveyors have been considerate. Such a triple combination of good qualities led the Royal A.C. to willingly visit Hereford on the occasion of their second provincial meet for the present year. Unfortunately the good weather which made the Nottinghamshire gathering such a success had forsaken the cider county on Saturday. The unfriendly rain kept many away from the event—to which the recent accession of the Bishop of Hereford to the list of vice-presidents of the Motor Union added a snip of piquancy.

The proceedings followed orthodox lines. A mayoral welcome spoken by Mr. James Mitchell opened the proceedings, and then followed the business meeting, over which Mr. Robert Todd presided in the absence of H.S.H. Prince Francis of Teck,

where Dr. Sinclair gave an organ recital. Then in the afternoon there was an excursion to Ledbury, where the motorists were most hospitably entertained by Lord Biddulph. The weather was somewhat dull and showery, and instead of proceeding thither by a route including Monmouth and Ross, the motorists went directly to Ledbury, where about forty cars were present. The visit to the pretty border town was regarded with much interest, and the arrival of the cars was watched by a large number of the inhabitants. A short time was very pleasantly spent in strolling about the demesne, and in watching the deer disporting on the rising ground of the spacious park. In addition to the members of the club and their friends, there were a number of visitors from Hereford and other parts, including the Mayoress of Hereford (Miss Mitchell).

In the evening the dinner took place in the Hereford Town Hall. Mr. Robert Todd presided, and gave the toast of "Lord Biddulph and the officers and members of the Herefordshire A.C." Just at the time when the railways came in, he said, the roads were being improved and strengthened; then nothing was done for about fifty years, when the cyclists demanded something better, and then the more influential body of motorists came



THE R.A.C. MEET AT HEREFORD.

The Cars arriving at Ledbury.

Photos by]

Lord Biddulph Receiving his Visitors.

Vehicles outside the Entrance to Ledbury Park.

[Tulley and Son.

the chairman of the R.A.C. Reports of the Organising and Legal Committees were presented. These dealt with several important matters. The principal subject was that of inconsiderate driving, which, it was stated, was receiving serious attention. The General Committee and the Organising Committee had received authority to confer and take suitable action to endeavour to suppress the evil, because it was one which had caused considerable ill-feeling against motor-cars and done great harm to the movement. The Legal Committee referred to specific complaints that had been made and the actions that had been taken against individuals. It was stated that 100 candidates had been elected to individual associateship, and the North-Eastern Automobile Club had been accepted for association in the new scheme with the Royal Automobile Club. The total number of individuals included in the arrangement was reported to be 14,700. An application from the Motor Union of Western India for assistance in dealing with two grievances to motorists and the motoring industry in India was considered and dealt with.

An inspection was made of the Town Hall and the Cathedral,

along. Wise county surveyors and County Councils at once recognised the position and set about improving the roads. At one time much prejudice existed against motorists, but that was rapidly dying out, and five years hence very little would be heard against them, the public realising that motoring was an excellent means of travelling and that the wants of motorists would have to be provided for.

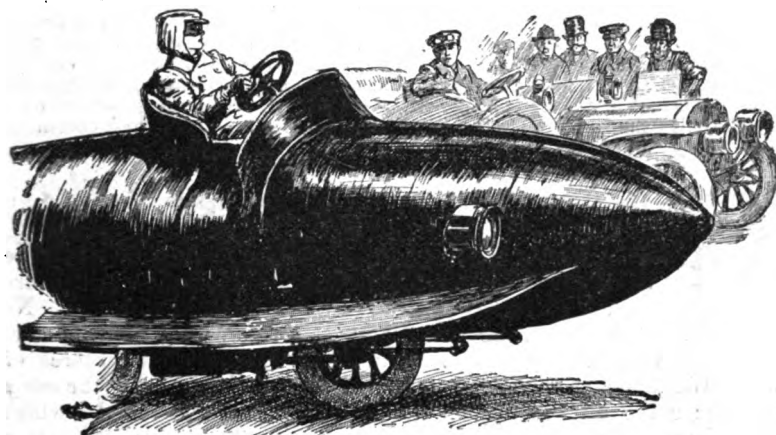
Lord Biddulph, responding, said it had given him great pleasure to see the members of the R.A.C. at Ledbury Park, and when they next came that way he should again have much pleasure in entertaining them.

Other toasts followed, and the President, acknowledging the cordial welcome which had been given the R.A.C., hoped it would not be the last time they would come to Hereford.

In deciding a case against the driver of a motor-cab at Nottingham the other day Mr. T. S. Birkin, the chairman of the bench, said that as a motorist he desired to say that the police in Nottinghamshire were most considerate.

"THE SCARLET RUNNER."

MR. and Mrs. C. N. and A. M. Williamson are novelists and motorists. Recalling some of their most popular volumes, we remember the "Car of Destiny," with the automobile adventures of its Spanish hero; the "Botor Chaperon" and its romance of the Dutch waterways; the "Princess Passes," with its combination of pedestrianism and motoring in the regions of the Alps; the "Lightning Conductor,"



"An Amazing Vehicle."

with speedy travel in France and Italy; "My Friend the Chauffeur," who enjoyed himself at Monte Carlo and by the Italian lakes; and now comes another, the "Scarlet Runner"—obviously, despite the prejudiced protestations of our market gardener, a motor-car romance. The chapters have chronological significance, commencing with "January: the Car and His Majesty," and ending with "December: Christopher and the Chauffeuse."

Many things happen in the intervening months. Christopher Race has a motor-car, and, in order to demonstrate to a rich and imperious uncle his capacity for earning a livelihood, he plies for hire. Of course, his first "fare" is an important Imperial personage, who is attracted by his demeanour no less than by "the glittering bonnet, which had no fewer than six cylinders of latest pattern." From mystery we get to excitement in Chapter II., and a girl in a train is chased by a man in a car. How this proceeds is thus described:—

Scarlet Runner had sped under the shadow of a ruined castle, and was nearing Ardwanage, when a train which had not yet gathered full speed after leaving the station ran towards them along the line, that here lay parallel with the road. Race had slowed down for a frightened horse, and he was in the act of putting on speed again when Western sprang up in the seat beside him. "Turn—as quick as you can," he stammered. "Catch that train. She's in it!" The smoke of the locomotive trailed its dark flag along the sky, and Scarlet Runner hurled herself in pursuit. The heavy engine drawing its huge load could do forty miles an hour on an even track; the light car, clean and springy as a trained athlete, could sprint at least twenty miles faster on the road, but that road must be clear, and there came in the skill of the driver. Christopher Race was a driver born, not made. His eye saw and understood with the quickness of light. His hand and foot moved with automatic precision; his nerve was unshaken. Western admired him, and for the moment compared the sport of ballooning unfavourably with that of motoring.

But, despite the speed and the nerve, when the race was over—spoiled by a misplaced level crossing—"they had lost." It was fortunate for the novel, though desperately irritating to the hero. Misfortune followed, and again the motor-car is requisitioned and Christopher is sent "hurrying off on his quest of life and death." This time we have a graphic account of a run on the Bath Road, enlivened by wrong scents at cross-roads, and the dilatory replies of villagers who seemed singularly unobservant. But the density of bucolic humanity was not the only disturbing element on the journey. A storm came on:—

Through rain and darkness he spied at a distance, across wide lawns,

a long low house, whose irregular shape was cut, sharp and black, out of the sombre fabric of the sky. Christopher saw no lights, but intervening shrubberies might hide some windows of the lower floors; and the agent had said with certainty that people were living in the house. Race had slowed down, for the white glare of his lamps on pale mud and wet grass was bewildering, but he was proceeding gently when, with a sudden bump, Scarlet Runner's front tyres struck some tenre yet curiously yielding obstacle. Surprised, Christopher stopped the car so abruptly that inadvertently he stopped the engine as well. Instantly he jumped down to see what was amiss, and even the famishing chauffeur forgot his anguish in this new excitement. The obstruction, whatever it might be, was mysteriously invisible, but in a moment Christopher had stumbled over a thick wire tightly stretched across the drive at a height of twelve to fifteen inches above the ground. Had Scarlet Runner been going at an ordinary pace, there would certainly have been an ugly accident. As Christopher pitched forward, and righted himself hurriedly, the chauffeur cried out, and would have broken into excited questioning, but Race silenced him with a raised finger of warning. The chauffeur kept his place, and Christopher took the electric torch from under the front seat. Armed with this he stepped over the wire, and discovered in the fresh mud clear traces of a motor-car's pneumatics. They passed beyond the obstacle and disappeared behind a curtain of darkness, making it evident that the wire had been stretched since the Collingwoods had gone by—either driving to the house or leaving it.

Of course after that we are not surprised to read of a burglary in a mansion in propinquity, and a whole train of circumstances of so startling a character that some of the leading actors later go to Italy for change of scene, considerations of health and other substantial reasons. Back again in England—in July—we are introduced to a new automobile invention which is to be tried on a stretch of hard sand on the East coast. It was early when Race drove thither, performing law-breaking feats of speed on the way. The invention was the design of a young motor enthusiast.

It was a very clear invention, for at a stroke it revolutionised all existing systems of transmission, and did away with gear-box, pinions, and clutch. The engine worked a pump, whose business was to compress oil and force it under high pressure to two turbines on the back axle. The turbines turned the wheels, "and there you are," as the inventor explained, exulting over his model. The system was capable of infinite gradations of speed, by guiding this stream of oil towards the



"Christopher was obliged to ask questions in the village."

centre or towards the periphery of the turbines. Owing to the beneficent nature of the transmitting force the mechanism was smooth and silent as the motor of a dream, and a great proportion of the engine power was able to act directly on the wheels. The idea had instantly caught Race's fancy. He loved his car as most men love their sweet-hearts, and could not bear to let Scarlet Runner lack anything which might bring her to perfection. Her transmission gear was already of the newest pattern, with direct drive on the top speed; still, Christopher had to admit to the inventor that much engine power was lost in getting to the wheels, and in the hour he decided upon adopting the proposed plan. Scarlet Runner, thus regenerated, had come out of a London

workshop only two days ago, her owner proud that she should be the first car in England to inaugurate a new era in automobilism. Such tests as could be had in London streets had been triumphant; and now here was Christopher with his scarlet darling heart and engine both beating in the hope of a long, satisfactory trial, with the sea and the rising sun as sole witnesses.

Getting near the seashore, and within thirty yards of a group of men in the water, Race then slackened speed, and would have turned, had not one of the men seen him and begun to shout and beckon. At the same moment several others broke away from the group to hurry across the sand towards the approaching motor-car; and Christopher saw, to his extreme surprise, that the thing they had surrounded was a half-submerged automobile. In a second all desire to depart was burnt up by a fire of curiosity. Instead of retreating, he drove nearer; so near that, faint as was still the light, he could see the make and colour of the drowning car.

She was, to the eye of an expert in such matters, unmistakably a Hansard, of a pattern now superseded. Of fifteen to twenty horsepower, perhaps, she had an old-fashioned back entrance tonneau; but she had doubtless been a fine car in her day, her motor might be as good as ever, and apparently she was still valued by someone, since her dark blue paint was fresh, and the leather cushions, of a colour to match, quite new—facts emphasised rather than concealed by her soaked condition.

Here was a mystery indeed—thickened to a considerable degree when the fact that the number of the motor had been chiselled off proved that its abandonment had been an act of deliberation. There was a great hue and cry, the "Daily Recorder" specialising on the subject and raising quite an agitation, which promptly fell when it was shown later that "there never was any mystery except what the 'Daily Recorder' made." It would probably be unfair to the authors to tell of the eventful months of August, September, October, and November. December becomes quite motorious—almost imaginatively so, for we find the Royal Automobile Club organising a race and taking temporarily a new garage to house the competitors in. Everyone was interested, for not only was a well-known millionaire offering a £10,000 prize and several cups for the encouragement of originality among inventors, but most of the motor-cars themselves were worth seeing. Everyone was there, including "Sir John Maverick, ardent motorist, millionaire proprietor of the 'Man on the Car,' and the organiser of the freak race," which was intended, he said, to assist poor inventors in the way of finance. Despite that it was December in England, ladies "trailed their graceful frocks out of the restaurant" to see the great event; so that, apparently, the weather was better behaved than quite recently.

The great freak race was to start from Regent's Park and finish, after a roundabout thousand-mile run, at Edinburgh. It was not to be a speed test, nevertheless elaborate preparations had been taken to protect the public, and there was a tacit understanding that for this occasion there were to be no police traps. Scouts told off by the Automobile Club and other organisations were to be stationed at all dangerous spots to warn cars to go slowly, and any chauffeur driving to the public danger would be at once struck off the list of competitors. Early on the morning fixed for the start automobiles began to move out of the big garage and take up their allotted places. Never before had been seen such a collection of fearful and wonderful cars. It reminded many of that famous foggy November day in 1896 when motors were first allowed to run on English roads, and twenty or thirty coughing, barking, shaking machines started on the historic run to Brighton. Everyone felt that this occasion was historic. Accustomed for so long a time to the conventional design of motor-cars, people could not restrain their laughter at some of the extraordinary-looking creatures that came to the starting point. Inventors seemed to have taken full advantage of the licence allowed by the conditions of the race, and it would be difficult to imagine an odder collection of self-propelled vehicles. Race himself stared round him, bewildered, as he took the place that had fallen to him by lot, and wondered if he had not stepped by accident into pantomime land. Scarlet Runner looked strictly conventional among all her queerly-shaped rivals, as all arrangements for the oil drive were, of course, under her body, and to the ordinary eye Christopher Race's car proclaimed no special feature entitling her to rank among the freaks.

But there were freaks, and among the dozen or so of excellent illustrations in the volume is one of the car and the chauffeuse whom Christopher subsequently married—the old-fashioned conventional ending that comes with something of the charm of freshness in these days when novels have turgid endings

and indefinite finals. "Scarlet Runner" is one of those novels where the interest receives acceleration with every chapter until the end; and we place the book on our shelves as one worthy of re-reading when the evenings lengthen again. But the "freak" that carried the "fair" must be described, and therewith end our quotations.

An amazing vehicle—if vehicle it could be called—was gliding, silent and snake-like, towards the empty place in front of Scarlet Runner. In shape it suggested a gigantic cigar; in colour it was black, and its jointless metal casing glittered in the wintry sunlight. Half way down its length the great cigar was cut out into a nick, and in the nick sat, very upright and alert, the slender figure of a woman. She wore a leather jacket; her hair was covered by a kind of curtain descending from her leather cap, and fastening under her chin; and her eyes looked through goggles in an elfin mask, which protected and concealed the whole upper part of the face—a face beautiful and charming when unmasked.

COMMERCIAL TRAVELLERS' CARS.

IN all parts of the country commercial travellers' cars may be seen outside business houses waiting whilst their owners are securing business which less up-to-date men will miss. No district, however, shows so many smart motor-cars used by commercial travellers as London. The narrow thoroughfares of Watling Street, Wood Street, and Fore Street, E.C., in the early morning especially, are almost congested by these vehicles, which have replaced the old closed broughams. The mere fact that a traveller uses a motor-car to carry him about the city or country proves him to be thoroughly alive. And what better recommendation can a traveller have? The ability to carry his samples along with him, to be independent of the harassing baggage man who in the old days used to hand-truck the baskets of samples from door to door, is of greater advantage to travellers than is apparent at first thought. The traveller with a motor-car has not to worry over the vagaries of hotel porters receiving from or putting on rail the baskets, neither has he to keep an eye on them whilst travelling. As soon as he has done business at one place he motors off to another and secures a good order, whilst the hand-truck man would be pushing his heavy load through the streets.

The relief from care over samples, the importance of nightly making up a timetable by rail, from the necessity of hurrying a slow customer in order to adhere to the daily timetable, enables a commercial traveller to keep a clear head for business throughout the day, and enjoy a little recreation in the evening with the consciousness of a batch of good orders in the post to his principals.

Commercial travellers with motor-cars can work in a short week rounds which formerly occupied a month. In addition, there is always time to make detours in order to secure likely new customers. The responsibility of running a motor sample carrier is not very great, a motor-car being one of the easiest things in the world to learn to operate. An intelligent man, and every commercial traveller should be that, can learn to drive well in less than a week. He can get a contract from the maker of the car to keep it in running order, excepting accidents, for less than £25 per annum, including tyres. The cost of petrol and lubricating oil, and the few necessary sundries, will run to another £5 for thirty miles daily, but not more. The total cost will be about 35s. per week. Add this to 5 per cent. on the capital outlay, say, £200, and the resultant sum is less than a week's railway fares.

If he so desires, the traveller can hire a car at the rate of £250 a year, including driver and all found, the average mileage being sixty miles per day. As this includes thirty miles daily more than that previously estimated for and the wages of a driver, it is a good bargain if a chauffeur is needed with the car.

SIR JOSEPH WARD, Premier of the Dominion, has just made a successful trip from end to end of New Zealand in a 28-h.p. Daimler, owned by Mr. George Henning, of Auckland. Although during the trip some of the roughest parts of the country were covered, the vehicle went through without a hitch.

GOSSIP FROM PARIS.

"QUELLE PILE" (What a hiding) was the thought, if not the openly expressed appreciation, of all the big French automobile manufacturers when the result of the Grand Prix was known! Yes, indeed, it was a defeat such as France had never experienced before. Last year they lost the first place, but they secured the second and the third. This time in the seven first there was only one French car—a Bayard-Clement—which occupied the fourth place. With that single exception the race was a veritable massacre of the cars of the big French firms. Of the twenty-three which started the race only ten finished. French makers tried to put a good face on it, but their crushing defeat was all the more painful because it was a double German victory, as the Benz cars coming in second, third, and seventh won the Coupe de Regularité. Then there was the deplorable fatal accident to Cissac and his mechanic. For the French everything tended to throw a gloom over the end of the day, which had begun in brilliant sunshine and closed with tearing wind and clouds of dust.

AND if the French manufacturers were "blue" with disappointment the enormous crowd of spectators who had been promised every convenience were "blue" with discontent at the faulty organisation which had caused them so much annoyance and discomfort. To get from Dieppe to the Grand Stand even in a motor-car, which should have taken ten minutes at most, occupied at least an hour and a half. And then, though the race commenced at 6 a.m. and finished only a little before 5 p.m., the arrangements for *déjeuner* were so bad that a very great many people had to go without it. No, after all the boasting of the French drivers about the fantastical speed they were sure to make in the race, and the assurances of the Sporting Committee about the faultlessness of the organisation, the Grand Prix was as complete a fiasco as could be well imagined except in the unprecedented number of the spectators, most of whom, however, went away almost as discontented as the French motor-car builders.

WHAT is to be done next year? Everyone knows the Marquis de Dion, the Vice-President of the A.C.F., and many other people consider road-racing futile and dangerous. It is dangerous not only in itself but because every race entails long practice on the public road before the contest. Then after it is over the machines are sold to young men, who, using them as touring cars, spread terror on all the main roads of the land. Since the Grand Prix many people have expressed such sentiments, but, after the thrashing they received, the French can scarcely abandon the annual competition which was instituted to replace the Gordon Bennett Cup. If only the future Grand Prix could be disputed on the track of an autodrome it would be an appreciable advantage. Of course the French want to find an excuse, if not a plausible explanation, for their defeat. They will not admit it was the fault of their cars, though so many of them broke down, and they try to throw the blame on the tyres. However, the winning German cars were furnished with the same detachable rims as the French. "Oh, yes," said one manufacturer, "that is true, but we are accustomed to inflate our tyres to the pressure of 5 kilogrammes, whereas the Germans inflated theirs to the pressure of 8 kilogrammes. Consequently, the tyres adhered to the rims better on the German cars than they did on ours." There may be some truth in that, but the point should have been found out before the race.

THE dinner given by Monsieur and Madame Armengaud in their villa at Saint Cloud, to celebrate the winning of the Armengaud prize of £400 for a quarter of an hour in the air on an aeroplane, was a memorable event. One of the chief reasons of the success of the entertainment was the amiability of Madame Armengaud, who is one of the most charming women of Parisian society, and a lady who has won the hearts of all the aeronauts and aviators of the French capital. Mr. Farman was, of course, the hero of the fete, because he had made a flight lasting 20 min. 19.3-5 sec. When, at dessert, the cheque of £400 was handed to Mr.

Farman by Madame Armengaud in the name of her husband, the guests' enthusiasm was manifested by hearty applause, which was all the louder because the prize was not the consecration of the victory of one man over another but of the progress made in aviation within the last few months. The witty speech in which M. Armengaud congratulated Mr. Farman brought Commandant Renard to his feet. The latter said he had always had such a horror of the sea that when quite a youth he made a vow never to cross the Channel in a boat. He had kept his word and would do so in the future, but he did not despair of soon being able to reach England by the aerial route. Thereupon M. Deutsch jumped up declaring he would give a prize of £1,000 to the person who should enable Commandant Renard to satisfy his ambition of visiting the British Isles. Thundering applause greeted the announcement, and after explanations it was stipulated that to gain the prize the steerable balloon which might convey Commandant Renard across the Channel must land him at Aldershot, whereas in the case of the aerial vessel being an aeroplane, it would suffice to leave the French coast and deposit the Commandant on the English shore. Commandant Renard is a big fellow weighing at least 15 stone, and the question is whether he will care to trust himself to an aeroplane. If he



M. L. Bleriot, who in addition to being the designer of the well-known Bleriot lamps, has for a long time been experimenting with aeroplanes. He succeeded last week in making a flight lasting 10 min. 23 sec. without touching ground.

refuses to do so, it is proposed that he should be represented on the machine by a sand-bag of his weight.

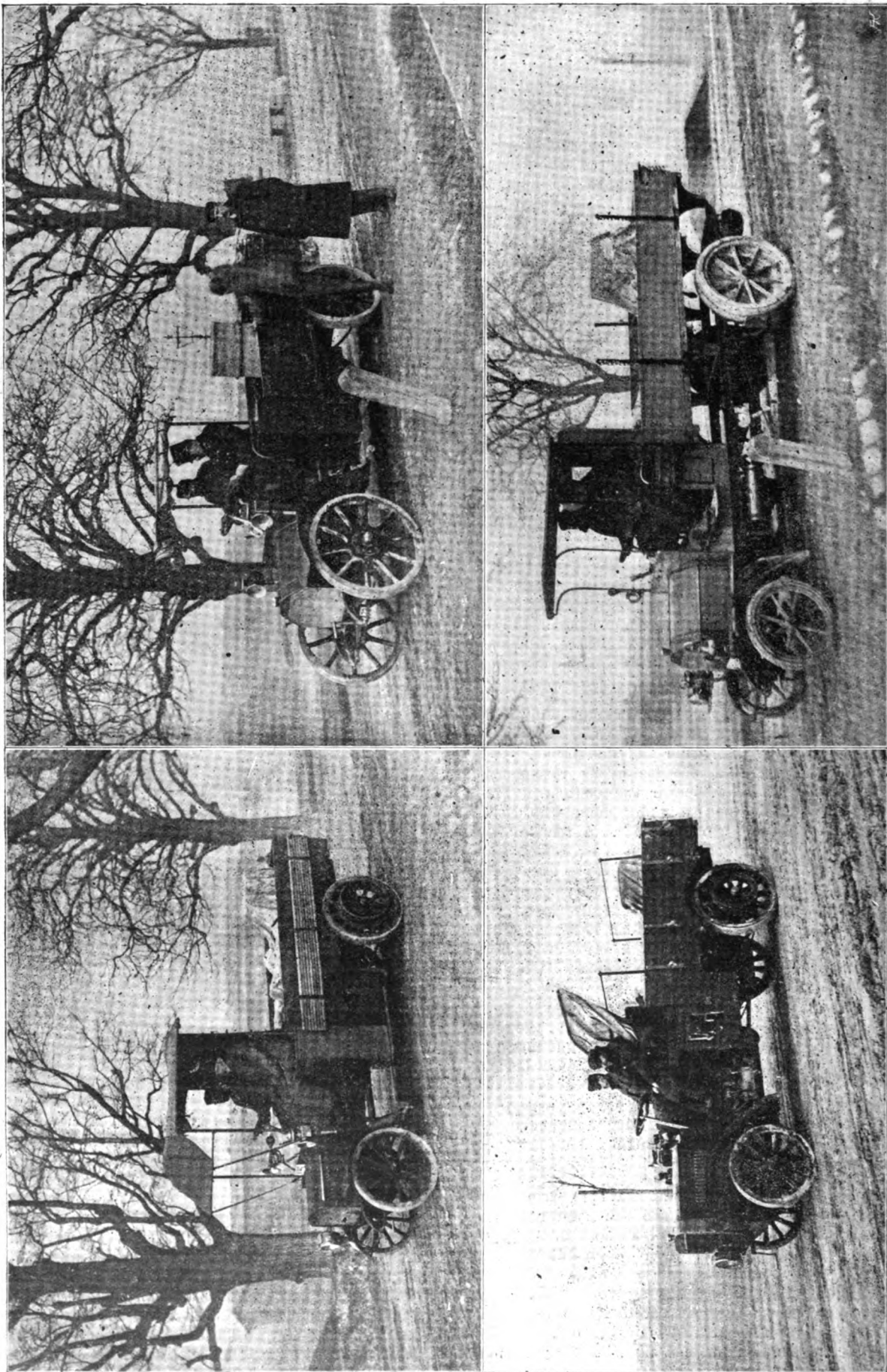
MARNEY.

SOME of the nurses of the Edinburgh Royal Infirmary have had a motor-car run to Roslin, and other parties are to be taken on similar trips by the kindness of local motorists, weekly, to the month of September.

A CONCISE handbook for English and American motorists in France has been edited by Major Stevens and published in London by Messrs. Ballantyne and Co., Ltd. This shows at a glance the best routes to the French capital, and the principal tourist and health resorts, as well as to the leading places on the French frontiers. There is also some useful information with regard to the Customs in Continental countries generally, as well as driving permits. The routes are clearly sketched and the criticisms of the various roads will be very helpful.

FROM Messrs. S. F. Edge, Ltd., comes a copy of the second edition of the Napier Instruction Book, which should prove indispensable to all owners and drivers of Napier cars. The practice of issuing a hand-book containing hints with regard to the keeping of cars *au point* is one that we have always recommended, as it is of material help in securing good running and in ensuring that vehicles shall give satisfaction. The work under notice describes the function of practically every part of Napier cars, and states the attention each requires in the way of adjustment and lubrication. The printed instructions are supplemented by lettered drawings, so that even amateurs should have no difficulty in following them.

MILITARY MOTOR WAGON TRIALS IN AUSTRIA.



The Austrian Military Authorities lately carried out a series of trials of motor vehicles suitable for Army purposes. The two illustrations on the left show respectively the W. H. and E., and Bock and Hollepper's lorries, and those on the right the Laurin-Klenz and German Daimler vehicles.

(Allgemeine Automobil Zeitung.)

CONTINENTAL NOTES.

British Motorists in France.

Recent British motoring visitors to France include Mr. Granville, of Stafford (32-h.p. Wolseley); Mr. Ripley (50-h.p. Napier); Mr. and Mrs. Allard (40-h.p. Daimler); Mr. Pulley and family (60-h.p. Napier); Mr. Johnson and family, of London (35-h.p. Renault); Sir Henry and Lady Settle (40-h.p. Panhard); Lord and Lady Wemyss (50-h.p. Mercedes); Sir Henry Lucas (35-h.p. Mors); and Mr. and Mrs. Noyes (24-h.p. Panhard).

Notes on the Grand Prix Race.

M. Paul Meyan is very outspoken on the result of the race in the last issue of his paper, "La France Automobile." Under the heading "Après l'Échec," he remarks that "the struggle was certainly keen and sportsmen have no cause to grumble. The first places were hotly contested by foreigners. The speed of the Mercedes and Benz was distinctly superior to ours. Briefly, we did not exist! Time was when France won all races. . . . Now we go abroad to get beaten and even the

burg, the third to Amal, the fourth to Filipstadt, the fifth to Falun and the sixth to Elfkarlo, about 100 miles from Stockholm. The Napier is reported to have retired on the fifth day owing to radiator troubles; all the other four finished, the first prize being awarded to Herr Thisel's Horch, the second to Herr Nystrom's Durkopp, and the third to Herr Olsson's Peugeot.

Motor-Buses in Paris.

The Paris Omnibus Company is testing a new type of motor-omnibus on the Clichy-Odeon line. The vehicle is much smaller than the somewhat cumbersome and noisy buses at present in use. There is no *imperiale* or upper-deck; instead the bus is divided into two compartments, the forward one, provided with cushioned seats, being given up to first-class passengers. No seats are provided in the rear portion, so that the passengers have to stand huddled together.

Miscellaneous Items.

The French Ministry of War has asked the French Chambre



Motoring in Bosnia.—A Street Scene in Sarajevo.

foreigner comes and beats us at home." M. Meyan then goes on to ask whether the time has not come when an end should be put to such races as the Grand Prix, in which France has, he considers, nothing to gain and everything to lose. Most of the drivers suffered from eye troubles, due, it is considered, to the tarred roads. So bad was Heath that he had to allow his mechanic, Arland, to drive his Panhard for the last lap, while Bablot (Brasier) was compelled to retire from the same cause seven miles from the finish.

The Ardennes Circuit.

It has been decided by the Belgian Automobile Club to postpone the Ardennes Circuit contest from the 12th prox. until the last week of August, the exact date not yet being fixed. Two Lorraine-Dietrichs, two Weigels and three Opels have already been entered for the event.

A Swedish Reliability Trial.

Only five cars took part in the reliability trial held by the Swedish Automobile Club from the 18th to the 22nd ult., one each Napier, Horch, Durkopp, Peugeot and Scania. The first day's run was from Malmo to Halmstad, the second to Gothen-

Syndicale de l'Automobile to arrange for the loan of eighty motor-lorries for use in connection with the Commissariat. Department during the forthcoming military manoeuvres in the Blois, Tours and Bourges districts.—An electrical motor-ambulance has lately been put in service by the municipal authorities of Amsterdam.—The Aero Club de la Sarthe has just been formed at Le Mans, with M. Leon Bollée as President.—A motor-boat race meeting is to be held at San Sebastian, Spain, from August 31st to September 3rd next.—The latest addition to the motor-car stud of the Kaiser is a 70-h.p. Adler vehicle.—Forty-five entries have been received for the run of military motorists from Vienna to Berlin, which is being organised by the Austrian and German Motor Volunteer Corps for the 27th, 28th and 29th inst.—La Compagnie Française de Vans Automobiles is the name of a company which has just been formed in Paris.—The Automobile Club de Belfort is organising a hill climbing competition for the Paul Lederlin Cup; the event will be held on the 26th inst., on the hill known as the Ballon d'Alsace, over a 14-kilometre course.—The Ostend automobile meeting commenced on Monday with a series of five kilometre speed trials. A Napier car is competing in the racing section.

THE BOSWELL ENGINE STARTING DEVICE.

THERE have been many attempts to introduce a means of starting the engines of petrol cars from the seat, and of doing away with the necessity of the usual starting handle at the front. The efforts of inventors have been mainly divided into two sections, one towards the production of an

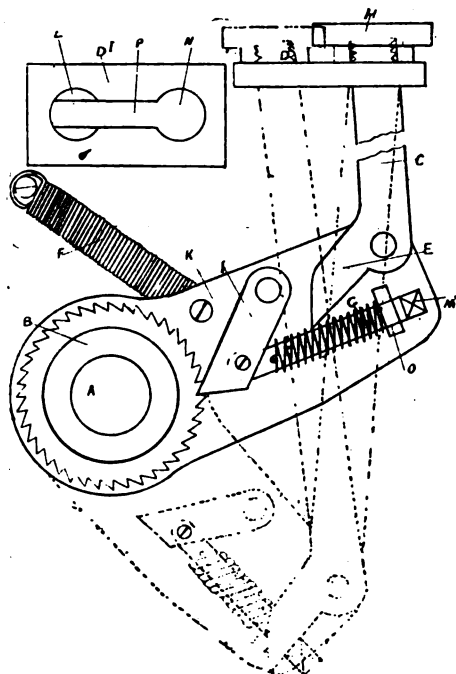


Fig. 1.—Details of the Boswell Engine Starting Device.

arrangement which, by the pressing of a button or the movement of a lever, automatically puts the motor into operation through the medium of stored up charges and special valves, and the second in which the same end is obtained through a ratchet device worked either by hand or foot levers. In this class falls

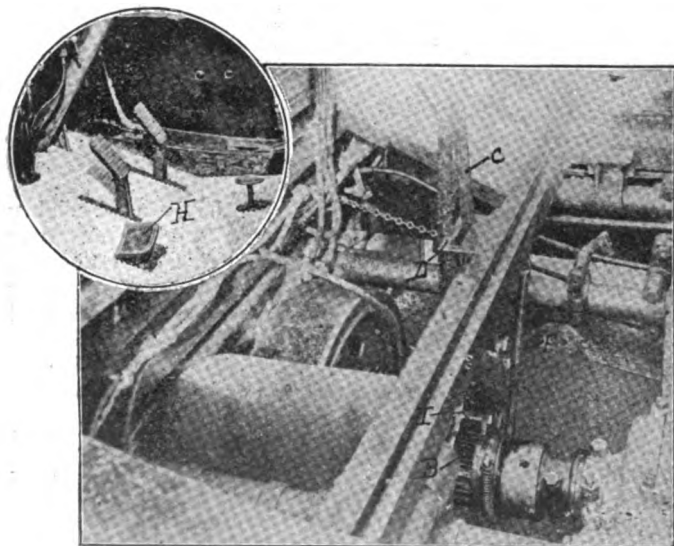


Fig. 2.—A View of the Starter as fitted to a Humber Car.

the Renault plan, which was fully illustrated and described in the *M.C.J.* of February 22nd last, and in the same category is the Boswell method, which has lately been attracting attention in motoring circles in the eastern counties, and of which we are this week able to give some particulars. Like the Renault, the new device is mounted on the clutch shaft, but, instead of being

operated by a press forward pedal, it is actuated by one having an up and down motion.

Referring to the illustrations, Fig. 1 shows the arrangement diagrammatically, while Fig. 2 depicts it installed on a Humber car. It will be seen that the starting mechanism comprises a ratchet brace B mounted on the clutch shaft A. All the working parts are attached to the plate K; the pawl I is held in position by a spiral spring G placed over a rod M, which slides through an eye O. The rod C, to which the pedal H is attached, is held in a neutral position by a plate D fixed in the floorboard of the car. As shown in plan in the upper part of Fig. 1, the plate is provided with a slot P and two recesses, L N; to hold the rod out of operation it is pushed over to the former, while to bring the apparatus into position for starting the engine it is moved to N, when by the action of the spiral spring F it immediately rises to its full height, lifting with it the plate K and the parts attached to it. The clutch being engaged in the usual way and the change-speed lever placed in the neutral notch, one or two sharp pushes on the pedal H are sufficient to put the engine in motion, as the end of the plate K being forced down, the ratchet brace by the action of the pawl I is rotated and the clutch shaft, and through it the engine shaft, turned. When the rod is pushed down to the full extent the tongue E, by coming into contact with a projection M, at once disengages the pawl from the ratchet, thereby allowing the shaft to run free.

Mr. S. H. Boswell, of 48, London Street, Norwich, the patentee of the arrangement, informs us that it can be adapted to any make of car, and that the up and down movement of the rod C and pedal H from the floor board is generally from six to eight inches. The starter has already been fitted to a number of vehicles, ranging in power up to 25-h.p., one owner of a 10-12-h.p. Humber having found it so satisfactory in practice that he has had the old starting handle removed from his car.

THE MORSE ROCKER-JOINT CHAIN.

THE Westinghouse Brake Company, Ltd., of York Road, King's Cross, N., whose Morse rocker-joint chain is now in use on a large number of motor-buses in London, have recently effected several improvements in the same, and have produced one specially designed for use on pleasure and touring cars. In the earlier form, described in the *M.C.J.* of October 21st, 1905, the chain was constructed primarily for driving in one direction only. The latest pattern has double-ended links, and it can, therefore, be operated equally well forwards or backwards. The principal feature of the chain remains unaltered, this being the rocker joint, which is claimed to eliminate sliding friction and to reduce wear to a minimum. The joint consists of a pair of specially shaped pins, known respectively as the "seat pin" and the "rocker pin," one of which has an approximately semi-circular section, while the other is a sector having a smaller angle. The links have specially shaped holes to receive these pins. The action of the joint is as follows: as the chain passes over the chain wheels and becomes bent, the rocker pin rolls over the surface of the seat pin, the motion being purely a rocking one. On the straight portion of the chain the pressure is taken solely by the broad bearing surface, it being only when the joints are passing on or off the wheels that any pressure comes on the apex of the rocker pin. The chain is retained in place upon the chain wheels by means of a special central link which engages with a circumferential groove in the chain wheel. We had an opportunity the other day of making a short trial run on a 12-h.p. Star car fitted with the new chain, and were much impressed with the quietness of operation, the vehicle being to all intents and purposes as quiet as one of the live axle type. This feature, combined with the high efficiency, should do much to popularise the use of the Morse rocker-joint chain, which is made in a variety of pitches and widths, the $1\frac{1}{2}$ in. pitch being the size recommended for pleasure cars. The drive can be readily adapted to vehicles fitted with roller chains, the only alteration necessary being the fitting of new sprockets.

SOME EMERGENCY REPAIRS.

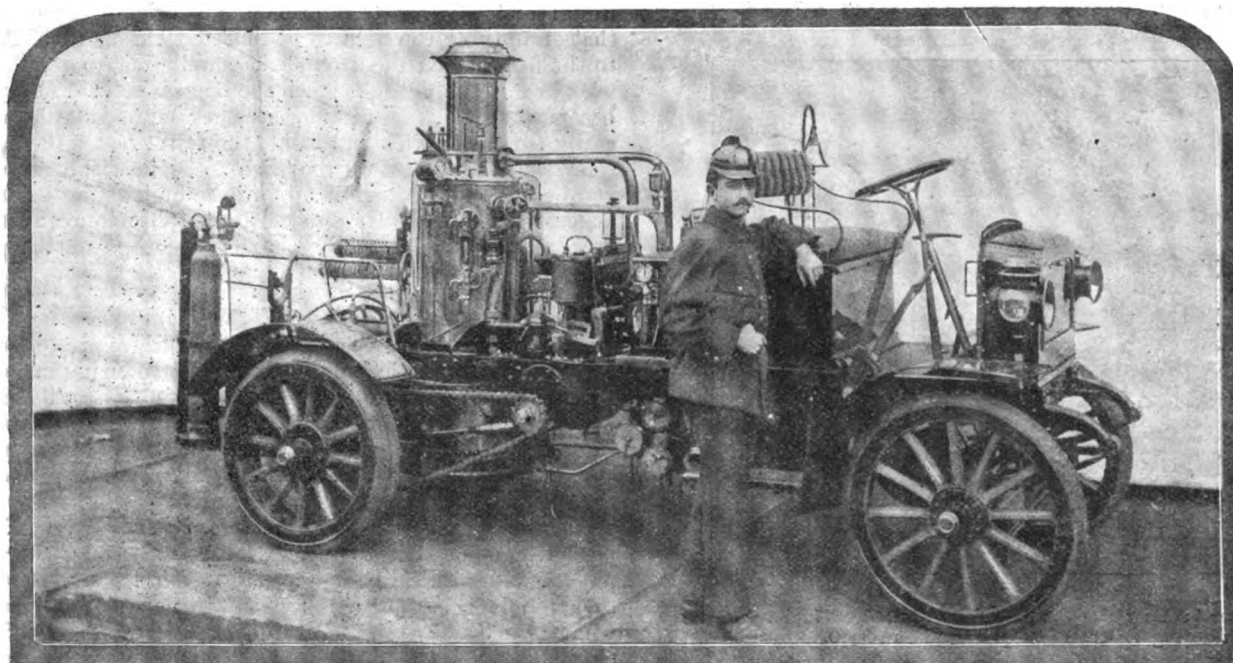
THE steam engine was described by George Stephenson as having in its composition a counterpart for each separate part of the human body. If such is the case, the same theory may well be applied to the internal combustion engine. Unless the valve of the heart in the former opens and closes correctly (everything else being so dependent upon its proper timing) things soon go wrong. Fortunately there is a great difference between the two kinds; the one can be taken out and put in order, the other must always remain hidden from view. Needless to say the two instances having reference to valves and forming part of this article apply to the material and not the human. As the *M.C.J.* circulates amongst users of both the motor-car and motor-cycle, no apology is needed for mentioning in the same plane the somewhat humble bike with the lordly car.

It was in a lonely part of Ireland, when touring towards dear "old dirty Dublin"—to perpetuate a saying often used by those whose privilege it has not been to see the fair city on the banks of the Liffey—and, after ascending one of the steep

length, and the trouble became accentuated. In many cases the tappet rod is adjustable, but the cause and effect are the same.

Another valve incident, but with a motor-cycle, and of quite a different character. In this case the valve stem broke off just under the head, and, as usual in a country place, where repairs were not as easy as in a cycle manufacturer's shop. The writer was not the victim, but happened to be near at hand. The cycle was taken into a private workshop, where the use of a few tools and a vice were possible. We removed the head and drove the piece out of the centre, finding a big French wire nail, filed it down so that it was a good hard driving fit into the old hole, and cut it off the right length; the valve was then put in again, and ran the rider home twenty miles without trouble. The first thought of many will be that the number of vibrations would soon dub up the nail end. This was not the case, for many of them are almost glass hard; this particular one was quite hard enough for a partly worn file.

We will now move on to the heart of a motor-car engine, viz., the cylinder and its contents. It was a foreign make of car, and duplicate parts are oftentimes long in coming, hence the reason for the emergency repair described below. The car was,



The Steam Motor Fire Engine recently supplied to the Fire Brigade of Milan, Italy, by the Waggon und Maschinenfabrik Gesellschaft (Busch), of Bautzen, Germany.

gradients in a western county, that it was noticed the engine was not pulling with its usual force, and on an Irish road, where so many of the surveyors adopt the "darning system," it does not take long for any defect to assert itself in no half-hearted way. The loss of compression increased, and, after a general survey, we tested each cylinder separately and located the trouble in No. 2 cylinder. On careful examination it was discovered that it lay with the exhaust valve not quite closing down. The owner of the car, who is not an engineer, was quite sure that the trouble must be elsewhere, as just prior to starting the valves had been ground in. I at once thought—Ah! that accounts for the fly in the ointment. These valves had been ground in more than once, and it was the last straw, as with the camel, that caused the trouble. The more at each grinding that came off the valve the farther the stem came through the valve chamber, and so could not regain its seating. The stem was reduced in length a trifle with a file, just sufficient for it to reseal itself, and we proceeded all right. Some readers may wonder why this did not happen immediately on starting off (it was not far as it was). This is accounted for by the fact that the hotter the valve and stem became so the latter increased in

wanting in power and there was considerable noise in one of the cylinders. After locating the culprit, viz., cylinder No. 3, we removed the piston, and found two of the three rings broken, one in two places. The car was wanted for use, and this in a country place; as the Irish say, a thought struck me, which is really only the mind going back to past memories. I obtained some asbestos tape and twisted this round and round the piston in the ring groove. Not liking to trust to two in one cylinder, a ring was received from No. 1 cylinder and some tape inserted in its place, so that two asbestos ring substitutes were in cylinders 1 and 3. The tape was well supplied with graphite, and a trial run made with perfect success. The car was used regularly and some long journeys made for fourteen days until the new rings arrived, and even then there was no absolute need for their insertion.

In looking for valve troubles, it should be remembered that not only the stems and tappet-rods wear, but the cams do likewise.

E. T. H.

A LARGE and well-designed garage has been opened at Kidderminster by the Castle Motor Company, Ltd. Accommodation is provided for no fewer than eighty automobiles.

SOME USEFUL NOTES.

A TIGHT sprocket wheel which fits on a taper and is keyed should never be "brutally" removed. A proper "extractor" should be gently used, occasional taps being given behind the sprocket.

A FREQUENT cause of overheating in modern cars, particularly on those where no pump is employed, is slipping of the fan belt. It is most necessary that a fan should always be doing its work thoroughly.

SHOULD a carburettor catch fire through a back shot, the fire may occasionally be extinguished by turning off the petrol and racing the engine. The engine will soon suck it out, and there is very little danger.

A NEW engine, no matter how well made, will usually be found to be slightly stiff, and should be given plenty of lubrication. However carefully fitted the bearings of the crank shaft and of the connecting rods upon the crank pins may be, there are usually imperfections in the surfaces of the shaft and



A British Car in America.—The 60-h.p. Six-Cylinder Napier Car belonging to Mr. A. L. Spitzer, of Toledo, O.

its bushes which have to be worn down before the metallic contact becomes compressed and "laid down" into that glassy, smooth condition which conduces to perfect running. Well ground crank shafts and carefully scraped bushings require but very little use before the bearing surfaces become excellent.

AN air lock in the water circulation is a troublesome matter, and one which will probably puzzle the amateur motorist more than anything else in connection with water cooling. There are several ways in which air locks or air pockets may be formed. By air lock it is understood that air has been drawn into the water pipes, and forms a complete cushion between two bodies of water, which effectually prevents its flowing. One of the most frequent causes of forming an air lock is putting a fresh supply of water into the tank when there is a small amount of water running in the pipes, which are below the level of the tank. The water rushing into these pipes prevents the air escaping, and thus the air lock is formed. To prevent this, if there is a small amount of water left in the radiator and connecting pipes, it is, I find, best to drain it completely away, put in fresh water, allowing the drain tap to remain open until this flows through. By this procedure the air will, of course, be driven out of the pipes, being forced through the drain tap by the water behind it.

SOME CURRENT TOPICS.

Chain Drive v. Live Axle.

The A.C.F. Grand Prix race once again revives the old question of transmission—chain v. the cardan shaft and live axle, for the result was an undoubted victory for the former, the three leading cars all having side chain drive. In fact, out of the first dozen to finish the contest only four had live axles. Taking the whole forty-eight racing machines, I find that twenty-nine were chain driven and nineteen had cardan shafts and bevel gear. This preference for chains on the part of builders was borne out by the results, no less than 15, or 51 per cent., of the twenty-three cars which completed the race, being of this type, while only eight (42 per cent.) live axle machines covered the ten circuits.

A Tip re Smoky Paraffin Lamps.

I came across a useful tip the other day with regard to paraffin motor lamps, the credit for which is due to the Bleriot Company. It is a common experience to find shortly after one has made himself comfortable in the driving seat after lighting up, that the lamps are smoking so badly that the interior is blackened, and that the glass is also in a state rendering it more useful for looking at the sun on the occasion of an eclipse than that of allowing the light to be reflected through it. According to the firm named the trouble is simply due to regulating the wick at a suitable height when the lamp is cold. As soon as it becomes heated, the paraffin becomes more volatile and more easily fed to the wick and flame, the result being the same as if the wick were turned up too high to begin with. The remedy is, of course, not to turn it up quite so high at the beginning, or at least to allow the lamp to burn for a few minutes so that it can be regulated after becoming heated, before re-starting on one's journey.

Some Useful Examples from Yorkshire.

The motoring associations in Yorkshire are to be congratulated on the practical ideas they are introducing in connection with the view of mutually assisting members. The Harrogate Automobile Association, for example, has adopted a plan whereby those present at the meetings commit to paper some query that may have arisen in connection with their cars. The papers are then mixed up and drawn, and each member in turn is expected to answer the question which has fallen to his lot, or, if he feels incapable of the task, to select a subject from a number specially put in. It will readily be seen that, even if a correct solution of the trouble is not arrived at, a suggestion may be thrown out which will direct the thoughts of the puzzled one into new channels, and so achieve the desired result. Furthermore, the publicity given to the various difficulties that may be encountered by different motorists, and the best means of overcoming the same, brings forth a valuable amount of useful information that must be of general benefit. The same idea of increasing the practical knowledge of motorists has been developed in a somewhat different manner by the Scarborough and District Motor Club, which recently held a competition consisting of locating faults in the electrical ignition parts of motor vehicles purposely made by the judges. Such a contest offers considerable scope for testing the ability of motorists to cope with troubles of this kind; and it says much for the *savoir faire* of the winner that he was able to locate the cause of the engine refusing to work and have it running again in four minutes. The examples thus set by these Yorkshire clubs could, I am sure, be usefully followed by other bodies of motorists in many parts of the country, that of the Harrogate Association being particularly suited to form the programme at one or more winter meetings when club activities are usually not so great as in the summer season.

ARCANUM.

THE Anglo American Oil Company have been granted a Royal Warrant as purveyors of motor spirit to King Edward VII.—a distinction of importance, more especially in view of His Majesty's keen interest in all that appertains to motoring.

IN King Street, Perth, Mr. James Macfarlane has a capital garage, with repair department and stocks of accessories, spare parts, &c.

THE Motor Van Service is the name of a new concern which has been established at 52, North End, Croydon, for the purpose of hiring out all kinds of light motor delivery vans.

AMONG the applications for motor driving licences recently made to the Secretary of State of California are a considerable number from Japanese residing in San Francisco.

MARY, DUCHESS OF HAMILTON has purchased a Sheffield-Simplex car. An order for a six-cylinder 45-h.p. limousine has also been placed with the Sheffield-Simplex Motor Works by Mr. E. J. Avory, of Cobham.

MESSRS. WARWICK WRIGHT, LTD., have recently delivered Metallurgique 26-h.p. cars to the Maharaja Kumar of Kooch Behar, Sir Robert Lucas-Tooth, and Colonel Buchanan, and 40-h.p. vehicles to Dr. Cuthbertson and Mr. J. G. R. Raphael.

AMONGST recent purchasers of Daimler cars are the Rt. Hon. the Earl of Maclesfield, of Shirburn Castle, Wallingford, who has purchased a 42-h.p. "Hazlewood" phaeton car; Captain Arthur Philpots, Chelston Cross, Torquay, a 30-h.p. "Blackdown" landaulet; and Madame Melba, a 42-h.p. chassis. The company have also just completed a 42-h.p. shooting brake to the order of His Highness Maharaja Ranjitsinhji, Jam Sahib Nawanagar. The vehicle, which is painted green with light blue and salmon lines, is intended for use in India, and is fitted with a double roof to withstand the heat.

AT the annual conference of the Urban District Councils of England and Wales, held at New Brighton on Saturday, a resolution was submitted urging the Association to continue their efforts to induce the Government to increase the taxation of all motor-cars and motor vehicles, the proceeds to be devoted to road maintenance.

THE Chambre Syndicale des Carrossiers having invited the Institute of British Carriage Manufacturers to Paris in September, a programme of entertainment has been arranged for the 7th, 8th, and 9th of that month. Visits will be paid to Messrs. Kellner's carriage works at Boulogne, to Messrs. Rothschild's works, and to those of Messrs. Panhard and Levassor.

MESSRS. R. REYNOLD JACKSON AND CO. have sent us a photograph showing an 8-h.p. Jackson car towing a heavy motor-bus up High Street, Notting Hill Gate. The vehicle had broken down near their show rooms, and the police and a gang of men were trying unsuccessfully to move it out of the way of the congested traffic. The Jackson car, with a single-cylinder engine, was eventually attached to the bus, and towed it some 250 yards, without any other assistance, at a speed of six miles per hour.

THE Bridlington Motor Engineering Works have established a new garage in the Springfield Avenue, near the railway station, where they can store about thirty cars. They have repair works well equipped with modern machinery, and can also undertake the vulcanizing of tyres and charging of accumulators. Conveniently situated, this well-organised garage should prove popular with motorists in that part of Yorkshire as well as with those travelling through the district.

ACCORDING to Dr. Longford, the Medical Officer of Health to the Stoke Union, the dust-raised by motor-cars in the district is responsible for an epidemic of inflammation of the eyes which has broken out among the children in the workhouse infirmary.

A DEVICE that should prove a convenience to those motorists who are now and then obliged to get at some part underneath their car, but have no pit available, has lately been put on the market by the Brown Company, of 523, East Water Street, Syracuse, N.Y., U.S.A. It consists of a light wooden truck mounted on castors, with a cushion at one end, on which the person who is to do the repair can rest his head, and a chain by which the truck can be drawn into place and out from under the vehicle by a second person.

HERE AND THERE.

MR. J. CHAMBERLAIN has left Aix-les-Bains and travelled in a motor-car to Lausanne, where he will remain for some days.

THE Prime Minister, the Rt. Hon. H. H. Asquith, has purchased a 45-h.p. six-cylinder Napier; the vehicle is fitted with a double landaulet body to seat five inside.

AT Oban, Messrs. MacDougall have a new extensive garage with a motor repair workshop and two vulcanising plants for dealing with motor tyres.

Mr. BUCHANAN SHIELL, of Perth, has a large garage and repair establishment in Murray Street in that northern city. His plant is both modern and extensive.

FOR the "Model Engineer" Model Boat Regatta, at Wembley Park, on the 25th inst., there will be three events, including an open race for model steam, petrol, and electric boats over four feet in length, and a similar event for boats of four feet or more in length.

A CONSIDERABLE development is taking place in the Sheffield steel trade by the manufacture on a large scale of nickel steel motor axles. It is found that nickel steel, that is steel with a mixture of 3 per cent. of nickel, is a very satisfactory material for these axles.

THE accompanying illustration shows the up-to-date methods of Components, Ltd., cycle manufacturers, Bournbrook, Bir-



mingham, for delivering their goods in the vicinity of the Midland city. Anyone who is acquainted with Birmingham knows that it has some very stiff gradients, but the Ariel motor-lorry used by the company, with its engine of 30-40-h.p., is able to cope with a full load on the steepest of the hills. Careful comparison of the lorry with horse traction shows that the work done by the motor is more than can be done by three vans of similar carrying capacity, with two horses drawing each van.

THE Victrix Motor-Car Works, Kendal, have lately introduced a new universal joint for use on the cardan shafts of live axle cars, which appears to possess several features of merit, notably as regards the accuracy of manufacture and the provision for lubrication.

SALES of motor-cars at regular intervals are being organised at Birmingham by Messrs. Thomas Clayton and Sons, Ltd., of 125 and 126, New Street, Birmingham. The first is announced for Thursday next, and particulars of the same can be obtained from the auctioneer, Mr. F. W. Goodeve, 28, Cannon Street, Birmingham.

ON Tuesday a Renard road train, consisting of an 80-h.p. Daimler tractor with passenger carriage and three goods trucks, was run in the grounds of the Crystal Palace prior to being shipped for India. Subsequently Mr. H. S. Foster said the train had averaged 11½ miles an hour in journeying up to London from the Coventry works, and that a Renard train is now in service in Russia taking the Imperial luggage to and from the different residences of the Czar.

MOTORING ACCESSORIES.

The Sisco Tyre Inflator and Tester.

An accessory which is steadily gaining in popularity amongst motorists is the "Sisco" Tyre Inflator and Tester, made by the Scotch and Irish Oxygen Company, of Polmadie, Glasgow. By means of the arrangement the labour associated with hand-operated tyre pumps is obviated, the motorist being able to get any desired pressure up to 90 lb. in about one minute by simply turning a small wheel. The device also acts as a tyre tester, the exact pressure being shown on the gauge; a valuable feature, as there is thus no need to carry a separate testing apparatus.

The outfit is supplied in wooden boxes or leather cases, while refills are supplied at a cheap rate, not only by the makers, but by a large number of agents throughout the country. An interesting and illustrated pamphlet giving full particulars of the speciality has just been issued.

Spare Parts.

The motorist whose car is in frequent service will appreciate the well-arranged catalogue of spare parts and accessories which has just been issued by Messrs. G. T. Riches and Co., of 19, Store Street, Tottenham Court Road, London, W.C. The firm have a complete selection of goods for motorists, and during a recent call at their establishment we had ample evidence of their ability to supply goods directly from stock—an important consideration when spare parts are wanted in a hurry. The new price list is larger than any previous publication of Messrs. Riches and Co., and in its 200 pages are about a thousand illustrations. An excellent system of classification has been followed, and the well-devised index facilitates easy reference, so that particulars of any tools or appliances, accessories, or spare parts can be readily found. Prices are based upon the principle of retaining customers once secured, and the firm's practical experience of the motor trade is always at the disposal of those with whom they do business. Tyre pumps, pressure gauges, vulcanising equipment, and everything in connection with tyre work is listed by Messrs. Riches and Co., whose electrical accessories are of very wide range. We notice a comprehensive selection of drivers' indicators, spare parts for all makes of magnetos, motor hoods and similar fittings, lamps, horns and tools—in fact, the range is fully exhaustive.

The "Multum" Accumulator Lamp.

Fig. 1 depicts one of the many novelties lately put on the market by Messrs. Ward and Goldstone, of Sampson Works, Salford, Manchester. The "Multum" pocket lamp, as it is known, consists of a dry accumulator, which can be charged innumerable times at a small cost, and will give ten to twelve hours' light at a charge. The accumulator case is of ebonite composition, being moulded in one piece, and does not soften and deteriorate. The bulb is of the metal filament type, and

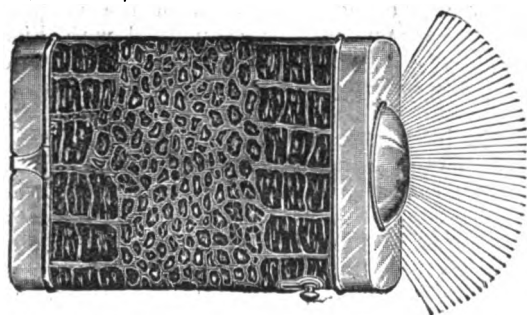


Fig. 1.

gives a white light; it is fitted with a special prismatic lens which intensifies and distributes the light. The case of the lamp is finished in nickel plating and leatherette, with side switch. The dimensions are 4 in. by 2½ in. by 1 in., so that it can be readily carried in the pocket.

A New Hand Cleaning Liquid.

We have received a sample tin of "Shofa," a new cleansing liquid or composition which has been brought out by the well-known firm of Messrs. William Cooper and Nephews, Berkhamsted, who have arranged with the United Motor Industries, of 45, Poland Street, W., to act as their sole distributors in the United Kingdom and the colonies. Before taking up the preparation the United Motor Industries subjected it to searching tests, and found that the claims of the makers are fully

justified in practice—namely, that a very small quantity will not only thoroughly cleanse the hands, however much they may be stained with motor oil, grease, &c., but will further leave them in a smooth and soft, pleasing condition, instead of that roughness and disagreeable feeling that one has hitherto associated with many of these cleansers. The United Motor Industries, Ltd., have also just issued a useful list of "Castle" accessories specially designed for motor-cyclists' use; these, include motor horns, belting, and belt fasteners, gas lamps, magnetos, accumulators, lubricating oils, &c.

A Megaphone Reed.

Messrs. Alfred Dunhill, Limited, of Euston Road, London, N.W., have brought out a simple attachment for the ordinary motor horn which secures an effective far-reaching sound which does not suffer the disadvantage of being unpleasant. Having once been adjusted, this new Megaphone Reed can be relied upon to respond immediately at all times when required. Its use will make the horn as efficient as the siren, without, however, the particular type of note that is associated with the

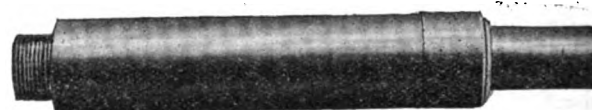


Fig. 2.

latter. The reed is made of a new material which produces treble the sound of any ordinary reed, and, there being nothing to get out of order, there should be a large demand for Messrs. Dunhill's latest addition to the motorist's accessory list.

The Barnes' Petrol Deodorizer.

Motorists generally, as well as those who are more closely associated with the organisation of motor-bus services, will be interested in a device and preparation which is being introduced by Messrs. Barnes and Pocock, Ltd., of 11, Queen Victoria Street, London, E. As to the malodorous character of the evil against which the Barnes' deodorizer is directed there is no doubt. It is painfully apparent to all who journey along the narrow streets of the City, and already the device has proved its value in this connection. The apparatus consists of an outer and an inner cylinder placed inside an outer vessel. The two former are perforated and lined with fine gauze on the outside so far as the inner cylinder is concerned, and on the inside in the case of the outer cylinder. Through the gauze the spirit only can pass, and between the two layers of closely-meshed metal the special preparation is placed, being covered by a lid. Located within the outer casing and fitted tightly at top and bottom, the Deodorizer may be trusted not to allow any of the special preparation getting into the pipes leading to the carburettor and so choking the same. On the motor car or bus—for the device is made in three sizes for vehicles up to 15-h.p., 0-h.p., and 40-h.p.—the apparatus is placed between the petrol tank and the carburettor with inlet connection at the top and the outlet at the side. The motor spirit then passes into the central cylinder, percolating through the deodorising preparation into the outer space, and thence to the carburettor. The spirit is thus effectually deodorised without in any way affecting its qualities. In the apparatus there is sufficient preparation to effectually subdue the smells of the motor for from 2,000 to 3,000 miles, and refills are made up in a very handy form. On some of the London buses the Barnes deodoriser has already shown its capacity for destroying not only the fumes from petrol, but also those arising from excessive lubrication, and its adoption generally would be welcomed by police and public alike.

Sirens.

Although there has been considerable prejudice against sirens in this country, Messrs. Maestre and Blatge, who from 20, Store Street, Tottenham Court Road, W.C., are supplying the trade with most useful and up-to-date novelties, are convinced of their necessity in connection with the covered car. When a motorist is driving such a vehicle ahead of another it is often impossible for the horn to be heard; there the system has its distinctive utility. In order to obviate the drawbacks connected with the frequent breakage of the cables of the siren, the firm are introducing for the season a "Harmonic" siren, which, it is said, can be heard five miles away. This has a new gear drive and is operated by a pedal. It can be fitted to any make of car, and agents and garage proprietors will be interested in this and many other accessories now being brought forward by the firm.

Correspondence.

[Letters to the Editor should be addressed to the offices, 27-33, Charing Cross Road, London, W.C.]

INCREASED MILEAGE ON PNEUMATIC TYRES WITH DECREASED PRESSURE.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—As you are probably aware, I have made very considerable experiments to find out—firstly, whether reduced pressure decreases the speed of the vehicle fitted with pneumatic tyres or not; secondly, whether decreased pressure decreases or increases the life of the tyre. The first series of tests prove that reduction of pressure in the tyres makes practically no difference in speed. The second series of tests prove that you can use your tyres with less pressure than was commonly thought, and, therefore, the whole car rides more easily and smoothly, and at the same time the tyres actually last longer. The tests have all been carried out on the road on my own six-cylinder Napier. The weight of the car complete, as I generally drive it, was a shade under 35 cwt. The result was that with 60 lb. pressure in the front 880 by 120 tyres they ran 88 per cent. further than when the pressure was kept at 70 lb. to the square inch, and when the pressure of the back tyre (895 by 135) was reduced from 85 lb. to 70 lb. I got an increased mileage of 49.9 per cent. It is, therefore, clearly proved that reduced pressure means greater comfort on a motor-car, and less expense in tyre bills.

I am now carrying out experiments with still lower pressures, but owing to the distance one has to run it takes a considerable time to obtain results.—Yours truly,

S. F. EDGE.

THE FOUR INCH RACE AND MONEY PRIZES.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—Enclosed I beg to hand you a copy of a letter which I have addressed to the secretary of the Royal Automobile Club. Perhaps you would like to ventilate this question in your next issue, and by so doing get the opinion of the parties interested.—Yours truly,

G. W. HANDS.

The Secretary Royal Automobile Club.

Sir,—As a visitor to the Grand Prix race I was very much struck with the interest taken in motor racing abroad, and, although figures are not available, I think I am right in saying that the attendance of visitors exceeded by far any other racing event held before. The only road race held in Great Britain organised by the R.A.C. has attracted very good entries, but I think the Four Inch race could be made more popular still if the entrants of the winning cars could reap an additional benefit in the shape of a money prize.

The Targa Florio has always attracted a great number of entries by reason of the fact that big money prizes have been offered, and if the Four Inch race would offer some similar inducements I am sure that it would secure a greater number of entries and afford a much greater attraction to the public. May I, therefore, suggest that the R.A.C. should put up three or four prizes of say £1,000 to the winning car, £500 to the second car, and £250 to the third and fourth cars. No doubt your committee can easily find the necessary funds for this purpose. If I may be permitted to express my own opinion, I think that if the manufacturers who have entered cars in the Four Inch race were approached by the committee they might be induced to make up amongst themselves a big purse by contributions of £25 and £50 for each car entered. It is true that an additional expense would be incurred by the makers of non-victorious cars, but, on the other hand, the entrants of the winning cars would reap a benefit which would to a large extent defray the expenses connected with the race. I shall be glad if you will give the matter your consideration, and, if you think it advisable, communicate with the parties interested.—Yours truly,

G. W. HANDS.

THE QUESTION OF GEARS.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—In last week's issue your correspondent "Brixham" invites motorists to express their views on gears, after drawing attention to their ratio as generally fitted, and the difficulty on what he terms "emergency" hills with standard gears. I would point out that the best way out of the trouble is to do without the gear, and drive direct on all speeds, which as far as I know is only done on the new Turner-Miesse steamer. It would probably be a revelation to your correspondent to see the way these cars take a hill, however steep, free from noise, shock, or vibration. I carefully examined one of these cars, and tested it on the road a week or two ago, with the result that I ordered one. I have no interest in the makers of any car, but feel sure the Turner-Miesse will go a long way towards popularising the steamer.—Yours truly,

WALTON.

THE A.C.F. GRAND PRIX RACE.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—If ever a firm and a man suffered from ill-luck throughout a whole week I certainly think the Weigel Motors, Ltd., and myself have. We have built cars which, if not as good as all, were at least better than most, and to set at rest the question of their speed at once I may say, without hesitation, these cars will shortly prove at Brooklands that they are capable of a speed of upwards of 100 miles an hour. At any rate, in practice, I and Laxen were continually touching ninety-six miles and keeping it going mile after mile. I drove my own car 800 odd miles by the speedometer whilst in France and never touched the engine or any part of the car. Laxen drove his car hard between five and six hundred miles with the same satisfactory result. Harrison, who did not arrive until after us, did not do so much work, but still he had no trouble.

Bad luck attended us before the race, as a gentleman, the brother-in-law of one of us, was unfortunately killed in the presence of myself and Laxen. A finer example of a British sportsman and a greater lover of automobiles than this gentleman was never lived, and in his death our sport has lost a great and true patron, and I have lost one of the greatest friends that a man can ever hope to have. With such a calamity before us all, and myself in particular, we were not in the happiest frame of mind to start, and I had every desire to withdraw all three cars,



A Humber Car in Moscow.

On the right is the wall of the Kremlin, showing the Porte Spasskaya or Holy Gate. In the background is the Cathedral of St. Basil-Bajenny, one of the strangest, yet most picturesque, specimens of architecture anywhere to be met with, having no less than twenty gilded and painted domes and towers, all of different shapes and sizes.

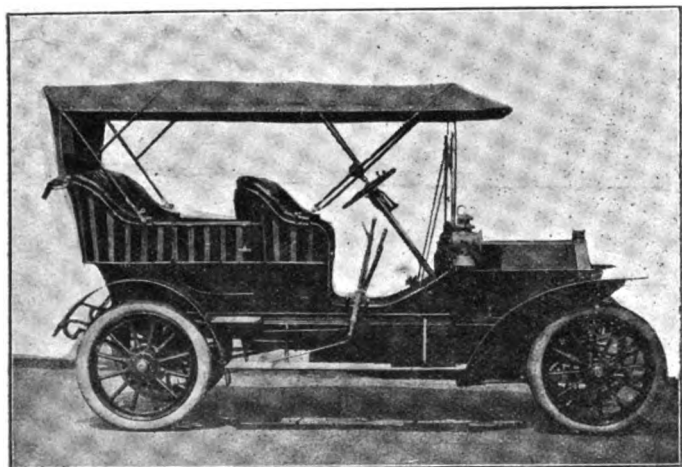
and had it not been that I had to study the interests of my company I should have, without hesitation, withdrawn them.

This year we have made cars which we knew would stand a chance, and, perhaps for the first time in the history of British automobilism, true thorough-bred racing cars had been built to compete against the foreigners, and I know that English hopes in Dieppe ran high. These hopes, however, were doomed to disappointment at the very first lap. Laxen, in taking the corner at Eu, was misled by the bad way in which the hoardings were put up, and took the outside hoardings instead of taking the corner, smashing the front of the chassis, the base of the radiator, twisting the front cross member, and putting his starting handle out of action. Twisting from the forward to a side impact, he smashed against the change-speed lever and gate, and placed his two lower speeds out of action. Very puckily he was able to start again—his engine, suprising to relate, not having stopped—and he came in to the control after having done a lap in the creditable time (considering the circumstances) of 50 min.

When I saw the car I knew it was hopeless, but, not wishing to discourage Laxen, who persisted in wishing to go on, I let him. The hill at Eu, however, was too much for him on top speed. He might have taken it, but another car being in his way caused him to slow down, and he could not get up the hill again on top speed; the result being that he left his car at Eu, pushing it through the hoardings which he had himself knocked down.

Harrison's luck was just as bad. In the first round the sparking plug blew out. In the second he had one burst tyre and one puncture. In the third lap a stone hit his oil tank and made a hole in it, and he spent a considerable time in the control in repairing this and taking the opportunity to fill up. The fourth round he did in good time, and in the fifth actually got into the eighth place, proving beyond doubt that his car was fast. In his next lap, unluckily for him, he mistook the village of Eu for an entirely different part of the course, and, instead of taking the corner, went straight through the village, clean through the palings at a speed of close on eighty miles an hour, turned over twice, and was finally pinned tight under the car. The villagers lifted the car bodily to enable him to get out, and he luckily escaped without any broken bones, but received a severe shaking, the greater part of his body being considerably torn and bruised. That he escaped with his life is good luck, and about the only good luck that attended the Weigel drivers throughout the whole of the day. He was taken to the hospital, which, after a good massage, he was permitted to leave in a Rothschild ambulance, under the kind care of Baron Henri de Rothschild. His mechanic, Coleman, escaped without a single scratch, his clothes only having suffered.

As to the novice who replaced me, his luck was out also. He had never been upon the car until that morning, and he had never been round the course, excepting once on a touring car with me. His first lap in 45 minutes speaks volumes for what he might have done had he had the good fortune to go round once or twice more. But his end came close to Eu, by taking the stump of a tree, which smashed the swivel of the front axle. The first of the French cars to finish were built upon practically identical lines to the Weigel, and, at any rate, I repeat my hope that I shall shortly prove, at the only place open to me to prove it, viz., at Brooklands, that our cars are capable of doing over 100 miles an hour although they are only of 60-h.p.



The 12-h.p. Live Axle Car recently supplied by the Star Engineering Company to Mr. Lewis Waller, the well-known actor.

As for the tyres we used this year, which were Dunlops, I have nothing but good to say of them. In practice, over the distance above mentioned, none of us had cause to change a single tyre, and I did the whole of my 800 odd miles practising with one set. In the race itself there was only one burst tyre, on Harrison's car, and one can hardly expect not to have at least one burst in such a race as this. What can be said of the other tyres? If one were to read the French papers it will be sufficient for the purpose. I am told that the winner changed twenty tyres. At any rate, at every lap one saw cars come in either minus tyres on the wheels or minus spare tyres hung upon the car.

There is very little doubt in my mind that the cars, although much smaller than last year, were much faster, and this is proved by the marvellous performance of Salzer, who did the circuit in 36 min. odd from a standing start, and against 38 min. from a flying start last year. I should certainly like to compliment the Mercedes and Benz companies upon their fine performances, and I have no hesitation in saying that they were the best cars of the day, and that the result was a justifiable one, which is not always the case. The cars of both these firms were fine jobs, and far faster, in my opinion, for all-round work than any others that took part in the race. I have, further, no hesitation in saying that if they could wipe up the whole of the French contingent, they could equally do so to the British, my own firm included. We had bad luck but, at the same time, I always like to acknowledge what is true and right, and in this case I certainly accept that the two best cars took the most prominent places.

Dealing with the course, I have never seen a worse one. I have always maintained it was a dangerous circuit for high speeds, but in the terrible condition in which the roads were for this race the route was deplorably dangerous. It was a mass of loose stones, and was so some days previously, when I went round in a touring car. In fact, I must acknowledge the sportsmanlike conduct of M. De Knyff, who made the excuses of the Automobile Club of France to the drivers be-

fore the race, and admitted the road was bad, and stated that they had spent some thousands of pounds to try and make it good, but had failed, and one can only sympathise with the A.C.F. in its misfortune.

I went round the circuit after the race and found the road torn up as if steam navvies had been upon it, and what was more deplorable still was to see the number of accidents that had occurred. From Londinieres to Eu one did not travel two kilometres without seeing a car in a ditch. I saw two Porthos, Thery's Brasier, Cissac's Panhard, a Motobloc, Salzer's Mercedes, my own three cars and several others. Although two poor men lost their lives in the race, it is surprising to me that there were not a dozen who met the same fate. Although in Weigel Motors, Ltd., we have made a great effort for the Grand Prix and failed, yet at least we have been in good company, for many of the finest French and Italian cars broke down. One must see this race to understand it, and one can then appreciate that a breakdown, break-up, or smash-up would not be either surprising or a disgrace to the firm who had made their effort to win. Whether I shall build further cars for the Grand Prix is a question for consideration. I must confess I am loth not to continue to build them, believing that we in England, and perhaps Weigel Motors, Ltd., in particular, can build something to teach our foreign friends that we are as good as they, and I claim to be too good a sportsman to let my defeats hinder me from attempting to gain for England what she has never previously had, and that is to win the Grand Prix on merit. Perhaps when the feeling of all this bad luck has passed away I shall induce my directors to act in the same public-spirited fashion as they have hitherto done, and that is, uphold the British motor industry by at least making the attempt, even if it be an unfortunate failure like this year. I understand the rules for the next Grand Prix will be out in a month, I will then see whether we shall enter or not. I must confess, however, that the support one gets from Great Britain is small. French amateurs are always to be found who will purchase French cars after the Grand Prix, and so help the manufacturers. In this country the builder is left entirely to himself, and one hardly finds a friend amongst the amateurs to assist even by the purchase of a car.—Yours truly,

D. M. WEIGEL.

LONDON TRAFFIC.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—From the mass of very intelligible—if not always coherent—remonstrance, “letters to *The Times*,” “Mansion House meetings,” and what not, on the subject of the present condition of street traffic in London, little of practical suggestion has emerged.

May I, as a sufferer in common with my fellows, suggest, not indeed a remedy, but what might prove to be an effective palliative of most of these ills of which we justly complain? and that is the encouraging, or even the favouring, by regulation, of electrically-prepared traffic. Our present grievances are noise, smoke, smell, undue speed, and, for the traveller, undue vibration. The electric carriage is guiltless of all these offences.

The obstacle of excessive expense is urged. If it be a good argument, then a discriminating tariff for public vehicles would meet the difficulty. But is it a good argument? Already Berlin, Hamburg, and Cologne, where electricity is dearer than in London, have electric cabs, which pay, and the electrobus is only a matter of to-morrow.

I have run an electric carriage—the same carriage—for four years. It cannot travel faster than regulation speed. It can stop in its own length. It has no noise, smoke, smell, or vibration; and as to the argument of working expenses and tear and wear, it is a better car now than when it started, and it has saved me a considerable sum on my stable account.

Why should not the public—the cab and omnibus and walking public—share in these benefits? Why, in other years, instead of confining themselves to the negative check of taking over-nolay and over-smelly vehicles off the street, should not the authorities have power to favour and encourage the virtuous electric cab and electrobus? A very slight preference would do it. Or must we continue to have free trade in smell, noise, and occasional murder?—Yours truly,

LEWIS McIVER.

THE SALTBRN RACES.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—It is with great surprise that I have noted an advertisement appearing in a late issue of your journal, wherein it is stated that at the Saltburn race meeting a standard 40-h.p. Metallurgique car made the fastest time over the standing kilometre of any touring car, and beating, amongst others, a 58-h.p. Daimler and a 60-h.p. Napier. The only 58-h.p. Daimler car competing at this meeting was mine, and in the two events in which I competed I was first, beating in one event both the 60-h.p. Napier and the 40-h.p. Metallurgique, and in the other event beating the same Metallurgique car, the Napier not competing in this latter event.

It is distinctly comical that in the same issue of your journal in which this advertisement appears there are given the results of the races in question, which are in direct negation of the advertisement.—Yours truly,

GEORGE S. BARWICK.

THE SETTING OF VALVES.

THE attention which has recently been devoted in these columns to the question of the setting of the valves of petrol motors has attracted considerable notice, and, in view of the great diversity which exists among engine designers on the point, we are glad to notice that the Institution of Automobile Engineers has decided to go thoroughly into the subject next session. It is not only in this country that the matter of valve setting is coming into prominence; it is the same in France and the United States. In the last named country an automobile engineer has recently carried out a series of experiments with different setting of the valves, the results of which have recently been published in our contemporary, the "Horseless Age," from which we extract the following details.

The stand on which the motor was mounted for the tests and throughout the entire course of the experiments was fitted for the working in and adjusting of engines before placing them in the chassis. The equipment was made up as follows:—A well-designed Prony brake efficiently cooled and lubricated and provided at the outer end of the lever, to which an accurate spring scale was attached, with a dash pot for steadying purposes; a directly driven electric speed indicator, and a 120-gallon tank, from which the cooling water was drawn, and to which it was returned by the water-circulating pump, the latter and the lubricator being fitted to the motor as a part of the power unit. The water circulation arrangement permitted of engine operation at all times with a jacket temperature just below that of the boiling point of water. The engine used had four cylinders, $4\frac{1}{2}$ in. bore by 5 in. stroke, cast in pairs with integral water jackets. The connecting rods were 12 in. in length. The valves, of $1\frac{1}{2}$ in. diameter and $\frac{1}{4}$ in. lift, were located side by side in single combustion chamber pockets, and all operated from a single cam shaft. The cams were individual and pinned in place on the shaft, which construction lent itself particularly well to making changes in the timing.

Although known to give poor results, it was decided to leave the valve lift unaltered, and at the time the engine was set up on the stand the timing stood as shown diagrammatically at A. After thoroughly adjusting and testing the motor with this timing, the cams were changed and the same procedure followed out with the new setting. This was done with nine sets of cams, each giving a different timing, following up the gains made by the preceding one. In Fig. 1 at A, B, C, D, and E are given five of the valve settings tried, and in Fig. 2 are set forth the results in each case, in the form of horse-power speed curves. The curves are interesting in that they show the absolute result of the change in timing in each case.

Particular attention may be called to certain parts of the curves: Beginning with A, it will be noticed that the speed range of the motor with the valve timed as at A, Fig. 1, was very limited, and that above

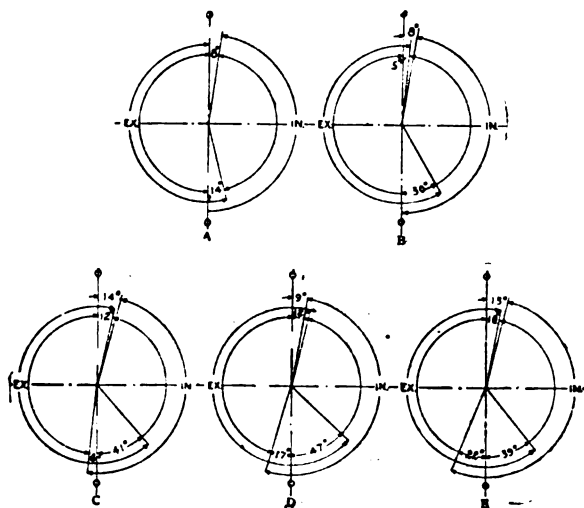


Fig. 1.—Valve Setting Diagrams.

877 revs. per minute the power dropped off, until at 963 revs. only 16.2 b.h.p. was being developed. The maximum b.h.p. with this timing (19.27) was delivered at 874 revs. per minute.

In curve B the only change in the valve setting from that in A was an increase in the time the exhaust valve was held open. This had the effect of increasing the speed range of the motor somewhat, and at the same time, through relieving the pistons of a part of the back pressure, of increasing the power at all speeds. Between the settings B and C the exhaust cams were again changed to give an earlier and slightly longer period of opening, but with only small gains in either power or speed. In C the exhaust cams were again changed to give a later timing to the closing, although retaining the opening time used in the test (not shown) just preceding. The total angular distance of the inlet valve opening remained the same as in the three preceding tests, but the setting was here shifted, so that the valve opened later and closed after the outer centre had been passed.

As timed at C the power was slightly increased and the speed range very much so. In the test (not shown) preceding C the curve closely followed curve B and indicated a gain of .76 b.h.p. and a barely perceptible increase in the speed range. The tests preceding and following C seem to indicate that the later closing of the inlet valve in C is almost entirely responsible for the gains there shown. The most noticeable feature of curve C is the easy rise and fall to and from the maximum b.h.p., with a corresponding lengthening of the speed range.

Between C and D another setting (not shown) was tried, in which the timing remained the same, with the exception of the inlet valve closing, which was timed to occur at 20 deg. over the outer centre. This resulted in gains greater than any of the previous in both power and speed range, and gave a curve superior to D in every respect. The timing as in D, in which the time of the exhaust opening was again advanced, and the time of the intake opening set to lap the exhaust closing

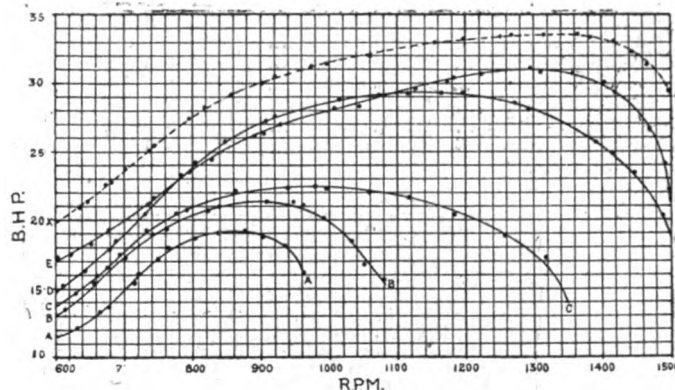


Fig. 2.—Curves showing Variation in Power due to Different Valve Settings.

by 3 deg., was next tried. This resulted in a drop in power at the lower speeds, with a maximum power inferior to that with the timing just preceding. It thus seemed that the limit of exhaust lead for the development of power at low and medium speeds had been reached. It will be noticed that the maximum power of which the engine was capable had been increased from 19.27-h.p. with the timing as in A, to 29.38-h.p. with the D setting.

Two tests were run between the timings D and E; one in which the intake opening lapped the exhaust closing by 7 deg. with the intake closing at 20 deg. past the centre, and one in which the intake closed at 25 deg. over the centre with the timing of the exhaust opening and closing and the intake opening as in C. In both these tests the curves were inferior to that with the D setting. The curve for the latter of the two showed a dropping off in power at the higher speeds only, which loss was taken to indicate that some of each charge had been pushed out by the pistons on the return strokes because of extremely late inlet closing, due to the timing and the inertia of the valves at high speeds.

The next and last set of cams timed the valves as shown at diagram E. The timings of both inlet and exhaust that had given the best results in the preceding tests were here employed, and gave the best curve of the series in respect of rapid rise of the power at the lower speeds, maximum b.h.p., and speed range with sustained power with an increase in the speed. The curve E shows to what degree a steady rise in the b.h.p. had been attained with an almost corresponding increase in the revolutions per minute. The rapid drop in power at speeds higher than 1,300 revolutions per minute—corresponding in this engine to a piston speed of 1,125 ft. per minute—is due in part to mechanical losses and in part to the originally small size of the valves, and could not have been even slightly overcome by the timing without causing great power losses at moderate speeds. At any rate, a piston speed of 1,125 ft. per minute is excessive for economical operation. It will be noticed that as finally timed the engine developed, at a piston speed of 900 ft. per minute, 29.12 b.h.p., the revs. being 1,080, and that the maximum of 31.18 b.h.p. was delivered at 1,294 revs.

As before mentioned, the valves were only $1\frac{1}{2}$ in. in diameter, and this fact alone is responsible for any weakness remaining in the horse power speed curve after the timing had finally been adjusted to its best. If the valves had been larger the rate of gas flow would have been lower at the higher speeds, with a consequently more sustained power curve, this diameter closely approximating that shown at X, Fig. 2, which was obtained with an engine of the same cylinder dimensions with connecting rods 10 in. in length and valves 2 in. in diameter, lifting $\frac{1}{4}$ in., timed as in E, Fig. 1, except that the exhaust opened at 37 deg. before the outer centre. A slight all-round reduction would have to be made in applying the curve X, as a possibility, to the engine from which the curve E was made, because of the shorter connecting rods employed. As will be seen, the engine X developed a maximum of 33.72 b.h.p. at a speed of 1,365 revs.; and at 904 revs. 30.11 b.h.p. was delivered.

MR. WARWICK WRIGHT, who is taking up motor-boat racing, has just received delivery of his new boat, which is fitted with a 40-h.p. Metallurgique engine.

HILL CLIMBING COMPETITIONS.

ASTON.

On Saturday the Hertfordshire County Automobile Club held its open hill climb at Aston Hill, and a great success was again recorded both from the interest of the competitors and from the attendance of the public. The executive officers are to be congratulated on the admirable arrangements made for the meeting. Mr. S. Saker was the judge; Messrs. C. McWhirter, E. Webster and T. Williams were clerks of the course; Mr. W. Young and Mr. F. W. Shorland marshals in charge; Mr. W. Whittall clerk of the scales; Messrs. F. Straight, A. V. Ebbelwhite and J. H. Barley timekeepers; Mr. A. J. Salmon an obliging press steward and Mr. Sydney J. Ellis the secretary of the meeting.

The following are the results:—

| CLASS I. | | | | | |
|----------|---------------------------|---------------|--------|----------------|-------------------|
| Place. | car. | Driver. | Marks. | Time. m. s. | Final Placing. |
| 1 | 9-h.p. Riley | J. Browning | 756 | X | 1 |
| 2 | 8-h.p. Jackson | J. W. Davis | 763 | + 1 8½ | 7 |
| 3 | 8-h.p. Jackson | E. Jackson | 764 | + 55½ | 5 |
| 4 | 8-h.p. Jackson | R. R. Jackson | 771 | + 49½ | 2 |
| 5 | 10-h.p. De Dion | W. V. Jolley | 775 | + 54½ | 3 |
| 6 | 8-9-h.p. Chenard-Walcker. | H. Pennington | 875 | + 1 6½ | 6 |

CLASS III.—continued.

| Place. | Car. | Driver. | Marks. | Time. m. s. | Final Placing. |
|--------|------------------------|-------------------|--------|----------------|-------------------|
| 4 | 26-h.p. Metallurgique. | O. Cupper | 726 | + 4½ | 2 |
| 5 | 18-h.p. Minerva | W. Holloway | 888 | + 40 | 7 |
| 6 | 24-h.p. Minerva | E. Edwards | 9025 | + 40 | |
| 7 | 18-h.p. Minerva | Basil Crump | 981 | + 50½ | 9 |
| 8 | 40-h.p. Austin | Miss M. Thompson. | 972 | + 22½ | 6 |
| 9 | 20-h.p. Standard | F. G. Lewin | 1020 | + 45½ | 8 |
| 10 | 20-h.p. Mass | W. M. Horniman. | 1032 | + 15½ | 4 |
| 11 | 20-h.p. Renault | C. L. Woodward | 1175 | + 58½ | 10 |
| 12 | 20-h.p. Rothwell | W. G. James | 1315 | + 58½ | |

CLASS IV.

| | | | | | |
|---|--------------------------|----------------|------|--------|---|
| 1 | 60-h.p. Napier | S. F. Edge | 1035 | X | 1 |
| 2 | 60-h.p. Napier | Miss D. Levitt | 1070 | + 5½ | 2 |
| 3 | 30-35-h.p. Simms-Walbeck | S. G. Spoor | 1221 | + 32 | 3 |
| 4 | 40-h.p. Weigel | S. S. Barber | 1512 | + 1 0½ | 4 |



The Hertfordshire Club's Hill-Climbing Competition at Aston Hill.—The Scene at the Starting Point.

| | | | | | |
|---|-----------------|-----------------|-----|---------|---|
| 7 | 10 h.p. De Dion | C. J. Newey | 950 | + 1 46½ | 8 |
| 8 | 8-h.p. Phoenix | J. von Hooydonk | 990 | + 55½ | 4 |

CLASS II.

| | | | | | |
|----|-------------------------|----------------|------|---------|----|
| 1 | 15-h.p. Talbot | J. Hedges | 618 | + 15 | 2 |
| 2 | 20-h.p. Vauxhall | P. C. Kidner | 623 | X | 1 |
| 3 | 15-h.p. Talbot | C. R. Garrard | 765 | + 39½ | 5 |
| 4 | 14-h.p. Alldays | E. Armstrong | 850 | + 35 | 3 |
| 5 | 20-h.p. Alldays | E. Blackmore | 862 | + 49½ | 6 |
| 6 | 12-h.p. Sizaire-Naudin. | A. Bray | 872 | + 1 18½ | 8 |
| 7 | 12-h.p. Riley | V. Riley | 900 | + 1 22½ | 9 |
| 8 | 15-h.p. Mass | A. F. King | 955 | + 36½ | 4 |
| 9 | 15-h.p. De Dion | R. Giffen | 1038 | + 1 39½ | 10 |
| 10 | 14-16-h.p. Fiat | H. W. Colliver | 1125 | + 1 39½ | |
| 11 | 14-16-h.p. Jackson | H. Jackson | 1189 | + 1 6½ | 7 |
| 12 | 16-20-h.p. Unic | C. L. Thompson | 1360 | + 1 52½ | 11 |
| 13 | 10-12-h.p. Star | E. King | 1640 | + 1 54½ | 12 |

CLASS III.

| | | | | | |
|---|----------------|---------------|-----|-------|---|
| 1 | 20-h.p. Talbot | G. Day | 708 | + 16½ | 5 |
| 2 | 20-h.p. Talbot | T. H. Woollen | 714 | + 14½ | 3 |
| 3 | 40-h.p. Napier | F. Browning | 720 | X | 1 |

KETTLEBY.

On Saturday the Leicestershire A.C. held a hill-climbing competition at Kettleby Hill, on the main road leading from Melton to Kettleby. There was a large attendance, not only from the county of Leicester, but also from the adjoining ones of Nottingham, Northampton, and Derby. The weather was threatening all day, but fortunately the rain kept off, and the competition was carried out in comfort. The cars were divided into three classes, the first being for vehicles with one or two cylinders, the second for cars not exceeding 20-h.p., and the third for those above that rating, calculated on R.A.C. formula. The Leicestershire Club gave a medal to the car in each event having the fastest time to its credit, and another for that making the best performance on the following formula:—

The formula used in each of the classes was as follows:—

$$\frac{\text{Times in seconds} \times \text{Formula H.P.}}{\text{Total weight in pounds.}}$$

The horse power was decided by the following formula, namely:—

$$\frac{N \times (B + S)^2}{6,500}$$

N—Number of cylinders, B—Bore of cylinders in mm., and S—Stroke of pistons in mm.

A challenge cup was also presented by Mr. J. A. Hartopp, and this was won for the first time by Mr. A. Farnell on his 30-40-h.p. Daimler. The arrangements were admirably carried out by the officials, and the results were as follows:—

| EVENT A. | | | Place on | |
|-----------------------|-------------------|----------------------|-------------|------------|
| Name. | Club. | Maker's Name. | Time, form- | m. s. ula. |
| Stanley Riley ... | Leicester ... | 9-h.p. Riley ... | 2 31½ | 1 |
| Victor Riley ... | Coventry ... | 12-h.p. Riley ... | — | — |
| W. Thomson ... | — | 12-h.p. De Dion ... | 3 54½ | 3 |
| Dr. R. G. Hogarth ... | Notts ... | 8-h.p. Clyde ... | 3 2½ | 2 |
| G. H. Wait ... | Leicester ... | 8-h.p. Clyde ... | — | — |
| F. H. Gerard ... | Leicester ... | 8-h.p. De Dion ... | 4 7½ | 4 |
| G. H. Spicer ... | Coventry, &c. ... | 6-h.p. Wolseley ... | 4 19½ | 6 |
| Andrew King ... | Notts ... | 10-12-h.p. Swift ... | 2 34 | 5 |

| EVENT B. | | | Time, form- | |
|--------------------------|----------------------|----------------------------|-------------|------------|
| Name. | Club. | Maker's Name. | Time, form- | m. s. ula. |
| J. M. Bennett ... | Leicester-shire ... | 14-16-h.p. Argyll ... | 3 34½ | 10 |
| Mrs. H. A. Han-shaw ... | Leicester-shire ... | 14-20-h.p. Renault ... | 2 19 | 5 |
| Dr. P. E. Tres-sider ... | Notts ... | 15-h.p. Clement-Talbot ... | 1 41 | 1 |
| C. B. Warner ... | Leicester ... | 10-12-h.p. Clyde ... | 3 10 | 6 |
| F. H. Gerard ... | Leicester ... | 12-14-h.p. De Dion ... | 3 3½ | 8 |
| G. H. Wait ... | Leicester ... | 14-h.p. Clyde ... | 2 8 | 2 |
| F. A. Bolton ... | Derby ... | 15-h.p. Standard ... | — | — |
| Capt. W. Byron ... | Leicester ... | 18-h.p. Minerva ... | 2 0 | 4 |
| E. E. Coltman ... | Leicester ... | 20-h.p. Coltman ... | 2 38½ | 9 |
| M. Ross-Browne ... | Notts, and Derby ... | 15-h.p. Mass ... | 1 38 | 3 |
| Spencer Downing ... | Mid. and Derby ... | 14-h.p. Alldays ... | 2 33½ | 7 |

| EVENT C. | | | Time, form- | |
|------------------------|---------------------------------------|------------------------|-------------|------------|
| Name. | Club. | Maker's Name. | Time, form- | m. s. ula. |
| *Mrs. H. Hamshaw ... | Leicester-shire ... | 60-h.p. Napier ... | 1 7½ | 9 |
| J. Croshaw Wil-son ... | Notts ... | 45-h.p. Deasy ... | — | — |
| Dr. R. G. Hogarth ... | Notts ... | 25-h.p. Talbot ... | 1 38 | 2 |
| Albert Farnell ... | Leicester-shire ... | 30-40-h.p. Daimler ... | 1 12½ | 1 |
| F. A. Bolton ... | Leicester-shire, Derby Notts, &c. ... | 40-50-h.p. Ariel ... | 1 8½ | 7 |
| Capt. W. Byron ... | Leicester-shire ... | 24-h.p. Minerva ... | 1 51½ | 6 |
| E. E. Coltman ... | Leicester-shire ... | 20-h.p. Coltman ... | 2 26½ | 10 |
| P. Graham ... | Notts ... | 35-h.p. Deasy ... | 1 20½ | 3 |
| E. H. Lewis ... | Notts ... | 35-h.p. Deasy ... | 1 19½ | 4 |
| J. A. Doran ... | Leicester ... | 45-h.p. Daimler ... | 1 9½ | 5 |
| C. T. Leech ... | Derby ... | 42-h.p. Daimler ... | 1 14½ | 8 |

* Fastest time.

The cars then ran for the Du Pre Challenge Cup:—F. A. Bolton, 40-50-h.p. Ariel, 1 m. 2 1-5 s.; Mrs. Hamshaw, 60-h.p. Napier, 1 m. 10 s.; J. A. Doran, 45-h.p. Daimler, 1 m. 14 s.; A. Farnell, 30-h.p. Daimler, 1 m. 14 s.; C. T. Leach, 42-h.p. Daimler, 1 m. 14 1-5 s.; E. W. Lewis, 35-h.p. Deasy, 1 m. 19 3-5 s.; P. Graham, 35-h.p. Deasy, 1 m. 21 3-5 s.; R. G. Hogarth, 25-h.p. Talbot, 1 m. 38 3-5 s.; M. Ross Browne, 15-h.p. Mass, 1 m. 39 s.; P. Tressider, 15-h.p. Talbot, 1 m. 41 s.; Capt. Byron, 24-h.p. Minerva, 1 m. 48 s.; H. Belcher, 15-h.p. Talbot, 1 m. 51 s.; G. H. Wait, 14-h.p. Clyde, 2 m. 7 s.; Capt. Byron, 18-h.p. Minerva, 2 m. 10 s.; H. A. Bennett, 16-h.p. Bell, 2 m. 14 s.; Mrs. Hamshaw, 14-20-h.p. Renault, 2 m. 18 s.; S. Riley, 9-h.p. Riley, 2 m. 22 s.; E. E. Coltman, 20-h.p. Coltman, 2 m. 32 s.; A. King, 10-12-h.p. Swift, 2 m. 35 s.; J. Downing, 14-h.p. Alldays, 2 m. 35 1-5 s.; C. B. Warner, 10-12-h.p. Clyde, 2 m. 56 s.; J. W. Taylor, 15-h.p. Humber, 3 m. 2 4-5 s.; F. H. Gerard, 12-14-h.p. De Dion, 3 m. 3 4-5 s.; R. G. Hogarth, 8-h.p. Clyde, 3 m. 8 1-5 s.; J. M. Bennett, 14-16-h.p. Argyll, 3 m. 25 s.; and W. Thomson, 12-h.p. De Dion, 3 m. 46 s.

COALPORT.

On Saturday the Wolverhampton and District A.C. held an open hill-climbing competition at Coalport, near Ironbridge. The climb was one of 1,000 yards with an average gradient of one in ten, with several difficult turns that made the course additionally severe. There were five classes. The results are appended:—

| CLASS I. | | | m. s. | |
|--------------------|--------------------------------|-------|-------|---|
| T. W. Bowen ... | 10-12-h.p. Clement-Talbot ... | 2 39½ | — | — |
| E. Lisle, jun. ... | 10-h.p. Royal Starling ... | 2 56 | — | — |
| W. B. Goodwin ... | 6-h.p. Rover ... | 3 21½ | — | — |
| E. G. Newey ... | 10-h.p. De Dion ... | 3 15 | — | — |
| CLASS II. | | | m. s. | |
| G. A. Phillips ... | 10-12-h.p. Coventry Humber ... | 2 15½ | — | — |
| J. Lisle ... | 12-h.p. Star ... | 2 34½ | — | — |
| L. J. Holman ... | 12-h.p. Star ... | 3 13½ | — | — |

CLASS III.

| | | | |
|-----------------|------------------------|-------|-------|
| R. Crowley ... | 20-h.p. Belsize ... | 2 12½ | m. s. |
| T. T. Mills ... | 18-22-h.p. Daimler ... | 2 19½ | m. s. |

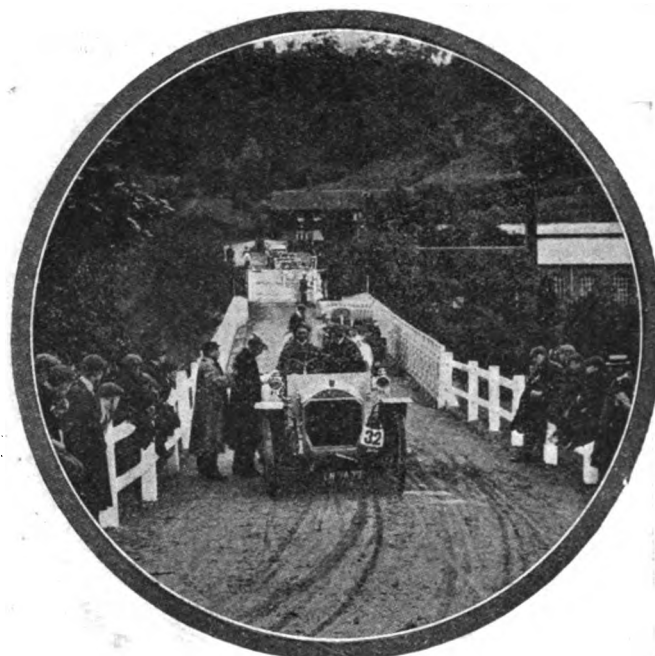
CLASS IV.

| | | | |
|-------------------|-------------------------------|-------|-------|
| A. G. Jones ... | 15-20-h.p. Clement-Talbot ... | 1 24 | m. s. |
| W. Stokes ... | 25-h.p. Talbot ... | 1 32½ | m. s. |
| N. F. Bayliss ... | 20-h.p. Sunbeam ... | 1 51½ | m. s. |
| H. Austin ... | 18-24-h.p. Austin ... | 1 51½ | m. s. |
| F. Eastmead ... | 20-h.p. Sunbeam ... | 1 52 | m. s. |
| F. A. Stark ... | 20-32-h.p. Beeston-Humber ... | 2 11½ | m. s. |
| W. H. Cook ... | 20-h.p. Sunbeam ... | 2 14 | m. s. |

CLASS V.

| | | | |
|-------------------|----------------------|-------|-------|
| F. Newton ... | 45-h.p. Napier ... | 1 8½ | m. s. |
| C. Sangster ... | 30-40-h.p. Ariel ... | 1 24 | m. s. |
| J. H. Barnett ... | 40-h.p. Austin ... | 1 41½ | m. s. |
| W. H. Evans ... | 40-h.p. Napier ... | 2 13 | m. s. |

The 10-h.p. Starling, which was driven by Mr. E. Lisle, jun., won the Silver Cup presented by the president of the Wolverhampton and District A.C., as well as the Star Trophy Silver Cup. On handicap the car also made the best performance in the Club event, and the driver was awarded a gold medal. In the Open event the car also did extremely well, and its performance was one of the outstanding features of the meet.



The Wolverhampton Club's Hill-Climbing Competition at Coalport.—Newton on the 45-h.p. Six-Cylinder Napier which made the fastest time. Photo by Campbell-Gray.

SCOTTISH RELIABILITY TRIAL.

IN view of the discussion with regard to the hill approaching Kenmore from Amulree the committee of the Scottish A.C. have obtained a detailed section of the steepest portion of the hill from a civil engineer. This is measured from a point 185 feet below the lower elbow curve to a point 110 feet above the upper elbow curve, and, consequently, embraces two elbow curves. The gradients, commencing at the lower bend referred to and going upwards, are as follows:—

For 50 ft., 1 in 11-5; 75 ft., 1 in 8-3; 25 ft., 1 in 6-5; 2-5 ft., 1 in 5-7; 15 ft., in the middle of which is the centre of the curve of the lower elbow, 1 in 5-2; 10 ft., in 1-7; 25 ft., 1 in 8-6; 25 ft., 1 in 11-5; 25 ft., 1 in 9-9; 15 ft., to the centre of the curve of the upper elbow, 1 in 6-6; 10 ft., upwards from said centre, 1 in 6-3; 25 ft., 1 in 6-2; 25 ft., 1 in 7-2; 50 ft., 1 in 6-9.

These gradients are all taken in the centre of the road.

LIEUT. J. CARRUTHERS, R.F.A., was the winner of the motor-car event in the annual sports of the R.A. at Aldershot last week.

MESSRS. JARROTT AND LETTS, 45, Great Marlborough Street, London, W., have just issued a new catalogue of the Sizaire-Naudin car for which they are sole concessionaires in this country. The list gives full particulars of the new 12-h.p. model, together with illustrations of the engine-clutch, change-speed gear, &c., as well as of the various types of bodies that can be fitted to the chassis. A copy of the list will be sent by the firm on application.

CLUBS AND ASSOCIATIONS.

ROYAL.

NEW members of the Royal A.C. include the Right Hon. Lord Atkinson, P.C., the Earl of Harrowby, the Hon. Edward Coke, Col. H. R. Cross, Col. H. C. Hansard, and Sir W. J. Lancaster.

AUTOMOBILE ASSOCIATION.

IN addition to the large extensions of the patrol organisation in Ayrshire, Dumbartonshire, Dumfries, Forfarshire, Fifeshire, Perthshire, Stirlingshire, and Lanarkshire, in connection with which a strong local committee have been doing great work during the last few months, offices have now been opened by the A.A. at Gordon Chambers, Mitchell Street, Glasgow.

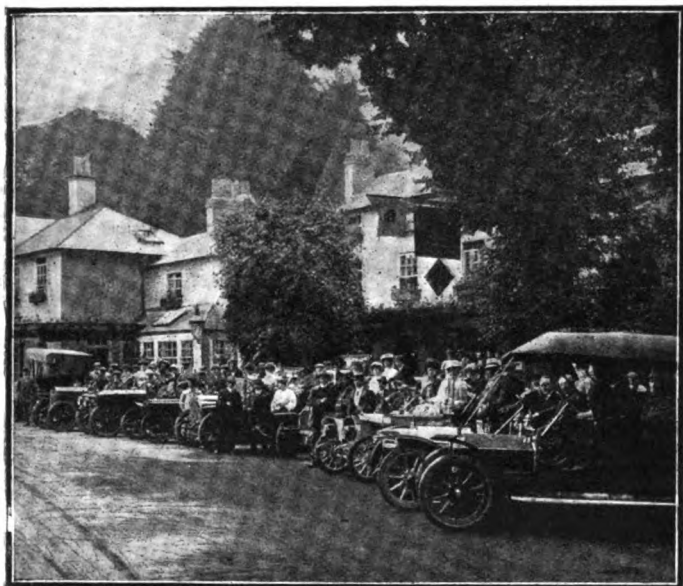
SOUTHEAST.

THIS club is promoting a gymkhana at Great Stambidge on Wednesday next.

The committee is carefully watching the application of the Southend Town Council to the Local Government Board for a ten mile speed limit in certain streets of the borough.

ROAD.

THE Committee and some members of the Road Club ran down to the Burford Bridge Hotel on Sunday last. The club, which was instituted about two years ago, has been reorganised, and, among other



The Meet of the Road Club at Burford Bridge.

Photo by]

[E. W. Ashworth.

advantages to its members, has now made arrangements with a large number of first-class hotels throughout the kingdom to accept the club scale of charges. Particulars of membership can be obtained of the secretary, at Carlton House, 11, Regent Street, London, S.W.

AUTO-CYCLE UNION.

FIFTY-EIGHT competitors set out from Land's End on Monday in the Auto-Cycle Union's trial from there to John o' Groat's. The distance of the trial is 896 miles, and the first day's stage ended at Taunton, 155½ miles. Only one passenger machine—namely the 10-h.p. Legonda tri-car of M. W. Randle, was among the starters. The weather at the start was fine, but before Launceston was reached several local showers were encountered. These had the effect of making the road rather treacherous in places, but the good condition of the surface lessened the danger considerably. The first six to arrive, in the order named, were:—S. W. Carty, 3½-h.p. N.S.U. two-speed; W. H. Wells, 5-h.p. Vindec special; J. Tassell, 3½-h.p. Matchless; A. D. Nicholson, 3½-h.p. Triumph; M. Greiger, 6-h.p. N.S.U.; P. H. Cockcroft, 3½-h.p. Triumph.

CYCLE AND MOTOR TRADES BENEVOLENT FUND.

AT the July monthly meeting of the Executive Committee of this fund, the treasurer reported the amount of £486 to the credit of the current account at the bank. It was mentioned that employees in the motor trade had been somewhat backward in associating themselves with its benefits, and they are urged not to overlook the advantages it can afford them.

LANCASHIRE.

THE Lancashire Automobile Club have had a reliability contest for members. The course mapped out covered a distance of about 150 miles, commencing at the Yew Tree and terminating at the Kirkstone Inn, the route being Gisburn, Settle, Ingelton, Kirkby Lonsdale, Kendal, and Shap Fell, to Carlisle. From thence the cars returned via Pooley Bridge to Kirkstone Inn, where the run terminated. Of the fourteen entrants, twelve competitors started. The cars started at intervals between 8.45 and 9.30 a.m., and reached Carlisle between 12.30 and 2.30. At Carlisle a stoppage of an hour and a half was allowed for lunch, petrol and oil. All the cars finished at Bowness by six o'clock.

The winners of certificates as accomplishing an absolute non-stop run are as follow:—

| | | | |
|-----------------------------|-----|-----|--------------------|
| A. E. Crowdy, Manchester | ... | ... | 14-h.p. Siddeley |
| J. S. Horsfall, Nelson | ... | ... | 14-16-h.p. Argyll |
| Robert Magnall, Darwen | ... | ... | 40-h.p. Napier |
| L. Rothwell, Bury | ... | ... | 30-h.p. Humber |
| J. E. Stanning, Leyland | ... | ... | 30-h.p. M.P. |
| J. A. Sutcliffe, Manchester | ... | ... | 30-35-h.p. Daimler |

In addition to the above awards, medals have been granted to the following for meritorious performances:—

| | | | |
|----------------------------|-----|-----|--------------------|
| J. W. Ainsworth, Blackburn | ... | ... | 10-h.p. De Dion |
| F. H. Walker, Lytham | ... | ... | 28-36-h.p. Daimler |
| Mrs. T. M. Crook, Hoghton | ... | ... | 35-h.p. Mercedes |

ESSEX COUNTY.

ON Saturday the Essex County A.C. held a successful gymkhana in an enclosure on the Ongar road, at Brentford, kindly lent by the chairman of the club, Mr. Burnett Tabrum, J.P. The "gate" was in aid of the Brentford District Cottage Hospital, and at the conclusion of the interesting afternoon Lady Locock distributed the prizes, and Mr. and Mrs. Tabrum entertained the company to tea. The results of the various competitions were as follows:—

Starting and Stopping Race: 1, Miss Miller, 10-h.p. Panhard; 2, Mr. Temperley, 15-h.p. Humber.

Week End Race: 1, Mr. F. Lindus Forge, 12-16-h.p. Vauxhall; 2, E. J. Boake, 12-16-h.p. Corre.

Victoria Cross Race: 1, Mr. F. Lindus Forge, 12-16-h.p. Vauxhall; 2, Miss Miller, 10-h.p. Panhard.

Ladies Passenger Race: 1, Sir Charles B. Locock, Bart., 16-h.p. Fiat; 2, Mr. F. Lindus Forge, 12-16-h.p. Vauxhall.

Musical Chairs: 1, Mr. Edward Bryant's, passenger, Miss Bryant; 2, Sir Charles Locock's, passenger, Mrs. Young.

Best Appearance Competition: 1, Mr. E. E. Bentall's car with landaulet body.

LADIES'.

THE members and friends of the Ladies' A.C. visited Hanworth Park, Middlesex, on Thursday of last week, at the invitation of Mrs. Ainslie. Several events were decided in a gymkhana held in a meadow adjoining the house. Mrs. Herbert Whiteley won the speed-judging competition, Miss Muriel Thompson the tilting at the ring and ball events, and Mrs. Edmunds the musical chair race. The 2nd Dragoon Guards (Queen's Bays) band attended, and at the close of the gymkhana Lady Edward Spencer Churchill, who was accompanied by Lord Edward Spencer Churchill, distributed the prizes. There were about 250 ladies present.

SCOTTISH.

IN view of the approach of the touring season the executive of the Scottish Automobile Club would direct the attention of motorists generally to the necessity, in driving through Scotland, of observing moderate and considerate speeds in all towns, villages, and populous places, and in particular they would urge that visiting motorists would pay special regard to the warning and caution boards which have been erected by the Club at the entrances to villages and in other parts of the country.

By the invitation of Mr. T. Mitchell, the president, the members of the Bradford Automobile Club recently spent an enjoyable afternoon at his residence, Upwood.

ENTRIES at ordinary fees for the Lancashire A.C.'s hill climb at Rivington Pike, Horwich, on the 30th inst., close on Monday next. The address of the hon. secretary is Kensington Place, Blackburn.

THE fastest time made by any car in the Kettleby hill climb, the first, second and third fastest times up Aston Hill, and the fastest time of the Coalport climb were made by cars fitted with Dunlops.

UNDER the auspices of the Irish Motor Yacht Club, the Irish branch of the British Motor Boat Club, the Enniskillen Yacht Club and the Irish A.C., a motor-boat and automobile meet will be held on Lough Erne from the 25th to 29th inst.

SOME seventy crippled children belonging to the London County Council School at Mansford Street, Bethnal Green, have been taken under the auspices of the Beaumont Cycling Club for the fifth annual outing in motor-cars kindly lent by well-known motorists. The children visited various interesting parts of Epping Forest, being afterwards entertained to dinner and tea at Oak Hill Farm, Theydon Bois.

CASES AGAINST MOTORISTS.

THE ENDORSEMENT OF LICENCES.

Michael Brathwaite, a motor-car driver, of Kensington, was summoned before Mr. Plowden, at Marylebone, at the instance of the Commissioners of Works of Public Buildings, for failing to produce his licence for the purpose of having it endorsed with the third conviction recorded against him for exceeding the ten-mile speed limit in the public parks. Mr. Travers Humphreys, barrister, appeared for the Director of Public Prosecutions, the proceedings being in the nature of a test case. Mr. Staplee Firth, who defended at the instance of the Motor Union, submitted that no matter how often a motor driver was convicted of exceeding the speed limit in the parks, his licence could never be endorsed, inasmuch as the section of the Motor Cars Act requiring the endorsement of licences was not prospective, and did not, therefore, apply to offences under the Parks Regulation Act.

Mr. Plowden found that a case heard in the Divisional Court was conclusive on the subject, and ordered the licence to be endorsed. He also imposed a fine of 20s., with five guineas costs. Notice of appeal was given.

APPEAL DISMISSED.

At the Ketford Quarter Sessions Earl Fitzwilliam's motor appeal case has been heard. The appeal was against the decision of the Ketford magistrates, who fined the earl's chauffeur £2 10s. and costs for exceeding the ten mile limit on the London road on April 3rd. Mr. H. Y. Stanger, K.C., M.P., and Dr. T. Lindley conducted the case for the prosecution, and Mr. Marshall Hall, K.C. (instructed by Mr. Staplee Firth, London), appeared for the appellant. The magistrates confirmed the conviction.

Several batches of motorists have also been fined at Leamington, at Kingston, where £90 was taken in fines in one day, and at Haywards Heath, where £95 was obtained from speedy motorists on Monday of this week.

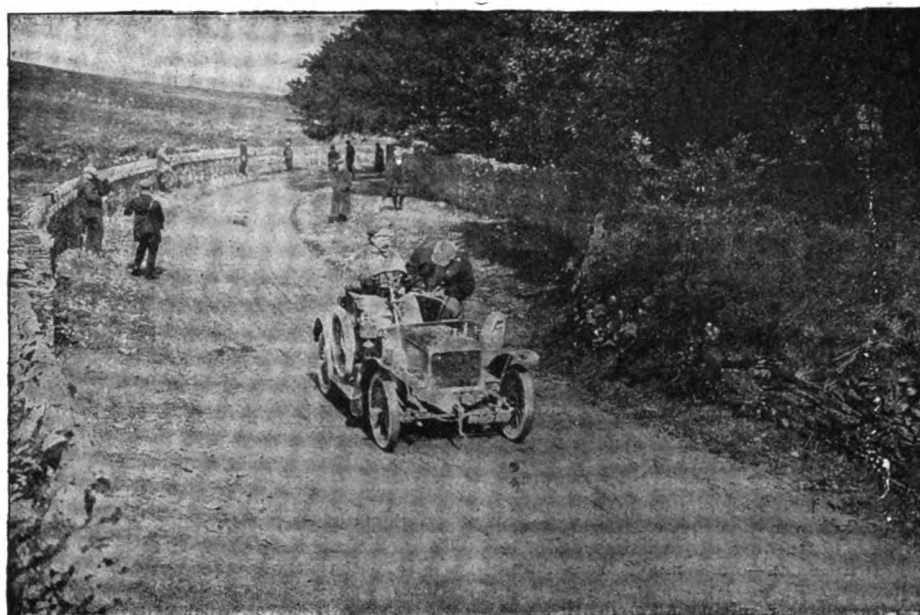
At Lewes Police Court, on Tuesday, three motorists were fined £13 and costs for exceeding the legal limit on the road between Polegate and Lewes.

On Tuesday another batch of motorists appeared at Haywards Heath Petty Sessions for exceeding the speed limit on the London to Brighton road, the fines and costs inflicted exceeding £100.

A FINE REDUCED.

On June 10 last Mr. J. W. Govan, of Ayr, was convicted at Ayr Sheriff Court of having recklessly and negligently driven a motor-cycle into Racecourse Road, Ayr, whereby it collided with a pair of horses belonging to Mrs. Neilson. A fine of £15 15s., with an alternative of forty days' imprisonment, was imposed, and the accused's motor licence was suspended. One month was allowed for payment of the fine. Mr. Govan's agent submitted the matter to the Secretary for Scotland, stating that in the circumstances of the case it seemed clear that the sentence was out of proportion to the offence committed, and intimation has now been received from the Secretary for Scotland that on full consideration of the circumstances of the case he is prepared to recommend that the fine imposed should be reduced to £5 5s. and the suspension of the licence remitted, and that steps are being taken for the preparation of a warrant for that purpose.

SUCH bad reports are rife concerning the failure of foreign tyres and rims in the Grand Prix that it is satisfactory to know that the Dunlop detachable rims and tyres proved perfectly satisfactory to the



A Reminiscence of the Irish Trials.—The Royal Starling 10-h.p. Two-Cylinder Car driven by Mr. H. S. Huet.

COMMITTED FOR TRIAL.

Claude Levy, aged 31, chauffeur, of Barry Road, East Dulwich, who has already been committed for trial upon the City Coroner's warrant, charged with the manslaughter of William Burr, of Hague Street, Bethnal Green, appeared at the Guildhall on Monday, charged with manslaughter and with reckless driving, and causing bodily injury to Harriett Calcutt.

Mr. T. G. Vickery (from the City Solicitor's office) said the City Solicitor had been asked to render legal aid in this matter on behalf of the police. It was a serious matter for the defendant, for the use of this particular car on the night in question was unauthorised by his employer. The accused repudiated this statement. The magistrate committed Levy for trial on both charges.

LICENCE SUSPENDED.

At the Richmond Borough Police Court, Cecil G. Watts, 27, Lordship Lane, Tottenham, was summoned for running his car at a speed of twenty-seven miles. Four previous convictions for exceeding speed limit were proved, and the Bench fined him £20 and suspended his licence for six months. Inspector Hart applied for police costs, which were granted.

EXCEEDING LEGAL LIMIT.

At Newbury several motorists have been fined sums of £3 and costs; at Kingston, five cases of exceeding the ten mile limit in Richmond Park were heard. A day or two later twenty cases of exceeding the legal limit were dealt with. At Wokingham fines of £5 each have been inflicted on several drivers who exceeded the legal limit at Sonning and Binfield.

users, Messrs. Warwick Wright, Weigel and Resta having all expressed their approval of the same.

MESSRS. JOSEPH OWEN AND SONS, LTD., of Stanley Road, Liverpool, supplied the materials for the wheels for the Austin cars in the A.C.F. Grand Prix race.

MESSRS. DUNHILL'S, of 359-361, Euston Road, London, N.W., have issued a new catalogue of their clothing and raiment for motorists, in which several good types of ladies' coats are illustrated. The selection of new dust coats for gentlemen motorists when on tour is also comprehensive of the latest designs.

IN motor repairs every minute saved is often of great importance, and in the matter of gear replacements time is usually lost in obtaining quotations for special requirements as to diameter, pitch, shape of boss, keyways, &c., of pinions wanted. To save this waste of time Auer, Ltd., of Grosvenor Road, Hanwell, W., have got out a list giving a scale of prices at which they are prepared to promptly supply spur gear wheels in any pitch, and of any shape, complete with holes bored and keyways cut, teeth chamfered, &c. The gears are made from forged blanks of special Sheffield steel, and are carefully case-hardened. A copy of the list will be sent on application.

FROM the Standard Motor Co., Ltd., Albany Street, London, N.W., comes a copy of the new artistic catalogue of "Standard" cars that has just been issued. The list not only gives full particulars of the two models, 20-h.p. and 40-h.p., both fitted with six-cylinder engines, but includes illustrations of the main parts of the chassis and of the factory in which the vehicles are built. A copy of the list will be sent on application to the Standard Company.

FORTHCOMING EVENTS.

JULY.

- 13th (Sat.).—Annual gymkhana of the Herts C.A.C. at The Grove, Watford, by permission of the president, the Earl of Clarendon.
 Gymkhana of the Kent A.C. at Maidstone.
 Meet of the Liverpool and Cheshire A.C.'s at Delamere.
 New Forest and Dorset A.C.'s joint hill climb.
 Hill Climb of the Essex C.A.C.
 Derby A.C. Uttoxeter Challenge Cup Competition.
 Lincolnshire A.C. meet at Grimsby and drive to Cleethorpes.
 Manchester A.C. hill climb.
 20th (M.).—Entries close for the O'Gorman trophy.
 20th and 21st.—The R.A.C. dust trials at Brooklands.
 22nd (W.).—Gymkhana organised by the Southend and District M.C. at the Rectory Ground, Great Stourbridge, near Rochford.
 There are eight car events.
 23rd (Th.).—Gymkhana of the Cambridge A.C. at Chippenham Park.
 Hill climbing competition of the Hull and East Riding A.C.C.
 25th (Sat.).—Petrol Consumption Tests of the Motor Cycling Club.
 Annual Open Hill Climb of the Midland A.C. at Shelsley Walsh.
 Gymkhana of the North Middlesex A.C. at Pyrford Court, near Woking.
 Committee meeting of the Kent A.C. at Herne Bay.
 Motor Union Provincial meet at Harrogate.
 Cheshire A.C. hill climb.
 Lancashire A.C. open hill climb.
 North Yorkshire A.C. gymkhana at York.
 West Surrey A.C. gymkhana at Godalming.
 26th (Sun.).—Southend M.C. run to Coach and Horses, Quendon.
 29th (W.).—Lincolnshire A.C. at Skegness.

LIGHTING-UP TIMES—LONDON.

| | | | |
|---------------|------------|------------|------------|
| July 18th—9.7 | — 20th—9.5 | — 22nd—9.3 | — 24th—9.1 |
| " 19th—9.6 | — 21st—9.4 | — 23rd—9.2 | — 25th—9.0 |

To find the approximate lighting-up time in July for Birmingham 13 minutes should be added to the above times, 18 for York, 22 for Manchester, and 45 for Glasgow.

AUTOMOBILE ACCIDENTS.

A SHOCKING motor fatality occurred at West Croydon on Saturday. Mrs. Ball, aged 79, was crossing Whitehorse Road when she was struck by a motor-car, carried several yards under the car, and so badly injured that she died in less than two hours at Croydon Hospital.

At Wembley the driver of a London motor-cab wished to turn round, but, finding something wrong with the machinery, he made to jump off the vehicle. Before he could do so, however, the cab backed into a fence and descended the steep embankment, turning turtle half way down. The occupants—two ladies and a gentleman—were much bruised and shaken, but escaped serious injury.

A MOTOR-CAR accident near Tadcaster, resulting in two deaths, was reported at Leeds on Sunday night. The victims are Albert Clarke, twenty-one, and a person whose name is unknown. Two motor-cars, it appears, came into collision at the junction of two roads. Clarke, one of the two persons killed, was cycling from Leeds with two companions, and was jammed between the two cars and thrown. A nurse, who was travelling on the other car, was also fatally injured.

Two motor-cars have been in collision near the St. George's Hall, Rotherham. Only slight damage was done. One of the vehicles belonged to the Gas Department of the Rotherham Corporation.

FRIGHTENED by a motor-car, the horses of a coach travelling from Windermere to Keswick upset the vehicle, injuring two American ladies among the passengers.

A MOTOR-CAR collision occurred at Swadlincote, near Burton-on-Trent, on Monday. The car, belonging to the Mid Counties Garage Company, of Leicester and Ashby-de-la-Zouch, was being driven down a hill when it collided with a pony trap, which was knocked through a fence and down an embankment into a field. The car, on the other hand, swerved across the road into a telegraph pole, turned a somersault, and rolled over on two gentlemen and a lady who were inside.

Two rather alarming accidents occurred on Monday at Bognor. A motor-car driven by a young man named Goldsmith had been used to convey a party to the Stamp House, and he was on his way back to Bognor, when, at Big Tree, he had the misfortune to knock down a motorcyclist. The rider was picked up in an unconscious state and was found to have fractured his right arm in two places. He was taken into Bognor in the motor-car. The other accident occurred at the South Bersted Level Crossing. A motor-car driven by a youth named Hayler was making a journey to the Stamp House with a load of trippers. The gates were closed to allow the 3.27 p.m. train from Bognor to Barnham to go out, and the vehicle dashed right through the gates and across the line to the other side. The car was not damaged, but the gates were splintered.

COMPANY NEWS.

ARGYLL, MOTORS, LTD.—On Tuesday an extraordinary general meeting of Argyll Motors, Ltd., was held at Glasgow under the chairmanship of Mr. W. A. Smith, who explained that bad weather and bad trade in May had caused a falling in sales from £49,559 in the same month of the previous year, to £22,525. It became manifest to them that unless sales speedily increased it would be impossible to meet their debenture interest and redemption. The whole circumstances of the case were reviewed at a meeting of the trustees for the debenture stock holders in London, when it was resolved that in the interests of the shareholders and others it would be the best policy to go into voluntary liquidation. He denied the charge which had been made with regard to the disposal of his shares, his holding of which at the present time amounted to £17,216. At the conclusion he moved that the company should go into voluntary liquidation. This was seconded by Mr. A. W. Steven, another of the directors. Mr. Thomas Dence quoted figures showing the total liabilities to be £952,000, and the total assets £761,000. The resolution of voluntary liquidation was unanimously approved, and the directors' recommendation with regard to the liquidators was also adopted.

ROAD REPORTS.

MIDDLESEX.—The Middlesex County Council has declined the requests of the Finchley and Tottenham Urban District Councils for a limitation of the speed of motor-cars to ten miles an hour in the Great North Road, Regent's Park Road, and the main road through Tottenham.

BRIGHTON.—Several of the rural authorities in the Brighton district are complaining of the running of heavy motor-buses and motor-cars along narrow roads, thereby causing danger and inconvenience to the public.

WINDSOR.—Some police officers at Windsor on Sunday adopted a novel plan for reducing the speed of motor-cars using the Bath road. Each constable had an open note-book, and on the approach of a motor-car he was seen to be taking notes. Motorists evidently thought that the officers were timing them over a measured distance, and the result was in each case a prompt and material reduction in speed. As a matter of fact there was no police trap at all; the constables are reported to have merely resorted to a simple ruse for reducing the speed of the cars.

BUSINESS NEWS.

AN extensive series of pictures showing the A.C.F. Grand Prix Race at Dieppe are being shown nightly at the Empire, London.

THE Mercedes car which won the A.C.F. Grand Prix race last week is now to be seen in the showrooms of Messrs. Ducros Mercedes, Ltd., in Long Acre, London, W.C.

CHAIN driving scored heavily in the recent Grand Prix race, as the first three cars used this form of transmission. Renold chains were fitted to the winning Mercedes, and other cars entered which used them were Austin, De Dietrich, Germain and Motobloc.

IN connection with the illustration given in our last issue of a 38-h.p. Daimler car on Trinafour Hill, it should have been stated that the vehicle made the fastest time in Class F of the Scottish Trials. The quickest ascent of this steep gradient was made by the 40-50-h.p. Ariel which competed in class G.

AN attractive circular has been issued by the Dunlop Tyre Company, showing that in the three recent English, Scotch, and Irish Trials cars fitted with their tyres have won twenty-two out of twenty-eight first prizes.

MESSRS. JARROTT AND LETTS, LTD., have had so many requests for trial runs on the Sizaire-Naudin from all parts of the country that they have arranged to have some special representatives on the road, and also for a tour round England on one of these popular voitures. The object of the firm is to enable all those interested to have a trial run on the roads and hills of their own locality on a 12-h.p. Sizaire. The vehicle which is making the tour will be driven by Mr. A. Bray, who will stop at various centres for a week or more to arrange trial trips for any agents or private inquiries he may receive in that particular district. Anyone wishing to make an appointment for a trial run should communicate with Messrs. Jarrott and Letts, Ltd., immediately.

MR. G. BUTLER MORRIS, who from its inception has been identified with the business side of "The Car" as commercial manager, has, we learn, resigned his position and has commenced business as an insurance broker, in association with an established firm of brokers, under the title of Morris, Crawford and Co., at 4, Sackville Street, W., and 78, Poultry, E.C.

IT speaks much for the growing reputation of the Stepney spare-wheel that a letter from Spain addressed "All London taximeter cabs are fitted with Stepney wheels, London"—a phrase copied from a picture-post-card, was delivered to the company at Llanelli without delay by the postal authorities.

ARIEL MOTORS, LTD., have written to the Society of Motor Manufacturers and Traders asking if the society proposes endeavouring to arrange with manufacturers with a view to fixing a standard basis for catalogue definition of horse-power during 1909. They think it quite time that there should be some uniformity in regard to this matter, as at present the manufacturers' catalogue horse-power is no guide whatever to the buying public.

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COMMENTS.



FOLLOWING closely upon the report of the Scottish Trial comes that of the International Touring Trial, which will be read with profit by the entrants—but the interest of which has been greatly discounted by the publication of the details that have previously appeared. In their report the judges point out that the cars were run each day over distances substantially more than would be run in the ordinary use of a touring car. The route was selected to include the severest hills that could be expected to be climbed by a car touring in any part of Great Britain or the Continent. Then it was sought to secure imitation of the long stretches of Continental roads by introducing into the Trial a 200 miles' run on the Brooklands Track. Cars were eliminated from the latter if they had not reached the night's depot by five o'clock on the following morning or if they were pushed up any hill, and of the forty-six starters thirty-six were in a position to compete on the track. The judges record that out of the eleven class winners no fewer than seven were of British manufacture. On another page we give the official record of the time or distance which separated the winners from the other competitors.

The British Association.

At the forthcoming meetings of the British Association which are to be held in Dublin several papers of more than ordinary importance are promised. In the Engineering Section, which will open on September 3rd with an address by Mr. Dugald Clerk, the president of the year, many features of automobile interest loom large upon the programme. Mr. F. W. Lanchester will read a paper on the "Laws of Flight," and this will be followed by one by Mr. F. H. Royce on the "Causes of Wear in Automobile Vehicle Machinery." Mr. Worby Beaumont will read a paper on "A Fundamental Error in the Theory of Power Transmission by Belt," and the work of the Engineering Section will be concluded by a contribution on "Railless Traction" by Mr. F. Douglas Cox. The Irish motoring organisation will give a hearty welcome to those automobilists attending the meeting of the British Association.

The Prospect of Peace.

AN echo of the troublous times which marked the dissolution of the R.A.C. and the M.U. comes in a report which has reached us as to an informal discussion taking place in the North of England among the representatives of several leading provincial clubs with a view of preventing the re-opening of controversy when the time comes for those organisations that are now affiliated with both bodies to reconsider their position. It is understood that the Peace Committee, which was established early in the year, is continuing its negotiations, and that a strong movement is afoot to hold in check any dissension that might otherwise arise. Within the last few days the Devon Auto-

mobile Club has received its "notice to quit" in the shape of the formal notice to terminate the present affiliation agreement between the club and R.A.C. and M.U. It has been resolved that the secretary shall in due course send reply postcards to all members of the club upon which to record their votes as to whether they wish the club to affiliate with the Motor Union or the Royal A.C. next year. A meet of cars will be held at some place of interest in Devon early in September, when a discussion upon the subject will be invited.

Inter Club Meets at Brooklands.

THE first attempt to secure an inter-club competition on the Brooklands Track not having proved sufficiently attractive to induce any club to accept the challenge of the Nottinghamshire A.C. in its entirety, a new challenge is now under consideration by the authorities of the track. It is intended in the revised regulations to allow accepting clubs to enter in one or more of the specified classes according to choice. Owing, however, to the lateness of the season this contest cannot take place until the summer of next year. It is to be hoped that the Brooklands A.R.C. will issue the suggested terms of the competition without delay, so that they may have full consideration at some of the winter gatherings of the interested clubs.

Hill Climbs.

THOSE responsible for the conduct of hill-climbing competitions would do well to consider the point suggested by an incident occurring in the hill climb of the Coventry Motor Club at Newnham on Saturday last. The cars were started at the usual minute interval, but one of the fast vehicles was considerably hampered in passing an earlier competitor when at the steepest part of the hill. Probably the skill of the driver prevented a mishap, but the nearness of the vehicles in inches was too appreciable to be pleasant. It is unfortunate that in such competitions the fastest cars are sent off so quickly after the less speedy ones. The practice is not confined to local clubs, for, both in the Scottish trials and in the longer event of which it formed a section, several runs were spoiled, notably on the Cairn o' Mount and Kirkstone Pass, owing to this cause. If the minute interval is to be maintained, it might be well, as a precaution of safety, to dispatch the speedier vehicles before letting the lesser powered ones make their ascent.

A Club for India.

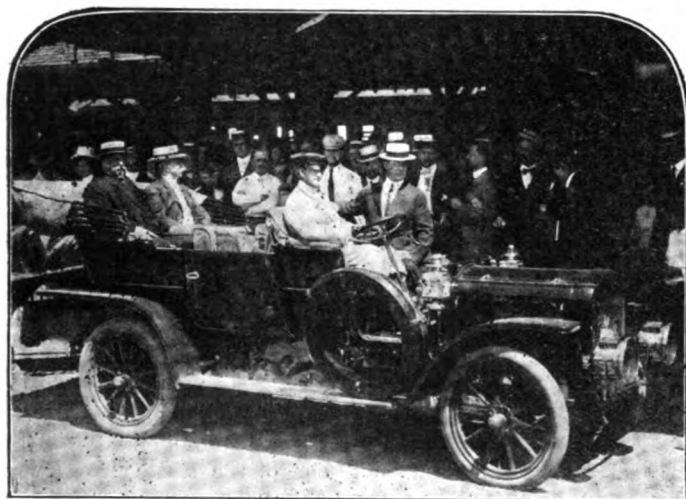
News of the doings of the various motoring organisations in the Indian Dependency, no less than the statistics as to the number of motor-cars that are sent thither from this country, proves the interest that is taken in automobilism in that distant part of the Empire. Now a scheme is being promulgated for instituting a Motor Club for India, which shall be a central organisation to see to the condition of the Indian roads, to promote touring, and generally have a control over the movement such as is exercised by the R.A.C. in this country. There is a rapidly increasing number of motorists in the Empire, and the absence of such an association is being greatly lamented by many of those who have had experience of the value of similar organisations in this country.

4 times 8 = 25.

AN interesting side-light as to how the speed is judged by the police was given at the Brighton Bench a few days ago, when a fine of 40s. and costs was imposed by the borough magistrates upon the driver of a motor-cab. The police evidence was to the effect that defendant was travelling at the rate of twenty-five miles an hour, and when asked upon what basis he made his estimate the police-constable said he had seen Lerner, the champion walker (originally a Brighton policeman), walking eight miles an hour. The motorist in this case was travelling four times as fast as the pedestrian whom he had seen. Apparently the Bench took no notice of the discrepancy between three and four times eight, and the usual fine was inflicted without much discussion.

A Presidential Candidate.

PROBABLY the motor-car will play a part in the forthcoming presidential election in the United States almost as great as in the parliamentary contests in this country. We reproduce herewith a portrait of Mr. W. H. Taft, one of the American candidates, in the Government 30-h.p. White steam car. Apparently he is opposed to the speed limit, for, after lunching with President Roosevelt at Oyster Bay, he reached Long Island



city, thirty-two miles distant, in one hour and six minutes, or fourteen minutes less than the train schedule. In the photograph Mr. Taft is shown seated in the White steam car with General Luke E. Wright, his successor as Secretary of War for the United States.

American Shrines in England.

THOSE who write books of studies of the picturesque centres of our English landscape would confer a further favour by prefacing the same with some brief guide as to how to reach these literary and historical shrines. Nowadays the visitor is often anxious to know the best routes, either by road or rail, and we would suggest to Mr. A. T. Storey, when a second edition of his "American Shrines in England" is demanded, that a sketch map, together with some short description of the roads to and from the places noted, will add to the practical value of his work. Within the compass of some fourteen chapters he has a great deal to say as to the English homes of the Washingtons, Franklins, Pilgrim Fathers, the founders of Yale and Harvard colleges, as well as some other heroes of American colonisation, and he says it well. Messrs. Methuen and Co. are the publishers of the volume, which is embellished with illustrations in colour as well as in monotype. The historical information has apparently been accurately compiled, and to American motorists visiting this country the only feature which will be found lacking is that of "how to get there,"

which we have suggested. Even without that, however, the volume possesses considerable interest.

Danger Signals.

AFTER two years' negotiation an excellent arrangement has been arrived at between the Devon County Council and the Devon and Cornwall A.C., by which the former will spend £250 in the provision of danger signals provided that the latter will subscribe or obtain £50. This is a step in the right direction, and is on the lines we should like to see local authorities working elsewhere. The Council has asked the club to assist it in deciding upon the most important places where signals should be erected for the protection of the motoring and non-motoring public, and a sub-committee of the club, consisting of the chairman, Mr. W. E. P. Bastard (Yealmpton), Mr. M. Farrant (Exeter), Mr. E. Parsons (Plymouth), and Mr. M. F. Stapylton (Totnes) has been appointed for the purpose of going over the principal main roads of the county and preparing a list of "danger spots" for submission to the Council.

The Midland and Stop Watches.

WITH a view of increasing the efficacy of the police traps which they have established, the police employed by the Standing Joint Committee of the Warwickshire County Council have been supplied with sixteen stop watches, and these will soon be in operation. According to Colonel Woolcombe-Adams, the "controls" hitherto maintained by the police have been of an indifferent character, and the constables placed in charge are now to be specially trained in the use of their new stop watches. The introduction of these will be made at Henley-in-Arden and at Dunchurch, as well as at various cross roads. The Chief Constable and the county authorities are working in union in the matter, and the local motor clubs would do well to impress upon their members the necessity of moderating any enthusiasm for speed which may have developed. Fines amounting to £93 have just been inflicted on eighteen motorists at the Coventry County Petty Sessions by way of example.

Lights on Vehicles.

AT the beginning of the year the Lights on Vehicles Act passed last year came into operation. This was to secure that "no person shall permit his vehicle to be in any street or road during the period between one hour after sunset and one hour before sunrise without providing a light." Under certain circumstances, exemptions were allowed to be made by Borough or County Councils, and in our issue of February 1st last we gave the results of our inquiry into the way in which the new legislation was being endorsed by the various authorities of the country. Now we have obtained from the Home Office a further statement showing the local authorities who have imposed obligations additional to those required by the Act. This, together with a list of the County Councils which have obtained exemption from the operation of the Act during the harvesting operations, is published on another page, and will be of interest to those travelling in the agricultural districts during the coming months.

Making Examples.

AT Sheffield there is a Children's Court, in which are heard cases against juveniles, the young delinquents being kept quite apart from the older offenders. The other day the dangers arising out of the practice of throwing missiles at passing motor-cars was pointed out to three small boys when a solicitor, instructed by Mr. C. D. Leng, prosecuted a trio of lads for throwing clay at Mr. Leng's motor-car whilst it was passing down Division Street. The case was taken into court in the interests of the motorists of the city, a great many offences of this kind having previously occurred. It was not the damage which was done to the car which was complained of, but that the motorists

might be seriously injured, perhaps blinded, and as a result be unable to control their car. The Bench, on the advice of the solicitor, decided to communicate with the education authorities, so that some steps might be taken to warn other schoolboys of the serious results likely to occur from such a dangerous practice. A fine of 2s. 6d. was imposed on each of the three defendants, who may become missionaries of manners among other lads of their age and city.

Speed Limitation Applications.

ON Monday night, in the House of Commons, Mr. Burns mentioned that he had had sixty-nine applications from local authorities for the reduction of the speed limit of motor-cars from the maximum of twenty miles per hour to ten, five, and in one case two miles an hour. In Scotland even more requests for similarly reduced limits have been made, Mr. Sinclair, the Secretary for Scotland, having had eighty-four applications from the local authorities. Of course all have not been granted, but

right that people should know that motorists were not riding at the enormous pace some people imagined; in fact, he believed that the habit of fast travelling was already dying out. This view will accord with the experience of those who have followed the course of the Motor Movement during recent years, and is apparently accepted by the Joint Committee of Cheshire, for they subsequently decided to provide a motor-car for the use of their Chief Constable in order to facilitate police administration, and also to effect an economy which is calculated to amount to between £300 and £400 a year.

"The Law."

IN a case against a motorist heard at the Durham County Police Court one of the magistrates observed that the car, which was alleged to have been travelling at a rate of over thirty miles an hour, should have been stopped by the police and the owner of the car informed that there would be a prosecution. Unfortunately, this is rarely done, with the result



The Grimsby Meeting of the Lincolnshire Automobile Club.—The Mayor of Grimsby leading the way to Cleethorpes.

we refer to these figures as demonstrating to those who are complaining of the speed of motor vehicles that the subject has received careful attention throughout the country, and that there are few Councils where speed limits might be usefully instituted that have not made known their desires to the central authorities at the seat of Government.

A Police Constable's Testimony.

WE remember with what consternation the City Fathers of Belfast regarded their Chief Constable when, in giving evidence in connection with their application for a speed limit in the city, he made confession that such was unnecessary and that the ordinary powers with which he is endowed by law were sufficient to meet the case. Now another Chief Constable has come forward with a kind of semi-official benediction for the automobile. At a meeting of the Cheshire Standing Joint Committee on Saturday Col. Hammersley informed that authority that he had taken steps to test the speed at which motor-cars were travelling through the county roads. He thought it was only

that the unfortunate offender has to prepare his reply to the summons some time after the alleged event, and also at a considerable distance from the place where it has taken place. Under such circumstances it is generally impossible for the motorist to prepare an adequate defence and the police manage to get it all their own way.

The Considerate Driver.

Now that motorists are getting away to the seaside and to the pleasant places of their own, as well as of other countries, several warnings have reached us from local authorities and others urging a moderation of the speed of motor-cars in populous places which are more than ordinarily crowded at the holiday season. At Skegness the matter has been discussed by the local authorities, and the Automobile Association in London has just received a request from the Hunstanton Urban District Council asking them to suggest to motorists the pleasure it will give them if they drive slowly along the main roads of that rising resort. Verily the considerate driver is in great request; he is more frequently met with than is commonly allowed.

HOW TO KEEP DOWN THE EXPENSES OF MOTORING.

By A. E. S. CRAIG.

TO the man who is hovering on the brink of his first investment in a motor-car the great difference of opinion that appears to exist as to the cost of owning and running one must be sorely perplexing. Ranging from the optimistic assurance of would-be vendors, he is confronted with a rising estimate of expenses which he may glean from his friends and acquaintances, or by the perusal of various letters that appear on the subject in the columns of the Press from time to time. It will be my humble endeavour in the following remarks to show that what seem to be contradictory versions are in reality largely due to the idiosyncrasy of the individuals by whom the information is afforded. By this I mean to imply that in the same manner that one man will rub along comfortably through life's thorny path on a small pittance, and by commonsense and economy exude a halo of content, another on ten times the amount of the first will hardly be able to make both ends meet. I will further premise by stating that what advice I have to tender is for people whose means will neither enable them to afford the luxury of a very large car, nor even leave them sufficient margin to squander money recklessly on a small one. That is to say, I will deal with cars of 15-h.p. and under.



The Marquess de Villamarta on his 42-h.p. Daimler Car at the Fair of Jerez, a small town about eight miles from Cadiz Spain.

When a man writes to the papers and pours forth his indignation at finding the upkeep of his car has been abnormal, we see only one side of the picture. The name of the car is for obvious reasons withheld, its state of preservation when he bought it can only, as a rule, be guessed, whilst his own intelligence may usually be arrived at by the schedule of items he submits. The novice who purchases a car at an auction second-hand, or from someone "going abroad," or even "from a friend," without conscientious advice from a person really capable of judging, not only the merits of the vehicle, but its adaptability to the special requirements of the buyer, will probably find himself severely handicapped from the start. There may be nothing particularly wrong with the car, it may possibly be even fair market value for the price paid, but to the purchaser it is, perhaps, dear at any price. I positively affirm that, beyond knowing the limit price he can afford to pay an inexperienced buyer stands but a poor chance of getting satisfaction, unless he deals direct with some firm of high repute in selecting his first venture in automobilism, without unbiassed advice. The first axiom, therefore, must be: Know exactly what you want, and be sure you get it.

It is a great mistake, for instance, to think that because a car with a few surplus horse-power is cheap that it is a bargain for you. It may be for the man to whom the extra power will sometimes be of real service, but assuming you have arrived at the limit power that your circumstances as to load, road, and

speed demand, every bit of extra power is an unnecessary and continual expense. Wherever you go, with every revolution of the engine, that extra power, like the little lamb of Mary, goes too. And it travels at your expense. Equally foolish is the man who buys a car that is in any way too large or heavy for his requirements. Not only in climbing hills, but on the level, starting, and even stopping, the maintenance of that car is burdened with an unremunerative expense. Worst of all is the tyre bill, but fuel and renewals may be counted on to bring up the rear in good style. I have read somewhere that infant mortality is in great measure due to the intense ignorance of young mothers as to the proper manner of rearing their progeny, and it seems to me that an apt comparison can be made with the treatment meted out to automobiles by the crass stupidity of their owners. A rickety state of health and frequent visits to motor doctors is the unhappy lot of cars in the care of inexperienced motor owners. The second maxim may therefore read: Owner, know thy car.

There is no doubt that, whether one employs a chauffeur or not, he who by natural proclivity, or by dint of setting himself seriously to the task, becomes an adept in mechanical knowledge is placed at a very great advantage as regards the cost of maintaining his car in good working order on an economical basis. Without in any way desiring to underrate the value of the services of that *rara avis* a competent mechanic driver, I take it that there are a great number of people whose finances will not allow of the employment of a servant expressly to look after the car. Indeed, the future of motoring would be narrowed too much in its scope if only those to whom the additional cost of a chauffeur is possible should be able to afford to keep a car. A horse fattens under the eye of its master, and a motor-car concerning which the owner has sufficient practical knowledge to distinguish between the necessity for an overhaul and its limitations on the one hand, and an excuse for the driver to have a day or two "off" on the other, will run longer and cost less than one where the master only knows how to swear with vigour at the bills presented, without the most remote idea as to the extent to which he is having to pay for his ignorance.

In certain circumstances I am inclined to the opinion that for those who do not propose to keep a chauffeur, and have no time or desire to do more than the actual driving themselves, a maintenance contract with some reputable garage firm will work out the cheapest in the long run. But to arrange such a contract on a really equitable basis, so as to work without friction between the parties concerned, is by no means an easy matter. For if the maintenance contract is to throw all risks on the firm that undertakes the upkeep, it means that they are entering the field of speculation. They are speculating on the good faith of the makers of the car, and of the one who is going to drive it, and are thus chancing all sorts of possible contingencies, and hence it stands to reason that the rate of upkeep must necessarily be high enough to cover a number of expenses that may never materialise. This is the stumbling block to a really low rate being possible; and yet if, on the other hand, the owner agrees to take all risks, and pays for all repairs in addition to a non-speculative and therefore lower rate, there is no longer the same incentive to the garage people to keep the car on the road with as little repairs as possible, and therefore if the owner has a run of bad luck he is inclined to be suspicious of unfair treatment. I think the matter of maintenance is one that lends itself to discussion, so that by interchange of experiences and ideas the best all-round basis may be arrived at.

(To be concluded).

M. CLAUDE LE LAS, whose brother holds the French record for hydroplanes, having covered on the Seine, on November 8th last, one kilometre with the current and one kilometre against the current in 1 min. 56½ sec., i.e., an average speed of 62 kilometres 68 metres an hour, has come over from France for the purpose of carrying out a series of tests in Southampton Water with a 12-h.p. hydroplane. M. Le Las is staying at Sea View, Bellevue Road, Cowes, and will be pleased to show his craft to any motor-boat men who may like to try it.

GOSSIP FROM PARIS.

AFTER reflection French motor-car builders have found consolation for their crushing defeat in the Grand Prix in the undeniable fact that if they were beaten by Mercedes in Ireland in 1903, by Itala at Brescia in 1905, by Fiat at the Grand Prix in 1907, by Itala and Isotta Fraschini at Brescia in the same year, and by Mercedes at the Grand Prix in 1908, they from 1895 to 1902 scored an almost uninterrupted series of victories. They are quite right not to despair of earning fresh laurels, and they are all the more likely to succeed because the "pile" they received from the Germans on July 7th has, I think, opened their eyes. Till then they imagined that in the automobile field they could always say with Caesar, "Veni, vedi, vincit." Now they know they are not the only people in the world who can make good, reliable, and fast cars; and that to hold their own against the English, Italian, German, and other foreign manufacturers they must not content themselves with their old methods, which have been surpassed by their competitors in more than one country. It would, of course, be rash to predict the result of next year's Grand Prix, but already all the big French automobile firms are determined it shall not be their fault if one of them does not

unsuspecting motorists as possible. But in Switzerland, as in and around Paris, there must be two to check the speed of a car. My friend, who was fortunately acquainted with the ridiculous speed limit, happened one day, when he was going at a fair pace, to notice a gendarme pull his watch out of his fob and make a note. Guessing that another representative of the law was not far off, he stopped his car altogether for five minutes as soon as he got round a corner out of sight of the official. Then he started off again at full speed. In a moment the second gendarme was in the middle of the road making signs for him to stop. Of course he pulled up at once, but to the amazement of the gendarmes it was found on comparing notes that my friend had been travelling at an average speed of no more than three miles an hour! The gendarmes did not like the practical joke, but they let him go with the warning not to try it on again.

MR. HENRY FARMAN has gone to the States to teach our American cousins to fly, because the Wright Brothers are so occupied in preparing their machines to be sold—one to the United States Government and the other to the French syndicate—that they really have no time for anything else. Farman received



Some of the "Sight-Seeing" Motor-Cars used by Messrs. Thomas Cook and Sons in Paris.

carry off the palm. The director of one of the most important of them told me the other day he was sure French makers would neglect nothing to secure victory in 1909. As for his firm, it would set to work as soon as the regulations of the race were fixed, because it was undeniable repeated defeats would in the end prove disastrous for the French automobile industry. He added: "I don't believe the German victory will affect us very much, because our exports to Germany are not very important, and our French customers do not like German goods. But we must not go on getting beaten in the races. We shall have our Grand Prix next year, and we mean to be prepared for it, though, after all, even another defeat would not prove the inferiority of our touring and town cars any more than it would demonstrate the superiority of those built by the foreign firm whose car might win the race."

A FRIEND of mine, who has just returned from a tour in Switzerland, tells me that in certain parts of that country, so frequented as a holiday resort, the speed limit for automobiles is fixed at five miles an hour, and it appears the gendarmes there are just as cunning as in France, and seek to obtain promotion by securing the condemnation of as many innocent and

as guarantee a good lump sum before he left, and is to be paid £50 a day during his three months' stay if he flies or not, and an extra £40 a day every time he flies, with all expenses paid for himself, his two assistants, and a secretary. In the meantime he leaves in France serious competitors, who during his absence may learn to surpass his performances. Bleriot, with his monoplane, seems at last to have made a long step towards solving the problem of the stability of his machine, even in a fairly high wind. The other day he took his apparatus out of its shed at Issy les Moulineaux while the wind was blowing strong. He flew with it twice from one end of the parade ground to the other and veered round with apparent ease and safety. At the end of the last flight he came to the ground rather roughly, but that was not so much due to the wind as to a miscalculation of the aviator, who imagined he was flying higher. His propeller was slightly damaged, but his machine will in a few days be ready for new flights. It is expected that Bleriot will begin by beating Farman's time and distance record and will then try to equal and, if possible, surpass any performance which Wilbur Wright may make at Le Mans. Then there is Delagrangé, who is back from his starring tour in Italy. With the assistance of the Frères Voisin he will certainly seek to astonish the world.

MARNEY.

B

THE DUST TRIALS.

THE Dust Trials for petrol cars organised by the R.A.C. occupied attention on the Brooklands Track on Monday and Tuesday. The Dust Committee of the Club were the judges, Mr. C. W. S. Crawley acting as hon. secretary for the trials, Major F. L. Lloyd and Capt. A. Hume as marshals, Messrs. J. Lyons Sampson and S. F. Beevor as tyre testers, and Mr. J. S. Mallam as the recorder.

Last year's procedure on the track was closely followed, a course along the finishing straight being prepared with fine limestone powder to a depth of two inches. In order that the cars should be uniformly run at the regulation rate of speed an endless cord with ribbons attached thereto at intervals was run at the side of the track at the proper speed for a distance of 500 ft., the last 200 ft. being the dust track. There were twenty-five entrants in Class 1, that for the makers' standard cars, and these were run along the track first at a speed of twenty and then of thirty miles per hour. From the performances, as observed from

pared surface. Very little dust was raised, and for that which ascended the hoofs of the horse were responsible.

It was demonstrated by all the cars that their dust-raising qualities were considerably increased as the speed advanced from twenty to thirty miles per hour. Proof was also given of the point that motorists passing other cars or carriages can reduce the nuisance by reducing their rate of travel. Mr. A. Duckham drove a 38-6-h.p. Napier with its tyres pumped to different pressures, but the results can only be compared in the photographs that were taken. Among the devices tried was a perforated sheet steel screen, more or less inclined to the horizontal, under the body fitted by Mr. Conrad Ingleby to a 21-h.p. car; the well-known disc wheels of Messrs. Wayman and Matthews applied to a 24-8-h.p. Junior car. They had also adopted a full-length undershield, open at the front and rear but closed to the sides of the vehicle. A patent exhaust suction device for collecting the dust from the wheels and depositing it on the road in a granulated form was fitted to a 24-25-h.p. old pattern Orleans car, and its performance was such as to excite considerable interest in the official



The R.A.C. Dust Trials at Brooklands.—The "Standard" Six-Cylinder Car.

the track, it would be difficult to assign the cars in order of precedence, owing to the variable wind which was blowing, and which made comparison very difficult. But the photographs, as well as the cinematographs that were taken, should give opportunity for the judges to have the advantage on a later occasion when considering their report. Among the cars competing in the makers' section were the following:—18-5-h.p. Alldays, 8-9-h.p. Sizaire, 18-5-h.p. Chenard and Walcker, 48-6-h.p. Thames, 30-h.p. Mors, 25-6-h.p. Lanchester, 22-5-h.p. Buick, 25-6-h.p. Westinghouse, 18-h.p. Reo, 24-8-h.p. Gaggenau, 6-h.p. Chenard and Walcker, and 25-6 h.p. Cadillac.

Later in the day the International Club competition for amateurs took place, the same preparations being made. Three clubs were entered for this competition—the Blackheath A.C. (Mr. A. Jackson's 24-8-h.p. Mutel), the West Surrey A.C. (Mr. J. F. Ponsford's 9-h.p. Clement and Mr. R. S. Robertson's 12-8-h.p. Siddeley), and the Kent A.C. (Messrs. F. Aldridge, 29-4-h.p. Standard and G. M. Kenyon, 25-6-h.p. Minerva).

On Tuesday the trials were continued, and novelty imported into the proceedings by running a light dogcart over the pre-

placings. On a 32-4-h.p. Pilgrim Mr. F. L. Martineau had adapted flat tray-like fittings under the wings, as well as another tray under the car. The purpose is to catch the air deflected from the wings, throwing it upwards instead of on the ground. The Dennis car was also the subject of some interesting experiments, showing that it ranks well among the minimum dust-raisers. Considerable interest was taken in the re-appearance of Mr. F. F. Wellington, whose original demonstrations in "dustless" running at Luton will be remembered. He had a 24-8-h.p. Gaggenau with a low body, and specially shaped mudguards, the rear ones being of canvas, to be rolled up in dry weather. The standard car of this type made a creditable run with a minimum of dust, and is evidently well designed from that point of view.

Colonel Crompton and his colleagues are now considering the data obtained in conjunction with the photographs that have been taken.

THE Star Engineering Company have lately completed two 12-h.p. vehicles for the "Sheffield Independent," for the rapid delivery of newspapers in the Sheffield district.

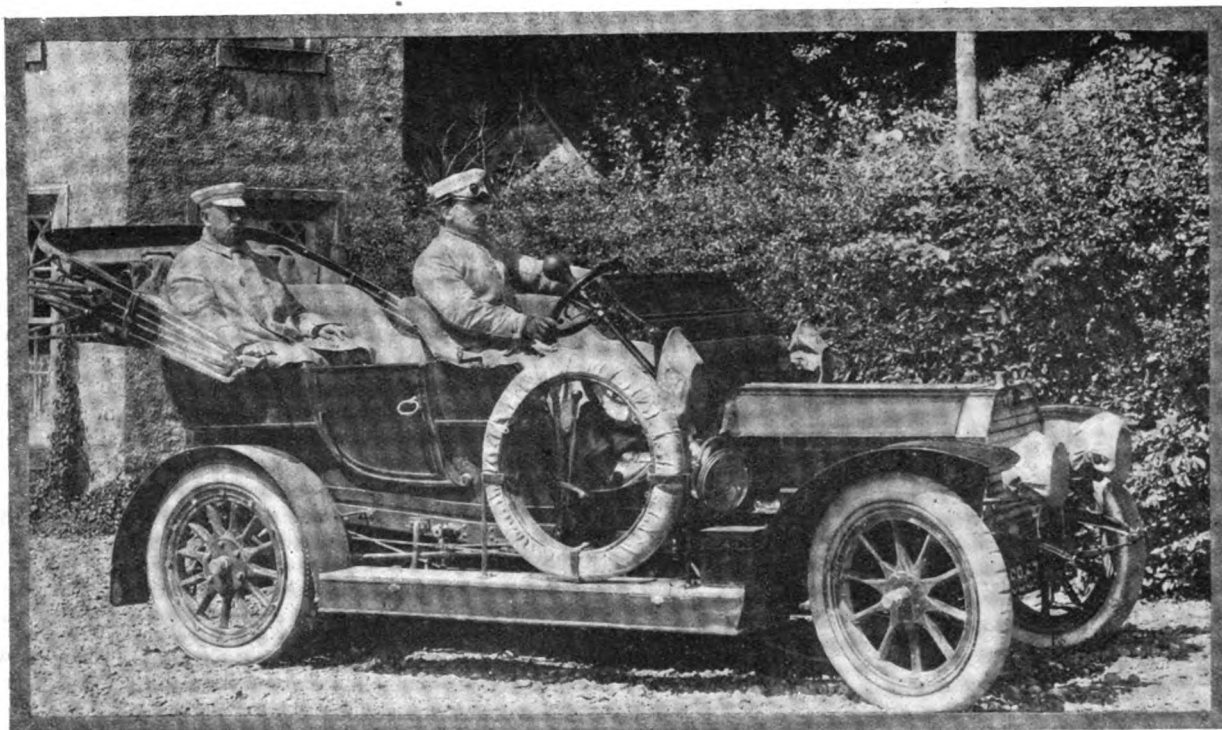
THE SOCIAL WHIRL.

THE King spent the week-end with Lord and Lady Desborough, at Taplow Court, on the Thames. He arrived, attended by Colonel Sir A. Davidson, on Saturday afternoon, from Sandown by motor-car. There was a large house party, including Prince Francis of Teck, Chairman of the R.A.C., who a few days before had conveyed to us the approval by His Majesty of the plans for the new Automobile Club House. On Sunday several motoring expeditions were indulged in from Taplow Court, and the King motored across to Cliveden to take tea with Mr. and Mrs. W. Astor. Subsequently he visited Lord Burnham at Hall Barn, returning to Taplow Court for dinner—a round of social pleasures only possible in such a short space of time in these merry motoring days.

Her Royal Highness the Princess of Wales, accompanied by Prince Alexander of Teck, went by motor-car from Marlborough House to Coombe Warren, Kingston Hill, on Tuesday afternoon, and honoured Earl and Countess De Grey by lunching with them at their residence, Coombe Court. They returned to town later

been present from attending the annual gymkhana of the Kent A.C., where Sir Alfred Watkin, Bart., was one of the judges. Sir Alfred is a keen automobilist, a member of the R.A.C., as well as a vice-president of the Kent A.C., and among the recreations to which he is most devoted are mechanical pursuits, especially the working of locomotive engines.

Mr. P. A. Molteno, M.P., who has joined other M.P.'s—Messrs. Harold Cox, Cathcart Wason, Watt, B. S. Straus and company—in the catechising of the President of the L.G.B., is the son of the first Premier of Cape Colony, and represents one of those Scottish constituencies where heckling with regard to motor matters is becoming a fine art. On Monday he asked Mr. Burns if he was aware that there was a mechanical governor, worked automatically, which reduced the speed of motor-cars to any desired limit, and would he make its adoption compulsory? Mr. Burns replied: "As an engineer I may say that I know how governors can be tampered with"—and the members laughed almost as uproariously as do the barristers when a judicial joke occurs in court.



Lord Breadalbane and his 16-20-h.p. new Arrol-Johnston Car.

in the day. Countess de Grey was one of the pioneer lady motorists.

The Marquis of Breadalbane has had a three weeks' motor tour in Nether Lorn, Argyllshire, and the accompanying photograph of his lordship was taken when leaving Oban at the beginning of the trip. The marquis takes a keen concern in the direction of his wide estates in Scotland, and when engaged on such business does not drive the car himself being generally too much occupied in consultation with estate officials. The roads in Nether Lorn are very narrow and precipitous, and are dangerous for anything in the nature of large touring cars. Some of them have as severe a gradient as 1 in 8, and are unsuited for cars, except those specially designed for such roads, and low-g geared, as is Lord Breadalbane's, to twenty miles per hour. His lordship's demesnes are familiar to those motorists who have followed the Scottish Trials, his seats including Taymouth Castle, Aberfeldy, and Auchmore, Killin—both in the Perthshire Highlands.

The rain of Saturday last spoilt several outdoor functions. At Maidstone it was sufficient to deter many who would have

I learn from Penzance that a good impression was left in the town by those who participated in the start of the reliability trial of the Auto Cycle Union from Land's End. Many Cornish motorists attended to see the passage of the "minor automobiles," and altogether Penzance resounded with the merry music of the motor in quite unaccustomed mood. The weather was splendid—by way of contrast to the rain the riders had left behind them in London and the south-easterly region.

As an indication of the interest shown by motorists in tyre vulcanizing, I may mention that Mrs. Evelyn Roberts, wife of Mr. Henry John Roberts, the famous amateur pigeon shot, has attended a number of times at the Harvey Frost Demonstrating Rooms, below the offices of the M.C.J. in the Charing Cross Road, and has done such excellent repairs that she has passed the tests and gained the first H.F. certificate granted to a lady.

After the house dinner at the Motor Club on Wednesday next a large party will hie themselves to the Palace Theatre to see the Hastings Gymkhana of last week o'er again on the bioscope.

LOLLIUS.

CONTINENTAL NOTES.

The A.C.F. Grand Prix Race.

The first meeting of the Sporting Commission of the A.C.F. since the Grand Prix race was held in Paris on Monday. It was expected that the rules for next year's contest would be considered, but, owing to the absence of one or two important members, the matter was postponed until a later date. Although the accounts were not entirely closed, it was announced that the recent Dieppe meeting would show a satisfactory profit to the French club. A somewhat novel proposal has been made by M. Arnoult, vice-president of the Technical Committee of the A.C.F., with regard to the rules for the 1909 event—and that is to do away with all restrictions in cylinder dimensions, fuel consumption, &c. In his view, these races have largely become a question of tyres, and the old idea that a race in which no limits are fixed will result in the production of monsters with enormous engines is no longer to be feared; manufacturers having learnt the lesson that the likelihood of such vehicles winning is remote, the very high speed they are capable of attaining carrying with it an inevitable tendency to greater tyre troubles. In his view a car weighing about 700 kilograms and fitted with a motor of slightly greater cylinder capacity than was provided for in the Grand Prix des Voiturettes would not only be able to keep up a high average speed, but, being relatively light on tyres, would have a greater chance of winning than heavier cars fitted with very high power engines. On the other hand, a writer in "Les Sports" suggests that it does not come within the province of the A.C.F. Sporting Commission to alter the conditions of the race, but rather in that of the Committee of Delegates of National



The A.C.F. Grand Prix des Voiturettes.—M. Naudin on the Sizaire-Naudin which finished second.

The car made the fastest lap in the race, covering it in 53 min. 42 sec.

Clubs, whose decision at Ostend last year was the basis of the 1908 race. Even if the Sporting Commission could deal with the matter he considers it unwise for France to keep on desiring a change in rules because it cannot win the great international contest. It was France, he points out, that brought about the death of the Gordon Bennett race; a contest with a fuel consumption limit was then tried and Italy won. Another alteration was desirable! And so at the Ostend Conference the French proposals with slight modifications were adopted. In view of this he naturally considers that the best interests of France would be to leave the rules alone and—try to win.

British Motorists in France.

Among the recent British motoring visitors to France are Mr. and Mrs. Benda, of London (24-h.p. Mors), Mr. Stafford (40-h.p. Wolseley), Mr. Sulzbach (24-h.p. Adler), Mr. Lowenfeld, of London (40-h.p. Daimler), and Mr. and Mrs. William Walker (40-h.p. De Dietrich).

Another Light Car Competition.

The "Auto" has just issued the regulations for the annual light car competition, known as the Coupe des Voiturettes, which is to be held in France from the 10th to the 13th September next. Some slight alterations have been made in the rules, notably as regards the cylinder dimensions, which have been fixed as follows:—Up to 100 mm. bore for single-cylinder engines, to 80 mm. for double-cylinders, and 65 mm. for four-cylinders; the minimum weight of the cars for all classes is 600 kilograms. The event will be held on a closed circuit taking in Compiègne, Pierrefonds, and Crepy-en-Valois, and be over a distance of about 500 kilometres. Entries at £8 per car will be received up to August 31st; should over forty be received there will be two eliminating contests over 250 kilometres, the first twelve in each being eligible for the final.

The Ostend Automobile Meeting.

The annual automobile meeting at Ostend was held last week. The proceedings opened on the 13th inst. with a series of ten kilometre speed trials, the best time of the day (4 min. 28 sec.), being made by Hautvast on a Clement-Bayard. On the 14th inst. there was a run to Nieuport, while a 250 kilometre reliability run was held on the 15th, when M. Gehenniaux won the Duke of Orleans cup, he covering the distance on his Berliet in 4 h. 37 min. The programme on the 16th comprised speed trials over the flying kilometre and the standing mile, the competitors having to make runs in each direction. Bourland on a Germain was the winner in the touring car class (engines between 85 and 100 mm. bore) he covering the two kilometres in 1 min. 34 sec., and the two miles in 2 min. 58 sec. In the flying kilometre test for racing cars Hautvast made the double run on his Clement-Bayard in 45 2-5 sec., Rigal and Gabriel on similar vehicles being second and third in respectively 46 4-5 sec. and 49 2-5 sec., Newton (Napier) fourth in 50 4-5 sec. and De la Marra (Fiat) fifth in 55 1-5 sec.

Speed Trials at Boulogne.

The speed trials organised by the Boulogne and Calais sections of the Automobile Club du Nord de la France were held at Boulogne on the 17th and 18th inst. On the first day the contest for the Franchomme Challenge Cup was run off, this consisting of a seven kilometre test with a flying start on the Coquelles-St. Inglevert Road. The event was confined to those who had taken part in the Ostend meeting, the winner being Herr Schmidt on a Benz, who secured 294 points. A better time was made by Jochems on a Mercedes, but the bodywork of his car did not meet the regulations. Saturday was devoted to the Caraman-Chimay Challenge Cup contest for touring cars, this consisting of three kilometres from a standing start on the level, a standing mile hill-climb and a similar test over a distance of 300 metres, the total of the time deciding the winner. Victory went to M. Franchomme, who drove a De Dion. The three Clement-Bayard Grand Prix racers also took part unofficially in the meeting, Hautvast covering the level three kilometres in 1 min. 19 3-5 sec. and the mile and 300 metres hill-climbs in respectively 1 min. 4 4-5 sec. and 16 2-5 sec.

Industrial Vehicles Trial in Austria.

The Austrian Automobile Club is organising a reliability trial of industrial vehicles; the event is to be held from the 23rd to the 31st of October next in North Bohemia and Moravia. The idea of making the daily runs from one centre has been abandoned in favour of a round course which shall take in as many towns as possible and so bring the vehicles under the notice of a maximum number of prospective users. Classes will be provided for: (1)

carrier motor-cycles; (2) vans up to 16 cwt. capacity, minimum speed $11\frac{1}{2}$ miles per hour; (3) vehicles up to 30 cwt. capacity, $9\frac{1}{2}$ miles per hour; (4) lorries up to 2 tons load, $9\frac{1}{2}$ miles per hour in the case of rubber tyres and $7\frac{1}{2}$ miles per hour with iron tyres; (5) ditto up to 3 tons, $7\frac{1}{2}$ and $5\frac{1}{2}$ miles per hour respectively; (6) ditto up to 4 tons, 7 and 5 miles; (7) ditto up to 5 tons, $6\frac{1}{2}$ and $4\frac{1}{2}$ miles; (8) motor-buses; (9) motor-trains, 5 miles per hour. Prizes will be offered by both the Austrian Ministries of War and Commerce, the latter being for the lowest fuel consumption for the load carried.

The Coupe de Normandie.

The regulations with regard to the race for light cars, which is being organised by "L'Etoile Sportive Caennaise" for August 15th, have just been issued. The event is open for (1) cars having single-cylinder engines up to 110 mm. bore; (2) two-cylinder vehicles up to 80 mm., and (3) four-cylinder machines up to 85 mm.; it will be held on a 62-kilometre course, taking in Caen, Bayeux and Tilly-sur-Seuilles, this having to be covered four times. Entries, at the rate of £6 per car, £11 for two, and £16 for three, were received up to the 20th inst., and can be sent up to August 5th at an extra fee of £2 per machine.

The Industrial Vehicle Trials in Italy.

With reference to the Industrial Motor Trials, which are to take place next September at Piacenza, under the auspices of the Italian War Office and Agricultural Department, it is announced that the last day for the receipt of entries has been postponed until the 30th inst. Twenty-eight machines have already been entered, including three by the Suddutsche Automobilfabrik, two by the St. Pancras Ironwork Company, three by the Saurer Company, one by the Yorkshire Wagon Company, four by the Fiat Company, and five by the S.P.A. Company. The Committee have obtained substantial reductions for the vehicles, exhibitors and drivers on the Italian State Railways, and is now endeavouring to secure special reduced tickets from London to Italy.

Belgian Motor-Car Imports and Exports.

The value of the foreign motor-cars and parts imported into Belgium during the six months ending with June last amounted to only £83,024, as compared with £98,716 in the corresponding half of last year. On the other hand, there has been an increase in the exports of Belgian motor-cars and parts—from £220,784 in the first six months of 1907 to £255,536 in the similar period of the current year.

Miscellaneous Items.

The municipal authorities of Amsterdam have lately put in service a Krieger electrical motor ambulance.—An electrical fire service wagon is to be added to the equipment of the fire brigade of Aix-la-Chapelle.—A new State motor-car service has just been inaugurated between Tegernsee and Schliersee, Bavaria.—A start is about to be made in Paris with the work of constructing underground passages under busy thoroughfares for foot passengers. The first to be made is that under the Avenue des Champs Elysees, while one is also to be established at the Gare Saint Lazare. If the experiment is successful in relieving congested traffic and reducing the number of accidents, others will be made at various busy points in the city.—M. Bousson Borgnis is about to experiment at Issy-les-Moulineaux with an aeroplane which aims at being a practical passenger carrier. There are six sets of wings on superposed planes, the upward movement being obtained by two sets placed on a long projecting V-shaped bow. The total weight of the machine is about 4 cwt.—The death is announced, at the age of sixty-seven years, of M. Louis René Panhard, one of the founders of the well-known Panhard-Levassor Company. The deceased, who was decorated with the Legion of Honour, retired from active business a few years ago, and his last appearance in public was at the inauguration of the monument to M. Levassor, his former partner, at the Porte Maillot, Paris.—"Les Sports," of Paris, is organising a series of speed trials on the level and on a hill at Evreux for September 20th.

THE TORKINGTON TYRE.

THE other day we had an opportunity of taking a short trial run on a 30-40-h.p. car fitted with a new solid tyre which is being put on the market by the Torkington Tyres, Ltd. Inventors have for years been at work on the production of a tyre which shall give practically the same easy riding as pneumatics, with none of the drawbacks of the latter in the way of liability to puncture or burst, high cost of upkeep, &c., the need for the same, in view of the increased weight and speed of cars, having become greater than ever. The main drawback to ordinary solid rubber tyres as fitted to pleasure cars has been their tendency to roll at high speeds, and, owing to the centrifugal action, to leave the rim. Both these disadvantages are claimed to have been overcome in the new tyre which has been devised by Mr. A. W. Torkington. It consists of an approximately square section of soft resilient rubber divided longitudinally into two closely-abutting strips, held in a rim of the section in general use for pneumatic covers, but which, to facilitate fitting, is made with a detachable flange. In the centre of the tyre is imbedded an articulated band or chain of metal, free to move downwards with the rubber at any point, but rigid laterally to prevent rolling. This band is bolted through the rubber, and by pressing the lower portion of the tyre firmly into the rim provides for the centrifugal force developed at high speeds. The arrangement is such that the rubber (which is nearly double the depth of the ordinary solid, so that it has a largely increased cushioning action) and metal work harmoniously together. The base of the rubber is honeycombed, so



A Rough Road.

From a sketch in

["La Locomotion Automobile."]

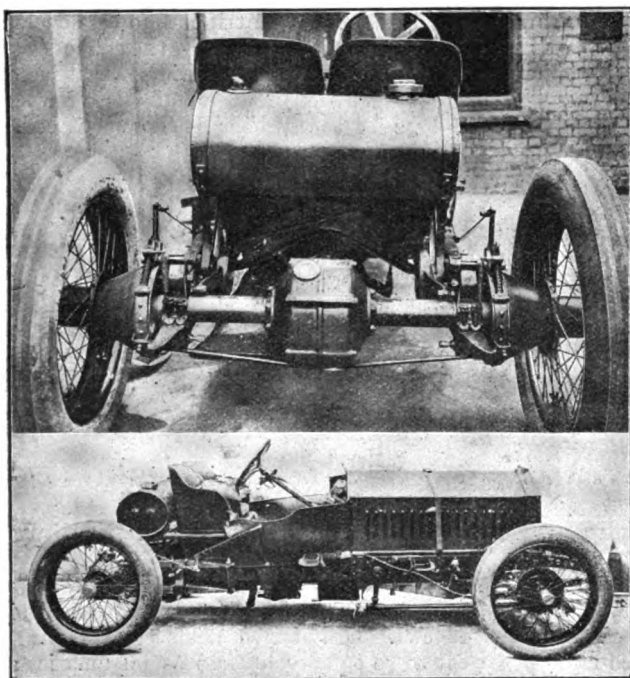
forming air chambers, which provide a place for the displaced rubber to sink into, giving a much greater yield.

Before putting the tyre on the market it has been submitted to very exhaustive experiments on a powerful limousine weighing, loaded, about 44 cwt. Gravitation trials carried out near Elstree have proved it to be equally as fast as pneumatics; its safety at high speeds has been thoroughly demonstrated on the Brooklands track, while the comparative yield and rebound tests show it to be much more efficient in these respects than ordinary solids, in fact, to approximate very closely the pneumatic. In the course of the trial run to which reference has already been made the car ran very smoothly, no perceptible difference being noticeable between it and a vehicle shod with pneumatics. Although the first cost, owing to the large quantity and the high quality of the rubber used in the new tyres, is slightly in excess of pneumatics, the freedom from punctures, bursts, etc., added to their durability, results in a material economy of the tyre bill over a period, in addition to which there is the absence of trouble and worry with regard to spares and inflation. As regards the life of the tyre, we were shown one which after 3,000 miles' use had only lost $\frac{1}{4}$ in. by wear; as there is about $\frac{3}{4}$ in. of rubber available it is estimated that from 16,000 to 18,000 miles can safely be relied upon before renewals become necessary.

MESSRS. M. H. AND M. SPENCER have opened the Carnarvon Arms Garage and Motor Works at Dulverton, Somerset, with a well-equipped repair shop for the speedy execution of motor work.

THE NAPIER GRAND PRIX CARS.

WE herewith reproduce two views of one of the six-cylinder Napier cars which were built for the purpose of taking part in the 1908 A.C.F. Grand Prix Race, but which were not entered owing to the fact that the French Club would not allow the use of detachable wheels. There are several novel features in the design. In the first place it may be mentioned that the engine cylinders, although separate, are very close together, making a very compact motor. The inlet valves are operated from the top by push rods and levers actuated from an enclosed cam shaft. The push rods end in a ball joint where they are attached to the levers, and each valve tappet is kept up to its seat by a flat spring. The throttle is controlled by pedal and also by a hand lever below the steering wheel. The bore of the cylinders is 126 mm., the power developed by the motor in accordance with the R.A.C. rating being just under 60-h.p. Two systems of ignition—accumulators with synchronised distributor, and magneto—are provided. The latter is driven by gearing off the crank shaft, the water circulating pump being actuated in a similar manner. The usual type of water filler is absent on the radiator, a hinged cover with a large opening being used in its place in case water has to be put in hurriedly.



An air pump worked from the cam shaft is employed for maintaining the pressure in the petrol tank.

The gear-box is adapted to give three forward speeds and a reverse, the final transmission being by a cardan shaft and bevel gear to the rear live axle. The propeller shaft is in a line with the crank shaft of the engine. It will, therefore, be understood that the drive from the motor to the rear axle is in a perfectly horizontal direction, the friction of universal joints, arising from an angular position of the cardan shaft, being thus eliminated.

A noticeable and highly original feature of the vehicle is the suspension of the back axle. Instead of the latter being connected to the centre of a semi-elliptical laminated spring, as is the usual practice, two flat laminated springs are attached at their centre to a bracket fixed to the main frame of the car on each side. These springs are arranged one above the other about a foot apart; their rear ends are attached to a bracket bolted to the axle, while at the front they are held in a clip attached to the main frame. The object of this somewhat novel system of springing is to reduce the amount of dead weight on the back axle, and Messrs. S. F. Edge, Ltd., inform us that in tests on the road and at Brooklands it was found that at speeds in the neigh-

bourhood of 100 m.p.h. the vehicle seemed to hold the track better than any system hitherto used in Napier cars.

The car is equipped with detachable and interchangeable wire wheels, road equalisers being fitted to both the back and front axles. The foot brake acts on a drum at the rear of the gear-box; the back wheel brakes operate on drums projecting from the driving hubs. The wheel base of the vehicle is 9 ft. 8 in., the track 4 ft. 8 in., and the weight in Grand Prix order 1,112 kilos. Among the little details of interest is a finely woven copper gauze wind shield provided for the driver, this being adjustable vertically in a frame attached to the dashboard.

Mr. S. F. Edge intends to drive one of these cars in the race against Mr. C. Jarrott at the August meeting at Brooklands, when its performance will be watched with interest; at the present time the vehicle is undergoing a lengthy test in France.

SOME USEFUL NOTES.

THE bearings of the radiator fan require occasional lubrication. If a plain bearing is used a grease cup is generally provided, and if ball bearings are employed, they are either packed in grease or fitted with covered oil holes.

Now that warm weather is again with us, those who have jacketed carburettors will do well to experiment without hot air (or hot water) round the mixing chamber. It is frequently the case that the engine will run infinitely better, as it is quite possible to have the mixing chamber too hot.

If the engine of the car has adjustable valve tappets the valves can always be kept nicely synchronised. Get a chart from the manufacturers and have the flywheel accurately marked so that the different positions in line with the pointer can be readily obtained. Occasionally go over all the valves; it makes a wonderful difference to the even running of an engine.

A PETROL engine will often have good compression when cold and have next to none at all after it has run for some time. When an engine acts in this way the trouble is usually due to leakage past the valves on account of the small amount of clearance between the valve stems and the tappets or push rods. When the stems and valves are cold the latter seat properly, but when the former are heated, and of course expanded, the valves are prevented from seating by the stems resting on the tappets.

WHEN nuts are met with that refuse to start under the persuasion of a spanner of appropriate size and with a reasonable expenditure of force, great care should be used in dealing with them. If too large a wrench is used, or if a piece of pipe is slipped over the spanner handle to increase its leverage, a practice which is frequently resorted to, it is often an easy matter to twist off a bolt or stud without starting the nut. When this occurs the remaining part of the stud has to be drilled out, the hole tapped, and another stud made and put in its place, considerable expense being the result.

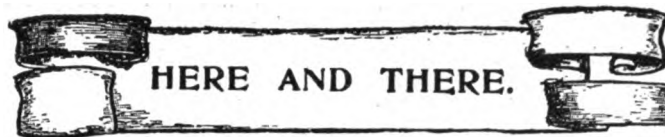
BEFORE attempting to dismantle an engine, gear-box, or any other part of a car, it is essential that its construction should be fully known. If one goes at the task blindly by removing all the nuts in sight, without knowing just what effect the freeing of each one of the fastening devices will produce, the chances are that an unnecessary amount of work will be done; parts may be thrown out of relation which need not have been disturbed. If a drawing showing exactly the way in which all the parts are secured together can be secured five minutes' study of this will be worth more than half an hour with the spanner, removing nuts in a half experimental manner. If no such guide to the method of putting together of the mechanism is to be had, it is worth while to study the relation of the actual parts until there is no doubt as to the particular function of each bolt, or other holding device, and as to what will happen when each is removed.

MESSRS. A. J. NEGUS AND COMPANY have a good garage in Stony Stratford, where they are also able to do all classes of motor repair work.

It is reported that on the committee stage of the Finance Bill in the House of Commons an effort will be made to discuss the question of industrial alcohol.

SIR ALFRED HICKMAN, whose name is well known in connection with the iron trade in the Midlands, has just placed an order for a 60-h.p. six-cylinder Napier.

WE illustrate herewith a unique type of motor body which has lately been fitted to a Talbot chassis for the Rt. Hon. the Earl of Shrewsbury by Messrs. J. Rothschild et Fils, Ltd. The general plan follows the outline of a dinghy. The seating consists of two front bucket seats and a central single seat behind, which may be turned upside down when not in use. A special dashboard has been made to accommodate the increased width of the body in front, and the change speed and brake levers, and their quadrant, have been placed inside the chassis side member, in order that the body shall not be unduly wide. The off side of the body has, states the "Automobile and Carriage Builders'



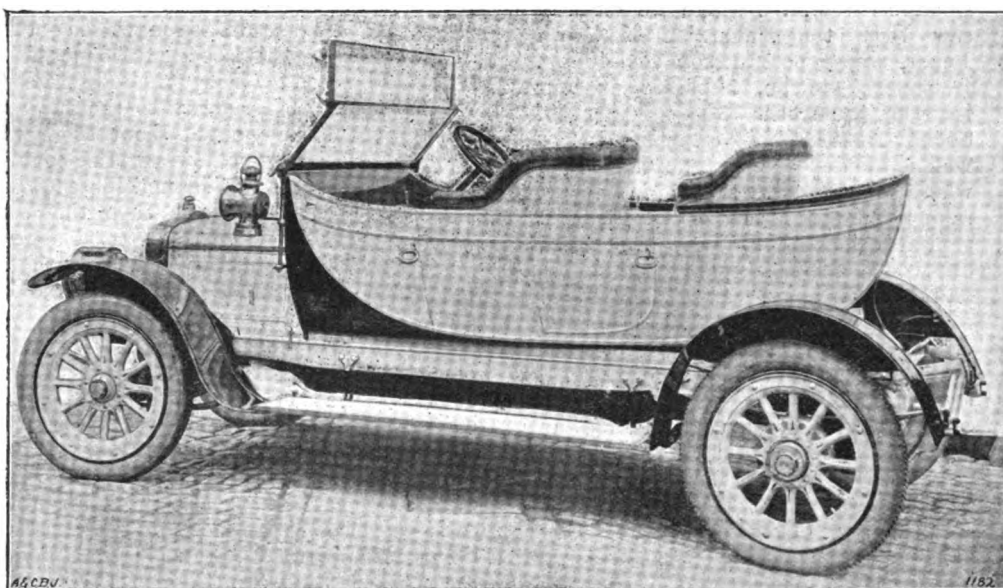
MOTOR-CARS are being hired out by most of the enterprising automobile agents in the Eastbourne district for visitors to the Pevensey pageant.

A FEW days ago the Star Engineering Company, Wolverhampton, delivered four of the eighteen 9-h.p. 12-15 cwt. vans they are building for Messrs. Lever Bros., of Port Sunlight.

RECENT purchasers of Daimler cars include the Hon. Mrs. Bowes-Lyon, who has acquired a 42-h.p. vehicle of the "Aston" landaulet type, and Sir Wm. Cruickshank, who has ordered a 42-h.p. "Stoneleigh" limousine.

A MOVEMENT has been started to construct a 158-mile road for automobilists near Winnipeg, Canada. It will be oval in form, and the expense of construction and maintenance will be met from the tolls collected from those who use it.

FROM the Great Eastern Railway Company comes a copy of their booklet "Holidays on the Continent," giving descriptions and illustrations of some of the less known districts of Holland, North Germany and the smaller valleys of the Rhine, which are suggested as good holiday places for motorists as well as for tourists generally.



The Neval Car built for the Earl of Shrewsbury.

Journal," to whom we are indebted for the illustration, no side doors, and no sham openings or dummy handles have been adopted. One of the finest pieces of work in the body is the formation of the hind portion, where a sheet of metal has been shaped to the broadening keel, forming at the same time a return curve with the back pillar, and spreads itself to the limits of the chassis side and back members. An Auster wind screen is fitted above the special dashboard, and steel wings with side shields, both front and hind, are provided. The body "deck" around the hind seat is finished with a matchboarded effect, a similar treatment having been carried out to the inside surface of the body.

THE Town Clerk of Holborn has been requested by his Council to co-operate with the police in any action they may take with reference to the drivers of L.C.C. trams who disregard the bye-laws for regulating the traffic at the dangerous point in Theobald's Road and Gray's Inn Road, London, W.C.

THERE was a marked decline in the importation of foreign motor-cars and parts into the United States during May last, a value of only £42,540 being recorded as against £81,885 in the corresponding month of 1907. Altogether seventy-one cars were received, of which fifty-two were from France, fifteen from Italy, and two each from the United Kingdom and Germany.

THE exports of motor-cars and parts from the United States during May last only attained a value of £91,811, as compared with £133,090 in the corresponding month of 1907. The United Kingdom occupies the leading place with £26,532, France being second with £20,118, and Canada third with £18,812.

A LIVELY scene was witnessed on the road at Snailwell, near Newmarket, when a trainer recently had several race horses out on the highway. The chauffeur of another trainer was passing on a motor-car, and, not stopping as desired, received several lashes with a whip from the man in charge of the animals. At the Newmarket Petty Sessions, a fine of 30s. and costs has been imposed upon the man who wielded the whip.

At the last meeting of the Hayfield (Derbyshire) Guardians a member moved that the County Council be asked to have a flag or signal instituted at every six miles along their roads, at which motor-cars should be stopped and tolls taken. He urged his proposal with some warmth, suggesting that it would enormously reduce the county rates and draw the money required from a class of people who damaged the roads. The proposal, however, was not seconded. A committee was then constituted to consider, in co-operation with the New Mills District Council, some means of dealing with the damage to roads.

THE Dean of Carlisle has placed an order for a 25-h.p. Weigel chassis.

A PROPOSITION to adopt a ten mile limit for motor-cars has been negatived at Blackpool.

MESSRS. ARGYLL MOTORS, LIMITED, are supplying a motor fire tender to the Dundee Town Council.

THE shipments of British motor-cars to South Africa during the six months ending with June last attained a value of £16,055.

THE Great Eastern Railway Company have established a service of motor-buses in Bury St. Edmunds. They have twenty-one doubled-decked motor-omnibuses in public service, twelve of which were built at the company's works at Stratford in 1905.

MR. ROBERT LUDWIG MOND, the son of Dr. Mond, the well-known scientist, is among the latest to take an interest in the navigation of the air, he being at present engaged on the construction of a new aeroplane.

WE learn that Prince Albert of Belgium has just purchased one of the Germain cars which competed in the A.C.F. Grand Prix. Following the race, His Royal Highness took a trial run on the vehicle, which is to be equipped with a touring body for the present season.

How nearly motor garments now approximate to the ordinary habiliments of mankind is shown by a visit to the show rooms of

Messrs. Alfred Dunhill, Ltd., at 5, Conduit Street, W., where we recently saw H.H. the Maharajah of Cooch Behar, whose portrait, on his 40-h.p. Delaunay-Belleville, appeared in our issue of June 6th. Many leaders of Society frequent that establishment, as well as the depot in Euston Road, N.W., where the latest styles in motor raiment may be seen. We illustrate a typical example of one of the firm's dust coats, which are equally serviceable on the car or afoot. These are made in many materials, ranging from the ordinary holland to alpaca, fawn, twill, crush, Tussore silk, &c. Another good type of garment is the "Dunwear" coat, cut with Raglan shoulders and fitted with deep Prussian collar. This is noticeably easy to slip on, and is equally suitable for wear as a rain coat—during such days as we have recently had—or a dust coat in the days we hope to come.

TWENTY motor-cars were, one day last week, placed at the disposal of Alderman T. E. Higham, the Mayor of Accrington, for the purpose of a

treat to the crippled children of the town. About fifty youngsters enjoyed the outing to St. Anne's-on-Sea.

FIAT MOTORS, LTD., have just issued a book of instructions with regard to the care and maintenance of the Fiat 15-20-h.p. car. Chapters are devoted to the question of lubrication and adjustment, the various parts requiring attention being illustrated by lettered drawings. Some general hints are also given as well as a price list of spare parts. Owners and drivers of these vehicles will find the new instruction book an indispensable companion.

THE Vatican has hitherto always been strongly against the motor-car, the Pope looking upon it as unsuited to the dignity of the Church. For this reason he has always refused permission to the Cardinals to adopt motor-cars in place of the traditional carriage and pair, notwithstanding that many of them have requested his sanction. Consequently, the fact that Cardinal del Val is using a motor-car to convey him between Rome and Vicarello has attracted some attention. Without an automobile, however, the Papal Secretary of State would be unable to take his cure and attend to his Vatican duties, and the Pope has, therefore, reluctantly permitted him to use the new means of locomotion.

DR. D. J. FARNAN, of Dublin, has just acquired a 15-20-h.p. Buick car.

ANOTHER hostile demonstration against the driver of a motor-bus has occurred at Mile End.

AMONG recent purchases of 40-h.p. Benz cars are Mr. F. Williams, of Brasted Hall, Sevenoaks.

THE Duke of Grafton has lately acquired a 35-45-h.p. Maudslay car with double landaulet body by Thorn.

MANY motor vehicles, including cabs, are plying in the Minehead district, taking visitors on trips to the many interesting places in the vicinity.

AT the meeting of the Royal Veterinary College on Tuesday, Sir Nigel Kingscote said that in spite of the introduction of mechanical traction, the services of veterinary surgeons were never in greater demand than to-day.

THE Skegness Urban District Council has sent a memorial to the Prime Minister urging the following five points against motor vehicles:—(1) the danger to life and limb; (2) the nuisance caused by the dust and noise; (3) the enhanced cost of road maintenance, which has to be borne by local taxpayers; (4) the damage to crops; (5) the depreciation of property. Mr. Asquith, being himself a motorist, will know how to deal with the matter.

MR. JOSEPH MARSTON, a very old-established carrier, of Otley, has just placed a steam wagon—a Yorkshire—in service. Mr. Marston and his father have made the daily journey between Otley and Leeds for nearly a hundred years. Their first vehicle was a cart, and as a railway to the rural district of Wharfedale had not then been thought about, there was a good deal of competition. One by one, however, the competitors fell away, until the Marstons were left in undisputed possession with six horses and seven wagons, which in their time had displaced the carts. Naturally, the railway has absorbed a good deal of the traffic, but there still continues a demand for the road carrier, who, with the motor wagon just acquired, will now be able to make double the number of journeys.

THE Bureau of Tours of the Automobile Club of America has sent us a copy of its recently-issued 1908 Year Book. The chief features of the work are the A.C.A. official route cards, prepared with special signs copyrighted by the Club. A full list of the ferries within a circumference of 150 miles from New York is also included, this giving sailing hours and charges for motor-cars; also the steamship connections to all the coast points; a full synopsis of the various State motor laws; a list of hotels, garages, attorneys and physicians in every part of the United States holding the A.C.A. official appointment. Next follows a synopsis of the requirements in foreign countries and the necessary formalities before embarking on a trip abroad. At the end of the book is a resume of road conditions in the various States of the Union, compiled by the U.S. Office of Public Roads especially for the Year Book.

To the rear of the famous and fashionable church of St. George's, Hanover Square, W., and entered from Maddox Street, Regent Street, London, is the establishment of the Maddox Street Motor Company, Ltd., in Masons' Arms Yard. Within a comparatively short time the company has, under the able direction of Mr. Jenkins, made a reputation in connection with the disposal of second-hand cars of high grade, its *clientele* including many well-known people in Society and in public life. The policy of the company has been to thoroughly overhaul every car they purchase, in conjunction with the makers wherever possible, so that reliability is a dependable quality. At the time of our visit to their headquarters several excellent vehicles were ready for prospective purchasers who had entrusted Mr. Jenkins with fulfilling their requirements. Mr. Jenkins has not only a wide knowledge of the automobile business, but he is well acquainted with the roads in different parts of the country, and makes an endeavour to advise so that purchasers secure cars identically suited to their needs. In addition to their place in the West End of London, the Maddox Street Motor Company, Ltd., have a depot in York Street, Belfast, from which a large business in the North of Ireland is conducted.



Correspondence.

[Letters to the Editor should be addressed to the offices, 27-33, Charing Cross Road, London, W.C.]

THE SCOTTISH RELIABILITY TRIALS.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—I have just received the official report of the Scottish Reliability Trials held in June last. For lucidity and clearness it would be difficult to imagine anything to surpass it, and my representative, Mr. Sydney Smith, tells me that he could not imagine any competition more searchingly carried out or better arranged. There is one point, however, which, for the good of the sport, I would like to see improved, and that is the question of weight. The marks were awarded essentially for reliability, petrol consumption and hill-climbing. Unfortunately the marks for petrol consumption were awarded on a ton-mileage basis, and the marks for hill-climbing on a weight basis. This would be all right if it merely consisted of the weight carried, but it works out in practice that the heavier the car the better the results on the formula will be, so that a car that is well designed and made of high-type steel and very light is heavily handicapped, whereas the heavier car, with possibly crude castings where a high grade steel should be employed, would get through

taining any benefit by having to carry to the end of the car's days approximately half a ton additional weight.

With regard to the petrol results, the 15-20-h.p. car that obtained the most marks on a ton-mileage basis actually did one mile less to the gallon than the Metallurgique; it, however, gave much better results on ton mileage, as the car unladen weighed 5 cwt. more.

I am not writing this in a carping spirit, or merely to bring out the many virtues that we claim for the Metallurgique, but merely from the point of view of future competitions being arranged so that a light strong car may not be penalised for its very virtue. Possibly others may have views on the same subject, and it would be interesting to hear suggestions as to how these difficulties can be avoided in future.—Yours truly,
WARWICK WRIGHT.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—It may be interesting to you to know the reason of my losing an entirely non-stop performance for the 25-30-h.p. Brown car, which I



The Sheffield Hill-Climbing Competition at Grindleford.—The Scene at the Starting Point.

on the reliability by having these made heavy, and actually the car may score over its lighter and stronger competitor. Surely what we ought most to aim at is to produce the lightest possible vehicle that will stand up.

Possibly the Committee of the Scottish Club realize better than anybody the severity of the route they chose, and it would be quite safe to assume the route would be severe enough to break up any car that was unduly light, if made of bad material. After all, the man who owns a motor-car does not wish to pay for ton miles of petrol; it is no comfort to him, if he uses five gallons where he should only use four, if at the same time the maker assures him that he has achieved a great ton-mileage result. The result in miles to the gallon—that is the thing he pays for—is the only thing that interests him.

The same thing surely holds good with regard to hill-climbing. The hill-climbing results are tabulated, first, in order of time occupied on each hill, and secondly the results on formula. The Metallurgique had the distinction of obtaining four fastest times on the various hills, and yet on the formula result it found itself placed second to a car which it beat on the first hill by 20 sec., on the second hill by 1 min. 47 1-5 sec., on the third by 49 sec., on the fourth by 21 3-5 sec., and on the fifth by 33 sec. This car weighed 31 cwt. 3 qrs. 14 lbs. The 26-h.p. Metallurgique weighed 22 cwt., both without passengers. It will be seen therefore, that though the Metallurgique was much faster than its rival, on account of the fact that it did not weigh so much it was beaten on the formula. Now a man buying a motor-car surely would not imagine he was ob-

drove in the Scottish Trials. This arose through my having to reverse more than once on Glen Quaich Hill. It was not owing to any lack of power on the part of the car, as it took all the hills in the whole 2,000-mile trial with the greatest ease.

It must be remembered that this car was absolutely standard, and that during the Scottish Trials I carried nearly 200 lbs. over my passenger weight. The only road adjustment on the 2,000-mile trial was 11 minutes to replace a feather in the fan pulley, and 3 minutes to clean the throttle, which was clogged with dust the last day.

It is interesting to note that I have just received a letter from Australia stating that a similar 25-30-h.p. Brown car has, under ordinary touring conditions, completed 6,000 miles without a single mechanical adjustment.—Yours truly,

BERNARD R. BANKS.

TRIALS.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—Following what you have written with regard to the organisation of reliability trials, and the insistence with which you have urged that the trade is nearly tired of such expensive lapses from business, I would like to say a word or two; especially as the director of the Society of Motor Manufacturers and Traders are evidently coming to the view that trials are almost unnecessary. Their decision not to take any part in the Dust Trials of the R.A.C. is significant—as it is also the

opinion that the time has come to attend to the construction of the road rather than to the dust on the surface. In this connection the club is certainly on the wrong track, and should deal with cause rather than effect.—Yours truly,

T. H.

THE SETTING OF VALVES, &c.

To THE EDITOR OF *The Motor-Car Journal*.

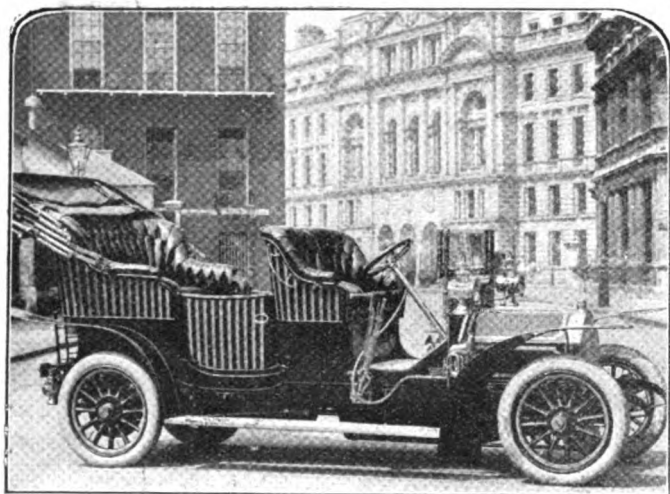
SIR,—The information given by you on page 321 of your issue of June 6th is extremely interesting. You mention that the table re "The Setting of Valves" will be very useful to repairers and to engineers. To repairers, I will admit, its use will be most advantageous, but I consider that from an engineer's or designer's point of view the following information is also required:—1, bore; 2, stroke; 3, are valves on one side or on opposite sides? 4, diameter of valves; 5, lift of valves; 6, normal speed of engine. With this information one can see, probably, why the great difference occurs.

The letter headed "Some Facts in the Selection of Motor Oils," in the same issue, is also interesting; but as, unfortunately, most of us possess cars with gun-metal bearings, our hopes seem dashed to the ground. I wonder if any of the oil manufacturers will notice that letter and supply us with a cheap light mineral oil suitable for gun-metal bearings. I intend personally to try the effect with an oil-testing machine, and will let you know the results later.—Yours truly,

ALFRED E. JOYCE.

Assistant-Engineer, P.W.D.

Nagpur, India.



The 15-20-h.p. Fiat Live Axle Car recently shipped by Fiat Motors, Ltd., to Lagos for the personal use of His Excellency the Governor of Southern Nigeria.

Before being accepted the car was subjected to a series of severe tests by the motor expert of the E.A.C., who was appointed by the Crown Agents for the Colonies, through whom the order was received. The vehicle is painted blue with vertical stripes of light blue, the bodywork being by Brainsey and Sons.

DETACHABLE RIMS v. DETACHABLE WHEELS.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—Referring to the letter of "Anxious" in your issue of 11th inst., it seems to me that the time required to perform the various operations mentioned depends entirely on the skill and aptitude of the operator, the only uncertain element being the time required to detach the cover from the rim and to re-attach it without damaging the new tube. This being so, I may inform "Anxious" that a "divided rim" has been patented and will very shortly be placed upon the market, by the use of which the "outer detachable" part of the rim may be removed and the cover and tube laid bare in a few seconds and as readily replaced after a new inner tube has been substituted. This "divided rim" consists of two parts only, one of which is fixed to the wheel. No tools of any description are required to remove and re-attach the "outer part," which latter cannot detach itself in case of a puncture. A fairly skilful operator could, with one of these rims, easily replace a damaged tube with a new one and be on the road again in three or four minutes.

It may, however, be interesting to "Anxious" and others to know that by the use of these rims "twin tyres" may be used on each wheel, each tyre being narrower than usual and giving two distinct and separate treads, thus minimising the risk of side-slip or skid. Only in the case of both tyres being punctured on one wheel would repairs be necessary on the road, and these could be effected in the time stated above.—Yours truly,

SIMPLEX.

LONDON TRAFFIC.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—Sir Lewis McIver's letter to the *M.C.J.* of July 18th is a valuable expression of opinion which has been too long withheld.

The present noise, smell, and smoke in congested places, such as station yards, and more especially in street blocks in the central parts of London, cannot be permitted to continue.

Everyone will admit the phenomenal success of the petrol car in its own sphere, but for town use there is no self-propelled carriage that can compete in desirability with the electric car. Experience gained by the Electromobile Company in running over 2,000,000 miles has convinced us that cabs propelled by electricity can be profitably run on the existing tariff.—Yours truly,

WESTBURY.

DUST AND SPEED.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—What is the proper thing to do in case a more powerful car comes up behind you on a dusty road and your speedometer tells you that you are at twenty miles an hour or more? Should you turn out and allow them to dust you and incidentally infringe the Act; or should you keep to the middle of the road as long as the legal limit is maintained? I believe that a good deal of excessive speed is due to one car trying to get clear of the dust of another. Do you know what the general feeling among drivers is about it, and do you consider it any discourtesy to refuse to give way?—Yours truly,

W. R. ETCHES.

COURTESY TO STRANGERS.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—Some time ago you referred to the way in which foreign motorists visiting this country are compelled to pay the Inland Revenue fees just as though they were permanent residents. This is certainly not courteous, and it cannot be called good business. Surely Government might be able to relax their rules in this respect and so show something of a welcome to our guests.

I learn that one of the most influential of the Continental automobile organisations, the German Automobile Manufacturers' Association, has recently induced its Government to reduce the tax from automobiles which are taken into the Fatherland temporarily for touring purposes. It is naturally hoped that this will lead to a considerable increase in the automobile tourist traffic of the country, and the same thing would happen if a similarly friendly policy were adopted here.—Yours truly,

T. LANGEMANN.

[We recently brought the matter to the notice of the Treasury, and are awaiting their reply.]

GRAPHITE AS A LUBRICANT.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—There seems to be a diversity of opinion among motorists as to the advisability of using graphite in the crankcase of petrol engines. Some advise mixing a teaspoonful of flake graphite with every quart of cylinder oil put into the base chamber for the purpose of lubricating the cylinders, saying it will give a fine surface to the inside of the cylinders if so used. Others say it is a very bad practice, as it will cause the pistons to bind. I should be glad to have the opinions of any car owners who have experimented with graphite in this way.—Yours truly,

BRISTOLIAN.

SOME NOTES ON THE SELECTION OF MOTOR OILS.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—In one letter, "Veritas Prevalabit" states that in the case of his four-cylinder car he "regretfully" made a compromise. But he omits to explain why "regretfully," and further what steps he took to remove the cause of his regrets, and with what success. An explanation on these points, omitted in his letter on this very interesting subject, would no doubt enlighten many of your readers and certainly interest all.—Yours truly,

TYRO.

AN ENDORSEMENT POINT.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—I was recently summoned at Guildford, and fined 10s. together with 8s. 6d. costs, for having a swinging strapped-on number plate in front of my 8-h.p. car. After being fined, the young clerk asked for my licence, which I gave him, thinking he only wished to see all was correct. To my astonishment, however, he stamped the back of it, endorsing same with a conviction under Section 2. Had he any right to do this, as nothing was said by the Bench about any endorsement, as my licence was a clean one before this? I did not knowingly plead guilty to the offence, having had the car in use fourteen months, and buying it second-hand.

from a previous owner with the plates already on. The numbers were transferred to me at the time of purchase. The former owner of my car was a doctor, and he had previously used the car for nearly two years, every day, in his practice. I was stopped last holiday, on my way home from Southsea, at Godalming, by a constable who stated he could not take my number properly.—Yours truly,

OLD SUBSCRIBER.

THE PRUNING OF HEDGES.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—The secretary of the Motor Union has been publishing an appeal to local authorities to cause any tree or hedge which obstructs the view of cross or side roads to be cut or pruned under powers alleged to be contained in Section 65 of the Highway Act, 1835. However desirable it may be that such powers should exist, no such powers are to be found in the section to which he refers. Trees and hedges can only be cut under that section where they exclude the sun and wind from the highway or where they actually and physically obstruct the carriage way. Moreover, if trees which merely obstructed the view could be cut under Section 65, which they cannot, the appeal would be particularly inappropriate at the present time, for it is provided by Section 66 of the same Act that the power to cut and prune hedges shall only be exercised between the last day of September and the last day of March.—Yours truly,

A. H. HASTIE.

DRY BATTERIES v. ACCUMULATORS.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—Some discussion on this subject appeared in your columns a few weeks ago; may I be allowed to state my own experience with an 8-h.p. De Dion car? On February 8th, 1906, I fitted a new dry battery for the first time, having found accumulators a great worry. This battery ran me 4,000 miles until April 27th, 1907, without any trouble, when I again fitted another battery. This second one ran me 4,300 miles until last Monday week, June 15th, on which date I fitted my present battery (same make). I never carry a spare battery until the one in use drops to five or six amperes, and I am warned by occasional misfires about a week before the battery gives out. The cost for the 8,300 miles is thus under £2, together with the great advantage, compared with an accumulator, that no attention is needed, as I do not test the battery until it has done at least six months' work.—Yours truly,

(REV.) GEORGE ROWLEY.

THE SALTBURN RACES.

THE legal advisers of Messrs. Warwick Wright, Ltd., write, with reference to the letter from Mr. George S. Barwick, which appeared in our issue of the 18th instant under the title "The Saltpurn Races":—"In this letter Mr. Barwick takes exception to the statement contained in our clients' advertisement that at the Saltpurn Speed Trials a 40-h.p. standard Metallurgique car driven by an amateur made the fastest time of all touring cars in the kilometre race from standing start, defeating by more than two miles per hour all competitors"; and Mr. Barwick further does not hesitate to suggest that our clients' statement is without foundation. There is not the slightest foundation for these suggestions; our clients' advertisement is perfectly correct and accurate, not merely in word but in actual fact and spirit. The 40-h.p. Metallurgique car, the property of Mr. H. R. Kirk, the well-known motorist, succeeded in making the fastest time over the course in the standing kilometre race, beating the record for touring cars on that course, and beating also by a comfortable margin the time of Mr. Barwick on his 58-h.p. Daimler. As Mr. Kirk's Metallurgique car was driven by an amateur who was not familiar with the car, not having driven it a great deal, his performances were not entirely uniform, and the car did not run as fast in the final and semi-final as it did in the heat in which the fastest times were done and in which the Metallurgique car did the fastest record for the standing kilometre, not only for the day but also for the course. This fact was brought to light by the secretary at the dinner held after the Saltpurn meeting. We feel sure that, in fairness to our clients, you will give this letter equal publicity to that given to Mr. Barwick's letter."

Mr. H. R. Kirk, of Leeds, the owner of the 40-h.p. Metallurgique car in question, writes on the same subject and is "prepared to prove that my car was faster by two miles per hour than Mr. Barwick's as timed by the official timekeepers of the R.A.C. at Saltpurn." He appends the respective fastest official speeds of the two cars for the standing kilometres as follows:—40-h.p. Metallurgique 52.2 m.p.h.; 58-h.p. Daimler 50.15 m.p.h.

[This correspondence is now closed.]

Two air tubes have been found near Ilkley. The owner can have them on application to Mr. Albert Farnell, of Bradford.

THE United Motor Industries, Ltd., have been appointed sole distributing agents for the home counties, including Essex, Middlesex, Sussex, Surrey and Kent, for the Beresford patent detachable rim. A sample rim is on view at Poland Street, W., and can be seen at any time by anyone interested in this ingenious device.

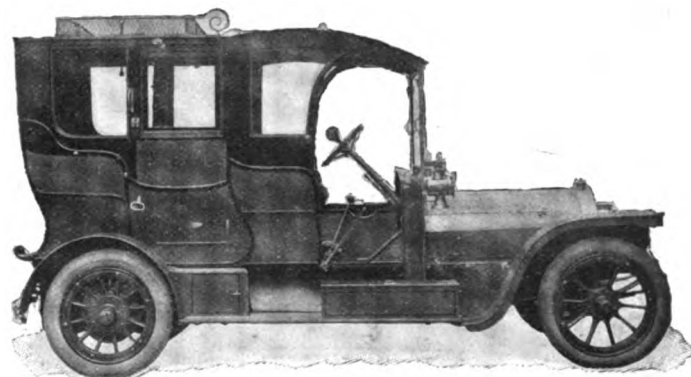
THE INTERNATIONAL TOURING CAR TRIAL.

BELOW we give an extract from the judges' report in connection with the recent trial officially recording the performances of the winner in each class:—

| Class. | Car. | Driver. | Won by. |
|--------|---------------------------------|---------------------|---------------------|
| A. ... | 6.2-h.p. De Dion-Bouton ... | W. V. Jolley ... | Walk over |
| B. ... | 8.9-h.p. Adler ... | Fincke ... | Walk over |
| C. ... | 10-h.p. Cadillac ... | F. S. Bennett ... | 1 m. 14½ s. |
| D. ... | 15.8-h.p. Singer ... | G. O. Herbert ... | More than six hours |
| E. ... | 20.5-h.p. Vaux all ... | P. C. Kidner ... | 56 m. 41½ s. |
| F. ... | 25.5-h.p. Talbot ... | H. G. Day ... | 3 m. 24½ s. |
| G. ... | 30-h.p. Adler ... | H. Wilhelm ... | 30 m. 19 s. |
| H. ... | 40-h.p. Armstrong-Whitworth ... | G. H. T. Slaney ... | By 145 miles |
| J. ... | 45.86-h.p. Ariel ... | H. Cordery ... | Walk over |
| K. ... | 48.6-h.p. Rolls-Royce ... | E. Platford ... | By 44 miles |
| L. ... | 59.5-h.p. Ariel ... | P. Lewis ... | Walk over |

THE HASTINGS GYMKHANA.

LAST week we were only able to briefly refer to the motor gymkhana taking place at Hastings as we went to press. This was held under the auspices of the Motor Club of London and the Hastings Entertainment Association and attracted much attention locally. Col. W. J. Bosworth was at the head of affairs, assisted by Mr. R. E. Edmondson, of the Motor Club, and Messrs. Harvey du Cros, A. H. Philpot, G. and W. du Cros, Stenson Cook and other well-known motorists. Unfortunately the parade of decorated motor-cars had to be abandoned owing to the scarcity of entries, and when it was superseded by an appearance competition on the gymkhana grounds only one motor-car was entered. This was Mr. A. H. Philpot's, the idea of the decorative scheme being to represent the Entente Cordiale.



The Sheffield-Simplex 45-h.p. Six-Cylinder Car recently completed for Earl Fitzwilliam. The special brougham, which is by Hamshaw, of Leicester, is finished in yellow with black lines, and has an attractive appearance.

In the Appearance Competition for undecorated cars the judging was done by those present, who voted on cards placed in a ballot-box. The result was that the first prize went to Mr. Harvey du Cros with his 60-h.p. Napier and the second to Mr. Arthur du Cros with his 40-h.p. Austin.

In the competition for Cleaving the Turk's Head Mr. Græme Fenton was first, Mr. Harvey du Cros, jun., second, and Mr. George du Cros third. An almost identical result followed in the Bending Race, and in the Musical Chairs the first prize went to Mr. H. A. Moyse, with Miss Phyllis Carlisle as passenger. Again in the Obstacle Race Messrs. Alfred and Harvey du Cros were successful along with Mr. Græme Fenton. In the "Comic" Motor Contest Mr. George du Cros took premier honours, and Mr. F. S. Gibbins was second. The Starting and Stopping Race was last on the programme, and this was won by Mr. Willie du Cros, Mr. H. F. Shaw being second, and Mr. S. H. Fitter third. The presentation of prizes brought the gathering to a conclusion, Mrs. Arthur du Cros gracefully undertaking that pleasant duty.

A NEW and ingenious form of terminal for accumulators is being put on the market by the Non-Corrosive Terminal Company, of 13, Grape Street, New Oxford Street, London, W., the object of the invention being to do away with the defects of corrosion and ensure the maintenance of good electrical conduction at the point where it is most frequently at fault. The terminal consists of a hard lead cup, having an insulated stopper screwing into it. The conductor, with its insulating covering, passes through the stopper and the bare ends of the wires are pressed firmly against the floor of the cup by the non-metallic screw. There is no exposure of the wires, they being brought into communication with the lead of the accumulator plates inside the cup, where they are safely protected, and, if a little oil is put into the cup, all possibility of corrosion is obviated.

CLUBS AND ASSOCIATIONS.

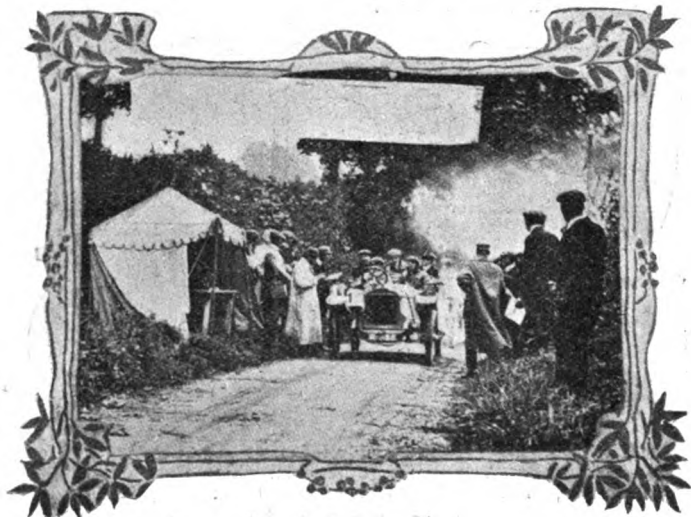
MOTOR UNION.

A DIGEST of motor traction cases compiled under the direction of the Legal Reports Committee of the Motor Union has just been published by Messrs. Butterworth and Co., with a view of assisting local solicitors and others in the interpretation and administration of the Motor Car Act and the regulations relating to the same. The work extends to 64 pages and nearly 200 cases are referred to. Those who have not filed the issues of the *M.C.J.*, with its regular record of motor cases, will find this publication of the Motor Union of considerable advantage.

AUTOMOBILE ASSOCIATION.

THE annual general meeting of the Automobile Association was held on Tuesday, and the members present congratulated the committee on the satisfactory state of the Association and its work. Col. W. J. Bosworth was in the chair, and in the course of his speech mentioned that the organisation had 7,032 members, and that the amount of cash on reserve and on current account was £8,500. New members were joining at the average rate of 100 a week, and the number lost by resignation, death, or other causes since the formation of the Association was only 296.

The Automobile Association is giving special attention to the Dover pageant, and motorists are informed that, from the point of view of comfort and good scenery, the route via Eltham, Farningham, Wrotham, Maidstone, Lenham, Charing and Canterbury is recommended. By this route motorists escape the congestion of traffic and dangerous cross streets in Dartford, Gravesend, Rochester, and Chatham. They also avoid fifteen miles of tram lines in the vicinity of these towns. The surface of the road is tarred practically all the way to Canterbury, and



The Coventry Motor Club's Hill-Climbing Competition at Newnham.—The 15-h.p. Talbot, the winner, on formula, of the handicap in Class 2.

is in good condition, whilst the roads through Stroud, Rainham, &c., are loose and dusty, particularly between Rainham and Canterbury.

Striking evidence of the popularity of the A.A. is afforded by the fact that at the last meeting of the Executive Committee no fewer than 452 new members were elected. This number constitutes a record for any one month since the inception of the Association, and shows an increase of over 100 on the number of members elected during the corresponding period of last year. During the twelve months to April 30th last over 3,000 new members joined the Association. The total membership now numbers over 7,000.

The Motor Club have made similar arrangements with regard to the Phyllis Court enclosure on the Thames during the Olympic Regatta, on the last three days of the present month, as those which were appreciated on the occasion of the Henley Regatta.

COVENTRY MOTOR.

A HILL-CLIMB was carried out very successfully on Saturday last on Newnham Hill, near Daventry. The distance to be covered was about 1,100 yds., with a gradient at the top of the hill of 1 in 6. Last year the cars were timed up to the corner at the top only, but on this occasion the cars in Classes 1 and 2 were driven round that corner. Some of the competitors in Class 3 (for cars over 26-h.p.) objected to race round this point, and in consequence the finishing point for this class was brought further down the hill to last year's finish. There was a good muster of spectators present, although the frequency of motor events in the neighbourhood has ceased to cause a wild delirious rush to the scene on the part of natives. The top part of the corner had been fenced in, but this did not prevent the ingress of spectators with extraordinary "bumps of

curiosity" crowding on the road, and there was some little difficulty in keeping them back, particularly when the fast cars were coming up the hill. The assistance rendered by the Northamptonshire county police was of a friendly and valuable character throughout the arrangements.

The officials were Col. Wyley, V.D., and Mr. V. A. Holroyd, judges; Mr. F. T. Bidlake and Mr. H. J. Swindley, timekeepers; Mr. Eric W. Walford, hon. secretary (to whom great credit is due), and the committee of the Coventry Motor Club. Special mention should be made of the services rendered to Mr. Walford by Mr. Reynolds, of Daventry, while greatly appreciated help was also rendered by the Dunlop corps of flag signallers. The following were the results:—

CLASS I.

- | Placing on Time. | | Placing on Formula. | |
|-----------------------------------|--|----------------------------------|--|
| 1. 9-h.p. Riley, J. Browning. | | 1. 10-h.p. De Dion, G. J. Newey. | |
| 2. 12-h.p. Clyde, C. B. Warner. | | 2. 8-h.p. Clyde, G. H. Wait. | |
| 3. 9-h.p. Riley, S. Riley. | | 3. 9-h.p. Riley, J. Browning. | |
| 4. 9-h.p. Adams, D. G. Gilmour. | | 4. 12-h.p. Clyde, G. B. Warner. | |
| 5. 8-h.p. Clyde, G. H. Wait. | | 5. 9-h.p. Riley, S. Riley. | |
| 6. 6-h.p. Wolseley, G. H. Spicer. | | 6. 9-h.p. Riley, A. Cox. | |

CLASS II.

- | | |
|--------------------------------------|---------------------------------------|
| 1. 26-h.p. Metallurgique, O. Copper. | 1. 15-h.p. Talbot, J. W. Hedge. |
| 2. 25-h.p. Talbot, H. Woollen. | 2. 15-h.p. Vauxhall, P. C. Kidner. |
| 3. 15-h.p. Humber, G. W. Brown. | 3. 12-h.p. Singer, G. O. Herbert. |
| 2. 15-h.p. Talbot, J. W. Hedge. | 4. 26-h.p. Metallurgique, O. Copper. |
| 5. 12-h.p. Vauxhall, P. C. Kidner. | 5. 25-h.p. Talbot, H. Woollen. |
| 6. 12-h.p. Riley, J. F. Buckingham. | 6. 10-12-h.p. Humber, G. A. Phillips. |

CLASS III.

- | | |
|-------------------------------------|-------------------------------------|
| 1. 60-h.p. Napier, W. Tryon. | 1. 38-h.p. Daimler, G. Street. |
| 2. 58-h.p. Daimler, G. S. Barwick. | 2. 60-h.p. Napier, W. Tryon. |
| 3. 35-h.p. Deasy, W. Crouch. | 3. 35-h.p. Deasy, W. Crouch. |
| 4. 38-h.p. Daimler, G. E. Street. | 4. 35-h.p. Deasy, P. Graham. |
| 5. 35-h.p. Deasy, P. Graham. | 5. 38-h.p. Daimler, A. J. Asbury. |
| 6. Six-cylinder Humber, W. G. Tack. | 6. Six-cylinder Humber, W. G. Tuok. |

In addition to winning the handicap in Class II., the 15-h.p. Talbot also won the cup presented by the United Motor Industries, Ltd.

DERBY.

THE Derby and District A.C. were joined in their inter-club contest for the Utttoxeter Silver Challenge Cup on Saturday last by the Mid-Staffordshire A.C. The contest was held on a hill leading from Marchington to Utttoxeter, and the winner proved to be Mr. Herbert Jefferson (Derby and District A.C.), 9-h.p. Riley, whose time was 1 min. 29 sec. He thus becomes the second holder of the Challenge Cup and takes the silver medal, while Dr. R. G. Hogarth (Derby and District A.C.), 8-h.p. Clyde, 1 min. 50 sec., as runner-up, takes the bronze medal. The fastest time medal was again easily secured by Mr. F. A. Bolton, (Derby and District A.C.), 40-50-h.p. Ariel, who on his second run up made the ascent in 46 1-5 sec.

Appended is a complete list of the competitors in the order of merit in which they were placed, with the particulars of their cars and the times made by them in the ascents upon which they were adjudged:—

| No. | Driver. | H.P. and Type. | Times min. sec. |
|-----|------------------------|-------------------------------|--------------------|
| 1. | H. Jefferson ... | 9-h.p. Riley ... | 1 29 |
| 2. | Dr. Hogarth ... | 8-h.p. Clyde ... | 1 50½ |
| 3. | A. R. Flint ... | 8-h.p. Rover ... | 2 32 |
| 4. | B. Sadler ... | 8-h.p. De Dion ... | 3 7½ |
| 5. | J. A. Doran ... | 18-h.p. Minerva ... | 1 8½ |
| 6. | A. G. Harley-Jones ... | 15-20-h.p. Clement-Talbot ... | 0 58 |
| 7. | F. G. Keeling ... | 8-h.p. Rover ... | 2 47½ |
| 8. | M. Ross-Browne ... | 15-h.p. Mass ... | 1 7½ |
| 9. | F. A. Bolton ... | 40-50-h.p. Ariel ... | 0 46½ |
| 10. | C. T. Leech ... | 42-h.p. Daimler ... | 1 8½ |
| 11. | Arthur Ford ... | 30-55-h.p. Daimler ... | 1 0½ |
| 12. | A. E. Chambers ... | 6-h.p. De Dion ... | 2 35 |
| 13. | Joseph Keele ... | 40-h.p. Weigel ... | 0 56½ |
| 14. | S. Downing ... | 14-h.p. Alldays ... | 1 34½ |
| 15. | C. J. Allin ... | 10-12-h.p. Humber ... | 2 1 |
| 16. | Rowland Ford ... | 36-h.p. Daimler ... | 1 4½ |
| 17. | Miss Southam ... | 12-16-h.p. Clement-Talbot ... | 1 38½ |
| 18. | D. C. Bolton ... | 4-h.p. Bolton Voiturette ... | 3 26½ |
| 19. | A. W. Upton ... | 14-16-h.p. Decauville ... | 1 55 |
| 20. | R. E. Meade ... | 12-14-h.p. Clement ... | 1 46½ |
| 21. | F. O. N. Hurdle ... | 18-24-h.p. Austin ... | 1 48½ |
| 22. | F. W. Podmore ... | 12-14-h.p. Clement-Talbot ... | 1 45½ |

The officials of the competition were:—Clerks of the scales, Messrs. Eckersby; starter, C. A. Newton; timekeepers, Chas. J. Allin, Edward H. Fryer, J. Cornes-Nevitt, C. Birumshaw; clerk of the course, A. E. Chambers; marshals, Mr. C. Turner Leech, Dr. W. G. Copestake, Mr. P. E. Joulé.

At the conclusion of the contest a return was made to the Derby Club's headquarters in Utttoxeter, the White Hart Hotel, where tea was taken by the majority of the members, all agreeing this to be by far the most successful competition the Derby Club has yet held.

MANCHESTER M.C.

THE annual reliability trial for motor-cycles, forecars, &c., held under the closed competitions rules of the A.C.U., supplemented by the rules of the Manchester Motor Club, takes place on Saturday and Monday, August 1st and 3rd, starting from the Trafford Arms Hotel at 8 a.m. Saturday, August 1st. The trials will consist of an out and home run to Cheltenham by practically the same route as the motor-car section went during the Whitstable trials, with a hill climb test during part of the trials, all machines being timed from a standing start. The club's hon. sec. (Mr. A. J. Moorhouse) has already been over the course mapped out, and considers this to be one of the most trying but ideal routes for a competition of this class. Last year the trial resulted in a tie between J. E. Tytler and O. Gross, and was eventually run off and won on a hill climb by the latter.

THE INCORPORATED INSTITUTION OF AUTOMOBILE ENGINEERS.

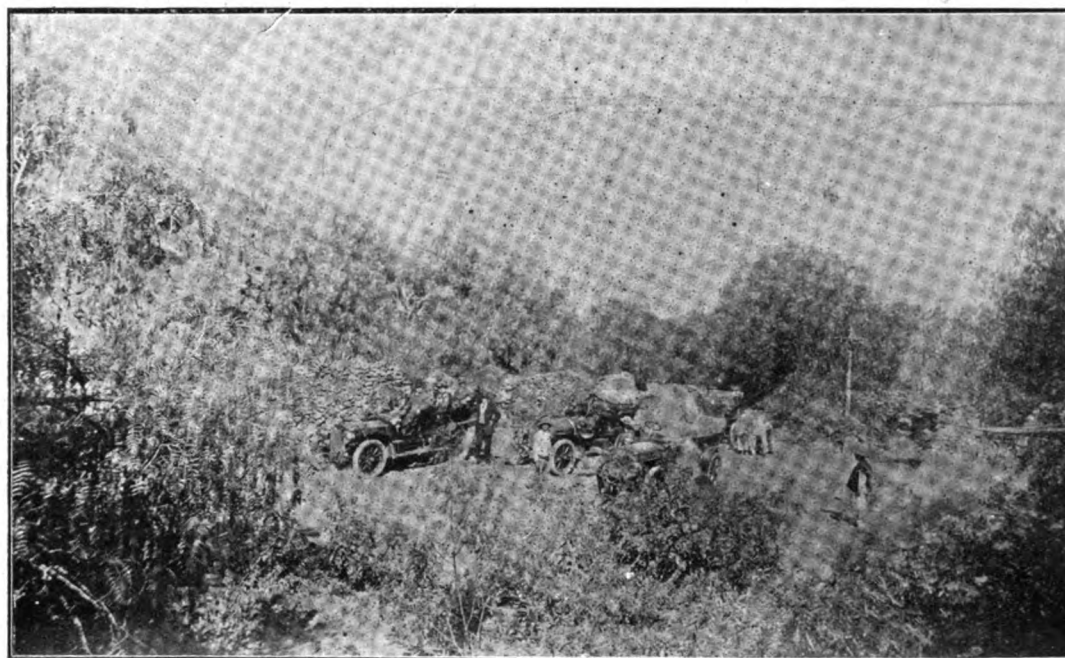
THE summer tour of the graduates' section of the Incorporated Institution of Automobile Engineers commenced on the 10th inst., when a good number of graduates started for the Midlands. The party arrived in Coventry at an early hour, and were received at the works of the Rover Company by Mr. J. K. Starley, by whom they were conducted through the various shops. Their steps were then directed towards the Daimler Company, where, in the absence of Mr. Percy Martin, they were met by Mr. C. Ridley, the chief engineer, and were shown through the extensive shops where the Daimler cars are made. The party took train for Birmingham, and on the Saturday morning visited the works of the Wolseley Tool

Musical Chairs.—First prize Miss Bemrose, driven by Mr. A. Batchelor; second prize, Mrs. Musker, driven by Mr. H. Musker. Mechanics' Event.—Percy Hallard, driver to Mr. C. B. Harris. The chairman's cup for the best kept and turned out car was awarded to Mr. W. Woodward's 60-h.p. Napier, which had been in use for two years. The Royal Automobile Club's medal was awarded to Mr. F. Aldridge.

MANCHESTER A.C.

A CLOSED hill-climbing competition was held by the Manchester A.C. on Saturday afternoon in a secluded valley on the border of Derbyshire and Cheshire. Between 3 and 4 p.m. some twenty entrants and twenty or thirty other cars assembled in this quiet cleft in the hills. The competing cars, divided into three classes according to their horse-power, were sent up the hill one by one.

The following were the entrants (in alphabetical order):—Class 1 (12-8-h.p. R.A.C. rating or under): C. F. Bell (12-h.p. Sizaire), F. W. Hobday (7-h.p. Sizaire), D. A. Parkyn (7-h.p. M.M.C.), T. M. Young (8-h.p. Rover). Class 2 (25-6-h.p. R.A.C. rating or under): J. Arrowsmith (18-24-h.p. Horbick), P. A. G. Bell (16-h.p. Bell), J. A. Bennett (three 22-h.p. S.C.A.T. cars), Mrs. E. A. Riley (14-16-h.p. Belsize), T. Rothwell (20-h.p. Rothwell and 25-h.p. Rothwell), J. L. Tattersall (20-h.p. Belsize). Class 3 (exceeding 25-6-h.p. R.A.C. rating): J. Arrowsmith (20-24-h.p. Horbick), G. J. Crawford (28-h.p. Lanchester), E. A. Gadd (42-h.p. Daimler), H. Hollingdrake (35-50-h.p. La Baire), C. Lings (42-h.p. Daimler), J. Newton (60-h.p. Napier), W. Stones (40-h.p. Napier), C. H. Wallwork (30-40-h.p. Belsize). After climbing the hill the cars proceeded to a neighbouring station on the North Staffordshire Railway,



Motoring in Mexico.—A Snapshot from San Mateo (Xalpa).

[El Automovil en Mexico. -]

and Motor-Car Co., Mr. Clegg, the works manager, receiving the visitors.

At each of the works the graduates were received with great courtesy, and the result is that a branch of the graduates' section is being formed in the Midlands.

KENT.

THE Kent club's annual gymkhana was held on Saturday at the Maidstone Athletic Ground. Fortunately the rain left off about 11 a.m. and the sun coming out soon dried the ground, but, owing to the doubtful morning, many of the competitors did not arrive. Sir Alfred Watkin, Bart., Messrs. T. F. Beavor, W. Willis, Capt. Page, and T. L. Boyd acted as judges. Messrs. W. E. Brewerton, J. E. Austin, T. H. Nash, and R. W. A. Brewer officiated as stewards.

The following were the results of the competitions:—

Crawling Race.—For four and six-cylinder cars, Mr. F. Aldridge, 15-h.p. Standard; ditto, under four, Mr. W. E. Brewerton, 8-h.p. De Dion.

Bending Race.—For cars with wheel base over 7 ft., Mr. H. Musker, 35-h.p. Daimler; ditto, under 7 ft., Mr. A. R. Norman, 10-h.p. Cadillac.

Tilting at the Ring.—Lady tilting.—First prize Miss Dorothy Aldridge, driven by Mr. F. Aldridge; second prize Miss Bilda Bemrose, driven by Mr. A. Batchelor.

Potato Race.—Mrs. Musker, driven by Mr. H. Musker.

Speed Test Race.—First prize, selected speed 20 miles per hour, Mr. A. R. Norman, within 2 per cent.; second prize, selected speed 20 miles per hour, Mr. H. Musker, 7 per cent. too fast.

where they were weighed in order that the merits of their respective performances might be calculated by means of the handicap formula—total weight in pounds divided by time in seconds multiplied by horse-power equals figure of merit. A first prize value £5 and a medal to the second were offered to the competitors in each of the three classes, and special prizes were offered irrespective of class for the best performance on handicap and the "fastest time."

SHEFFIELD.

ON Saturday last the Sheffield A.C. held a hill climb at Padley Hill, near Grindleford. The order of the competitors according to time taken was as follows:—

Class 1.—Single-cylinder cars: The fastest time was made by W. Hunt, 6-h.p. Wolseley, and the other competitors occupied the following times over that of the leader: L. Slater, 8-h.p. Jackson, 12 sec.; W. Watts, 8-h.p. De Dion, 23 3-5 sec.; F. B. Cawood, 6-h.p. Wolseley, 1 min. 7 2-5 sec.; H. Beesley, 6-h.p. Wolseley, 1 min. 11 4-5 sec.; A. W. Blackwell, 8-h.p. Rover, 1 min. 43 3-5 sec.; H. Appleyard, 6-h.p. Rover, 2 min. 2 4-5 sec.; E. W. Hatfield, 3 min. 6 2-5 sec.

Class 2.—For members not connected with the trade.—Fastest time: G. D. Flather, 12-16-h.p. Clement-Talbot; the other competitors' times being over this as follows: E. Wilson, 12-16-h.p. Clement-Talbot, 36 1-5 sec.; T. Nash, 18-28-h.p. Mercedes, 42 sec.; H. P. Orr, 16-20-h.p. Sunbeam, 43 2-5 sec.; H. Adams, 10-h.p. Belsize, 1 min. 56 1-5 sec.; H. Beesley, 6-h.p. Wolseley, 2 min. 16 2-5 sec.; A. Worrall, 10-h.p. Darracq, 3 min. 33 4-5 sec.; H. Naylor, 10-h.p. Swift, 9 min. 10 4-5 sec.

Class 3.—Open, for the Harvey Foster Challenge Cup.—Fastest time was made by A. Farnell, 30-h.p. Daimler; and others occupied the following times longer than the leader: Percy Richardson, 45-h.p. Sheffield-Simplex, 29 3-5 sec.; T. Nash, 18-28-h.p. Mercedes, 1 min. 25 2-5 sec.; H. Bargon, 15-20-h.p. Clement-Talbot, 1 min. 53 sec.; R. Crossley, 20-h.p. Belsize, 1 min. 57 1-5 sec.; E. Wilson, 2 min. 13 2-5 sec.; G. D. Flather, 12-16-h.p. Clement-Talbot, 2 min. 30 sec.; J. A. Craven, 30-h.p. Siddeley, 2 min. 37 4-5 sec.; J. H. Pickford, 20-h.p. Rover, 2 min. 52 4-5 sec.; H. Adams, 10-h.p. Belsize, 4 min. 45 sec.

LINCOLNSHIRE.

IT has become the custom for the Grimsby members of the Lincolnshire A.C. to annually entertain the rest of the members, and the gathering there on Saturday afternoon must be put down as one of the most enjoyable of the year. The Public Park was placed at the disposal of the motorists, and the cars were placed in a long and imposing row. After a visit to the reception tents, where the guests were received by the Mayor and Mayoress, Councillor and Mrs. Tickler, both enthusiastic motorists, a drive to Cleethorpes was taken. On returning to the Park an excellent tea was ready, and before rising thanks for the hospitable manner they had been entertained were expressed by Dr. Mansell Sympson and Mr. C. M. Pennell. On the way to Cleethorpes the Alldays ear belonging to Mr. Faulkner, Louth, in crossing in front of an electric car going the same way, was caught amidship and very badly damaged.

HERTFORDSHIRE.

THE third annual gymkhana of the H.C. A.C. took place on Saturday, when, notwithstanding the uncertain weather, a large number of members and friends were present at The Grove, the residence of the Earl of Clarendon, the president of the club. The first part of the programme took place in lovely weather and brilliant sunshine, but the latter part was marred by heavy showers of rain.

The winners and second prize winners of the various events were as follows:—Bending Race: 1, Mr. H. W. Colliver; 2, Mr. F. J. Jenkins. Turk's Head: 1, Mr. F. J. Jenkins; 2, Mr. S. Spoor. Starting and Stopping Race: 1, Mr. H. W. Colliver; 2, Mr. S. Spoor. Tortoise Race: 1, Mr. F. J. Jenkins; 2, Mrs. McWhirter. Potato Race: 1, Mrs. McWhirter, driving Miss Pryor; 2, Dr. Reid, driving Mrs. Pryor. Musical Chairs: 1, Mr. W. G. James and Miss James; 2, Dr. Reid and Miss Pryor.

Mrs. Saker presented the prizes, including the handsome cups competed for the previous Saturday at Aston Hill. Mr. J. S. Heywood acted as starter, and Messrs. Ernest Webster and W. Whittall as judges.

DORSET.

ON Saturday, the Dorset and the New Forest A.C.'s held a climb on a hill beyond Melbury Abbas, on the main Upper Blandford and Shaftesbury road. The first two in each class were as follows:—

Cars up to 10-h.p.: 1, R. F. Glyn's 9-h.p. Sizaire; 2, J. W. Davis's 6-2-h.p. Jackson.

Cars between 10-h.p. and 20-h.p.: 1, Mrs. Viner Ellis's 18-3-h.p. Peugeot; 2, R. F. Glyn's 17-9-h.p. Peugeot.

Cars between 20-h.p. and 30-h.p.: 1, F. W. Lacey's 20-1-h.p. Clement-Talbot; 2, F. Scorer's 20-h.p. Clement-Talbot.

Cars 30-h.p. and above: 1, G. H. T. Barlow's 41-9-h.p. Daimler; 2, H. Stuart Murray's 53-h.p. Gobron Brillie.

The challenge cup in the team race was won by the New Forest A.C.

SUSSEX MOTOR YACHT.

THE Sussex Motor Yacht Club, at the conclusion of its second annual regatta, held a dinner at the Grand Hotel, Brighton, when Sir Theodore Angier occupied the chair, supported by Lieut. A. Sumner, rear-commodore of the club. Mr. F. P. Armstrong, vice-president of the International Motor Yachting Association, proposed the toast of the club, and Lieut. Sumner, in responding, referred to the necessity of the organisation possessing its own headquarters. Mr. W. G. A. Edwards, in submitting the toast of the Motor Yacht Club, remarked that the committee thought they would have a suitable place at Hobden's Baths. The corporations of Brighton and Hove were toasted with heartiness, and the event marked the conclusion of a very successful meeting.

THE Northamptonshire A.C. has had a successful meet at Fawsley Park, where they were received by Lady Knightley of Fawsley.

THE Dundee and District Motor Cycle Club have had a series of competitions, in which Messrs. J. D. Cruickshank and G. Whitehouse secured distinction.

AMONG the new candidates for enrolment as individual associates of the R.A.C. are Lord Camoys, Sir Stanley Bois, Sir C. R. Williams, Mr. J. Duckworth, M.P., and the Rev. Philip Armitage.

THE Huddersfield branch of the Yorkshire A.C. have received a letter of thanks from the local Infirmary Board for their recent outing of patients and nurses in thirty-nine motor-cars lent by members of the club.

MESSRS. G. DAVENPORT AND Co. have removed from Hatton Garden to 95, Clerkenwell Road, London, E.C., where they have extensive stocks of motor watches, chronographs, &c.

LIGHTS ON VEHICLES ACT, 1907.

THE following is a list of the local authorities who have made by-laws since January 1st imposing obligations, as mentioned below, in addition to those imposed by the above Act:—

Stafford County Council and Stafford Town Council.—Bye-laws requiring that vehicles shall carry an additional lamp on the left side showing a white light to the front.

Glamorgan County Council.—A bye-law requiring (1) that vehicles shall carry an additional lamp on the left side showing a white light to the front, and (2) if the vehicle is a covered van, a lamp showing a red light to the rear.

Newcastle Town Council.—A bye-law requiring (1) that vehicles shall carry an additional lamp on the left side showing a white light to the front, and (2) that all vehicles shall carry a lamp or lamps showing a red light to the rear.

Leeds City Council and Reigate Town Council.—Bye-laws requiring all vehicles to carry a lamp or lamps showing a red light to the rear.

Salford Town Council.—A bye-law requiring that heavy and slow-going vehicles shall carry a lamp or lamps showing a red light to the rear.

Gloucester, Warwick and Worcester County Councils.—Bye-laws requiring that a vehicle or load on wheels drawn by another vehicle shall carry a lamp or lamps showing a red light to the rear.

II.—The following is a list of the County Councils which up to date have made Orders under Section 4 of the Act exempting from the operation of the Act throughout their respective counties vehicles carrying, in the course of harvesting operations, any farm produce to stack or barn during certain months of the year:—

Berkshire from June to October (inclusive).

Cambridgeshire during July, August, September.

Carmarthenshire from June to September (inclusive).

Cheshire during August, September, October.

Cornwall from June to October (inclusive).

Devon from July to October (inclusive).

Dorset from June to September (inclusive).

Durham from September to November (inclusive).

Essex from June to September (inclusive).

Gloucestershire from June to September (inclusive).

Hertfordshire during July, August, September.

Huntingdonshire from July to November (inclusive).

Kesteven (Lines.) from July to November (inclusive).

Lancashire from June to October (inclusive).

Lindsey (Lines.) from July to November (inclusive).

Montgomeryshire from June to October (inclusive).

Monmouthshire from June to September (inclusive).

Norfolk, during July, August, September.

Northamptonshire from June to November (inclusive).

Northumberland during August, September, October.

Nottinghamshire from June to October (inclusive).

Oxfordshire from June to September (inclusive).

Peterborough, Soke of, from July to October (inclusive).

Somersetshire from June to October (inclusive).

Staffordshire from June to September (inclusive).

Suffolk, East, from June to September (inclusive).

Suffolk, West, from June to September (inclusive).

Sussex, West, during July, August, September.

Westmorland during July, August, September and first two weeks in October.

Wiltshire from June to September (inclusive).

Worcestershire from June to September (inclusive).

Yorkshire, East Riding, during August, September, October.

Yorkshire, North Riding, from June 15th to October 15th (inclusive).

The Herefordshire County Council have made a similar order applying from June to September (inclusive) to vehicles actually laden with and carrying to stack or barn in the course of harvesting any farm produce (not being roots or other non-inflammable produce) and proceeding at a walking pace.

III.—The following orders have been made under Section 3 of the Act:—

The Mersey Docks and Harbour Board have made an order exempting from the operation of the Act any vehicles being within the boundaries of the Mersey Dock Estate.

The Liverpool City Council and Bootle Town Council have made orders under Section 3 of the Act exempting from the operation of the Act (a) vehicles carrying cotton, and (b) all vehicles constructed and used for the carriage of goods while in certain parts of the city or borough.

Birkenhead Town Council have also made an order exempting all vehicles constructed and used for the carriage of goods from the operation of the Act while in certain parts of the borough.

DR. L. DOBSON, of 71, Holland Park Avenue, W., who has used a 10-12-h.p. Coventry-Humber over a total distance of 2,560 miles, writes that during that period he has not had a hitch of any sort. Mrs. Dobson has a similar vehicle, which is running satisfactorily. The two cars recently returned from an 800 miles tour in Wales, taking all the principal mountain passes, with seven people and luggage, without a single puncture or engine trouble of any kind.

CASES AGAINST MOTORISTS.

HONOURABLY ACQUITTED.

At Guildford Assizes, before Mr. Justice Jelf, the Kenley motor tragedy, which occupied the Court at the last assizes, was again mentioned. The charge against Duncan Albert Brown, aged 26, chauffeur, in the employ of Mr. A. F. Stewart, of Kenley Court, was that of having feloniously killed Arthur Borer, labourer, on January 12th.

It will be remembered that the suggestion of the prosecution in February was that the prisoner was the driver of a large green car, which late at night knocked down the man and killed him, and that he drove off without stopping. The jury's disagreement followed a three-days' trial. On the 15th inst. Mr. T. Mathew, for the Crown, said that at the previous assizes there was considerable evidence of identification, but they were not able to show that the prisoner was the man who was in charge of that particular car. An effort had been made to obtain additional evidence, but no such evidence had been forthcoming. Under the circumstances he was instructed to say that no evidence would be offered. Mr. Lunge, who appeared for the prisoner, said he would like to remind his lordship that Brown went into the witness-box and swore positively that he was not in charge of the car that killed Borer, and that he was at home at the time of the accident; also, that evidence was given which, if based upon correct recollection, was inconsistent with the guilt of Brown. His Lordship: If he is acquitted he is entitled to say he had succeeded in repelling the charge. A verdict of not guilty was returned, and accused was discharged.

MANSLAUGHTER.

Arthur Metson was indicted at the Guildford Assizes, on the 17th, for the manslaughter of John Bryan, who was picked up in a dying condition on the main road at Ripley on April 25th, having been knocked down by a motor-car. Metson was alleged to have been the driver of the car which knocked Bryan down. Metson went into the witness-box to give evidence on his own behalf. He asserted that the damage to his car was due to a collision with a lamp-post in the Fulham Road, but gave conflicting statements, which caused Mr. Justice Jelf to inquire how he could expect the jury to believe what he was saying. The judge, in summing up, said if the car did not cause the accident a more extraordinary combination of miracles could hardly be imagined. The jury found a verdict of guilty, and sentence of ten months' hard labour was passed.

LICENCES SUSPENDED.

Reginald G. Mundy was summoned at Chester-le-Street, on the 15th inst., on a charge of having ridden a motor-cycle to the danger of the public through the town on June 6th. Inspector Barlow said that on the date named there was a race for motor-cycles from London to Edinburgh. Defendant was one of the competitors, and passed through the town at about 12.50 p.m. at the rate of about twenty-five miles an hour. The street was crowded with people at the time. The Bench suspended his present licence, which does not expire until February next, and also decided that defendant should not hold another licence for twelve months after that date.

EXCEEDING LEGAL LIMIT.

The motorist whose car recently went over the edge of the cliff at Beachy Head on to the rocks beneath has been summoned for previously driving along the Kingston road, Putney, at an excessive rate of speed. The magistrate imposed a penalty of £20 and costs.

At the Petty Sessions at Christchurch, on a recent day, ten motorists were fined and a case was dismissed. In the latter, Francis Copping, the defendant, was represented by Mr. Staples Firth, and the witnesses gave evidence proving the value of the speedometer in rebutting the case for the prosecution.

Despite differences in the times given by two constables at either end of a police trap at Bromley, the magistrates have inflicted a fine on a motorist charged with driving into the police trap at more than twenty-six miles an hour.

A dozen motorists were summoned before the Chichester County Bench on Saturday for exceeding the speed limit at various places—Aldingbourne, Boxgrove, Havant and Westhampnett—and fines of £1 and £2 were levied in the various cases, one of the defendants being the chauffeur to the Bishop of Chichester. At Horsham four motorists were fined and two others at Portsmouth Petty Sessions.

Several motorists have been fined for exceeding the legal limit at the courts at Colwyn, Mold, Milverton and Torpoint.

DAMAGES.

Mr. E. K. Charrington, of Hunsdon (Herts), has obtained over £98 damages in respect to a collision which occurred at Sawbridgeworth when his wagonette was run into by a motor-car. The mishap occurred when approaching a cross road, and it was mentioned that the defendants had no opportunity of knowing that they were nearing such a situation.

ON THE THAMES.

The Vice-Commodore of the British Motor Boat Club has been fined £2 and costs in connection with navigating the motor-boat Rownsante at Teddington while conveying people at a charitable fete for trips up and down the river. It was alleged that the craft had made a great wash, bringing it within the purview of the officers of the Thames Conservancy.

ALLEGED DANGEROUS DRIVING:

At the Hastings Borough Bench Ralph Hessing has been summoned for driving a motor-car in a dangerous manner at St. Leonards. He was defended by Mr. Staples Firth. The police-constable estimated the speed at fifty miles an hour, and other witnesses, who admitted they were no judges of speed, described the rate at which the car was driven as tremendous. The defendant explained that he had had trouble with the exhaust of the car and had had to leave it at Hastings, proceeding to London by train. He estimated the speed at eighteen miles an hour, which was corroborated by his passenger on the car. The majority of the magistrates, coming to the conclusion that defendant did not drive to the danger of the public, dismissed the case.

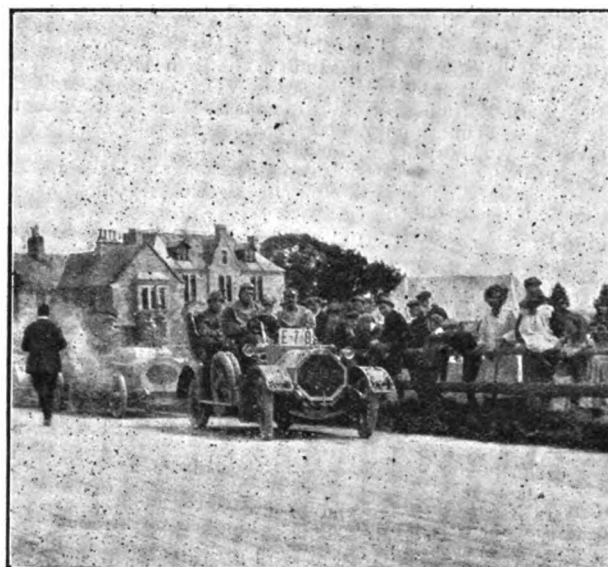
COMPANY NEWS.

SOUTH BANK TAR-MACADAM COMPANY.—£20,000 (£1). To take over business carried on by Mr. J. Robinson at Northgate, Darlington, South Bank, near Middlesbrough, and at Coatham, near Redcar, Yorkshire, as the South Bank Slag and Tar-Macadam Company. 7, Northgate, Darlington.

G. T. RICHES AND CO.—£10,000. To take over business of motor accessories manufacturers, dealers, and agents, carried on at 19, Store Street, W.C., as G. T. Riches and Co.

MONMOUTHSHIRE MOTOR COMPANY.—£10,000. Agreements (1) with Monmouth Motor and Cycle Company, Ltd., and (2) with G. Webb.

DETACHABLE RIM COMPANY.—£7,500. To acquire two inventions, and to adopt agreement with B. T. Hamilton, L. Stroud, and D. A. Prust. 3, The Mall, Ballard's Lane, Crouch End, N.



The 10-12-h.p. Coventry-Humber which took part in the 2,000 Miles and Scottish Reliability Trials.

CONSOLIDATED MOTOR CAB COMPANY.—£100,000. To adopt an agreement with A. Clarke, and to carry on the business of proprietors of motor-cabs, garage proprietors, &c. First directors: C. Roberts, T. Prior, H. Greig, and J. Stirton. Whitehall House, Charing-cross, S.W.

DURING the Ostend motor week Hautvast, who made all the fastest times, and Gehenniaux, who won the Duke of Orleans' Cup, both used Dunlop tyres.

LIKE many others in the recent A.C.F. Grand Prix race, the two Mors cars, driven by Jenatzy and Landon, experienced considerable trouble with tyres and rims. Landon had no less than twenty-one renewals, in two instances the rims coming entirely off the wheels, damaging the latter so much as to render it very difficult to fit new rims. Messrs. Mors (England), Ltd., are hoping to have one of the cars over for the Brooklands meeting in August, when it will have an opportunity of showing what it can do in the way of speed.

MR. E. J. THOMPSON, a well-known Croydon motorist, has just communicated to the Dunlop Tyre Company his experience with a grooved non-skidding Dunlop tyre which he has had in use on a 15-h.p. Humber car for sixteen months continuously. During this period the tyre has covered 13,125 miles, and in all this distance not only has it not punctured, but it has never been necessary to re-inflate it! A few nails have penetrated the outer surface of the cover, but none of them has ever got through to the tube. We are informed that the Dunlop Company have satisfied themselves of the authenticity of these facts, and we may add that the owner of the car and tyre concerned is in no way interested in the company, except for a natural appreciation of the quality of their tyres.

FORTHCOMING EVENTS.

JULY.

- 25th (Sat.).—Petrol Consumption Tests of the Motor Cycling Club.
Annual Open Hill Climb of the Midland A.C. at Shelsley Walsh.
Gymkhana of the North Middlesex A.C. at Pyrford Court, near Woking.
Committee meeting of the Kent A.C. at Herne Bay.
Motor Union Provincial meet at Harrogate; general committee meet at municipal offices at 10.30 a.m.; inter-club meet at the Kursaal at 3 p.m.; dinner at the Hotel Majestic, with Mr. Joynson-Hicks, M.P., in the chair.
Cheshire A.C. hill climb.
Lancashire A.C. open hill climb.
North Yorkshire A.C. gymkhana at York.
West Surrey A.C. gymkhana at Godalming.
26th (Sun.).—Southend M.C. run to Coach and Horses, Quendon.
29th (W.).—Lincolnshire A.C. at Skegness.

AUGUST.

- 1st (Sat.).—Brooklands A.R.C. meeting.
Entries finally close for the International "four-inch" race for the Tourist Trophy.
2nd-3rd.—Newcastle and District M.C.C. reliability contest.
3rd (M.).—Brooklands A.R.C. meet.
3rd and 4th.—Run of the Motor C.C. from London to Land's End.
8th (Sat.).—Visit of the Kent A.C. to Brasted Chart.
8th (Sat.).—Bristol and Glos. A.C. at Standish House.
12th (W.).—A.C. of Belgium—Circuit des Ardennes and the Liedekerke Cup race.
15th (Th.).—Northants A.C. speed trials at Castle Ashby.
21st (F.).—Ballinaslaught hill climb of the Irish A.C.
22nd (Sat.).—Annual race meeting of the A.C.U. at Shepherd's Bush.
Invitation of Sir D. Salomons to the Kent A.C. to visit Tunbridge Wells.
23rd (Sun.).—A. C. du Rhone Mont Pilat trial.
29th (Sat.).—Meet of the Lincolnshire Motor Club at Lincoln.
Mont Ventoux hill climb of the A.C. Vaclusien.
Leicester A.C. gymkhana.
30th (Sun.).—Southend M.C. run to Great White Horse Hotel, Ipswich.

LIGHTING-UP TIMES—LONDON.

| | | | |
|----------------|-----------|-----------|-----------------|
| July 25th—8.57 | 27th—8.55 | 29th—8.53 | 31st—8.51 |
| 26th—8.56 | 28th—8.54 | 30th—8.52 | August 1st—8.49 |

To find the approximate lighting-up time in July for Birmingham 13 minutes should be added to the above times, 18 for York, 22 for Manchester, and 45 for Glasgow.

ROAD REPORTS.

CHERTSEY.—The Chertsey Urban Council have considered the question of the danger arising from the speed of motor-cars *en route* to Brooklands. It was decided to again approach the County Council with a view to getting them to place the towns of Addlestone and Chertsey in the scheduled list of roads on which cars should go at reduced speed.

RUNCORN.—At a meeting of the Runcorn Rural District Council the surveyors have been instructed to place a salt scale from the salt works on the roads of the Council's district in order to abate the dust nuisance.

LICHFIELD.—There is a police trap between Shenstone and Lichfield. The road is very straight and presents a temptation for a good spin.

LAND'S END.—The road at the worst bends of the narrow and winding road leading from Land's End has been widened.

DEVON.—The police have a trap at Looe Lane, Torpoint (Devon), in which several motorists have recently been timed. The Okehampton-Exeter section has lately been the subject of much adverse criticism from motorists. The road, according to the motor-cyclists in the End to End run, was one long stretch of ruts and pits, due, presumably, to traction-engine traffic. One facetious cyclist suggested a novel way of having the road put in better order. He would like, he said, to drive representatives of the authorities responsible from the moorland town to the city in a springless cart! Could anyone devise a more exquisite form of cruelty?

DERBYSHIRE.—Caution boards have been placed on the dangerous cross roads at Calver (Derbyshire) by the Sheffield A.C.

SELBY.—At Hambleton, on the Leeds and Selby road, the police have a measured quarter of a mile.

NOTTINGHAMSHIRE.—Although the formal trap has not yet been established in the county of Nottinghamshire, Inspector Stapleton told the Nottingham magistrates a day or two ago that he had been observing a motorist over a distance of 350 yards on the Ratcliff road, West Bridgford. The result of this particular case was a fine of £20 and the suspension of the licence for twelve months. It was mentioned that the defendant had previously been convicted seven times for driving to the public danger and twice for exceeding the legal limit.

SUSSEX.—There are several police traps in the county of Sussex, starting from Crawley, on the London and Brighton road, and also in the Midhurst district.

AUTOMOBILE ACCIDENTS.

The inquest on the body of Mrs. Ball, who, as we reported last week, was killed by a motor-car in Croydon, has been concluded. Mr. John Strachan, of Sydenham, the owner, and George Baker, his chauffeur, declared the speed to be at the rate of six or seven miles per hour. The latter stated that he applied the brake directly he saw the woman fall, but admitted travelling about twenty yards before stopping, and that the car could have been pulled up in seven yards. His explanation was to the effect that he was unnerved, and that, being on the wrong side of the road, his first thought was to get on to the proper side before stopping. He did not know the woman was under his car. The jury returned a verdict of "Accidental death," expressing the opinion that Baker committed an error of judgment in not at once pulling up.

At the inquest at Brimfield, Hereford, on a motor-cyclist whose death resulted from a collision with a motor-car, the jury returned a verdict of "Accidental death" and found that the car was on its proper side when the unfortunate accident occurred.

BUSINESS NEWS.

ARRANGEMENTS are now being completed between Messrs. Worsnop and Co., Ltd., motor lamp manufacturers of Halifax, and Messrs. Easton and Melville, of 85, Shaftesbury Avenue, W.C., whereby the latter firm represents them in London. They carry a full stock of these now well-known lamps.

THE Napier car which Miss Levitt drove in the Prince Henry Touring Competition, and with which she accomplished an absolutely non-stop run, was run on Castle coils and accumulators, which gave every satisfaction throughout the contest.

MESSRS. TOZER, KEMSLEY AND FISHER, the well-known Australian shippers, have lately placed an order with Messrs. Warwick Wright, Ltd., for twenty-five Metallurgiques to the account of the Melbourne Motor Garage. The first consignment of these, a 26-h.p., two 18-h.p.'s, and a 12-h.p., has just been despatched.

MESSRS. REAL, MEDLAND AND WILLS, LIMITED, of Bridgwater, Somerset, have been keeping a very careful record of the cost of running motor-cars during the past three years, and have now favoured us with the results of this lengthy experience. In June, 1906, they bought a 10-12-h.p. Coventry Humber, which has been solely engaged in the hire business since that time. The total distance travelled has been 14,580 miles, and during the whole of this period the car has only had three mechanical stops, and these of but a temporary character. The actual cost, including every possible expense, works out at 4½d. per mile. In July of last year they bought a 15-h.p. Coventry Humber, which has now covered 12,000 miles and has never had a single mechanical stop on the road. Most of this vehicle's work has been performed through the hilly districts of Dartmoor and Exmoor, where level roads are the exception. A few weeks ago a thorough overhaul was made and no perceptible wear was manifest in any of the working parts.

MR. E. SMITH, of the Halifax Motor-car Company, who recently took delivery of a Standard six-cylinder car in London, drove the car down by road to Halifax. He has since written to the Standard Motor Company, Ltd., stating that the vehicle made the journey on an average petrol consumption of twenty miles to the gallon and absolutely on top speed, the other gears being only used for starting purposes.

COVENTRY chains were fitted to the Benz cars which finished second, third, and seventh in the A.C.F. Grand Prix race, and Messrs. Benz and Co. have notified the makers that they gave entire satisfaction.

THE Dunlop motor tyre list for 1908 contains the reductions in prices which were notified the trade on April 10th last, and will be a useful addition to the reference files of garage proprietors and others throughout the country.

THE Daimler Company's Spanish business is making rapid developments, amongst recent purchasers of their cars being Sir Don Rafael Sansamarina, Auditor de Guerra, Villagarcia, who has acquired a 36-h.p. phaeton car of the "Canley" type, and Dr. Don Joaquin Martinez Garcia, Villagarcia, who has selected a 42-h.p. "Stoneleigh" limousine.

At their Acton Vale works, Messrs. Panhard and Levassor have recently completed an extension in the form of a department comprising three lofty, well-lighted and dust-tight shops, each devoted to a distinct process of the painting of cars. In the first section, the ground work is prepared and brought to that condition in which it will best receive the later coats of colour. The car next passes into the second shop, where the successive coats are applied, and when they have dried—each drying hard before another is applied, of course—the varnishing begins. Coat after coat of fine varnish is applied and then "rubbed down" until the stage is reached when the final coat is laid on. Right up to the last moment the finisher always has to guard against a speck of dust, this being obtained, in the case of the Panhard and Levassor works, by the use of hermetically sealing doors, dust and air-tight windows, a flooring of specially manufactured material, and the liberal use of a hydraulic system which keeps on walls and floors a thin film of distilled water, tending to arrest any speck of foreign matter which might possibly elude all the other precautions. The commodious and independent arrangement of the works permits the body of a car to be painted while its chassis is being overhauled in the mechanical section. The paint shops are capable of containing from thirty to forty vehicles simultaneously, enabling a car to be mechanically overhauled and repainted in a minimum of time.

THE Motor-Car Journal.

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COMMENTS.



SUCH a week as that which we have just enjoyed—with its spell of fine sunny weather—calls the motorist from the office and the town. He goes forth to the seaside and, alas! to the police court. For it is a fact, duly noted by our correspondents at the various courts and Petty Sessions, that a spell of fine weather is always followed by a procession of motoring summonses. The managers of the leading London hotels are also observant of the change in social habits. People do not make the long

stays that once provided a chief source of revenue; now they rush about in motor-cars—lunch here, tea there, and dinner anywhere, with scarcely a settled place for breakfast. Such a wayward tendency often disorganises the staffs of hotels, and the sudden advent of scores of motorists calls forth all the resources of even the most wideawake establishment. It is a factor that proves the transition age in which we live.

Mr. Warne,
Worthing.

IN doing anything at all it is worth while doing it well. All those who know Mr. G. H. Warne, of Worthing, are aware that he cannot do anything other than excellent. The function on Saturday to inaugurate the opening of the new Lounge

of his hotel was one which will linger in the memory of those who participated. All familiar with Worthing appreciate the breezy and pure air of the place, and in conducting his hotel in his own characteristic manner Mr. Warne is adding to the attractions and prosperity of the town. The Worthing road is favourably known, the scenery along the whole route is of the most charming description, with ever-varying foliage and sufficient distinction in its gradients, none of which are steep, to avoid monotony. The road surface will compare with any in Great Britain. We wish Mr. Warne the success he deserves, and we anticipate he will receive it.

International
Courtesy.

IN our last issue a correspondent called attention to the way in which foreign motorists visiting this country merely for a few days have to pay the Inland Revenue fees just as though they were permanent residents in Great Britain.

This letter was apparently based upon previous references in these columns which we have placed before Sir Edward Grey, Mr. Lloyd-George and others concerned with the foreign relations of Great Britain as well as with the financial interests within its borders. As a result of correspondence we have now received a reply from the Lords Commissioners of His Majesty's Treasury to the effect "that the law makes no provision for exempting from licence-duty foreign motorists visiting this country, and that My Lords are consequently precluded from acting on the suggestion made by you." We regret the decision, especially as it might be possible to secure something like reciprocity between the nations in this respect to the mutual advantage of all. Although at present unable to alter the decision, we trust that the Treasury officials will ultimately come to recognise that the pro-

posal to forego the revenue licence need not cause the country much loss, though it may do a great deal to promote that interchange of visits which after all makes for the amity of the world.

The Affiliation
Question Again.

THE eleventh provincial meet of the Motor Union was held at Harrogate on Saturday, when the extraordinary number of events arranged throughout the country militated against the attendance, while the Parliamentary sitting prevented Mr. W. Joynson Hicks, M.P., taking his place as chairman. The gathering of cars which had been arranged for the afternoon was abandoned, owing to the showers, but the motorists found ample compensation in the entertainment provided at the Kursaal. Then in the evening a dinner was held under the presidency of Mr. E. H. Hepper, the chairman of the Yorkshire A.C. An interesting reference to the future relations of provincial clubs to both the R.A.C. and the M.U. was made by Mr. C. P. Wilson, the hon. secretary of the Yorkshire A.C., who commended a suggestion which has been made by the Manchester A.C. to the effect that provincial clubs should affiliate with both bodies on reduced terms. To choose between them will put provincial clubs on the horns of a dilemma, but, as we pointed out last week, it will have to be dealt with ere long.

Brooklands.

THERE are 101 entries for the August meet at Brooklands to-day (Saturday) and Bank Holiday. On the first day the All Comers' Handicap Sweepstakes will be run in three heats and a final; the Merit Trophy, the Journalists' Handicap, and the Montagu Cup will also be run. For the Sweepstakes there are thirty-one entries—a record entry for any one event thus far. On Monday the August Trophy will be run, as well as the O'Gorman Trophy race over a course of 100 miles, and there will also be an interesting match for the pleasure seekers between Miss Muriel Thompson and Miss Christabel Ellis, two of the ladies who ran in the first ladies' race on the track. We give the full list of entries in our club news.

Australian Advance.

AUTOMOBILISM is making slow, but sure, progress in this corner of the world, writes our Melbourne correspondent, but its devotees are having a fairly hard time to break down the usual prejudice which in every country has opposed the advance of the motor. So far, the drivers have not been subject to a Motor Traffic Bill; one was introduced into Parliament a couple of years ago, but was cast out through Labour opposition to some clauses. A new session opened in June, and a Bill has been prepared in response to the complaints of this and that municipality, and, so far as we can learn, many of the provisions are particularly harsh. The Automobile Club at Melbourne, however, intends to fight against those sections which will militate against the pleasure of motoring and the best interests of the trade, and the Committee is promised an early perusal of the measure. Touching on the club, it is well that at this juncture the committee has decided on a forward policy, and during the last five weeks 100 new members have been enrolled.

Another matter that is interesting the members is the formation of an Automobile Corps in connection with the Defence Scheme in the Commonwealth.

The late Mr. Cecil Edge.

THE regret with which we received news of the death of Mr. Cecil Edge from hæmorrhage of the lungs will be shared by all who knew him as a motorist and a sportsman, as well as by his large circle of personal friends. The sad event took place on Monday at Tilford, Fareham, and is rendered all the more sorrowful when we remember that Mr. Cecil Edge—who was a cousin of Mr. S. F. Edge—was only twenty-eight years of age. And yet he was one of the pioneers of automobilism, having been associated with some of the classic races of the sport. He was with Mr. S. F. Edge as mechanic in the Gordon Bennett race of 1901, and again when they won that competition in the following year. He was also prominent in the Irish motor week in 1903. In the following year he drove 1,107 miles without a stop on an 18-h.p. Napier, and in 1905 figured in several important events, driving an 80-h.p. Napier in the eliminating trials held in the



The late Mr. Cecil Edge at the wheel of a 1905 Gordon Bennett Racer.

Isle of Man to select the British team for the Gordon Bennett race, setting up a Yorkshire record of 71.42 miles per hour on Filey Sands, and also driving from London to Edinburgh as well as to Brighton on top gear—feats which were much discussed in those days. In 1906 he took part in all the leading hill climbs in this country, and last year he drove in the Herkomer contest, attended to his cousin during the memorable twenty-four hours' record run, and then on August Bank Holiday—exactly a year ago—he ran his last great race, being second in the Belgian Plate on the Brooklands track. He was not well at the time, and never really recovered his health, and his death at such an early age is deeply regretted. The funeral took place at noon on Thursday at Tilford Church. Mr. Edge was born at Sydney, and his last appearance at Brooklands was on Whit Monday.

Petrol and its Substitutes.

At the annual meeting of the Society of Chemical Industry, held at Newcastle-on-Tyne, Sir Boverton Redwood made reference to the supplies of petrol. He said that the product preferred for this purpose represented only about 5 per cent. of the crude petroleum, and before the recent opening up of the prolific mid-continent fields in the United States there were signs that that country might shortly need for her own use all the motor spirit she could produce. Fortunately in the Dutch East Indies there were very large quantities available, and the market was now to a great extent supplied from this source.

The consumption of motor spirit in Great Britain was, however, growing very fast, the imports having increased from 474,610 barrel units of 41 imperial gallons in 1905 to 809,280 barrel units for 1907. The automobile industry, in which no less than twelve millions sterling had already been invested in this country, was dependent for its existence upon a supply of a suitable combustible liquid, and it would thus be seen that the question of the maintenance of that supply was of great industrial importance. The chief difficulty lay in the fact that in manufacturing motor spirit the other productions, and especially the burning oil or kerosene, must be marketed if the industry was to be carried on without prohibitive cost. Unfortunately the great increase in the consumption of petroleum spirit had not been accompanied by a corresponding increase in that of kerosene, and it was to be hoped that the difficulty might be met by a larger use of kerosene as a source of power, though there were admittedly serious objections to the substitution of kerosene for petrol in motor-vehicles. These remarks naturally led to the consideration of the question of substitutes for petrol, and foremost among those to which public attention had been directed was the coal-tar product benzol, which could be obtained in considerable quantity if the patent coke-ovens in this country were provided with means for its recovery from the waste gases. Shale spirit might also be more largely produced, and lastly they had in alcohol a source of power which might be made available under suitable conditions, for alcohol could be readily and rapidly produced in almost unlimited quantities.

The Manx Race.

PERMISSION has been granted by the Lieut. Governor and the Highway Board of the Isle of Man to hold the "Graphic" Trophy Race on the morning of Wednesday, September 23rd, and the "Henry Edmunds" Hill-climb on the afternoon of the same day. Permission has also been granted for the "Four-inch" Race to be run over a course of about 38 miles in length, with nine circuits, making a distance of about 350 miles, starting from Quarter Bridge to Ballacrine, then via Glen Helen to Kirkmichael, Ballaugh and Ramsey by the mountain road, and over the mountain to Quarter Bridge. This course is about two miles shorter than the course for the Tourist Trophy Race of last year, but it avoids all level crossings, and consequently there will be nothing to impede the race from start to finish. The course has been selected by the Isle of Man authorities on account of the poor condition of the road from Ballacrine to Peel, and also in view of the inconvenience caused to the inhabitants of Peel due to the old Tourist Trophy course passing through a part of the town. Practising for the "Four-inch" race will begin on Monday, September 7th, and continue until Tuesday, September 22nd, both days inclusive, Sundays excepted. The club has been unable to obtain permission for the competitors to practise later than 7.30 a.m., but it is anticipated that there will be sufficient daylight to enable the competitors to accomplish two rounds each morning.

Armoured Tyres.

It is of interest to note the decision arrived at by the M.U. at Harrogate with regard to the letter from the Local Government Board seeking the views of automobile organisations upon the proposal, made to the Whitehall authority by the County Councils, for the prohibition of armoured or steel studded tyres. The Union came to the conclusion that the evidence does not warrant the entire prohibition of this type of tyre. Although of opinion that possibly some regulations might be made limiting the projection of steel studs beyond the rubber surface of the tyre, it considers that before any such order is made experiments should be carried out to ascertain whether such reduction would affect the non-skidding qualities of the tyre, and also to demonstrate the actual damage to a road surface by armoured tyres as compared with plain treads. Recognising the gravity of the road question, the Union is prepared, if such

course will be of assistance to the Local Government Board, to carry out a series of experiments at its own expense and place the results at the disposal of the Board.

'Ware of Traps.

SUCH "big hauls" of motorists were made by the police of the South of England at Easter and again at Whitsuntide, that they may be encouraged to try their "long traps" again during this coming August Bank Holiday.

Therefore we warn our readers not only to exercise care to keep out of their clutches but also to drive with every consideration for another reason. Recent holidays have brought their toll of accidents—cars have collided coming round corners and at cross roads, and there has been such an increase of mishaps that anti-motorists have had an excuse for virulent letters to the papers and for inciting the local authorities to petition Parliament in no

vehicles, or, better still, possess their own to make excursions at appointed times to the outlying villages and suburbs, bringing their customers from a radius which is impossible when only horses are employed and expensive and cumbersome in connection with the railroad.

Praise for Scotland Yard.

THE officials of Scotland Yard must be proud men this week, for they have received a well-expressed and well-deserved word of praise from the chairman of the General Motor Cab Company, with which the United Motor Cab Company has become amalgamated. Mr. Dalziel, in the course of a speech to the shareholders on Monday, said that many regulations had been irksome and at the time difficult of comprehension, but he was bound to admit that in the end they had been proved to be necessary, and even beneficial, to all concerned. He was, for



A New Public Service in Austria.

A public service of electrical motor vehicles has lately been inaugurated between Klosterneuburg and Weidling, a distance of about three miles. The machines, which were built by the Austrian Daimler Company, take their current from an overhead conductor, similarly to electric tramcars.

mild terms. We trust that no such opportunities will be given them after Bank Holiday, and that the universal good demeanour of motorists will give the public a demonstration of the reasonableness of the automobilist and his real regard for the safety of all who use the road.

Motors and Trade.

THE recent experiment of a shopping train introduced by one of the great stores in London is an advance upon the system by which many suburban houses attract customers by the provision of horse-drawn 'buses, and suggests a development for the motor-'bus and char-a-banc in the interests of the traders at various centres of importance. There is a growing tendency on the part of the leading commercial houses in London and of the great provincial cities to seek trade further afield, and there is no reason why they should not charter motor

instance, personally opposed to one of the early police regulations, which required that all motor-cabs must turn in a radius of 25 ft. When he discussed the matter with the manufacturers of the cabs they protested that it was a mechanical impossibility, but in the end a satisfactory model was produced, and, while there was a little delay in consequence, the result is that, even if the police withdrew the regulation now, they should never think of constructing cabs upon any other lines than the ones they had every reason to thank them now for having insisted upon. He mentioned this merely because it gave him an opportunity of paying a tribute to the uniform care, intelligence, and impartiality with which the authorities of Scotland Yard had dealt with this sudden invasion into the already congested domain of London traffic.

DURING the fiscal year 1906-7 the imports of motor-cars into Hawaii attained a value of £32,554.

AUSTRALIA FOR MOTORING TOURISTS.

AUSTRALIA, its climate and roads, its clubs and competitions, the cars used there, and its touring facilities, all form a subject on which little has so far been written. The average motorist and the manufacturer know little or nothing concerning one of the best motoring countries on the face of the globe. The reason Australia has such great possibilities for the motorist and offers such inducements to the motor tourist is, firstly, that the climate is ideal, and, secondly, the roads and scenery are entirely satisfactory.

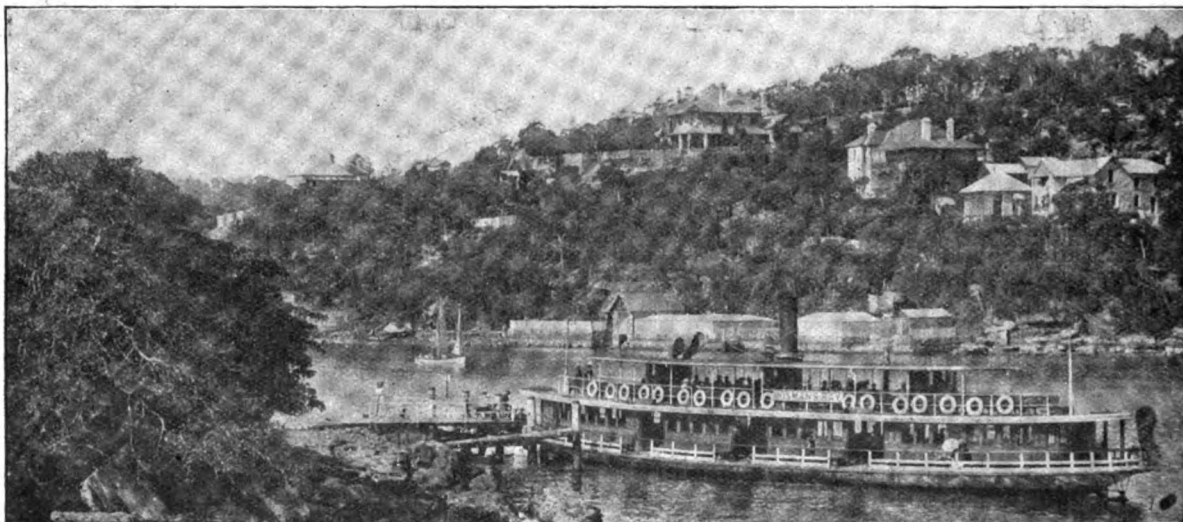
In England and America there is an off season, when even the most ardent motorist can scarcely persuade himself to venture out, and even if he does do so the ride cannot be called enjoyable. Australia has no such season; motoring is quite enjoyable all the year round. True, snow does fall in the Australian Alps, and several of the inland mountains in the south of the continent, yet there is so little of it, and, as most of this snow disappears as soon as the summer commences, one can say, from a motorist's point of view, Australia is practically snow free.

As to the roads, when one remembers that most of the main roads were built by the convicts in the early days of Australian settlement, and as this convict labour was practically free, it may be said with truthfulness that these main roads were well

particulars may be of interest to any motorist who intends taking a trip to the Antipodes. If it is intended to land at Brisbane and tour south to Sydney, he will have a tough task. The writer has known motorists who have made this trip, and others who have started to do it, and they are unanimous in declaring that, although the scenery is perfect among the coastal rivers, yet the roads are so bad and the crossing of these rivers so difficult, on account of the absence of bridges, that their advice to motorists intending to undertake this trip is—don't.

From Brisbane runs can be taken to Ipswich, Twowoomba, and Warwick, all which towns are within 200 to 300 miles. A beautiful road extends to Sandgate, a short distance up the coast from Brisbane. The best advice is either not to ship the car to Brisbane at all, or else visit the towns named from this city, again shipping and so landing at Sydney.

Sydney, the oldest city in Australia, has a population of about 600,000 and is built on the best harbour in the world, besides possessing an excellent ferry and electric tramcar system, which fact largely kills the use of the business man's motor-car. Nature certainly was in a good mood when she fashioned Sydney; a motorist could spend a full week and not go thirty miles from the city, and even then he would not have seen all the beauty spots—charming river and coast drives, drives through the orange groves of Pennant hills and Penrith. After having seen the city and the beauty spots in the vicinity, the



Mosmans Bay, a pretty spot near Sydney, New South Wales.

made. This was in the days before railways made their appearance, and a good road meant everything to those concerned. At the present time the Government keep all the main roads and also that vast network of roads which connect inland towns or villages with the main road, in good repair. Large ranches are in most cases connected to one another by tracks, which are not specially "built up" as roads are, but consist of a centre track in which the horse trots, and a gutter on either side made by the vehicle wheels. These tracks are laid down anywhere across a field, and are sandy in places.

Generally speaking, New South Wales is more hilly than either Victoria or South Australia, but, as one cannot call Australia a mountainous country, these hills form no obstacle to the present-day motor-car, but rather add zest to the tour, as some of the most beautiful and most unique scenery in the world is found in the Australian mountains and within easy reach of the fortunate owner of a motor-car. Another reason for the good roads in Australia is the scarcity of railways. Victoria is much more fortunate than New South Wales, South Australia and Queensland in this respect. Thus, where a station or ranch owner lives from 40 to 150 miles from the railway, and where stations are perhaps forty miles from one another, the motor-car has a tremendous pull over the horse and buggy.

Australia is ideal as a touring ground, so that the following

motorist starts inland to the Blue mountains—the summer and health resort of Sydney. As far as Penrith, thirty miles, it is fairly flat country; then the road rises sharply into the famous Lapston hill, the steepest gradient being about one in seven. After this the road slowly rises until Katoomba is reached; here may be seen thousands of small cottages, dotted among the hills, showing how extensively the Sydneyite goes to the mountains for summer. The road right up the mountains is good all the year round and the scenery superb. Medlow Baths, a little further on than Katoomba, is the sanatorium of New South Wales; built by Mr. Mark Foy, one of Sydney's importers; it overlooks the famous Kanimbla valley and has every facility for making the tourist comfortable. A garage has been erected in conjunction with the sanatorium, and as a large fleet of motors is kept for daily trips to the world-renowned Jenolan caves, the motorist can get everything he wishes. From here trips can be made to a hundred and one different sights. Leaving Katoomba the motorist passes on to the Mount Victoria hill, where the gradients touch one in six. Lithgow, the great industrial centre of Australia, can be seen, and from here an excellent road and good scenery takes one to Mudgee, about 180 miles from Sydney. Thence to Wellington is a fine ride and on to Dubbo, where the Royal hotel will accommodate the tourists.

The return trip through Wellington, Orange and Bathurst

gives one an extremely good idea of the farming industry. If the motorist wishes to see large stations he must go farther west, where are stations whose wheat crop covers from 15,000 to 20,000 acres and which shear from 130,000 to 200,000 sheep per season. Bathurst, the largest town on the west, is essentially agricultural. From here the motorist takes the Oberon road to the Jenolan caves, which the tourist must see, as no stranger ever leaves Australia without seeing these wonders. Imagine a large modern hotel with its flower gardens, coach drive, &c., situated in a small valley just large enough to hold it, surrounded by mountains towering above all around. One wonders how to get to the hotel until it is discovered that the road travels through a natural tunnel through the very base of the mountain. In this tunnel is the entrance to all the caves, which are perhaps different from anything else in the world, inasmuch as they are mostly long passages travelling for miles through the earth, and all about these passages are millions of clusters of stalactites and stalagmites. The passages are all electrically lighted and branch out in every direction for miles. Needless to say, these Jenolan caves are a regular goal for motorists, and a week can be comfortably spent in seeing them. An excellent road brings one back to Medlow Bath and then on to Sydney. This round trip covers about 600 miles, and a motorist must take it otherwise he misses one-third of the pleasure of the tour.

As to hotels, the following are good:—On the mountains, Medlow Bath; at Lithgow, Hunns; at Dubbo, Royal; at Bathurst, Cockbains. In Sydney there is the Australia, the Metropole, the Wentworth, and many others; the three mentioned can be recommended. There are many garages in Sydney; among them the General Motor Company will provide good stabling for the car and do any repair work.

The next tour is south, along the picturesque cliffs of the coast. A delightful day can be spent between Sydney, Clifton, Bulli, Kiama and Nowra. From the last-named town the tour can be continued down the coast to Eden, 350 miles from Sydney, and return to Nowra, and then inland by way of Kambewarra mountain, Kangaroo valley, Barrengarry mountain and on to Moss Vale, from which point the great southern road can be followed right into Melbourne. The tourist can deviate from this plan in two or three places—he can leave the main road and go to Tumberumba and the Yarrangobilly caves and on to join the main road at Waggawagga, from which point he could strike west to Yass and see some of the famous Riverina grazing and pastoral country. From Albury to Melbourne the tourist will thoroughly enjoy himself, and as there are few hills, almost any speed can be touched. At Melbourne there are many hotels—the Grand and Menzies being satisfactory hostleries.

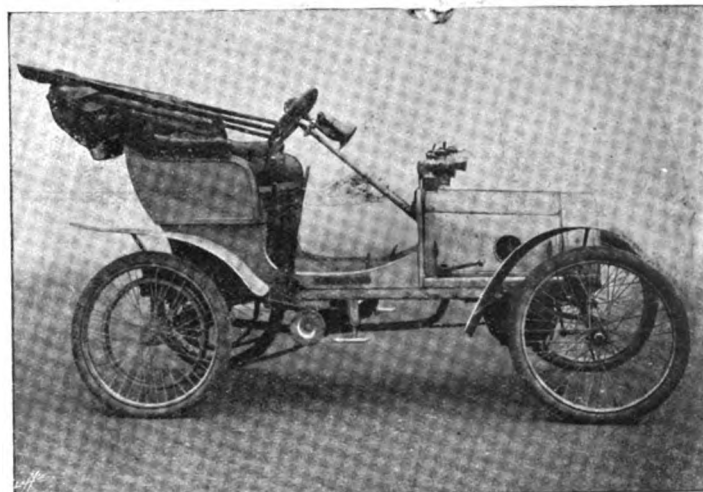
Melbourne is situated on the Yarra river and is laid out on the American plan, its clean, wide, well-laid-out streets being both a credit to Australia and a paradise to the motorist. Melbourne can rightly be called the home of motoring in Australia. Certainly it has no harbour like Sydney and has not one-quarter the number of beauty spots for the sightseer Sydney has, yet the excellence of its roads and the width of its streets are ideal for motoring. Besides this it is the connecting link on the route between Adelaide and Sydney, and it sends forth a number of excellent flat roads in a dozen different directions into the country; Bendigo and Ballarat, the great mining centres, can be visited, the former being about 170 miles from Melbourne and the latter 130. Certainly the tourist should see Ballarat, a pretty town of some 50,000 population, possessing a beautiful lake in its midst, to say nothing of the gardens, statuary, &c.

The motorist will find that in Victoria he will seldom have to drop from his top speed. The country and roads favour the motor-car. A fine tour can be taken to Geelong and on to Warnambool, on the southern coast, this road, like the others, being all that can be desired. St. Kilda beach and esplanade, near Melbourne, is a great bathing resort, and is also a favourite haunt of motorists on Sundays. From Melbourne also a fast turbine steamer will take the tourist and his car over to Tasmania in twelve hours from heads to heads. The car is slung ashore again at Launceston, where another small world is opened up to the motorist.

THE O.T.A.V. VOITURETTE.

A LITTLE car which should meet the requirements of a large section of the motoring public is the O.T.A.V., one of the latest examples of which we had an opportunity of inspecting a few days ago at the depot of the Junior and O.T.A.V. Cars Company, Ltd., at 117, Long Acre, London, W.C. The vehicle, which is of Italian construction, will in particular appeal to owners of tri-cars, as, while it occupies very little more space than the latter, it provides the stability of a car in addition to carrying its two passengers sociably, side by side; its price, too, brings it within reach of a large circle of prospective automobilists. The car, which weighs about 5 cwt., is fitted with a 5½ h.p. single-cylinder engine of the air-cooled type, and having a bore and stroke of 100 mm. by 110 mm. A novel system of cooling is adopted; a fan chamber is cast on one side of the crank chamber, and above this is a light metal hood which covers fully half the depth of the cylinder. Mounted directly on the crank shaft is a fan which drives air up the passage formed by the hood and round over the cylinder head. The ignition is by coil and accumulator, while the carburettor is of the automatic type, with a foot-controlled piston throttle.

The transmission is also on somewhat novel lines. From the engine the power is conveyed by a chain to a countershaft on which a planetary or epicyclic type of gear is mounted, this be-



ing adapted to give two forward speeds; at the ends of the countershaft are two pulleys connected by V-belts to similar pulleys attached to the cycle-type rear road wheels, the drive being thus by side belts in place of the usual chains. The low gear is practically only used for starting purposes and for climbing steep hills, the bulk of the running being done on the top speed, which, with the engine accelerated, is equal to thirty miles per hour. Both hand and foot operated brakes are fitted, while the road wheels are shod with 650 by 50 mm. tyres.

As indicating that the little vehicle is not a mere toy, it may be mentioned that an O.T.A.V. voiturette has been driven from Milan over the Alps to Paris; while we may add that one has been entered for the August races at Brooklands, when its performance will no doubt be watched with interest.

THE Scotch police evidently mean business, and owing to the recent spell of hot weather, which has made the roads very dusty, the anger of the people has been raised by their being smothered by the dust of passing cars, which are getting daily more numerous as English motorists go north. Many traps have just been started, and are due, we are informed, to the new chief constable of Kirkcudbright. The sooner motorists take warning of these traps the better, as the police evidently intend carrying on a campaign as the result of some English motorists, who drive considerably above the legal limit.

B

HOW TO KEEP DOWN THE EXPENSES OF MOTORING.

BY A. E. S. CRAIG.

(Concluded from page 460.)

I VENTURE to suggest the following conditions as generally fair:—The maintenance to include (1) accommodation for the car in a suitable building, to which the owner can have access at all hours; (2) insurance of the car against fire and all damage that may happen to it whilst in garage; (3) washing and cleaning the car after each journey; (4) filling up with oil, grease, petrol, and water, changing tyres when requested, and keeping same pumped up to a proper pressure; (5) execute minor repairs to be agreed on, such as grinding in valves, adjusting brakes, charging accumulators, &c., as and when required. The maintenance to exclude renewals or repairs to tyres, repairs to engine, gear-box, or rear axle, which involve dismantling these parts; but that a low fixed charge for executing same by competent mechanics be agreed upon at an hourly rate, and a fully detailed statement be rendered to the owner to check, as soon as the repairs are com-



A Reminiscence of the Irish Trials.—Mr. T. Henshaw's 48-h.p. Daimler entering Keomare Tunnel.

pleted. The owner to have the option of supplying new parts from the makers of the car, or elsewhere, at his discretion.

There are, however, a lot of people to whom the idea of maintenance does not appeal, or where such a scheme is impossible, because there is nobody in their vicinity capable of undertaking the same satisfactorily, and in this case they must make up their minds to let the care of their cars be their hobby; nay, more, they must regard the systematic routine of cleaning, adjusting, and overhauling as a duty that, if scamped and neglected, will in the end be both irksome and expensive. For instance, the man who puts his car away dirty, instead of tackling it at once, will find it takes longer the next day, for the mud is dry and in drying sucks the varnish. In the same manner, the timely adjusting of brakes, grinding in of valves, &c., repays over and over again; and as to the tyres, woe to the man who does not send his covers to be retreaded in good time, and who lets cuts gape open in the rubber. The e last should be one of the things than all motorists should learn to repair themselves, both as regards vulcanising on a patch to the inner tube, or to fill up a gash in the cover.

Money spent on equipping the place where the motor is

kept as a workshop is never thrown away; on the contrary, a judicious selection of tools will very probably pay for themselves in less than twelve months. Similarly the car should carry, on all occasions, a kit of tools and spares, each item chosen to be of real service, and not a heterogeneous collection of oddments. There is a good deal of difference in the prices of oils and greases, but it is false economy to buy a cheap unknown brand, except in the remote event of the buyer being able to test the quality. Rather is it best to purchase the highest grade oil obtainable, and take care not to waste it. Insurance also should not be shirked; the wise man will cover all risks possible that are included in the policies now obtainable from companies dealing with this class of business. Difference of opinion with our friends the police is another contingency for which one must prepare to be on the look-out, and therefore avoid, if possible, for the opinion of a policeman with a tin watch may be more costly, if less learned, than that of a K.C.

Assuming that we have purchased a car of, say, 10-12-h.p., new, from a good firm, that we keep it in a shed of our own, that we drive ourselves, and that we employ a youth to do the washing and odd jobs of cleaning, whilst we are ourselves capable of doing simple adjustments and repairs involving no great skill, I think a fair estimate for a yearly upkeep should not exceed as follows:—

| | |
|--|------|
| Petrol | £22 |
| Oils and grease, carbide and paraffin | 5 |
| Tyres and tyre repairs | 27 |
| Repairs and renewals | 15 |
| Insurance, licences | 12 |
| Washing, cleaning, &c. | 20 |
| Interest on capital | 15 |
| Depreciation | 35 |
| Sundry expenses | 4 |
| | £155 |

For the above sum a four-cylinder car, of at least 10-12-h.p., should be able to be kept in good running order, and also in a first-class state of preservation, and should allow a distance of some 7,000 miles to be covered in the course of the year—a further distance would, of course, work out appreciably less *pro rata*. The majority of tables estimating cost of maintaining a car nearly always (conveniently) omit such trifles as interest on capital and depreciation, which, of course, make my figures total somewhat high.

There is no doubt that the principal factor in keeping down the expenses of motoring depends on the man at the wheel, and this is where the owner of a small car who drives himself is at an advantage. He nurses his car, because it is money in his pocket to do so; he has not to pay for the escapades of others, and cannot afford to indulge in any on his own account.

It will be seen that, barring depreciation, the heaviest item scheduled above is for tyres, and unless one has exceptionally bad luck in the way of mechanical troubles, this is sure to be the case. And it is best that it should be so if it represents mileage run, and not rubber torn to waste by bad driving. The burden of my advice, therefore, to keep the maintenance low amounts to this—purchase wisely a car exactly fitted to your requirements; take the advice of unbiassed and competent people to aid you in your choice. Make yourself a master of your car in more ways than one. Remember that there is nothing gained, but a deal lost, by not keeping everything in perfect order. Do not grudge buying the best spares and necessities; you save money. Minimise your risks as much as possible. Do not lose a good opportunity of disposing of the car after you have had it a couple of years, as, if the price offered comes anywhere near the depreciation you have calculated, you will save money by having a new one, apart from the fresh guarantee you get from the makers, and the advantage of two years' further experience in design.

THERE were a large number of motor-cars seen at the Egham Floral and Industrial Society's show at Runnymede Park, Egham. The prizes were distributed by Princess Christian, who motored over from Cumberland Lodge.

CONTINENTAL NOTES.

Public Services in France.

A concession has just been granted for the establishment of a public motor-car service by means of Renard road trains between Laigle and Vieumoutiers (Orne).

The Ventoux Hill Climb.

The Automobile Club Vaclusien of Avignon has issued the regulations of the annual hill-climbing competition up Mont Ventoux, which is to be held on August 29th and 30th. The competing vehicles will be divided into classes on a cylinder bore basis, while a special category is being provided for six-cylinder cars.

The Semmering Hill Climb.

The Austrian Automobile Club has fixed September 20th as the date on which its annual international hill-climbing competition from Schottwein up the Semmering will be held. Classes will be provided for motor-cycles, touring cars (divided into categories on a cylinder bore basis) and racing machines. Entries will be received up to September 9th.

British Motorists in France.

Among the recent British motoring visitors to France are Mrs. Babcock (30-h.p. Fiat), Misses A. Rowe and Van Nostrand, London (50-h.p. Panhard), Mr. C. A. Moreing and family (35-h.p. Wolseley and 25-h.p. Daimler), Mr. S. Murphy and Mr. A. P. Stern, London (60-h.p. Napier), Mr. J. W. Earle, London (30-h.p. Rochet-Schneider), Mr. and Mrs. A. de Bourbet, Mr. Williams and Mr. Sewell (20-h.p. Stella), and Mr. Davenport and family (50-h.p. Mercedes).

French Motor-car Imports and Exports.

Returns just issued show that the value of the foreign motor-cars and parts imported into France during the six months ending with June last amounted to £150,960, as compared with £181,200 in the corresponding period of last year. As regards the exportation of French motor-cars and parts, while June proved rather more active than has prevailed of late, the aggregate shipments during the six months recently ended only totalled £2,673,800, as contrasted with £3,154,560 in the similar period of 1907. With the exception of Russia and Algeria, there has been a falling off in the shipments to practically all the leading markets, the decline in the case of England being from £1,312,800 to £1,242,000.

Touring in Germany.

The German Reichstag has recently passed a bill for facilitating frontier automobile traffic by reducing the taxes on visitors' vehicles. In future a charge of 3s. will be made for a permit to drive a foreign car staying in Germany only one day, 8s. from two to five days, 15s. for from five to fifteen days, 25s. for from fifteen to thirty days, 40s. for from thirty to sixty days, and 50s. for from sixty to ninety days. In addition a control plate has to be taken and given up when leaving the country, the charge for the same being 2s. for one day and 5s. for from two to ninety days. The matter of deposit with the Customs authorities remains unaltered, this being unaffected by the new taxes referred to above.

Further Grand Prix Calculations.

M. Faroux, of the "Auto," has been making some comparisons between the 1907 and 1908 A.C.F. Grand Prix races. The forty-eight drivers who took part in this year's event included only twenty-three who competed last year. Of this number only seven—Caillois, Hémerly, Rigal, Gabriel, Garcet, Courtade and Degrais—completed the full distance in both contests. Of the others, Nazzaro, Szisz, Baras, Bablot and Roch-Brault, who finished in 1907, retired in 1908, while Hanriot, Heath, Jenatzy and Salzer, who failed last year, covered the full ten laps this July. Finally, it may be mentioned that Lancia, Duray, Striker, Pierron, Rougier, Wagner and Perpère had to retire before the end on both occasions.

Another Industrial Vehicle Competition.

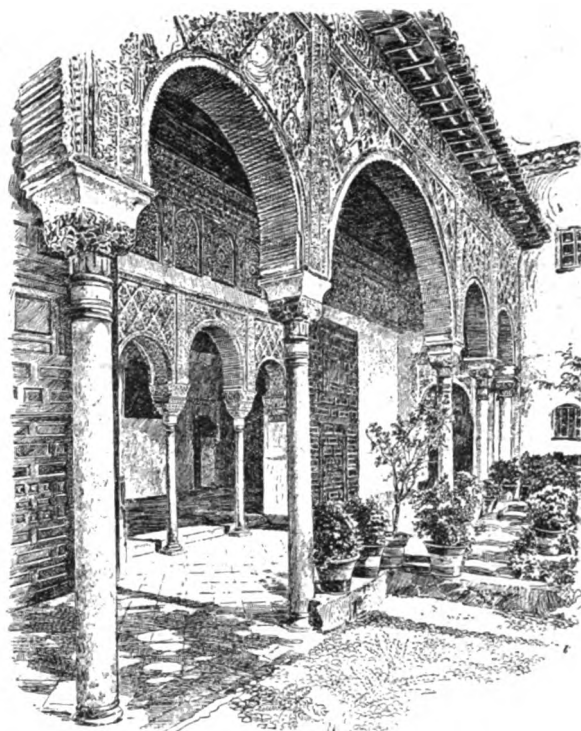
The "Auto," of Paris, proposes to hold a reliability trial of carrier motor-cycles, light delivery vans, motor-cabs, and hotel 'buses in the early part of October next. The event will last about a week.

Industrial Motor Vehicles in Antwerp.

A company has just been formed in Antwerp, with a capital of £60,000 and the title La Compagnie Generale Anversoise de Transports, to start a carrying business in that city by means of motor-lorries. The German Daimler Company is stated to be interested in the new undertaking.

More Aeroplane Trials.

M. Bleriot, in the course of a trial with his monoplane, at the parade ground at Issy-les-Moulineaux, on Thursday last week, fell from a height of about 16 ft. The front part of his machine was broken, and will have to be entirely reconstructed. M. Bleriot himself was uninjured. On the same day Captain Ferber carried out various experiments with his double-planed apparatus. He covered about 130 yards in short flights, but in



Touring in Spain.—In the Alhambra, Granada.

returning the machine struck the ground with such force that the propeller and the chassis were broken. The King of Italy having offered a prize of £2,000 to the man who first makes an uninterrupted aeroplane flight for half an hour on Italian soil, M. Delagrange announces that he will return to Italy in August with a new triple aeroplane, which is at present being constructed in Paris for him.

The New York-Paris Race.

The Protos car which, with a number of others, left New York on February 12th last on a race across the United States, Alaska, Siberia, and Europe to Paris, reached the French capital on Sunday last. Nine vehicles set out on the long run, but owing to various causes—dissatisfaction with the rules and organisation as well as difficulties with the cars themselves—six fell out before American territory was left. The Protos being a German-built car, it was not unnatural that it should receive a rousing reception on its arrival in Berlin. Some hours before the car was expected, on Friday last week, the streets in the vicinity of the offices of the "Berliner Zeitung," under whose auspices the vehicle was run, had become so con-

gested that it was necessary to clear them with mounted police. Lieutenant Koeppen, the driver, and the two chauffeurs were received by a deputation from the Imperial and Berlin Automobile Clubs and met with such an ovation that it was only with the utmost difficulty they could pilot the vehicle to its immediate destination. The Thomas (American) car reached Berlin on Monday, while the last news of Signor Scarfoglio on the Brixia-Zust (Italian) is from Omsk, Siberia.

THE LORRAINE-DIETRICH 14-18-H.P. LIVE AXLE CAR.

SOME few details of the new Lorraine-Dietrich live axle car have already appeared in these columns. As the vehicle is, however, an entirely new departure for the Lorraine-Dietrich Company, the following more complete description of the car may be of interest. The frame, which is of pressed steel,

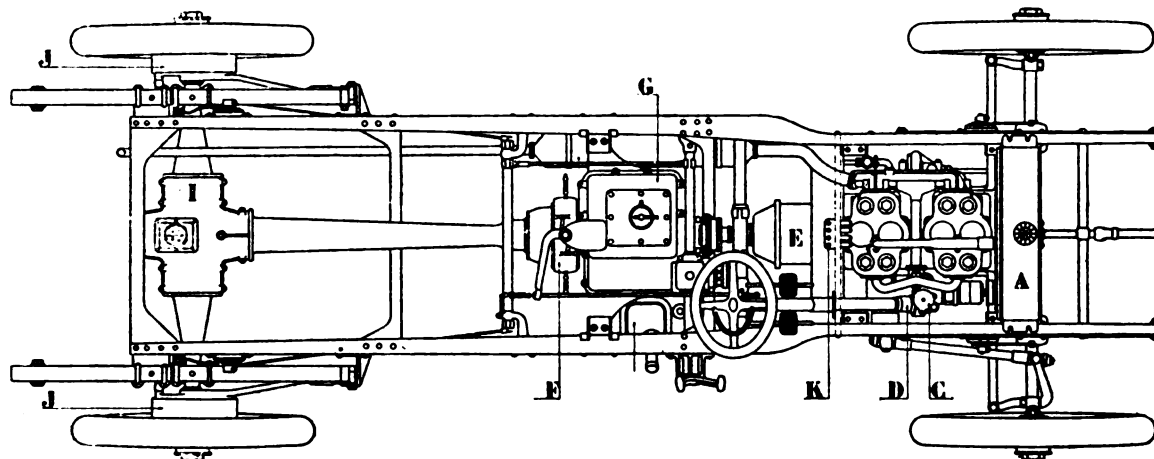


Fig. 1.—Plan of Chassis of Lorraine-Dietrich 14-18-h.p. Live Axle Car.

A. Radiator. C. Carburettor. D. Steering Gear. E. Clutch. F. Foot Brake. G. Gear Box. I. Bevel Gear Case.
J. Rear Wheel Brakes. K. Lubricator.

Miscellaneous Items.

British motorists who intend making a motor tour to Brittany can now obtain all the necessary French licences on arrival at St. Malo.—Prins Hendrik of Holland has lately acquired a 35-45-h.p. Renault limousine.—The postal authorities in Leipzig have recently acquired an Adler 8-14-h.p. motor-van.—The little town of Trappes (Seine-et-Oise) is apparently well-named, as the Touring Committee of the A.C.F. has issued a warning that motorists should reduce their speed when passing through the place.—The Hotchkiss Company are building five armoured motor-cars fitted with quick-firing guns to

can be supplied either curved, as illustrated in Fig. 2, or straight, the former facilitating the fitting of very low carriage bodies with roomy side doors. The engine comprises four cylinders, 90 mm. bore by 120 mm. stroke, cast in pairs, with the interchangeable inlet and exhaust valves set on opposite sides and operated mechanically off separate cam shafts. The ignition is by a high-tension magneto, which runs at the same speed as the engine, while the mixture is furnished by a special automatic carburettor, comprising two air inlets and means of cutting down the petrol supply when the engine is running slowly and the car standing. The lubrication of the engine and clutch is

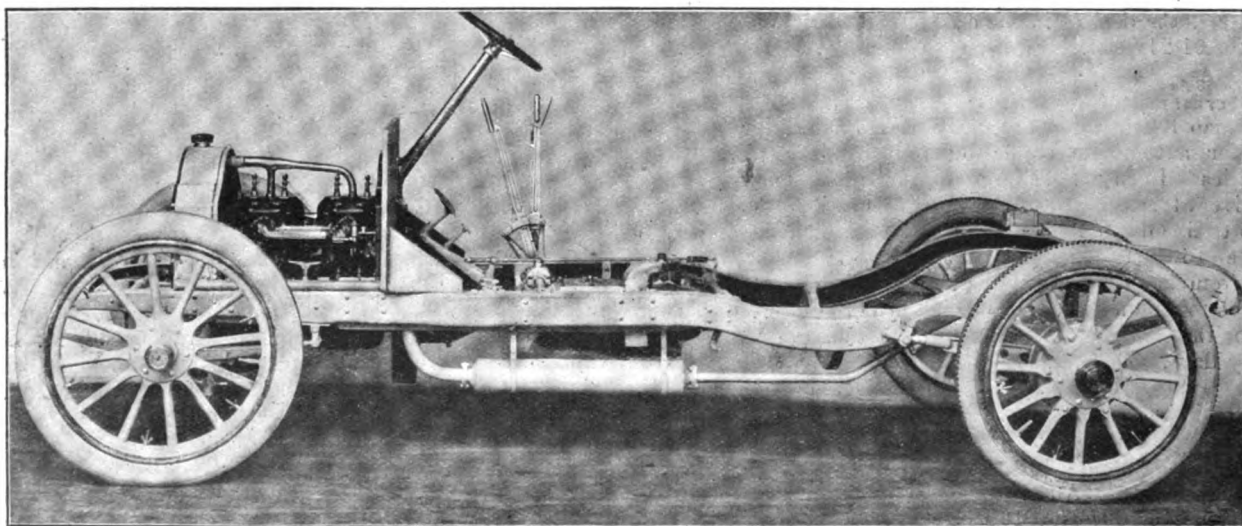


Fig. 2.—Elevation of Chassis of Lorraine-Dietrich 14-18-h.p. Live Axle Car.

the order of a foreign Government.—On Sunday last the Automobile Club de BelFORT held a hill-climbing competition over a 13 kilometre course on the hill known as the Ballon d'Alsace. The best time of the day, 13 min. 22 sec., was made by M. Kulmann on a Delahaye.—The joint run of the German and Austrian Motor Volunteer Corps from Vienna to Berlin commenced on Monday, when thirty-four cars left the Austrian capital.

effected by the pressure of the exhaust gases, the oil passing from a 4-litre tank through an adjustable sight-feed rack on the dashboard. A special form of centrifugal pump maintains the water circulation, through the cylinder jackets and a radiator of the framed ribbed tube type. The half-time gears, as also those driving the pump and magneto, are entirely enclosed and lubricated by the oil in the engine base chamber. It may be added that the lower half of the latter can be removed without

disturbing the bearings, the latter being supported in the upper half. The speed of the engine is controlled by a lever on the steering wheel and connected up to the ignition, and by a pedal which opens or closes the throttle as desired.

The clutch (Fig. 3) is of the metal disc type and runs in oil; it is connected to the gear-box through a universally-jointed shaft, which allows for any slight distortion of the frame whilst travelling over rough roads, and also permits the clutch to be dismantled without disturbing the engine or gear-box. The change-speed gear is adapted to give four speeds forward and a reverse, with direct drive on the top speed. The control is by means of a single lever working in a "gate," the gears not in operation being securely locked. The drive is transmitted to the live axle (Fig. 5), by means of a cardan shaft, which is supported by a cold-drawn taper steel tube, the latter acting as a torque rod. The rear axle is very strong in design, is oil-retaining, and fitted with ball bearings. The road wheels are mounted on the outer casing, and are driven by dog clutches fitted in the

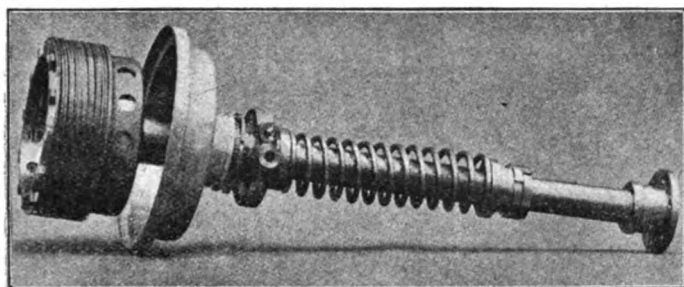


Fig. 3.—General View of Clutch.

wheel hubs. In this way the actual driving shafts do not have to bear any of the weight of the car. A special feature of the rear axle is that it is of the arched type, enabling the road wheels to be splayed, as in chain-driven cars. This is obtained by introducing a special form of compensating joint in each half of the live axle.

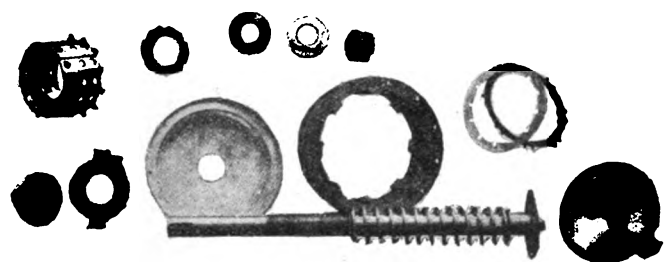


Fig. 4.—The Clutch Dismantled.

Special attention has been devoted to the brakes. The rear road wheels are fitted with large drums (Fig. 6), inside which are expanding segments, operated by means of a "pull-on" hand lever. A compensating device is fitted to equalise the pressure on each wheel, and further provision is made to absorb the shocks which would otherwise be thrown on the brake gear whilst travelling over rough roads with the brakes on. The foot brake, which acts on a drum at the rear of the gear-box, is unusually wide, and is provided with an extremely easy means of adjustment. The steering is by worm and sector, special provision being made to allow any wear to be readily taken up. The frame is supported on semi-elliptic springs at the front of the frame and three-quarter elliptics at the rear. The front axle is of rectangular-section steel. Self-lubricating ball bearings are fitted throughout the chassis, which has a wheel base of 9 ft. 10 in.; the road wheels are shod with 875 by 105 mm. tyres. Needless to say the details throughout are of the highest class, the vehicle being one which should well uphold the Lorraine Dietrich reputation for reliability.

We learn that Prince Eugene, the brother of the King of Sweden, has ordered a 15-20-h.p. Buick car.

SOME USEFUL NOTES.

It is important that all the connections of the mixture inlet pipe of a multi-cylinder engine should be perfectly tight. Slackness at any point permits the entry of a certain quantity of extra air, which renders the operation of starting the engine more difficult and reduces its power. Many cases of poor running, which have been difficult to locate, have been due to this point.

THE fact that the constant vibration of the car will loosen, open, or shake off anything that is capable of being jarred out of place should not be overlooked; in fact, the mischief that can be accomplished in this way is sometimes surprising. Cocks and taps should always be carefully watched, for if they are not tight they will surely jar open. The relief cocks on the cylinders will, of course, give instant warning when they are open by the

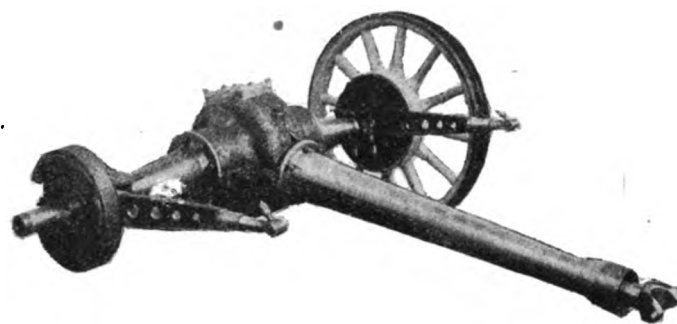


Fig. 5.—View of Cardan Shaft Casing and Rear Axle.

hissing of the escaping gas; but drain cocks in oil chambers will quietly allow the last drop of oil to run off, leaving the bearings or gears without lubrication. Drain cocks in the water system will also do their mischief silently, the motorist knowing nothing of what is happening until his engine begins to overheat. Cocks and taps should therefore be adjusted so that they turn stiffly,

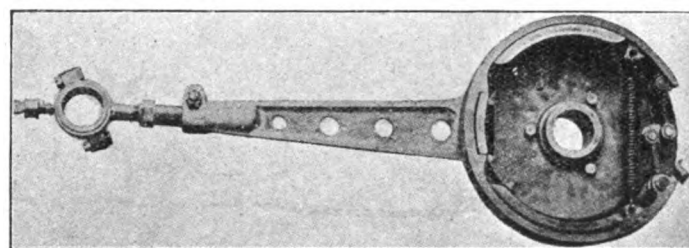
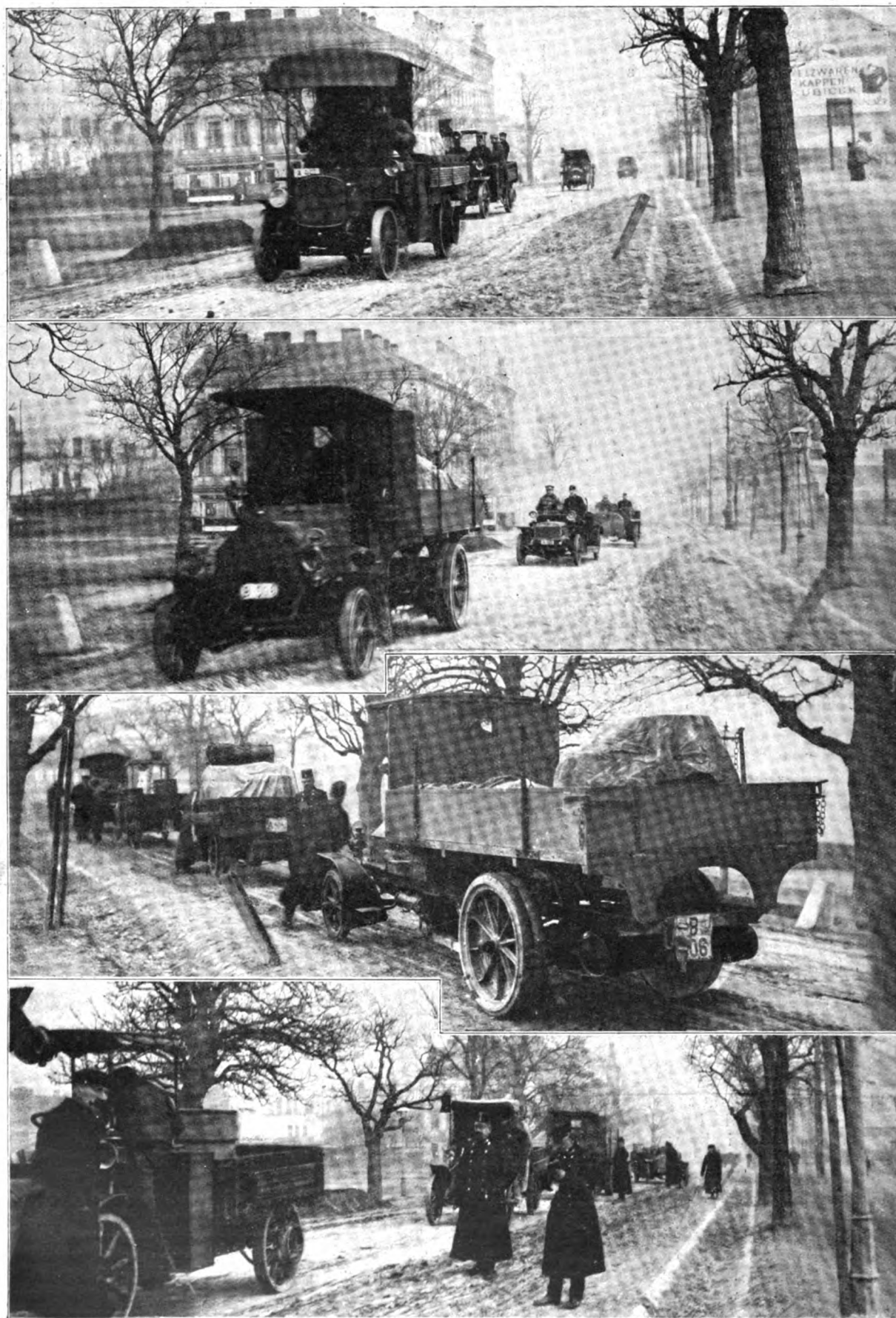


Fig. 6.—One of the Rear Wheel Brakes.

and they should be placed where they will be as free as possible from the chance of an accidental knock.

It is a somewhat regrettable fact that the average motorist is not so particular about the appearance of his vehicle as are the owners of horse-drawn carriages. He has, however, several excuses on his side for deficiency in the matter of paint and varnish, one at least being that however spick and span his car may be at starting, his journeys are seldom short enough or over sufficiently clean roads for such a decorative state to persist to their conclusion. Another point, also, which deserves some notice is the want of durability of varnish or paint under the conditions prevailing with a motor-vehicle, which seems to be attributable to the deteriorating effect of road dust at high speeds. The effect of the "sand-blast" on such hard materials as glass and porcelain is familiar, and there can be little doubt that to a similar action is due the want of durability of motor-carriage paint-work. The principal effect will usually be noticed on the paint at the back of the car, where the inrush of dust-laden air is most violent; and it is difficult to see how any painted surface can be made to resist it.

The Motor-Car Journal, Saturday, August 1st, 1908
MILITARY MOTOR WAGONS IN AUSTRIA.



The Austrian Military Authorities recently carried out some trials near Vienna of motor wagons suitable for use in connection with the Army. The above illustrations depict some of the competing vehicles.

[Allgemeine Automobil Zeitung.]

GOSSIP FROM PARIS.

A SIGN of the times! Mr. Friswell, so well known in English motor-trade circles, has just spent a week in Paris. He did not come, as he frequently did formerly, to buy French cars, but to sell English-built automobiles! Nothing could be more significant. Here in France the demand for the high horse-power touring automobile is steadily decreasing. Motor-car touring is, however, not dying, as some people pretend, and I do not believe it ever will die, but the owners of touring cars are not, as they used to be, always on the road. What may be called the touring fever is abating, and it often happens that a person wishing to make a tour, say, in the South of France does not think it necessary to undertake the long journey down in his car, but goes there by train and puts his car on a railway truck. This practice, which is becoming very general, accounts for the comparative scarcity of touring cars on the highroads, and also for the falling off in the demand for them. Young men who are still suffering from the intoxication of speed buy the powerful cars and so do people who, having a large family, want a big vehicle. On the other hand, a very large number of persons who, eighteen months ago, would have bought cars of high horse power for long journeys, now content themselves with much smaller machines, which can be sent by train comparatively cheaply and which are quite sufficient for even long excursions in the region the tourist may wish to explore. Mr. Friswell thinks the Standard car is well suited for such touring purposes as well as for use in towns. It is quite likely he is right; in any case he has made arrangements with an important automobile agent for the sale of his vehicles in France.

THE French Chamber had not time before the recess to vote the proposed new law for the regulation of motor-car traffic. And M. Colin, the President of the Anti-Automobile League, was glad of it. He had been pretty well satisfied with the Bill as it was presented to Parliament by M. Barthou, but he was mortified when he discovered he had not sufficient influence to prevent the Committee, of which he was a member, from modifying it in a liberal spirit. In spite of M. Colin the Committee actually transformed the proposed measure to such an extent that it was made almost acceptable to the motorists! If it is voted and promulgated as it stands, M. Colin's vocation in the Chamber will have disappeared, and he should at once resign his seat. But it is quite certain he will not, and, with persevering energy worthy of a better cause, he recently wrote in his capacity of President of the League to a certain number of Councils-General which had not yet pronounced in favour of encouraging the new means of locomotion. The result of his initiative has not been exactly what he hoped. For instance, the Council-General of the Basses Alpes responded to M. Colin's appeal by actually voting unanimously a resolution urging the Government to extend its proposed new motor-car regulations to all sorts of vehicles and to widen the narrow roads and round off the corners "to facilitate motor-car traffic." Similar resolutions have been adopted by numerous Departmental Councils, and it is to be hoped the example will be followed by many others.

THE order issued on Saturday last by the Minister of War prohibiting further aeroplane experiments on the Issy les Moulineaux parade ground, spread consternation among the aviators in France. For the most part they are not rich men, and if the order is not withdrawn several of them whose flying machines are very interesting will certainly be obliged to abandon their attempt to aid in the conquest of the ethereal realm. One young man whose annual budget is not large, and who during the last three years has foregone every sort of amusement and holiday to spend all his spare money in building aeroplanes, was absolutely in tears. Poor fellow! I was very sorry for him, especially as he had that very day made experiments with his monoplane which promised success. Then, trusting to the promise made by the military authorities, numerous inventors had long ago hired land bordering on the Issy les Moulineaux parade ground and

had spent large sums of money in building aeroplane sheds which will be useless in the future unless some arrangement is come to. As a matter of fact I am convinced that the prohibition, which was issued on account of M. Lepine, the Prefect of Police, having declared that under present circumstances he could not insure the safety of the public, will shortly be withdrawn. On several occasions the aviators have been within an ace of causing a catastrophe by flying into the crowd which always invades the parade ground. Seeing this, M. Lepine several weeks ago sent a large police force to keep the public off the field. But the aviators were informed they would have to pay for it. At a moment when a national subscription is being made in Germany to provide the country with an aerial fleet, it is impossible that the French Ministry should persevere in its *non possumus*, which would deprive so many French aviators of the means of continuing their experiments. It is only a question of police, and the difficulty will surely be surmounted. And what makes a satisfactory arrangement all the more certain is the fact that only a few months ago the War Minister granted the Aero Club of France the concession of a portion of the Issy les Moulineaux parade ground, on which half-a-dozen aeroplane sheds have already been erected.



A Story Without Words.

[La Locomotion Automobile.]

ALL eyes are now turned towards Le Mans. Wilbur Wright has at last completed the delicate work of putting his flying machine together. At least such is the announcement which has been made, but no one has yet seen the aeroplane. The aviator has probably good reasons for not allowing anyone to examine it before the public experiments, but the French are not accustomed to such secrecy. They will, however, forgive Wilbur Wright for keeping them out of his shed if he accomplishes only half he has promised. The old sleepy country town he has selected as the scene of his future triumph will ring with the cheers of thousands of people come from far and near, and especially from Paris, on the day he is seen leaving the racecourse on his machine and flying boldly over the neighbouring fields. As for Henry Farman's new challenge, the Wright Brothers are doubtlessly right in refusing it. The business they are engaged in, the one in America and the other in France, is evidently much more important than the 10,000 dollars they would get by winning the proposed match. I have seen several persons who within the last week went to Le Mans on purpose to have a chat with Wilbur Wright. They were all, with one exception, sceptical before they left Paris, but on their return I found they had materially altered their opinion. None of them saw the machine or knew any more about it than they did before they started, but they were one and all impressed by the confidence of the aviator in his ability to make long flights. Wilbur Wright says to everybody "What I have done before I can do again." And he says it in such a quiet, confident tone that his words carry conviction with them.

MARNEY.

THAMES VALLEY trips by motor-car and motor-boat are being organised by the Motor Boat Cruising Company, Ltd.

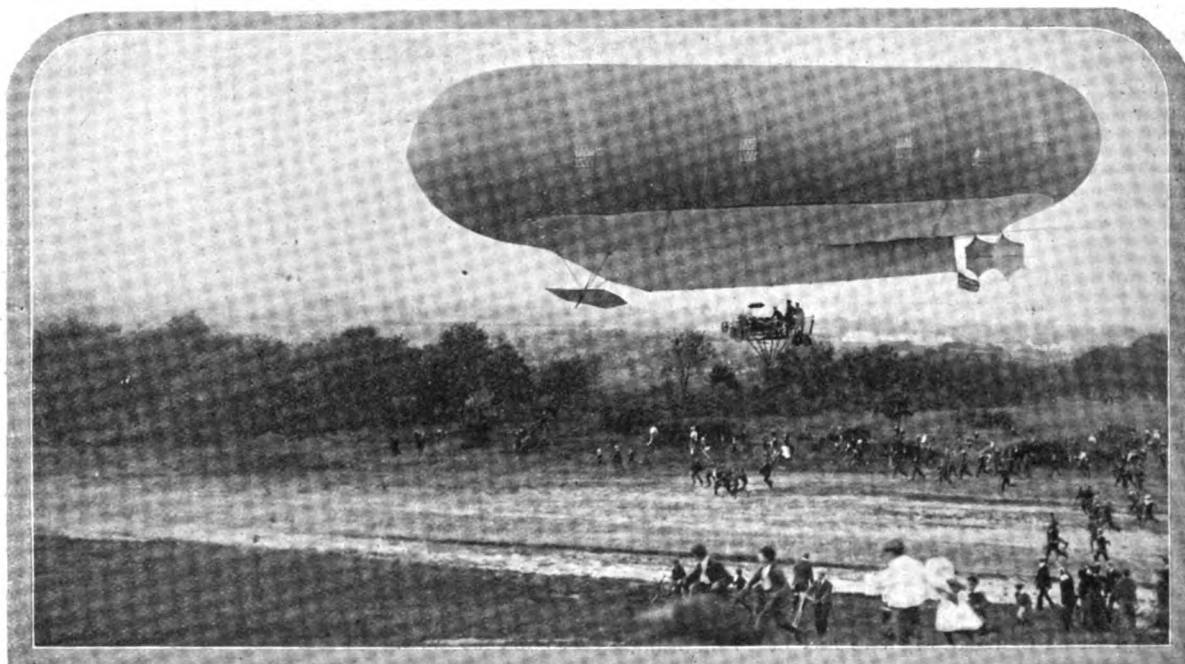
MOTERING NOTES FROM BRIGHTON.

WHETHER it be that the scare of the long-distance trap, together with the A.A.'s declaration of war on the *genus* "road-hog," are exerting a salutary influence, or whether the exuberant "scorcher" is voluntarily realising the error of his ways, the fact remains that from the non-motoring point of view there has been a perceptible improvement in the nature of the car traffic on the London-Brighton road these last three or four weeks. I say this on the authority of the local cycling world, and of country residents personally known to me who, while by no means afflicted with motorphobia, have often railed hotly against instances of inconsiderate driving that happen to have come directly under their notice. After all the give-and-take policy is best for both sides—but if the motorist does a little of the giving by curbing the fiery impulse of his mechanical Pegasus, I hope, in everybody's interests, the police won't continue to do the taking!

THE recent "battués" at Haywards Heath, while not without their irritating side, seem to have cleared the air, and encouraged the basis, at least, of a sort of *entente cordiale* between

one of the most enthusiastic lady-motorists in the district—who drove a speedy Weigel car; M. Bartholdi (Brouhot), the Hon. Charles Brand (Berliet), M. Bianchi (Milano), Mr. Scott (Napier), Mr. White, Messrs. Kayzer and Jones (Daimlers), Mr. Redhead (Delaunay-Belleville), and Mr. Andrews (Argyll). Most of these were lunching at the Metropole. Those famous comedians, the Poluski Brothers, who revel in a Clement-Talbot car, were combining business with pleasure at Brighton last week, exploring the country by day and amusing crowds at the Alhambra by night. They "stabled" at the Brighton and Sussex Garage, where were also the cars of the Marquis de Caumont La Force (Peugeot), Mr. Ingram (Darracq), Mr. Bayley (Rover), Mr. Marshall (Humber), and Messrs. Batchelor and Barrow (De Dions).

THEY have been busier at the local garages this week than for a long time, receiving visitors who made Brighton their headquarters for the Goodwood races. The motor-car has completely ruined the old racing habit of securing quarters on the South Coast within easy driving distance of the picturesque and historic course hard by the old cathedral city of Chichester, and



The First Trial Trip of the new British Army Airship.

the motorist and his "natural enemies." Of course, the long-distance trap will be in evidence this ensuing week-end, and probably during the few days immediately following, for the summer Turf carnival in Brighton will then be making things exceptionally lively all round. But the golden rule for the Brighton-bound motorist from town to observe is to keep just under a speed of twenty-five miles an hour all the way down. As long as he takes that simply and by no means unreasonably restrictive precaution, he will have nothing to fear, for the Chief Constable of Sussex himself has stated, in open court, that he will only take proceedings against drivers who exceed the twenty-five mile average.

NEVERTHELESS, police persecution in the past has done a great deal of mischief, and some little time may elapse ere any degree of confidence is likely to be restored. I am told that some motorists who used to be tolerably regular week-enders at Brighton have lately been favouring Tunbridge Wells and sea-coast towns further east, while many of those who still visit London-by-the-Sea make the journey by a circuitous route, to avoid possible trouble *en route*. Among the visitors to Brighton last week-end were Mr. Chaplin, of Henfield—whose mother is

from Brighton to Goodwood is a delightful run, through the most charming district of West Sussex.

SAXONIAN.

THE War Office competition for Light Tractors already announced in our columns will commence in February, 1909, and last until the middle of the month. Entries are to be made not later than the last day of August, and detailed particulars of the competition can be obtained on application to Capt. Bagnall-Wild, secretary of the Mechanical Transport Committee, at the War Office, London, S.W.

At the recent meeting of the Ligue Internationale des Associations Touristes, held in Stockholm, it was decided to hold the 1909 congress in London, on the invitation of the Motor Union, and for 1910 in Brussels. Among the matters dealt with at the Stockholm gathering were the indication of roads closed to traffic and of Customs houses; recognition of driving licences and car licences; recognition of number plates; danger, hotel, repairer, and motor house signs; an international road book; and tourists' identification papers to enable letters, &c., to be claimed at post-offices.

THE SOCIAL WHIRL.

THE King's departure from town on Monday marked the close of the London season, which has lasted little more than six weeks—as contrasted with three or four months in the Victorian era. Still it has been full of activity, and the motor-car has proved itself a factor in enabling both His Majesty and his Consort to testify to their interest in the social, political, international, sporting, and municipal life of the people. Last week the King paid a visit to the Hungarian Exhibition at Earl's Court, motoring to the Warwick Road entrance, and subsequently entering his car again at the Queen's Palace and driving through the grounds to the Western Gardens. On Saturday his Majesty trained to Wolferton, proceeding to Sandringham by motor-car, and subsequently making a tour of his estate to inspect the improvements in progress.

ON Monday the Goodwood House parties assembled, and although the King and Queen travelled by train a great many went down by car. In fact, the Duke of Richmond's party is largely made up of motoring peers and peeresses. Their Majesties are staying with the Duke at Goodwood House.

THE Prince of Wales, accompanied by Earl Grey and the members of the Viceregal Household, have been motoring among the farm houses and "habitants" of the Petit Cap district, where His Royal Highness was introduced to many leading French-Canadians. The Prince's interest in motoring is steadily growing, and although his enthusiasm is not so great as is that of the King, he recognises its value as a social force. That was first declared when he paid his first visit to a motor-car exhibition at the Agricultural Hall, London, some years ago.

SIR STANLEY BOIS, whose attendance at the Motor Union meet at Harrogate on Saturday gave the Ceylon A.C. representation at an English function, is a partner in one of the leading firms in Colombo, and was knighted three years ago. He is a member of the Legislative Council of Ceylon, and his recreations when at Colombo, where he has made his home, are music and motoring.

BETTWS-Y-COED was full of motorists at the week-end. On Saturday the North Wales Automobile Club held a gymkhana at Gwydyr Castle Park, when Col. Sandbach secured the Motor Union's medal for winning the largest number of events. Among the visitors was the Lord Chief Justice of Ireland. On Sunday the delightful little place was visited by about forty cars, the Cheshire and Manchester Automobile Clubs having a joint meeting there, instead of in the more police-trapped locality at which they originally intended to meet.

LADY GEORGE HAMILTON is staying at Deal, and while out motoring on Monday afternoon at Sandwich, a horse which had bolted with a trap came towards the vehicle. The chauffeur wisely drove the car to the left side of the road, thus averting an accident. A few minutes later Lady Hamilton in alighting from the car fell and received a shaking. I am glad to learn that no injury was inflicted, and that she was able to re-enter her car and shortly after proceed on her way back to Deal Castle.

SIR LEWIS M'IVER, whose recent letter to the *M.C.J.* on London traffic has attracted some attention, has been M.P. for West Edinburgh for a dozen years or more. When he writes of the traffic in Berlin, Hamburg and Cologne Sir Lewis is on familiar ground, for he was educated at Bonn before entering the Indian Civil Service. He is an enthusiast for the electric automobile for town use, having possessed such a vehicle for four years, saving a considerable sum on his stable account as a result. In fact, "as to the argument of working expenses and tear and wear it is a better car now than when it started"—an eulogy which cannot be applied to every car, whether in society or not. Lord Westbury's reply to Sir Lewis M'IVER's letter appeared last week.

SIR GEORGE ABERCROMBY, BART., who won the Third All Comers' Handicap Sweepstakes at Brooklands, is again an entrant and will drive his 58.1-h.p. Fiat on both days of the August meeting. His baronetcy was created as long ago as 1636, and he has become quite up-to-date in regarding motoring as one of the finest of modern sports. Although only two ladies are to appear on the track on Bank Holiday, several of the cars which competed in the Ladies' Handicap a month ago will be driven by their owners, and among the competing cars will be "Pobble"—the winner of the ladies' event—"Delilah," "Guarded Flame," "Linda," "Gollywog," "Grayling," and "Little Dorrit." The naming of cars is not proceeding very rapidly.

VISCOUNT CURZON, the son of Earl Howe, Lord Chamberlain to H.M. the Queen and a sub-lieutenant of the Royal Naval Volunteer Reserve, is shown in the accompanying illustration at the wheel of the 40-h.p. six-cylinder Napier he has lately acquired. The feature of the vehicle is that it is provided with two interchangeable bodies. In the picture it is seen as a smart two-seater specially equipped for long distance touring, the rear portion being very spacious, and adapted for carrying luggage and the various impedimenta necessary for long journeys. For



Viscount Curzon at the wheel of his 40-h.p. Six-Cylinder Napier.

town use during the London season the touring body is replaced by a double landaulet. The painting is in Viscount Curzon's own colours, viz., brown relieved with fine lines of black, whilst the upholstery is in dark brown leather.

THERE is a sound of motor-cars in the closely packed constituency of Haggerston, where the Hon. Rupert Guinness, a member of the R.A.C. and a vice-president of the North Middlesex A.C., is a candidate. Mr. Guinness was a famous sculler in his much younger days—he is still on the sunny side of forty—and his brother is M.P. for Bury St. Edmunds. The father of these two politicians is Lord Iveagh, whose name was prominent at one time in connection with the Iveagh-Pirie scheme of road locomotion for Ireland, and all the family are keen motorists. Haggerston is such a small place that the advent of a great fleet of motor-cars might prove of advantage to the opposing side, as it did at the general election in Bow and Bromley. Then so many automobiles were sent to the support of Mr. Arthur Du Cros on the election day that there were not only enough for his friends, but nearly all his opponents were able to go to the poll in his cars.

LOLLIUS.

SOME CURRENT TOPICS.

The Danger of Exhaust Gases in Closed Garages.

The necessity of seeing that there is ample ventilation in any building, such as private or public garages, where the engines of motor-cars are run for any length of time, has frequently been referred to in these pages. In view of the attention to the question of the toxic effect of the fumes from petrol engines which has lately been given in the columns of the two leading medical journals, it may not be amiss to once more allude to the subject here. That the carbonic oxide contained in the exhaust gases, unless quickly got rid of, can have very serious effects, is evidenced by a case cited by Dr. C. R. Box, F.R.C.P., in which "a young fellow in charge of a 40-h.p. car returned with the car to a private garage accompanied by another chauffeur. Having taken the car in, they completely closed the garage by pulling

See to the Ventilation!

Sir W. Gowers, in the course of a recent paper quoted in the "British Medical Journal," mentioned another case in which the victim was an Army officer, 38 years of age, a healthy subject previously, who first became affected by a perversion of taste, in so much that sweet things appeared to taste saline, and *vice versa*. Then his speech became affected, and throat trouble followed, and finally numerous muscular troubles supervened. The doctor treating him did not at first inquire the nature of his employment, which was that of testing petrol engines, but advised a cessation from work. Treatment followed, and the patient recovered. Returning to his employment the same symptoms again returned, and eventually he was obliged to permanently cease the occupation. A study of the case led Sir William to the decision that the only apparently assignable cause of these characteristically toxic effects was the products of the imperfect combustion of petrol, and he points out that the habitual inhalation of carbonic oxide gas has been known to



The New York-Paris Race.—The Scene in Berlin on the arrival of the Protos Car.

down the roller shutters with which it was provided. There was no other opening to the air with the exception of a staircase to the upper storey. The time was about 4 p.m. They then proceeded to manoeuvre the car about the garage, for which purpose the engine was kept running. At 4.30, experiencing a sense of vertigo and constriction of the head 'worse than headache,' but no nausea, they went upstairs to get some tea. About this time people outside the garage heard considerable shouting and commotion from within, and remarked upon it. At 5.45, on the return of another car, the garage was unlocked, and the two young fellows were found insensible upstairs. They must have lain insensible for over an hour, although the windows upstairs were open. They were immediately carried down into the open and soused with water, and even about fifteen minutes later both were in a completely dazed condition, and were unable to stand. The next day they were both all right, but had only an imperfect recollection of what had happened subsequently to their leaving the garage proper and going upstairs. The treatment adopted was free ventilation and the administration of hot strong tea, which was handy."

cause polyneuritis affecting the legs and also nervous disorder. It will be seen that the exhaust of a petrol motor, when the latter is run in closed premises, has a real element of danger, and that the motorist or garage owner will, I am sure, be well advised to see that whenever engines are being tested all the available doors and windows are open to ensure a plentiful circulation of fresh air.

Motor-cars and Health.

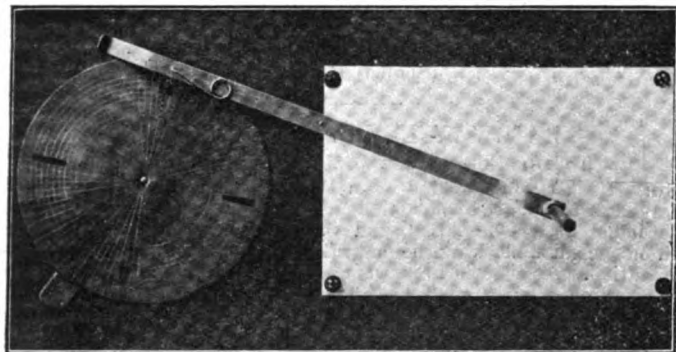
After the many diatribes that have been hurled by the general public against motor-cars in general and motor-buses in particular, it is refreshing to learn, on the authority of a West End physician, that the present healthy condition of London is due to the increasing number of automobiles and the diminution in horse traffic. According to this authority "if the Government would forbid horses in London the death rate would decrease by half, their presence on the streets being detrimental to the public health. On the other hand, the smell emitted by automobiles, although certainly not pleasant, is one of the finest disinfectants going, clearing the air of all germs and impurities."

ARCANUM.

At the Bray Petty Sessions a fine of 5s. has been imposed upon a local gentleman who was using an unlicensed motor bath chair.

THE mileage of tramways in the United Kingdom is said to be 2,349. This on the authority of Mr. A. L. C. Fell, the Chief Officer of the L.C.C. Tramways.

THE attention which has recently been devoted in the pages of the *M.C.J.* to the question of the setting of valves of petrol motors has led Mr. C. Crastin, of 16, Tollington Road, Holloway, N., to devise an instrument by means of which the relative



position of pistons and valves of petrol and gas engines in accordance with different valve settings can be readily shown. By means of this device, which Mr. Crastin—whose connection with the motor trade dates from the early days of the movement—has named the "Crastinograph," the position of the piston at the various periods of inlet valve opens, ditto closes, exhaust valve opens, ditto closes, can readily be shown in diagram form. As will be seen from the accompanying illustration, it consists of a disc, divided into degrees and into various circles, and a flat strip of steel adapted at one end to receive a pin and at the other a pencil. By means of the circles it is possible to fix the pin at any desired position as regards stroke; at the same time, the effective length of the metal strip can be adjusted, thus enabling the valve setting to be demonstrated in terms of piston position for engines of any stroke and length of connecting rod. The new instrument should prove useful and interesting to motor engineers generally, and especially to teachers of motor classes.

THE Maharajah of Nepal has placed an order with the Daimler Company, through Messrs. Jeremiah Lyon and Co., 4, Lombard Court, London, E.C., for a 30-h.p. Blackdown landaulet.

ALBUMS of photographs of motor-cars have been made up by the Motor House, of 314-318 and 366-368, Euston Road, N.W., which they are prepared to send to prospective motorists informing them of their requirements.

A NEW fluid known as "Evaporine" has lately been put on the market by the Vulite Company, Ltd., of 4, Euston Buildings, London, N.W., for the purpose of removing and preventing incrustation in the radiators and water tanks of motor-cars as well as in the water jackets of the engine cylinders.

DURING the hearing of a case at Yarmouth the senior magistrate said he believed the version given by a defendant, a boy, whereupon the Chief Constable retorted that it was "rather thick" to believe the lad and not the policeman. Mr. De Caux, the senior magistrate, protested against such a comment on the part of the Chief Constable.

WE regret to learn that Mr. J. Keele met with an unfortunate accident on last Monday week while being driven from Manchester to London. Rounding a corner, the car ran into two brewer's wagons, which were on the wrong side of the road. As a result of the collision, Mr. Keele was thrown several yards, damaging his kneecap so severely that he will be unable to keep his racing engagements at Brooklands on the 1st and 3rd inst.

HERE AND THERE.

THE Central Motor Works at Paisley, belonging to Messrs. Hamilton, McDonald and Co., are well able to undertake motor repair work.

THE amalgamation of the London General, the Road Car

Co. and the Vanguard Motor Omnibus companies is now an accomplished fact so far as the shareholders are concerned.

LOCAL motorists have organised a procession of automobiles round a portion of Guernsey for the pleasure of visitors.

MR. W. ROOTES has a well-equipped garage at Hawkhurst, where he has a competent staff of motor repairers.

THE Buckingham Rapid Transit Company, which has lately been formed in Buckingham, Quebec, has placed an order for an Albion 16-h.p. char-à-banc.

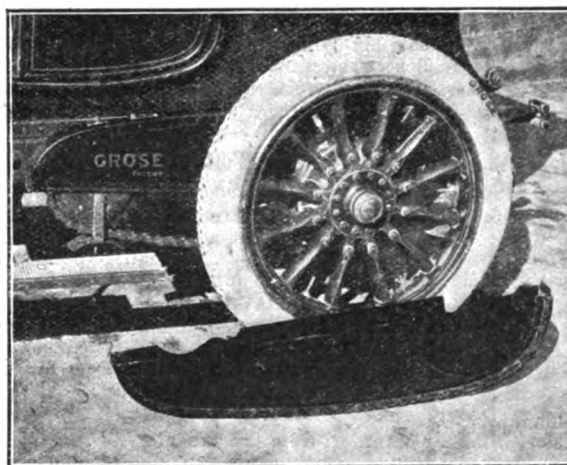
MR. HENRY FARMAN arrived in New York on Monday last and met with an enthusiastic reception. He hopes to make the first trial of his aeroplane on American soil at Oyster Bay to-day (Saturday).

FOLLOWING the recent announcement that Prince Henry of Prussia had patented a glass screen cleaning device comes the news that an improved propeller for motor-boats has been invented by Prince Christian of Hohenlohe.

THE Sussex Centre of the N.C.U. has informed the Motor Union and the R.A.C. that unless more consideration is paid by motorists to the safety of cyclists, N.C.U. members will feel it incumbent to co-operate with the police against the inconsiderate driving of motor-cars.

ACCORDING to the report of the British Consul at Havre, the total number of motor-cars carried by steamers on the various routes between England and France in 1907 was 3,131—an average of over eight per day all the year round—as against 2,655 in 1906. The following are the numbers for the respective routes:—Dover to Calais, 21 cars; Calais to Dover, 27; Folkestone to Boulogne, 796; Boulogne to Folkestone, 963; Dieppe to Newhaven, 310; Newhaven to Dieppe, 162; Southampton to Havre, 463; Havre to Southampton, 389.

MESSRS. GROSE, LTD., Northampton, are now fitting their One-Minute detachable motor chain cases to the following cars when ordered:—Daimler, Panhard, Siddeley, Rochet-Schneider, Züst, Vinot, &c. They can, in fact, be fitted to any make of



chain-driven vehicle. The makers claim that the cases reduce the noise of chains to the minimum, and insure sweet running; if the chains are well greased at the time of fitting no further attention is required for at least 4,000 miles.

IN responding to the toast of "The Prize-winners" at the annual luncheon given to farmers in connection with the Essex Hunt, Mr. J. Waltham, of Stanford Rivers, said that for a man to attend the meet of the hounds in a motor-car was the greatest insult that could be offered an English farmer. Motor-cars were disliked by farmers because they did not eat oats, and because they reduced the number of horses.

Correspondence.

[Letters to the Editor should be addressed to the offices, 37-33, Charing Cross Road, London, W.C.]

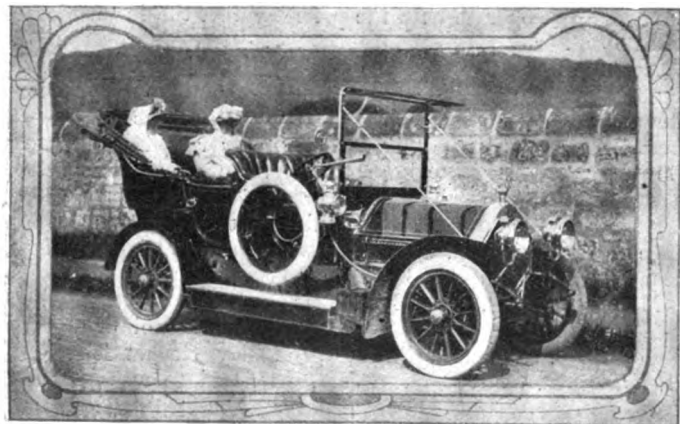
THE GRAND PRIX RACE.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—I have read with interest the remarks on the subject of the Grand Prix race in the last issue of the *M.C.J.* For my own part I cannot see that the Grand Prix contest for big cars now serves any useful purpose. The old Gordon Bennett may have done good in improving the breed—to use a horsey term—of the powerful touring cars, but these have been brought to such a high state of mechanical construction that they no longer need any help of this kind. If the French have had enough of races under any of the rules that have prevailed during the last three years, I think it would be well if, instead of proposing new rules, they were to drop the Grand Prix, so far as regards heavy cars, altogether.

As a motorist of moderate means, I was very much interested in the wonderful performance of the single-cylinder machines in the Grand Prix des Voiturettes. The progress that has been made in light car construction in France during the past year or so has been extremely marked, and if, as is generally claimed, the experience gained in races of this kind has an effect in increasing the all-round efficiency of cars used for ordinary purposes, the coming year should see a further notable improvement. If our neighbours across the Channel must organise an annual race, I for one would like to see it devoted to small cars.—Yours truly,

BUXTONIAN.



The Coventry-Humber Six-Cylinder Car belonging to Dr. Page-Robertson, of Gourrock, N.B.

The doctor writes enthusiastically of his vehicle, and informs us that he is averaging fifteen miles to the gallon of petrol.

THE SCOTTISH MOTOR SHOW.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—I enclose herewith copy of a letter I have to-day sent to the Secretary of the Society of Motor Manufacturers and Traders, Ltd., London, in connection with the above show. I shall be obliged if you will publish same in your next issue.—Yours truly,

DAVID A. FAIRLEY.

Secretary Scottish Motor Trade Association, Ltd.

COPY.

July 27th, 1908.

To the Secretary,
Society of Motor Manufacturers and Traders, Ltd.,
Maxwell House, Arundel Street, Strand, London.

The 12th Annual Scottish Motor Exhibition.
Waverley Market, Edinburgh.

22nd to 30th January, 1909 (inclusive).

Dear Sir,—I am in receipt of your letter of the 23rd inst., in reply to which I have to state that the policy of the Society of Motor Manufacturers and Traders, Ltd., in connection with the Scottish Exhibition is antagonistic to the interests of the motor industry in Scotland. The Scottish Motor Trade Association is not only one of the oldest in the United Kingdom but it has proved itself invaluable as developing the motor trade in Scotland. Owing to the vital importance of this question the Scottish Motor Trade Association, Ltd., have submitted to you the reasons for the continuance of the Motor Show in Scotland, and also offered to send a deputation to London to discuss the whole matter with your council. I regret the latter have neither answered the Scottish

Motor Trade Association's reasons, nor have they received the deputation. On the contrary, they have refrained from giving their reasons, and have not even communicated the terms of their resolution, both of which, considering the importance of the matter to Scotland, should, I think, have been done.

You will please understand that the Scottish Exhibition will be held as usual on the dates above mentioned. The matter has been fully considered by my association, and they are unanimously in favour of proceeding with the 1909 Exhibition in Edinburgh. My council have taken steps to prevent the agents in Scotland from signing any bond that would disable them from exhibiting in Edinburgh, and you may assume that they will refuse to sign the agents' bond which your society seeks to impose upon them. All the leading agents in Scotland concur in this policy and have agreed not to sign your bond.—Yours truly,
(Signed) DAVID A. FAIRLEY, Secretary.

RAILWAY LEVEL CROSSINGS.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—I trust you will find a small space in your paper re above. On July 27th I witnessed what might have been a very disastrous railway accident at Crawley, L.B. and S.C.R. Very scanty lights are placed on the gates blocking the main London and Brighton road at the above station. At about 9.10 p.m. a large-bodied Daimler car of about 35-h.p. was proceeding through the Crawley High Street towards Brighton at about fifteen miles per hour, when the gates were across the road for an express train of holiday makers to pass. The driver of the car did not notice the road was blocked until quite close to the gates, when he had to apply his brakes rather smartly to bring his car to a standstill, otherwise the results would have been disastrous.

Surely the railway company can be compelled when blocking any road to place a light on that can be seen at a good distance, or have the people who may be travelling on the road to be killed before any action is taken?

Trusting this may come under notice of someone in authority, that the evil may be remedied either by placing four lamps on the gates, or two larger ones than they now have.—Yours truly,

ONLOOKER.

SHOULD WOMEN MOTOR?

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—The philosophic amateur in the House of Commons is just now in conflict with the motor expert, offering pretentious argument on the speed of automobiles, but the question foremost in the minds of lovers of beauty spots is whether the motor-car is to be harnessed for family purposes, and, if so, should women motor? The bungling of parliamentary stupidity some years ago, in consequence of a three-mile-per-hour-limit preceded by a red flag, put the clock of progress back, which was remedied by a swing of the speed pendulum to twenty miles, giving unlimited possibilities to motor enterprise. Statistics and racing trials now place the maximum and minimum speed of automobiles to over 100 miles per hour, with an average of 30; therefore paterfamilias is much perturbed in mind as to whether such speed proclivities will prove distracting to his wife and bairns. Twenty miles an hour, with the car in safe hands, may be a low limit of restriction, and even thirty would be acceptable, always provided motor drivers were governed by the Golden Rule; but are they?

The highways and byways are our most valuable national, and even international, possession, for upon them the health and strength of the race depend, and visitors from our Colonies, to say nothing of our American, French, German and other friends from abroad, refer to the British Empire as a land of the free, and the British a sport and liberty loving people. Not only so, but the Englishwoman is known all the world over as a pioneer traveller, inspired by a sense of freedom, envied by other folk, men and women alike. It is she who takes the challenge in the palm of her hand, daring all and fearing nought, knowing that her honour and safety are an Englishman's most cherished trust. Automobilists, therefore, who are parliamentarians, the geniuses who control motor capitalism, motor enterprise, and motor manufacture, are invited in the interests of trade and family life to consider thoughtfully the question of "Should Women Motor?"

There are now on the market some twenty-five motor-cars built for purposes of modest motoring, capable of being harnessed for the family and home circle, well-suited to the skilful handling of a lady, if she be holder of the Royal Automobile Club driving and technical certificates. Very few families can afford the expenses of a chauffeur, and it seems a pity that a car should be stabled for five and a half days a week merely because the man of the house is away, busy at his profession or pre-occupied by the more important bread-winning duties.

Motor-driving for ladies has got to come sooner or later, and surely it behoves the sensible men interested in the sport, pastime and

trade, to bestir themselves in preparing the way and clearing the road for feminine conquest, as automobilism will never be really popular for the million until woman reigns supreme as queen of the automobile.—Yours truly,

N. G. BACON.

A COVENTRY CASE.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—I would ask you to warn through your columns fellow motorists against the danger in visiting Coventry by car at the present time. At the Police Court (Coventry), on a recent Friday, at the opening of the first case against a motorist the prosecuting solicitor made the statement that at a meeting of the Warwickshire Council a resolution had been passed that the sum of £15,000 must be raised to make good the roads in the Coventry district which had been damaged by motor traffic, and that many stop watches had recently been purchased for the police to enable motor traps to become the order of the day.

I had the misfortune to be "trapped" whilst driving a friend's 8-h.p. Rover (four-seater) with three passengers on board and carrying heavy baggage. On being "held up" at end of trap I was informed that a measured quarter of a mile had been covered by me in 43 sec., equalling twenty-one miles per hour, but that the charge of driving in excess of speed limit would not be made, but "driving to the common danger."

The road was devoid of traffic, with the exception of one tram I passed and a cart which came from an opposite direction to which I was travelling. The police swore that the little overburdened 8-h.p. Rover entered the trap at the rate of over forty miles per hour, but slowed up towards the end of the measured distance.

Notwithstanding my explanation to the Bench that under the most favourable conditions the car in question could not travel at a greater speed than thirty miles per hour, owing to its engine speed and gear, I was mulcted to the extent of £4 8s. 6d. If Mr. Harry Smith, managing director of the Rover Company, is prepared to accept the constable's evidence, then he should be a proud man indeed, for, in producing an 8-h.p. car having a slow-running engine and low top gear which will exceed forty miles per hour, a most marvellous and mysterious piece of mechanism has emanated from his works.—Yours truly,

HENRY P. CARTER.

A HINT TO DRIVERS.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—I make bold to trespass upon your generosity in order to ventilate a subject which I am sure you and your readers will find interesting. I will preface my remarks by saying that I have had a very long and constant experience of driving through the crowded streets of London, and I may, therefore, be permitted to say that I am thoroughly acquainted with the various characteristics of the many weird and strange drivers it has been my lot to meet with. But perhaps, of all the traditions connected with driving in the streets, that of holding out the wrong arm by a driver who wants to turn into a side street is perhaps the most remarkable. Let me say that "A" is driving in front, and "B" is driving another vehicle behind. Both are proceeding in the same direction, and are quite properly on the left side of the road. The intention of "A" is to turn into a side street on the same side of the road, but he erroneously throws out his right arm instead of the left, with the result that "B," on seeing the signal, keeps close in to the left side of the road, by which time, however, "A" is at right angles with "B," who narrowly escapes running into him.

It surely cannot be a difficult thing for a driver to remember to throw out the arm corresponding with the side of the road that he wants to turn off into, but very few people seem to realise this important yet simple rule. I have had a number of adventures, both minor and major, through others' neglect of these simple rules, and in writing to you upon the subject I have only the one solitary idea in my mind, which is, to draw the attention of gentlemen who may perhaps warn their drivers to remember that the proper observance of the above hint will perfect them in their driving.—Yours truly,

T. H. DEY.

CHARGING ACCUMULATORS FROM SMALL DYNAMOS.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—I notice that you are answering queries with regard to the charging of accumulators, and therefore venture to write you on the subject. I have a dynamo generating current at 100 volts, and have got my two wires (having ascertained which is + and —). How many candle-power must I have in the one circuit to charge my four-volt accumulator, which, according to instruction, should be charged at the rate of one ampere for ten hours?—Your truly,

J. R. WILSON.

[To charge a four-volt accumulator which requires one ampere for the charging rate, it will be necessary to put two 16 c.p. lamps in the circuit. At 100 volt pressure a 16 c.p. lamp takes .8 ampere, and therefore two of these will give a trifle over one ampere when the 4-volt accumulator is in circuit. If 16 c.p. lamps are not available, three lamps of 8 c.p. will do; these take about .4 ampere each; or if it is preferable to charge for a long time at a slow rate, two 8 c.p. lamps will be sufficient.]

SOLID v. PNEUMATIC TYRES.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—Referring to the description of the Torkington tyre in the last issue of the *M.C.J.*, I should be glad if any reader could inform me how much more power it would take to drive a car fitted with solids than if it were shod with pneumatic tyres? I have been informed by different people that it takes nearly double the power, but I cannot believe it to be right.—Yours truly,

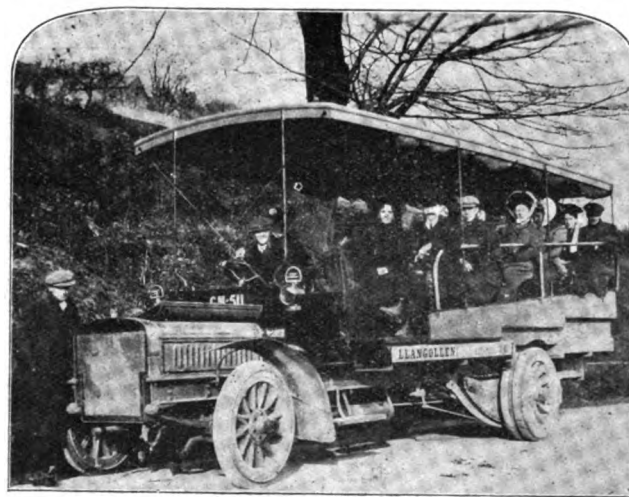
J. T. O.

[In connection with the point raised by our correspondent, we may mention that Mr. Lyons Sampson, M.I.Mech.E., recently carried out some gravitation tests to ascertain how the Torkington tyre compared in rolling resistance with pneumatics. The following results were obtained:—A 30-40-h.p. limousine car, weighing with passengers 42½ cwt., was allowed to run down from the brow of a hill from a predetermined point, the distance which it ran in each experiment being carefully measured. When fitted with Torkington tyres it travelled 1,677 yds., or 76 yds. further than when equipped with 920 mm. by 120 mm. pneumatic covers inflated to 80 lb. pressure, and 254 yds. further than when the same tyres were inflated to 50 lb. pressure only. The maximum speed attained in each case was about 43 miles per hour. From these figures it would seem that the new solid tyre neither slows the car nor absorbs more power than pneumatics.]

ENGINE STARTING TROUBLES.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—Will any of your readers kindly tell me how to overcome the following difficulty? I have a small car fitted with an 8-h.p. single-cylinder



The Durham-Churchill Char-a-banc used for excursion purposes by Mr. V. Gerard, of the Belgrave Hotel, Chester.

engine, magneto ignition, which I can always start at the second turn of the handle when commencing a journey or when the engine is cold, but after running some miles and stopping I have to turn sometimes a dozen or more times to start the engine. Why should it be more difficult to start when the engine is warm; would an auxiliary accumulator set for low tension magneto remove the difficulty?—Yours truly,

EPSOM.

[We are inclined to think that our correspondent's trouble is not at all to do with the ignition, as if this were the case he would have the same difficulty when starting cold. The trouble is generally reversed, trouble in starting cold, and not when hot. We should be rather in favour of trying the compression, and if found to be weak when hot, use a somewhat thicker lubricating oil. This appears to be the only possible trouble, as the engine will readily start when the lubricating oil is cold and will cause a good compression, but when it is warm is likely to let the compression pass the piston.]

LOW TENSION SPARKING PLUGS.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—It would be interesting to learn what has become of the various low tension ignition systems, those in which the contact spark is produced by means of make and break devices, operated magnetically instead of mechanically, that have been brought out during the past few years. At one time it seemed as if the idea would become a popular one, but they all seem to have disappeared. The object of the low tension plug device is, of course, to secure whatever advantages the contact spark possesses, and at the same time eliminate the numerous and somewhat vulnerable moving parts required to produce a properly timed mechanical make and break in each combustion chamber.—Yours truly,

ENGINEER.

THE MOTOR UNION AT HARROGATE.

ON Saturday Mr. C. McWhirter presided at the meeting of the General Committee of the Motor Union in the Municipal Offices at Harrogate, when the Mayor welcomed the motorists on behalf of the town.

It was reported that the number of individual members who had joined the Union direct was now 5,000, and that with the members of affiliated clubs the membership was over 15,000. Grants had been made in a number of appeals in the courts, and the Union is also supporting financially resistance to the attempt of a Metropolitan magistrate to end licences with the third offence for exceeding the speed limit in the Royal Parks. The point raised bears upon the successful appeal by the Union against the endorsement of licences under the Parks Regulation Act. A reply was agreed upon to a letter from the Local Government Board, asking the views of the Union upon proposals for the prohibition of armoured or steel studded tyres. The Union is of opinion that the evidence did not justify the entire prohibition of this type of tyre, but a suggestion was made for meeting the views of the local road authorities. The Union further expressed the view that the additional cost of maintaining trunk roads in consequence of the increased traffic should be met by grants from the State. Approval was given to the report of the Union's delegates to the International Touring Clubs' Congress at Stockholm, and it was agreed to invite the touring clubs of Europe to hold their annual Congress in London next year. Certain amendments were ordered to be promoted to the Town Planning Bill now before Parliament, with a view to improving the main roads through the suburbs of large towns. The Union's Foreign Handbook was reported to have been published that day. The meeting resolved to oppose before the Board of Trade the Mid-Lincolnshire Light Railway Bill, with a view to safeguarding the interests of users of the highway in respect to level crossings. An interview with the Inland Revenue authority with



Some of the Crippled Children of New York off for an Outing to Coney Island.

reference to the use of industrial alcohol for internal combustion engines was reported. It appeared that the Government would not oppose the use of alcohol, provided that the revenue is safeguarded by the use of a satisfactory denaturant.

Votes of thanks were passed to the Mayor and Corporation and the Yorkshire and Harrogate Clubs for the welcome extended to the Union.

The annual dinner was held at the Hotel Majestic, Harrogate, in the evening. Mr. E. H. Hepper, chairman of the Yorkshire A.C., presided, and was supported by the Mayor of Harrogate (Dr. Neville Williams), the town clerk (Mr. J. Turner Taylor), Sir Stanley Bois (Ceylon), Mr. C. McWhirter, Mr. C. P. Wilson (hon. secretary of the Yorkshire A.C.), Mr. Rees Jeffreys, and others.

The Chairman, in proposing "The Motor Union of Great Britain and Ireland," said he regretted the absence of the chairman of the Motor Union. He regretted the split between the Royal Automobile Club and the Motor Union, but he hoped they would come together again and be one happy family for the benefit of motoring. The Motor Union had done much in furthering considerate driving. There was much to be said for pedestrians, and motorists must do all they could to stop dust and the aggressive action of people who did not see eye to eye with them. He referred to the number of motor accidents during the past week or two. They were very distressing, but whether they were the fault of the motorists or the main roads he could not say. But he could say that motorists saved the lives of many careless pedestrians. If people would not step off the causeway in front of motorists there would not be so many accidents.

Mr. H. A. Watson (York), chairman of the North Yorkshire Automobile Club and a member of the Executive of the Motor Union, responded. He said that the work which had been accomplished by the Motor Union could only have been done by a well-managed organisation,

and its constitution appealed to the public and the Government departments. He urged that all motor organisations should act in concert, which would be a step in the right direction in bringing about a reconciliation between the R.A.C. and the Motor Union.

The toast of "Our Hosts" was honoured on the proposition of Mr. McWhirter. Replies to the toast were made by Mr. C. P. Wilson, hon. secretary of the Yorkshire A.C., and Dr. Holroyd, hon. secretary of the Harrogate Club.

Sir Stanley Bois, representative of the Ceylon A.C., proposed "The Mayor and Corporation," to which the Mayor replied. In doing so his Worship said the magistrates of Harrogate did not consider that there was any necessity at all for police traps along a quiet road in the open country.

The last toast was the health of the Chairman.

ROAD REPORTS.

KINGSTON.—The Kingston Corporation have treated a portion of Eden Street, one of the main roads through the town, largely used by motorists, with a new dust-laying material, which permits of the granite being rolled in dry. Hopes are entertained of its efficiency in allaying the dust nuisance. It is claimed that a road so treated will last from three to five years.

FINDON.—Efforts are being made by the parish council of Findon to secure the imposition of a speed limit of ten miles an hour on motor-cars on the Horsham and Worthing road.

HINDHEAD.—A dispute is proceeding between the Hambledon Rural District Council and the National Trust for the Preservation of Places of Beauty and of Interest with respect to the excavation of stone on Hindhead Common for the purpose of road repair. Major Edward F. Coates, Chairman of the Surrey County Council, has asked that the petition from Hindhead for a maximum speed limit for motors in that locality shall be brought before the Highways Committee of the Surrey County Council at their next meeting.

LEWISHAM.—The police control at Loampit Vale, Lewisham, has been in daily operation during the last week or so.

CARDIGANSHIRE.—In Cardiganshire stop-watches are to be provided for the use of the police engaged in timing the speed of motor-cars at several cross roads in the county.

COVENTRY.—Police traps of a quarter of a mile in length are being worked on the Birmingham road at Allesley, and at Anstey, along the London road just out of Coventry.

LYNTON AND LYNMOUTH.—The district roads are in excellent condition for motoring. A proposed new road across Lyn Down is objected to, as it is thought it would place Lynton and Lynmouth, especially the latter, out of the line of motor traffic.

HERTFORDSHIRE.—At a meeting on Monday of the Herts County Council, the following local authorities applied for orders constituting a speed-limit for motor-cars passing along certain highways specified—viz., Elstree Parish Council, Great Berkhamsted Urban District Council, St. Albans Rural District Council, Stevenage Urban District Council. The Council approved of orders being applied for limiting the speed of cars on these roads to ten miles an hour. The Herts medical officer of health, in his annual report presented to the County Council at the same meeting, stated that from experience at Baldock it is concluded that a slag and tar construction, if laid on the roads in dry weather, costs slightly more than ordinary macadam, but lasts three times as long, and is practically dustless.

NEWCASTLE.—At Seaton Burn, near Newcastle-on-Tyne, is a police "control"; another is frequently worked at Stanington, in the same district.

HIGH WYCOMBE.—The London and Oxford main road at High Wycombe has for some distance been experimentally tarred and found to be beneficial to motorists as well as minimising the dust nuisance. The Town Council of Wycombe has decided to extend the tarring, and the Buckinghamshire County Council is contributing half the cost.

WOKING.—The Surrey County Council have made an application to the Local Government Board to fix a reduced speed limit of ten miles an hour for motor-cars in parts of the urban districts of Woking and Walton-on-Thames.

WINDSOR.—Police traps are now a feature of the roads around Windsor.

PRESTON.—In the police court at Preston on Monday a new trap was disclosed.

KINGSTON.—The borough surveyor of Kingston is making some experiments with regard to the use of "Flasom" as a preventive of the dust nuisance in certain streets in that Surrey town.

SELBY.—Police traps on the Doncaster road at Brayton have lately led the way to Selby Petty Sessions.

MIDDLESEX.—The Middlesex County Council have agreed to ask the Local Government Board to make regulations limiting to ten miles an hour the speed of motor-cars in High Street, Brentford; in Upper Teddington Road, and High Street, Hampton Wick; and through Great Stanmore from Clutterbuck's Brewery to Marsh Lane, and along the whole of Church Street.

HOUNSLOW.—The experiments of the local authority for Hounslow to deal with the dust problem this year have proved very satisfactory as well as economical. The most successful material used was a preparation of oil tar, which on the Bath road cost only 1d. per square yard, as against an average of 1-28d. for watering in the customary manner.

CLUBS AND ASSOCIATIONS.

MOTOR UNION.

THE Motor Union has issued a statement of the Legal and Legislative Defence Fund for 1908, which shows a total expenditure of £543 in legislative and legal defence as well as in opposing speed limit applications. The total receipts have been £59, leaving an excess of expenditure of £486.

BROOKLANDS.

THE entries for the meet of Brooklands A.R.C. to-day (Saturday) are as follows:—

The Fourth All-comers' Handicap Sweepstakes, about 5½ miles.—J. E. Hutton, Hutton, "Little Dorrit"; G. C. G. Moss, Arrol-Johnston, "Guarded Flame"; G. A. Phillips, 19.6-h.p. Coventry-Humber; P. C. Kidner, 20.5-h.p. Vauxhall; P. D. Stirling, 25.6-h.p. Hutton; G. C. Colmore, 14.7-h.p. Humber; B. M. Thornton, 22.5-h.p. Ford; H. G. Nalder, Berliet, "Grayling"; A. Gsal, 35.7-h.p. Westinghouse; R. Wavell-Paxton, 52.1-h.p. F.I.A.T.; G. H. Levick, 25.6-h.p. Napier; G. H. Levick, 6.2-h.p. Delage; T. Faulkner, 24.8-h.p. Mercedes; W. B. R. Moorhouse, F.I.A.T., "Linda"; M. L. Braithwaite, 17.5-h.p. West; D. Pigot, Darracq, "Delilah"; A. C. Godwin-Smith, 22.4-h.p.

Mercedes; D. Pigot, Darracq, "Delilah"; S. F. Edge, 90-h.p. Napier F. R. Fry, 59.6 h.p. Mercedes.

The Journalists' Handicap, about 5 miles.—W. Whittall, 8.05-h.p. Rover; W. G. Aston, 13.9-h.p. De Dion; C. J. Bertelli, 7.5-h.p. O.T.A.V.; J. Owen, 25.6-h.p. Thornycroft; R. V. Beveridge, 8.9-h.p. Sizaire; R. J. Plateau, 19.6-h.p. Belsize; Eustace Gray, Porter Lind say.

The official entries for Monday's events are as follows:—

The August Trophy, about five miles.—I. Bullough, 44.5-h.p. Junior; G. C. G. Moss, Arrol-Johnston, "Guarded Flame"; P. D. Stirling, 25.6-h.p. Hutton; T. Faulkner, 24.8-h.p. Mercedes; A. H. Moreing, 38.1-h.p. Daimler; Harold Agar, 17.5-h.p. Leader; H. G. Nalder, Germain, "Yellow Peril"; G. H. Levick, 6.2-h.p. Delage; G. H. Levick, 25.6-h.p. Napier; G. Duveen, 34.5-h.p. Mercedes; W. B. R. Moorhouse, 58.1-h.p. Fiat; G. F. Scantlebury, 8.9-h.p. Sizaire; W. Whiteway, 24.1-h.p. Calthorpe; O. S. Thompson, Austin, "Pobble"; H. C. Halahan, 17.5-h.p. Dennis; F. A. Bolton, 59.6-h.p. Ariel; C. Hobson, 27.9-h.p. Nagant-Hobson; C. Hobson, 48.6-h.p. Brasier; Sir George Abercromby, 58.1-h.p. Fiat; A. Van Hoboken, 71.7-h.p. Mercedes; C. A. Bird, 34.5-h.p. Mercedes; G. Russell-Miller, 22.4-h.p. De la Buire; P. G. Wavell-Paxton, 52.1-h.p. Fiat; H. Browning, 23.3-h.p. Rover.



The Midland Club's Hill Climbing Competition at Shelsley Walsh.—The Scene at the Starting Point.

Certus; O. S. Thompson, Austin, "Pobble"; H. Taylor, 20.1-h.p. Clement-Talbot; F. A. Bolton, 59.6-h.p. Ariel; O. Cupper, Metallurgique, "Gollywog"; C. Hobson, 27.9-h.p. Nagant-Hobson; C. Hobson, 48.6-h.p. Brasier; Sir George Abercromby, Bt., 58.1-h.p. F.I.A.T.; W. J. Jochems, 48.6-h.p. Mercedes; A. J. Palmer, 33.4-h.p. Napier; H. Browning, 23.3-h.p. Rover; C. A. Bird, 34.5-h.p. Mercedes; F. R. Fry, 76-h.p. Mercedes; C. J. Bertelli, 7.5-h.p. O.T.A.V.; S. Straker, 18.8-h.p. Shamrock, Straker-Squire; T. H. Shaw, 21-h.p. New Leader; G. R. S. Darroch, 71.7-h.p. Darracq; Frank Eason, 22.5-h.p. Buick; Charles Jarrott, 6.2-h.p. Sizaire; E. A. Humphreys, 45.2-h.p. Hermes.

The Merit Trophy, about 5½ miles.—I. Bullough, 44.5-h.p. Junior; G. C. G. Moss, Arrol-Johnston, "Guarded Flame"; P. D. Stirling, 25.6-h.p. Hutton; A. H. Moreing, 38.1-h.p. Daimler; H. G. Nalder, Berliet, "Grayling"; G. H. Levick, 25.6-h.p. Napier; T. Faulkner, 24.8-h.p. Mercedes; G. E. Duveen, 34.5-h.p. Mercedes; G. F. Scantlebury, 8.9-h.p. Sizaire; G. H. Levick, 6.2-h.p. Delage; O. S. Thompson, Austin, "Pobble"; H. C. Halahan, 17.5-h.p. Dennis; F. A. Bolton, 59.6-h.p. Ariel; C. Hobson, 27.9-h.p. Nagant-Hobson; C. A. Bird, 34.5-h.p. Mercedes; C. J. Ratcliff, 27.3-h.p. Beeston-Humber.

The second Montagu Cup, about 30 miles.—J. E. Hutton, 76-h.p. Mercedes; H. G. Burford, 76-h.p. Mercedes; H. G. Burford, 59.6-h.p.

The First O'Gorman Trophy, about 100 miles.—S. F. Edge, Napier, Grand Prix; S. F. Edge, 60-h.p. Napier; J. E. Hutton, Hutton, "Little Dorrit"; D. Pigot, Darracq, "Delilah"; E. W. Lewis, 67.5-h.p. Deasy; H. G. Burford, 59.6-h.p. Mercedes; H. G. Burford, 76-h.p. Mercedes; F. R. Fry, 59.6-h.p. Mercedes.

A match will also be run between Miss Muriel Thompson and Miss Christabel Ellis.

HARTLEPOOLS.

ON Saturday the motor reliability trial in connection with the Hartlepool Automobile Club was repeated, the previous trial, which took place under terrible weather conditions some days ago, having been declared void. The route was the same as on the previous occasion—namely, from West Hartlepool to Helmsley and back—about 96 miles. Six cars competed, their times of starting and finishing being as follows:—

Mr. George Jones (16-20-h.p. Argyll), start 1 h. 30 min., finish 7 h. 7 min. 43 sec.; Mr. C. P. Sanderson (15-h.p. Coventry Humber), start 1 h. 33 min., finish 7 h. 31 min.; Mr. C. E. Smith (35-40-h.p. Mercedes), start 1 h. 36 min., finish 7 h. 18 min. 43 sec.; Mr. J. W.

Merryweather (14-16-h.p. Argyll), start 1 h. 39 min., finish 7 h. 21 min. 50 sec.; Mr. B. Pym (20-h.p. Beeston Humber), start 1 h. 42 min., finish 7 h. 23 min. 50 sec.; Mr. C. McAdams (14-16-h.p. Belsize), start 2 h. 6 min., finish 7 h. 57 min. 11 sec.

The cards have yet to be worked out and the result declared.

WEST SURREY A.C.

THE fifth annual gymkhana of the club was held on Saturday at Prior's Field, Godalming. The weather, which had been somewhat threatening, remained all that could be desired, and a concourse of about 400 members and guests witnessed the proceedings, there being seven events, for which fifteen entries had been received. The results were as follows:

Tilting at the Ring.—Winner, Mr. L. Pullman, 16-h.p. Aries, 47 points; 2nd, Mr. J. F. Ponsford, 43 points; runners-up, Messrs. E. Fairtlough and Buttemer, 33 points each.

Ten-mile Limit Race.—This was run over a course of a quarter of a mile, and resulted in a victory for Miss Houghton, 14-h.p. Renault, in 90.4-5 sec., 9.02 miles per hour; Mr. J. F. Ponsford, 8-h.p. Clement, being second with 10.36 miles per hour.

Starting Race.—1, Mr. Fairtlough, 12-h.p. Darracq; 2, Mr. A. Williams, 10-h.p. Wolseley.

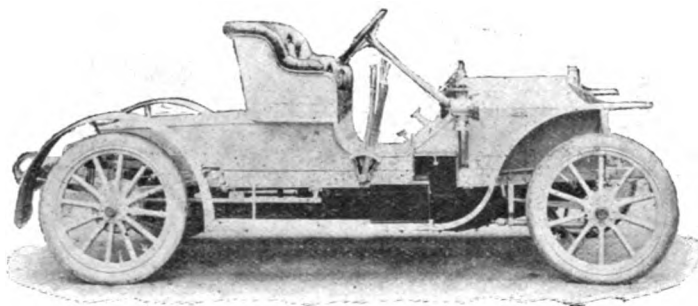
Passenger Race.—Winner, Dr. Hussey, 20-h.p. Pilgrim, with Mrs. Buttemer as passenger; 2nd, Mr. Swinburne with Miss Davis.

Skillful Driving Competition.—Winner, Mr. R. Buttemer, 14-h.p. Renault; 2nd, Mr. J. F. Ponsford.

Archery Race.—Ladies had to be taken as passengers, each passenger to shoot six arrows at a target. Best time won after deducting 12 sec. for a hit, and twenty for a bull. Scores were, however, uniformly nil, the only target that was nearly hit being one of the drivers, and the winner proved to be Dr. Hussey; second, Mr. L. Pullman.

Musical Chaire.—Winner, Mr. Swinburne, with Miss Hills; second, Mr. Buttemer, with Miss Fetter.

Messrs. S. Beavor, C. W. Crawley, and Hopkins Walters acted as judges, with Mr. J. E. Sparkes; times were taken by Mr. H. H. Griffin, while Messrs. Bryan Hook and Graeme Watt assisted the



The 32-h.p. Metallurgique recently delivered to the Earl of Carnarvon.

chairman in supervising the arrangements, which went off without a hitch.

The presentation of prizes by Mrs. F. Howard Fairtlough concluded the most successful gymkhana yet held by the club.

HULL AND DISTRICT.

THE Hull and District Automobile Club held an interesting competition on Saturday, the same taking the form of a "pace judging" competition. Dr. W. H. Coates (chairman of the committee) acted as starter, timekeeper, and judge, being assisted by Mr. H. Strong (assistant secretary).

The starting point of the route was at Tranby Lane end at Anlaby, and the route taken was by Kirkella, Kirkella Grange, South Cave, Elloughton, Welton, Melton, Ferriby, and Cemetery Lane, Hessle, back to the starting point.

There were nine entrants, of whom six faced the starter. Three prizes were offered by Mr. A. J. Atkinson (president of the club), Mr. G. Wade, and the Hull City Garage Company, the committee deciding to award two prizes. The order of merit was as follows:—1, Dr. E. H. Howlett; 2, Mr. A. T. Simpson. The other competitors in order were:—Mr. J. Webber, Mr. J. Walton, Mr. W. Fenner, and Mr. George H. Strong (hon. secretary of the club). The two winners were very close to one another in order of merit, Dr. Howlett being within 49 seconds of the scheduled time at his allotted speed, whilst Mr. Simpson was within 53 seconds of the scheduled time at his allotted speed.

YORKSHIRE.

ON Monday, Mr. H. R. Kirk, of Leeds, one of the vice-presidents of the Yorkshire A.C., invited the members of the club to a motor meet and garden party in his delightful grounds at Castle Grove, Headingley, Leeds. About 130 members and friends attended. The weather was favourable and a very enjoyable afternoon was spent by those who accepted Mr. Kirk's invitation. As the guests arrived they were intro-

duced by the hon. secretary and treasurer (Mr. C. P. M. Wilson) to Mr. Kirk in the hall of Castle Grove, after which they proceeded to the lawn to partake of afternoon tea and refreshments. An orchestra, under the leadership of Mr. A. Workman, ably read numerous selections. Nothing had been overlooked by Mr. Kirk in providing pleasure and comfort for his guests. Amongst those present were the following: Mr. John Kirk and Mr. R. S. Kirk (Leeds), Mr. and Mrs. Arthur Kirk (Pannal), Mr. and Mrs. J. Scott (Leeds), Mr. and Mrs. A. S. Russell (Ilkley), Mr. W. Rees Jeffreys, Mr. D. H. Thornton (Birkenshaw), Mr. and Mrs. F. W. Sutcliffe (Huddersfield), Mr. and Mrs. E. H. Hepper (Leeds), Mr. and Mrs. L. Hey (Leeds), Mr. J. Newton (Manchester), Mr. and Mrs. C. F. Guest (Barnsley), Mr. and Mrs. J. D. Fawcett (Leeds), and Mr. and Mrs. R. Winn (Leeds).

After enjoying the refreshments, a move was made to the field in front of the house, where Mr. Kirk had set out a course and made arrangements for a gymkhana. The prize winners were Mr. Arthur Kirk, who won the B.m.b. Competition, and Mr. F. W. Roberts, who won the Tortoise Race, whilst Mr. Jack Mortimer carried off second prize in both events.

MIDLAND.

ON Saturday the Midland A.C. held their annual hill-climb at Shelsley Walsh, over a course that must be regarded as almost an ideal one for such a purpose. The hill is in the private grounds of Mr. M. H. Taylor, of Court House, Shelsley Walsh, Worcestershire, so that there was no disturbance of the ordinary traffic. The cars were weighed at Martley, and the course selected measured 1,000 yards, with an average gradient of 1 in 8, the steepest portion being 1 in 6. The times of the cars in the open hill climb were as follows, the placing being also given:—

| Car. | Driver. | Time. | | Placing. |
|------------------------------|----------------------|-------|--------|----------|
| | | min. | sec. | |
| 20-h.p. Lanchester ... | G. H. Lanchester ... | 2 | 15 4.5 | 2 |
| 28-h.p. Lanchester ... | T. H. Barnsley ... | 1 | 52 | 7 |
| 20-h.p. Vauxhall ... | Percy C. Kidner ... | 1 | 31 2.5 | 1 |
| 20-h.p. Sunbeam ... | F. Eastmead ... | 2 | 15 3.5 | 22 |
| 10-12-h.p. Humber ... | G. A. Phillips ... | 2 | 24 4.5 | 18 |
| 40-h.p. Napier ... | J. F. Browning ... | 1 | 27 2.5 | 3 |
| 60-h.p. Napier ... | H. C. Tryon ... | 1 | 5 2.5 | 14 |
| 35-h.p. Deasy ... | P. Graham ... | 1 | 35 | 20 |
| 65-h.p. Mercedes ... | H. C. Burford ... | 1 | 17 4.5 | 28 |
| 58-h.p. Daimler ... | G. S. Barwick ... | 1 | 8 1.5 | 24 |
| 40-h.p. Ariel ... | C. Sangster ... | 1 | 26 3.5 | 25 |
| 8-9-h.p. Chenard-Walcker ... | H. Pennington ... | 4 | 38 3.5 | 13 |
| 38-h.p. Daimler ... | G. H. Ison ... | 1 | 24 | 8 |
| 38-h.p. Daimler ... | G. Street ... | 1 | 26 3.5 | 12 |
| 58-h.p. Daimler ... | E. M. C. Instone ... | 1 | 11 2.5 | 27 |
| 38-h.p. Daimler ... | A. J. Astbury ... | 1 | 34 2.5 | 16 |
| 14-h.p. Allday ... | F. W. Huband ... | 2 | 24 1.5 | 15 |
| 40-50-h.p. Ariel ... | F. A. Bolton ... | 1 | 14 3.5 | 26 |
| 25-h.p. Clement-Talbot ... | W. T. Stokes ... | 1 | 49 1.5 | 6 |
| 10-h.p. Clement-Talbot ... | T. W. Bowen ... | 3 | 19 3.5 | 5 |
| 40-h.p. Austin ... | S. Hands ... | 1 | 31 2.5 | 10 |
| 20-h.p. Allday ... | E. J. Blakemore ... | 2 | 34 2.5 | 19 |
| 38-h.p. Daimler ... | A. Farnell ... | 1 | 23 2.5 | 4 |
| 40-h.p. Metallurgique ... | Warwick Wright ... | 1 | 11 4.5 | 9 |
| 14-h.p. Allday ... | E. Armstrong ... | 2 | 31 3.5 | 17 |
| 58-h.p. Daimler ... | H. C. Holder ... | 1 | 17 3.5 | 29 |
| 14-16-h.p. Belsize ... | Mrs. E. A. Riley ... | 2 | 27 2.5 | 21 |
| 14-h.p. Allday ... | S. Downing ... | 2 | 22 | 11 |
| 14-h.p. Allday ... | C. E. Simms ... | 2 | 53 | 23 |

The first four cars, according to time, were:—(1) 60-h.p. Napier, which created a new record for the hill; (2) Mr. G. S. Barwick's 58-h.p. Daimler; (3) Mr. E. M. C. Instone's 58-h.p. Daimler and Mr. Warwick Wright's 40-h.p. Metallurgique, which was only 2-5 sec. behind.

On the handicap the cup presented by the president of the Midland A.C., Mr. P. S. Foster, was awarded to Mr. P. C. Kidner's 20-h.p. Vauxhall, Mr. G. H. Lanchester's 20-h.p. Lanchester and Mr. A. Farnell's 38-h.p. Daimler being second and third respectively.

In the Closed Event Handicap the competitors were Messrs. R. D. Todd, 20-h.p. Allday; C. J. Newey, 10-h.p. De Dion; C. A. Bird, 40-h.p. Mercedes; Arthur Cox, 9-h.p. Riley; W. Guilding, 12-h.p. Star; W. B. Kent, 14-16-h.p. West Aster; V. Riley, 12-h.p. Riley; G. Bird, 30-35-h.p. Ariel; G. W. Hands, 25-30-h.p. Calthorpe; L. Antweiler, 13-20-h.p. Calthorpe; W. Allday, 20-h.p. Allday; G. F. Heath, 18-h.p. Minerva; W. Pilkington, 10-16-h.p. Talbot; G. H. Lanchester, 20-h.p. Lanchester; T. H. Barnsley, 20-h.p. Lanchester; C. Sangster, 40-h.p. Ariel; A. J. Astbury, 38-h.p. Daimler; F. A. Bolton, 40-50-h.p. Ariel; W. T. Stokes, 25-h.p. Talbot; T. W. Bowen, 10-h.p. Talbot; H. C. Holder, 58-h.p. Daimler; S. Downing, 14-h.p. Allday; C. E. Simms, 14-h.p. Allday.

IPSWICH AND EAST SUFFOLK.

BY permission of Lord Rendlesham, the annual speed trials of the Ipswich and East Suffolk A.C. were held in East Rendlesham Park on Saturday. The cars were "weighed in" at Wickham Market Railway Station.

Mrs. Hackblock won the Ladies' Club on her 10-h.p. Adams car. In Class 1 for amateurs Dr. Brown, on his 8-h.p. De Dion, made best time in both the kilometre and the mile run, Mr. A. List, 8-h.p. De Dion, being

second in the latter event, and Mr. G. H. Grant, 8-h.p. Rover, being second in the kilometre test. In the class for larger cars, Mr. Dixon Hepworth, 14 h.p. V.S. and M. Ltd. was first in the mile, and Mr. Gordon Stewart, 15-h.p. Talbot, in the kilometre. In the trade class some very close times were registered, Mr. C. R. Garrard, 21-h.p. Talbot, being first.

At the Somerset A.C. Hill Climb on Saturday afternoon a Daimler car made fastest time of the whole competition.

THE Club House at 119, Piccadilly, is to be closed for purposes of cleaning and decoration from to-day (August 1st), and will remain closed for the whole of the month of August. During this period the Junior Athenæum Club (116, Piccadilly, W.) has consented to admit members of the R.A.C.

CASES AGAINST MOTORISTS.

EXCEEDING THE PARK LIMIT.

Mr. Alfred Vanderbilt was summoned at Marylebone Police Court for exceeding the motor-car speed limit in Regent's Park. Mr. Ware appeared for Mr. Vanderbilt, who, he said, expressed regret that he was ignorant of the park regulations. Mr. Plowden remarked Mr. Vanderbilt would have to submit as best he could to the strain of 40s. and 2s. costs.

DISMISSAL.

James Morris, chauffeur to the Archbishop of Westminster, was summoned, at Stratford, for negligently driving a motor-car, and farther for, after an accident, refusing to give his name and address. It was alleged that in passing two lady cyclists on the road his car touched their bicycles and knocked them off. He gave one of them 2s. 6d. to mend a broken spoke. Defendant denied that he touched the cyclists. The Chairman said the Bench had come to the conclusion there was no negligent driving and dismissed that summons; there was a technical offence for not giving the name and address, and there would be a fine of 1s. and 4s. costs.

JUDGES OF SPEED.

A quaint comparison in the matter of speed was made before the justices at the Reading Petty Sessions on Saturday, when Bertie Tripp, the motor-car driver of Mr. Arthur Dean, of Pangbourne, was summoned for driving his car to the danger of the public. John Holmes, the chief witness for the prosecution, said he and three others had to jump into a ditch to avoid being run over by the motor. Asked at what speed defendant was driving, he said the pace was as fast as the mail trains which proceeded through Pangbourne Station; whilst another witness said that before he could look round the car had passed out of sight round a corner 100 yards away. Other evidence was to the effect that the car was travelling at the rate of between thirty and fifty miles an hour. A fine of £2, with costs 19s. 6d., was imposed.

EXCEEDING LEGAL LIMIT.

On Monday six motorists were fined at Windsor, seven at Preston, nine at Bromley (Kent), three at Salisbury, two at Steyning, and five at Haywards Heath.

Seven motorists have been fined at Dumbarton for exceeding the legal limit at Old Kilpatrick and other places in the district.

A local doctor has been fined three guineas for exceeding the legal limit of ten miles per hour in the burgh of Auchtermarder.

On Tuesday a motorist was fined £15 at Feltham, and another £10 and costs at Haywards Heath.

The police established a trap at Lulhamstead, wherein seven motorists returning from the Newbury races were captured. They were all fined when, in course of time, they appeared in the local court.

Eight motorists summoned at Rugby were fined sums varying from 10s. to 15s., with costs.

At the Midhurst Petty Sessions, on the 23rd ult., several cases against motorists for exceeding the legal limit were heard, and fines amounting to £82, exclusive of costs, were imposed.

MOTOR SCOUT AND POLICE SERGEANT.

Before the Guildford County Magistrates on Saturday, a summons was heard against Sergeant Baker, of the Surrey Constabulary, for assaulting an A.A. "patrol" named William Mason, at Witley, on June 26th. Mr. Marshall Hall, K.C., who appeared with Mr. Rowland Harker for the prosecution, said that the desire of the Automobile Association was not to go against the police but to co-operate with them in putting down furious and reckless driving. So long as the police persisted in regarding them as opponents instead of allies, friction was bound to exist. The charge in this case was a technical one, and he merely asked that the sergeant should be bound over. It was stated in evidence that Sergeant Baker, thinking Mason was warning Lord Colville's chauffeur against a police trap, came out of his concealment and warned the scout not to give such information. Mason denied doing so, and, after some conversation, the sergeant took hold of the scout's badge and turned it over to look at the number. Baker absolutely denied that he touched Mason. The magistrates stopped the case, and dismissed it with costs.

NO PRINCELY EXEMPTION.

Among the defendants fined at Morpeth for exceeding the speed limit was Charles McKenzie, chauffeur, of Alnwick, who had to pay £1 for going through a control on July 3 at 26.41 miles an hour. The defendant said he was on duty for the Prince and Princess of Wales at Alnwick Castle, and was sent to Newcastle in connection with the royal

visit to the city that day. He was also told to be back at Alnwick Station for the return of the Prince and Princess in case his services should be needed when their Royal Highnesses reached Alnwick by train. He tried to keep as near the limit as possible. He drove the Princess during the week of the royal visit to the North.

SUSPENSION OF LICENCE.

Colin Defries has appeared to a summons for driving a motor-car at an excessive speed in Bromley Road, Catford. Mr. Barker prosecuted for the Commissioner of Police, and said defendant had many times been convicted for exceeding the speed limit, and had twice had his licence cancelled. Mr. Gill, magistrate, fined the defendant £50, with 5 gs. costs, the licence to be suspended during the term for which it was issued, and the defendant to be disqualified from holding a licence for twelve months.

AUTOMOBILE ACCIDENTS.

ABOUT five miles from Buxton, at the foot of a long, gradual descent known as Long Hill, a motor-car came to grief the other night. The driver of the car was Mr. J. H. Bennett, and he had with him three friends and a chauffeur. When the descent of Long Hill was nearly accomplished Mr. Wilson, who was sitting in front at Mr. Dillon's feet, either slipped or fell from the car, and Mr. Dillon in attempting to catch him fell off also. Through Mr. Bennett's turning round to see what had happened the car got out of its course, swerved to the right-hand side of the road, and, breaking through a wall, fell down a sloping embankment for about 20 ft., where it remained. Mr. Bennett was thrown violently out and received serious injuries to the body and legs, one of which has a compound fracture; Lock, the chauffeur, was badly



The Leyland 2-3 ton Van recently supplied to Messrs. Hamptons, Pall Mall, London, S.W.

bruised; and Messrs. Dillon and Wilson were both bruised and shaken.

A MOTOR-OMNIBUS, containing thirty-four members of the Whitefield and Hatchliffe Urban District Council, who had been inspecting the Bury Corporation Waterworks, was going down an incline recently near Burnley when the brakes failed to act and the vehicle dashed into a cart loaded with stone. Both vehicles were smashed, and ten of the council party were injured. Councillor Cunliffe, J.P., received a deep wound in the head, Councillor Wallwork a broken leg, and Councillor Parker a broken nose.

A COLLISION occurred on Tuesday between motor-cars at the junction of two streets at Inverness. In one car were Mr. and Mrs. Andrew Carnegie and their little daughter, and the other car was occupied by Mr. Peile Ross and two ladies. A lamp and mudguard on Mr. Carnegie's car were smashed. The damage to Mr. Ross's car was more serious, one of the front wheels being bent inwards. Occupants of the cars fortunately escaped injury.

POLICE CHARGED WITH PERJURY.

THOMAS EDWARDS and James Butler, constables of the Surrey Police, were before the Guildford Bench on Monday on a charge of perjury while giving evidence supporting a summons against the chauffeur to Sir Archibald Macdonald, Bart., on the ground that he did not stop when called upon at Witley. It was stated that Edwards jumped into the road fifty yards in front of the car, shouted and waved his hands, but that no notice was taken. On Tuesday Edwards was discharged and the summons against Butler was withdrawn.

FORTHCOMING EVENTS.

AUGUST.

- 1st (Sat.).—Brooklands A.R.C. meeting.
 • Entries finally close for the International "four-inch" race for the Tourist Trophy.
 Manchester M.C.'s reliability trial for motor-cycles, fore-cars, &c.
 2nd-3rd.—Newcastle and District M.C.C. reliability contest.
 3rd (M.).—Brooklands A.R.C. meet.
 3rd and 4th.—Run of the Motor C.C. from London to Land's End.
 8th (Sat.).—Visit of the Kent A.C. to Brasted Chart.
 8th (Sat.).—Bristol and Glos. A.C. at Standish House.
 12th (W.).—A.C. of Belgium—Circuit des Ardennes and the Liedekerke Cup race.
 15th (Th.).—Northants A.C. speed trials at Castle Ashby.
 21st (F.).—Ballinaslaught hill climb of the Irish A.C.
 22nd (Sat.).—Annual race meeting of the A.C.U. at Shepherd's Bush.
 Invitation of Sir D. Salomons to the Keat A.C. to visit Tunbridge Wells.
 23rd (Sun.).—A. C. du Rhone Mont Pilat trial.
 29th (Sat.).—Meet of the Lincolnshire Motor Club at Lincoln.
 Mont Ventoux hill climb of the A.C. Vauclusien.
 Leicester A.C. gymkhana.
 30th (Sun.).—Southen M.C. run to Great White Horse Hotel, Ipswich.

LIGHTING-UP TIMES—LONDON.

| | | | |
|-----------------|------------|------------|------------|
| August 1st—8.49 | 3rd—8.45 | 5th—8.40 | 7th—8.38 |
| " 2nd—8.47 | " 4th—8.42 | " 6th—8.39 | " 8th—8.35 |

To find the approximate lighting-up time in August for Birmingham 12 minutes should be added to the above times, 17 for York, 21 for Manchester, and 43 for Glasgow.

COMPANY NEWS.

TORKINGTON TIRES.—£100,000. To adopt an agreement with Torkington Tires (Parent Syndicate), Ltd., and A. W. Torkington, and to carry on the business of planters, growers, and manufacturers of and dealers in indiarubber, asbestos, and gutta percha, manufacturers of and dealers in motor-cars and vehicles, &c. 16, Victoria Street, Westminster.

W. AND G. DU CROS.—£10,000. To take over (1) the general engineering business carried on by Harvey du Cros at Acton Vale, W., but not including the business carried on by the said vendor as exclusive concessionaire of Panhard and Levassor for Great Britain and Ireland and the Colonies, and (2) the business of motor-car dealers carried on by W. du Cros and G. du Cros at 14, Regent Street, S.W.

RAILLESS ELECTRIC TRACTION COMPANY.—£5,000. Agreement with M. Schiemann and F. Mombert.

A REMEDY.

When business is slow,
 My spirits are low,
 And all my affairs go awry;
 E'en when it seems sure
 I'm doomed to endure
 The very same trials till I die;
 There's one thing for me,
 When care I would flee
 And summon new courage and zeal.
 That never grows old:
 'Tis better than gold—
 A spin in my automobile.

By G. E. Bird in *Automobile Topics*.

MODEL MOTOR-BOAT REGATTA.

A REGATTA was held at Wembley Park Lake on Saturday for model motor-boats. The first race was for boats over 4 ft. in length, the distance of the contest being 145 yards. First place went to Mr. W. H. Arkell's 5 ft. 6 in. petrol boat Moraine II., which covered the course in 32 sec. Mr. F. N. Sharp's 5 ft. 6 in. petrol boat Varuna was second in 35 sec., and Mr. W. Smith's 5 ft. petrol boat Belvedere third in 38 sec. The 77 yards race for boats under 4 ft. in length went to Mr. C. Davis's one metre steam boat Una in 25 sec., Mr. T. B. Duff's 3 ft. 3 in. steam Imp being second in 33 sec., and Mr. R. Church's 3 ft. 1 in. steam Mavis third in 37 sec.

THE list of the successes with "Shell" motor spirit at recent motoring events is steadily growing and now includes victories at the Ramsgate, Littlehampton, and Brighton motor-boat races, the Wolverhampton A.C.'s reliability trials, the Aston Hill climb, the Coventry M.C. hill climb, and the Brooklands motor track.

BUSINESS NEWS.

THE London depot of the Avon India Rubber Company, Ltd., of Melkham, Wilts., is now located at 35, Long Acre, W.C., the temporary premises at 31, Brooke Street, Holborn, E.C., having been closed.

THE STANDARD MOTOR COMPANY, LTD., 1, Albany Street, London, N.W., have compiled a price list and telegraphic code of duplicates of every piece used in the construction of the Standard 20 h.p. six-cylinder vehicle. Every user of this make of car should secure a copy of the list, which is issued in a form that should render it extremely handy.

FROM Ariel Motors, Ltd., we have received a photograph of Mr. Charles Sangster, holding the two silver cups awarded to Ariel cars in the recent Two Thousand Miles reliability trials. In Class J a 30-40-h.p. Ariel took the first prize, while in class L a 40-50-h.p. vehicle did the same, the latter also making fastest time on all five hills irrespective of class.

MESSRS. BUSSEY BROS., of 29 and 31, Montpelier Vale, Blackheath, S.E., have a garage a couple of minutes' walk from the railway station. Extensive alterations are now being carried out to cope with the growing business.

THE Protos car which reached Paris on Sunday last, and was thus the first to finish the New York-Paris race, was equipped with Dunlop detachable rims and tyres.

MESSRS. WARWICK WRIGHT, LTD., are the sole concessionaires for the Glascoire shock absorber.

THE Hutchinson Tyre Company will shortly be removing from 13, Maddox Street, London, W., to Kingsway.

MESSRS. MORS (ENGLAND), LTD., have received a letter from one of their clients who purchased a 17-23-h.p. Mors car about two years ago, stating that he has travelled many thousands of miles in it, and made repeated journeys to Paris and back, under all conditions of roads and weather, and that it has never failed him. He adds:—"I can safely say that during the whole time it has never cost me more than £5 for repairs, and it is in as good and reliable condition as when I first had it."

THE addition to Mr. G. H. Warne's hotel at Worthing will add to the popularity of the place. A garage for the motor-cars of visitors adds to the attractions of one of the best hotels on the south coast.

ELSEWHERE in the present issue will be found a condensation of an interesting article on "Australia for Motoring Tourists," from the pen of Mr. Roy Sandford, late of Lithgow, N.S.W., which was recently published by our American contemporary, "The Motor Age."

ONE day last week we had an 80-mile spin on a car fitted with one of the Coventry Simplex Motor Company's latest 16-18-h.p. four-cylinder engines, and found that not only was the vehicle speedy on the level but also an excellent hill-climber, Stoneleigh Hill, near Coventry, being scaled on top speed. We may add that the car, which is geared 4 to 1 on the back axle, weighs 18½ cwt., exclusive of the two passengers. The engine, which has cylinders 86 mm. bore by 92 mm. stroke, runs extremely quiet in operation, while the petrol consumption worked out at 25 miles to the gallon.

TO CORRESPONDENTS.

All communications intended for insertion in this Journal or relating to Editorial matters should be addressed to THE EDITORIAL DEPARTMENT, MOTOR-CAR JOURNAL, 27-33, Charing Cross Road, London, W.C., and must be written on one side of the paper only. Letters must in all cases be accompanied by the name and address of the writer, as no notice will be taken of anonymous communications.

To insure insertion communications and contributions must be in the Editor's hands by Tuesday forenoon of the week in which the same are intended to appear. Disappointment may be caused by non-compliance with this rule, and to avoid this earlier receipt, if possible, is necessary.

Photographers, both professional and amateur, are invited to send photographs of current events or of motoring scenes and incidents. The fee, if any, required for reproduction should be stated in each case, otherwise no liability will be accepted.

The Editors cannot undertake to return MSS. or drawings, although every effort will be made to do so in the case of rejected communications. Where such are regarded as of value, correspondents are requested to retain copies.

The Editors do not hold themselves responsible for the opinions expressed by their correspondents, or for statements and facts which do not appear in the editorial columns.

The Editors and Publishers beg also to state that they will accept no responsibility for unsolicited contributions, even if used, unless payment for same is directly specified in forwarding, and the terms arranged before publication.

THE Motor-Car Journal.

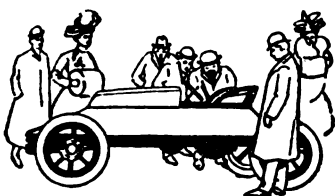
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COMMENTS.



THE Committee of the R.A.C. has just accorded a special vote of thanks to the officials and judges who contributed to the arduous work in connection with the recent International Touring Car Trial. While thus engaged a discussion also took place with regard to the organisation of a similar event for next year. It was eventually moved that an endeavour be made to hold in 1909 a trial on practically identical lines to that of 1908, a proposal that evoked considerable discussion. Ultimately an amendment was moved, seconded and carried to the effect "that the question of holding a trial for touring cars in 1909 be deferred until the next meeting." This resolution was satisfactory so far as it went, and if it leads to a reconsideration of the whole position the trade will thank Mr. Lionel de Rothschild and Mr. A. Armitage for their action at the last meeting. The truth is that those engaged in the automobile industry would find the recurrence of such a long-drawn-out event as the 1908 trial a considerable task upon their resources. The difficulty of the situation is also increased by the fact that the Trial is held at the time when they should be busy attending to the business of selling rather than testing their vehicles. It is a moot point whether the club would not be well advised to save the industry from the self-imposed taxation of these trials till at least 1910—a policy which we believe would be welcomed generally by the trade throughout the country.

The Bishop and the Car.

Several vicars have deplored the added dignity associated with the use of the automobile by bishops, while others have taken the wiser view that anything which enables the leaders to better acquaint themselves with the personnel of their diocese is to be welcomed. The provision of a motor-car is now regarded as almost an essential equipment for the ecclesiastical dignitary who takes his duties seriously, and the saving in time that is secured has most considerably added to the amount of work which bishops are really able to do.

The Car and the Sabbath.

Now that bishops have become motorists, and, of course, have found their way to local police courts, the car is not denounced by church and chapel goers to the extent of their early vituperation. Still, however, they complain of the way in which the attractions of the automobile are preferred to the ministrations of the preacher. They will be interested to learn that the idea of using the automobile to fill instead of empty the churches in summer time has taken hold of some communities in the New England States. Recognising the theory that many people who own motor-cars will not keep them in the garage on Sunday, the Bible class of the First Congregational

Church, of Holyoke, Mass., decided to induce automobilists to use their vehicles for the purpose of carrying the aged, infirm and otherwise incapable to church. The project caught on, and scores who otherwise could not get to church were swiftly conveyed to and from the Sunday services, and the owners of the cars actually enjoyed the work quite as much as their passengers did. The movement is reported to have spread throughout Connecticut.

The Danger of Exhaust Gases.

THE recent experience on Submarine boat No. 9 was the subject of a question in the House of Commons before Parliament rose for the holidays. Owing to a mechanical defect on this craft, a large quantity of exhaust gases escaped into the boat. The effect of the carbon monoxide on the men was so rapid, according to Mr. McKenna, the Secretary to the Admiralty, that it was almost impossible to guard against the occurrence of mishaps of this kind. Engines, however, had so much improved since submarine boats were first built that such an escape of petrol gas as white mice would serve to register was no longer to be feared. We trust that the Admiralty will not overlook the dangers of exhaust gases such as were fully emphasized in the "British Medical Journal," and in our own Journal as recently as last week.

Pure Exhaust.

A PURE Exhaust Prize Sub-committee of the R.A.C. has been sitting to consider the organisation of a competition along the lines suggested by its title. Tests are to be made for CO, oxygen and CO₂, the results largely to depend on low CO in relation to low oxygen. In addition to the comparative tests on the road there will be tests in the Motor House, and from samples of gas taken on the Brooklands Track while a car is travelling at various rates of speed. Various detail regulations have yet to be made, but doubtless the competition will present many points of interest and, maybe, some of value.

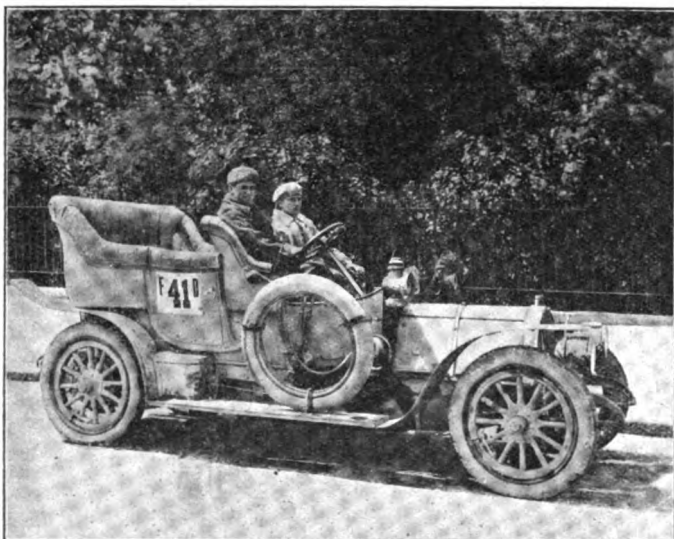
The Parliamentary View.

BOTH the House of Lords and the House of Commons have been discussing motor-car speed and various matters incidental to the subject. Apparently the authorities, however, are not alarmed at the present position of the subject, and there is little fear of any haphazard legislation coming along to restrict the growth of the industry. That much we gather from the official spokesmen of the Government in both branches of the Legislature. The Earl of Halsbury was in favour of drastic measures against motorists; Sir Francis Channing would have the speed limit reduced considerably; and Mr. A. S. Wilson went so far as to specify ten miles an hour as a reasonable limit to the latter. Mr. Henry Chaplin was in favour of stronger action against those who drove cars; and Lord Willoughby de Broke would have drivers give up the use of the horn. These are about the worst things urged against the motorist, on whose behalf Lord Montagu said many right and reasonable things, Earl Russell also defending the motorist with characteristic zeal. But the most important references

were made in the House of Commons, where Mr. Walter Long expressed the view that the speed limit, inserted in his own Act against his wish, was really of no use. The fact that it led to the un-English practice of setting police traps was also against it from a practical point of view. Mr. Burns, who is really responsible for the motoring legislation, was equally against police traps, and went on to suggest that the police should make Section 1 of the present Act the basis for nearly all their actions, for, as he said, "it detracted from the proper and dignified duties of the police to be engaged in trapping motors"—a view that motorists have always held, but one that the magistrates have been slow to accept.

Section 1 or 9.

A CASE heard at the South West London Police Court is not only illustrative of police methods, but suggests a line of prosecution that may become more frequent in the future than it has been in the past. A lady visitor to London was motoring in Streatham when she was stopped by the police and subsequently summoned for driving a motor-car at a speed dangerous to the public. In giving evidence for the prosecution the witnesses estimated that the vehicle was



A Reminiscence of the 2,000 Miles Trials.—The 20-24-h.p. Junior Car which competed in Class F, and which only lost eight minutes on the road—two for adjusting a chain, one for filling the radiator, and five for changing a sparking plug.

travelling at twenty miles an hour, and so insistent were they on this point that the magistrate, Mr. De Grey, intervened with the remark that this was the legal speed of motor-cars, and that a stop watch was the only means of securing reliable evidence on the point. He, therefore, dismissed the prosecution apparently because the police summoning under Clause 1 of the Act gave evidence which properly belonged to cases summoned under Section 9. There is evidently a growing tendency in London suburbs to rely upon the former section of the Act, and the police are not likely to repeat the mistake which lost them the case at the South West London Police Court.

Traps and Fines.

NOT only are motor traps being lengthened by the police, but the fines inflicted on motorists by the magistrates are also showing an unkindly rising in a corresponding degree. Recently, the Hampshire police established a "control" in the parish of Compton, on the main road from Winchester to Southampton. The results have been fairly good from the point of view of the county exchequer, but although the cases heard have been numerous, the individual fines have not been excessive.

On Saturday, however, a new policy seems to have entered the heads of the Bench, and heavy penalties were inflicted in several cases. We notice a growing inclination on the part of magistrates in Sussex and Surrey as well as in Hampshire, to increase the fines, a fact which should make motorists extremely wary as to how they proceed along the main roads of that district—if, in fact, they use them at all.

The Daimler Scholarship.

DR. H. S. HELE-SHAW has been examining about a score of entrants for the Daimler engineering scholarships which were announced last year with a view to obtaining for the well-known motor company at Coventry a new supply of promising raw material. Dr. Shaw's questionings have been designed to discover the natural ability of the applicants, and to ascertain their practical knowledge rather than their theoretical equipment. The system of the test provided by the Daimler Company was that half of the total marks obtainable by those in the competition should be awarded on Dr. Hele-Shaw's report, the other half being as the result of the Science and Art examinations. The results will not be made known for some time, but we would again congratulate the Daimler Company on the efforts they have made to incite young men to qualify for important engineering posts.

Speed in the City.

DR. F. J. WALDO, the Coroner of the City of London, has on several occasions indicated to juries the advisability of making representations to the City authorities with regard to the speed of motor vehicles passing through the narrow streets of London. At the conclusion of a recent inquiry he suggested that the Court of Common Council should renew the application for a reduction of the maximum speed limit to ten miles an hour throughout the City, and, the jury agreeing, the recommendation was sent to the proper authorities. The result of this action was seen at the last meeting of the Corporation before the holidays, when the chairman of the City Purposes Committee proposed that steps should be taken to give effect to the suggestion. After some discussion the resolution was referred back pending a conference to be held with the police authorities. The point, however, seems to have been that the City, acting on the suggestion of Mr. Herbert Gladstone, on the occasion of a recent deputation with regard to the motor-'bus traffic, intends to carry out the suggestion—a proposal already enforced in the narrow streets of the City by the congestion of traffic.

A Car Census.

SOMEWHAT of an innovation in matters of local government has been made by the District Committee of the County Council at Kingussie, where, on the suggestion of the road surveyor, it has been decided to take a census of motor-cars passing through the district for the fortnight ending the 15th inst. Neighbouring county road surveyors are being asked to assist in the matter, the idea being to ascertain the exact amount of motor-car traffic on the public roads of the locality. We would suggest that in cases where similar proceedings are being taken elsewhere, it would be well to include horse-drawn traffic in any calculations, so that some comparative results may be obtained.

The Dust Trials.

AT the meeting of the committee of the R.A.C. held before the holidays, the chairman of the Dust Committee said that the dust trials held on the 20th and 21st ult. on the Brooklands Track had been successful and had provided further interesting information in regard to the dust problem. In spite of some adverse criticisms in the Press, he said, the members of the committee would see from the photographs submitted that the

difference between cars as regards dust-raising was most marked, and the judges anticipated little difficulty in placing the first and second cars in each class. This year the Dust Committee made some entirely new experiments, *e.g.*, all the bad points of cars were imitated on a vehicle hired by the club for the purpose, and the photographs showed the Dust Committee where modifications might be made in car construction.

Police Confidence.

◆ TWENTY-TWO summonses against motorists for exceeding the speed limit were dealt with at the Battle Petty Sessions, on the 29th ult. Mr. Lawson Lewis, who prosecuted on behalf of the police, explained that the officers who were on duty at each end of the measured distance made it a rule to stop every car, and as many as 200 had been stopped in one day. Replying to the Chairman, who expressed a doubt as to whether some of the cases came within the jurisdiction of the Bench, Mr. Lewis said the arrangement was made for the convenience of all generally. He added that they had to consider

visitors can see Great Britain. What the steamship companies are doing for American visitors to England the Great Western Railway is also doing for provincial trippers to London. Last summer we illustrated the motor Observation Car which was put in service under the auspices of this company late in the season, and which is now again extending Englishmen's knowledge of the capital of the Empire. What with this G.W.R. motor vehicle and the "Seeing London" motor char-a-banc, which continues to find its largest *clientele* amongst American visitors to London, there is now no need to lament the lack of opportunities of doing the sights of the capital in double quick time.

Maps for Motorists.

◆ THE value of publicity even to Government Departments has been illustrated in the recent returns of the Ordnance Survey, which has during the last year or two done much to secure that the public shall know of the excellent series of maps issued under its auspices. Maps on the



The Lancashire Club's Hill Climb at Rivington Pike.—The Scene near the Starting Point.

where they had the greatest confidence in selecting the venue. "That is a nice compliment," returned the Chairman. We say nothing.

The Car for Sightseers.

◆ WE understand that the Cunard Steamship Company has lately inaugurated a departure which should quickly become popular with Trans-Atlantic passengers. Several years past many of the wealthy Americans who annually visit our shores have either sent their motor-cars on in advance or have arranged with one or other of the leading London firms to provide for an automobile with an experienced chauffeur meeting them on landing at Liverpool. Apparently recognising the growing tendency in this direction, the steamship company has now arranged for motor vehicles to be at the disposal of passengers requiring them as soon as they land at Liverpool. Those who are only here for a short stay are thus able to visit the Shakespeare or Milton country and the other points of interest to visitors from the United States, or to take extended motor tours to the North. The scheme was inaugurated on the recent arrival of the *Mauretania*, and should do much to quicken the pace at which

four, ten, and sixteen miles to the inch scale are now completed for the United Kingdom, with the exception of about 760 square miles in Cornwall, Lincoln, and Pembroke. With regard to the maps on the scale of one inch to the mile no part of the country now remains unrevised for more than fifteen years, so that it will be seen that the Ordnance Survey is becoming as up-to-date as its resources will allow. Seeing that motorists are probably the greatest users of such maps in the country, it might be well for the Survey as well as for the publishers of similar publications to take fuller advantage of the facilities which the motor press offers for making their publications known to their most frequent users.

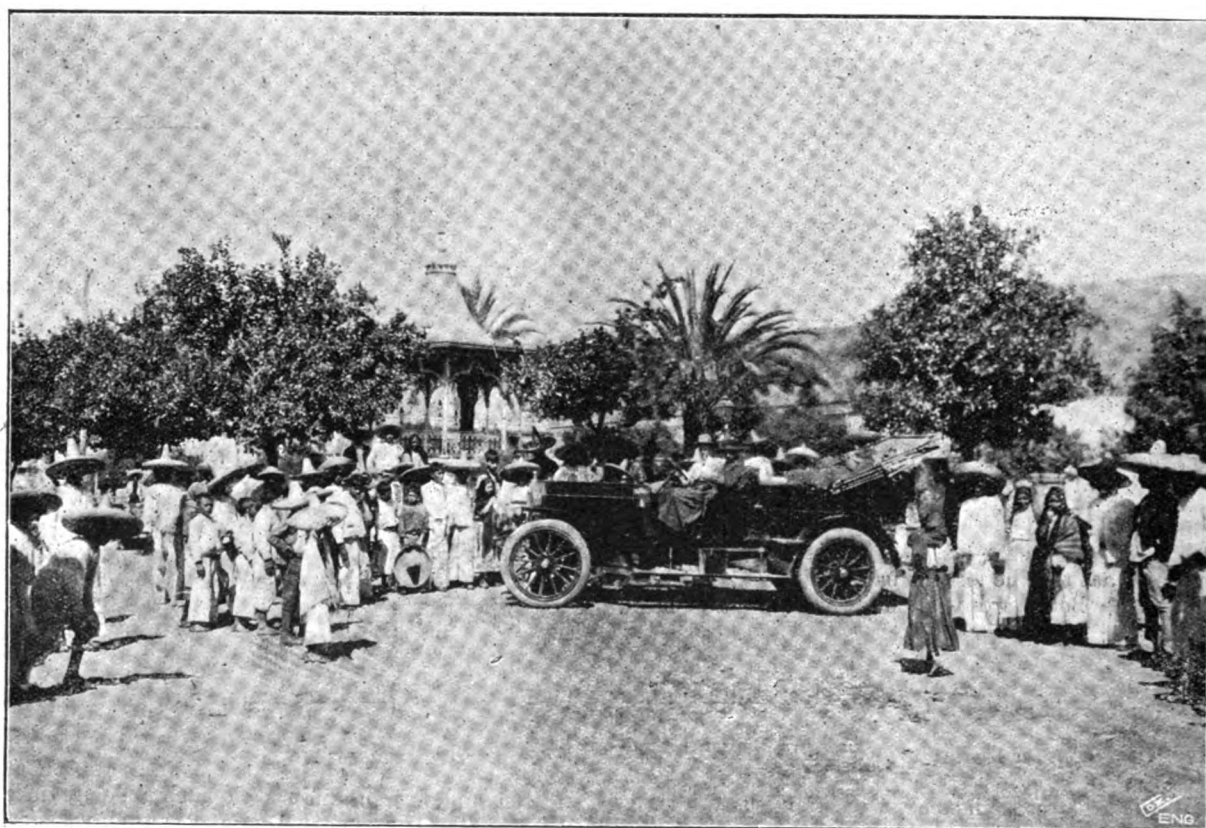
MANY private persons possessed of public spirit have lately placed warning signs at dangerous corners in order to maintain the safety of our highways and secure the safe passage of motorists. At a corner near Godstone, Lady Greenwell has put a M.U. sign to denote a concealed turning, and at Newmillerdam, on the Barnsley and Wakefield road, Sir Thomas Pilkington has placed one calling for a reduction of speed through the village. The M.U. has also received an application through the A.A. from Mrs. J. Hope for a sign notifying a concealed entrance drive at Heron's Ghyll Uckfield, Sussex.

MOTORING IN MEXICO.

AN interesting trip in Mexico was undertaken during February last by Messrs. J. L. Lawrence and H. L. Schultze, who made the journey from San Marcos to Tepic on a Napier 40-h.p. six-cylinder car, which had been specially constructed to the order of Don Faustino Somerella, of Tepic. One of the conditions of purchase was that the vehicle should be driven over the stage road from San Marcos, a distance of ninety-three miles, the only other car having made this trip successfully in the past being a 35-h.p. vehicle of American construction. The first part of the journey to El Rodeo, a distance of fifteen miles from San Marcos, and the first stage coach stop, is comparatively good going, although hilly as El Rodeo is approached, some of the gradients touching as much as 25 per cent. or 1 in 4. This village is at the foot of the mountain of Ingeniero, and from this point the trail zig-zags with steep gradients to the summit, a distance of $2\frac{1}{2}$ kilometres. The roadway is cut in the side of the mountain, and from the summit the winding road,

About midway between Ahuacatlan and Tetetlan the track passes by the volcano Ceboruco, and for a distance of twelve miles very deep volcanic sand is encountered. This volcano started in active eruption thirty-nine years ago, and continued so for fourteen years, causing the almost total destruction of live stock in the district. Tetetlan has 1,000 inhabitants, and has one of the oldest churches to be found in the Republic, and one of the original sanctuaries of Santa Maria de Guadalupe.

The next village is Chapalilla, five miles from Tetetlan, the old stronghold of the bandit Lozada, who was known by the name of the Tiger of Alica. The country roundabout is extremely mountainous and precipitous. The next stage stop is San Leonel, a distance of fourteen miles from Chapalilla, whilst two miles beyond is the hacienda of La Labor. At this point the road begins to improve, though still mountainous. This property belongs to Don Faustino Somerella, to whose order, as already stated, the car was built, sugar cane and corn being largely grown. The next village passed is San Cayetano, six miles from La Labor, where there are two large tequila distilleries, owned



Motoring in Mexico.—On the Plaza at Ixtlan.

[El Automovil en Mexico.]

with seven distinct turns, can be clearly traced, affording a very impressive view to the eye. This is the most difficult part of the journey, as the gradients in places approximate 1 in 3, whilst the surface is of very rough limestone. The country in this district is covered with stunted trees, and is practically uncultivated.

From El Rodeo to the Arroyo de Agua, the next stage post, is about ten miles. There is practically no road, the track being scattered with large limestone boulders all the way. After leaving Arroyo de Agua, the next stopping place is Ixtlan, a distance of fifteen miles. This is the centre of a large mining district, and is a beautiful little city, with about 10,000 inhabitants. The only means of communication with the outside world is by the regular stage coach running between San Marcos and Tepic. After ploughing through eight miles of heavy sand Ahuacatlan is reached. This is another stage post, and has a population of 4,000 people. Ahuacatlan is proud of the distinction of being the first town in the territory of Tepic to be lighted by electricity.

by the Riba y Cervantes family of Mexico. A further six miles over fair roads and Tepic is reached. The roads round about the city are all passable, but have some heavy gradients, in many cases of one in four.

The highest point reached during the trip was the summit of Ingeniero, with an altitude of over 6,500 ft. The city of Tepic lies at an altitude of 6,500 feet, and has 15,000 inhabitants.

THE PARK MOTOR COMPANY, of 216, Tottenham Court Road, London, W.C., are doing a large business in letting Mercedes cars for hire. During the holidays they had several high grade vehicles out in different parts of the country. Arrangements are made to hire out the cars with qualified drivers, and those desirous of spending their holidays abroad or at home will find the Park Motor Company well able to add to the comfort and delights of touring by car.

GOSSIP FROM PARIS.

If Dundreary had lived in the present epoch instead of having appeared on the stage of the Haymarket Theatre in the sixties of the nineteenth century, he would between two sneezes have declared that the speed limit, especially round Paris, "is a thing no fellah can understand." A friend of mine who recently came to Paris in his car went out one afternoon to visit the suburbs. He knew the speed limit in the city was 20 kilometres an hour and naturally thought it could not be less in the comparatively quiet outlying districts. But no sooner had he passed through the city gates and entered the deserted avenues of Neuilly than he was caught and was told he must not exceed 12 kilometres an hour. He was annoyed at the "proces verbal" which was drawn up against him, but, moderating his speed to the limit, he drove off and soon after reached Bezons, where another official made signs to him to stop. To his amazement he had incurred another fine! He had been driving at more than 6 kilometres an hour! When he got back to his hotel he was very disgusted. To his English mind the regulations were the inverse of common sense. He is not alone in holding that opinion; it is shared by all French motorists who are constantly pulled up for excess of speed when going much less fast than the butcher's cart or the milkman's van, which, being drawn by horses, are not interfered with. Evidently the unification of the speed limits in towns and villages must sooner or later be effected by an Act of Parliament. Now it depends in each commune on the goodwill or hostility of the mayor towards the new means of locomotion.

STRAW hats! Ninety per cent. of the male population of Paris wear them. They are very light and look cool and comfortable, though the round straw hat especially is often very hard and apt to be blown off by every little gust of wind. Who has not been amused at watching a man run after his hat, which always sets off afresh rolling on its brim just as he is stretching out his hand to seize it! Sometimes the hatless gentleman, rushing madly amidst the carts, carriages, and automobiles in a crowded thoroughfare, in despair slashes out with his stick to stop it, and in doing so generally pins it to the ground in the mud, or sets it rolling faster than ever. Well, it was after a frantic race of this sort that a day or two ago a middle-aged gentleman wearing the ribbon of the Legion of Honour struck out so violently with his stick at his fugitive hat that he lost his balance and fell prostrate in the middle of the Boulevard de la Madeleine. In a moment the congested traffic was stopped altogether by the crowd of people rushing to assist the unfortunate man lying groaning in the mud. He had sprained his ankle so seriously that he could not stand. "What is it?" Of course everyone wanted to know. And what could it be but a motor-car which had knocked down and probably killed a poor innocent pedestrian? A taxi-cab driver who, when the hat-hunter slipped down just in front of his car, had put on the brake and stopped short, was near being lynched. I cannot say what would have happened if the victim of this hat-hunting accident had not intervened. Between two groans he told the sergents de ville who were carrying him to the shop of a neighbouring chemist that he had not been run over. Nevertheless nine-tenths of the "sympathising" crowd dispersed reluctantly, believing that the taxi-cab must have been in some way responsible for the "terrible accident." Oh those motor-cars!

THE storm in the Issy-les-Moulineaux tracup has subsided. After many successive visits to the Prefect of Police and to the War Minister, the officials of the French Aero Club have obtained from M. Lepine the assurance that so far as he is concerned the experiments with aeroplanes will be tolerated on the Issy parade ground from 4 a.m. to 6 a.m. in summer and from 6 a.m. to 8 a.m. in winter—that is to say, from sunrise till the arrival of the troops for morning drill. However, the aviators will have to pay 18 francs 50 centimes (14s. 10d.) every time they take their machines out of their sheds, or rather every time they warn the police, as they must do, of their intention to make

experiments. The sum is not large, but it will, nevertheless, constitute a heavy tax, as the weather will most surely frequently prevent the aviator from carrying out his projected experiments on the day fixed for them. All the same, he will have to pay for the nine policemen posted at the gates of the drill ground, and if that number is found insufficient to keep the public at a safe distance the aviator will have to pay for a greater number. The War Minister's ratification of this arrangement has not yet been given, but it is confidently expected. This partial restoration of Issy-les-Moulineaux to the aviators is no doubt satisfactory to those who only wish to perfect their machines and to learn to manage them before undertaking really important flights, but the time has come when a larger field is required. The French Aero Club is seeking it with all the greater desire to succeed in finding a convenient spot near Paris, because the currents of air created on the parade ground of Issy-les-Moulineaux



TOURING IN BOSNIA.

1. The Pliva Bridge near Jajce.
2. A Dalmatian Fingerpost.
3. On the Zengg Pass.
4. A View between Zengg and Fiume.
5. Interested Spectators at Banjaluka.
6. Natives near Travnik.

[Allgemeine Automobil Zeitung.]

by the buildings and trees surrounding it, and by the hills at Meudon, are most treacherous. They were the sole cause of the accidents which befell Henry Farman and Bleriot. Compared with the eddies, a fairly strong wind blowing steadily from one direction is supportable.

MARNEY.

M. BERLIET has lately taken out a patent for an arrangement in which the exhaust gases from the engine are utilised to lubricate the chains of a chain-driven petrol car. The burnt gases, after passing through the silencer, are conveyed by pipes to cases enclosing the chains, and pass thence through small holes to the air. It is claimed that the gases, being charged with oil, lubricate the chains and repel any external dust.

THE "FORREST" GEARLESS TWO-SEATED CAR.

MESSRS. J. A. WADE AND CO., of Forrest Street, Park Lane, Liverpool, have during the past year or so been turning out a little two-seated car which, by reason of its simple form of gearless transmission, has attracted much attention in the North. We are this week able to illustrate in Fig. 1 a general view of the latest pattern of the "Forrest" vehicle, which is well adapted for the use of doctors and other professional men, as well as of those in search of a small runabout at a moderate price. The motive power, which is located in the fore part of the frame, consists of an 8-h.p. two-cylinder V-type engine, 84 mm. bore by 110 mm. stroke. The ignition is by coil and accumulators and the water circulation on the thermo-syphon system, the radiator having an extra large cooling surface, separate water intake and outlet pipes for each cylinder being also fitted.

The feature of the car lies in the transmission, the usual change-speed gear-box being replaced by a friction or rolling contact drive. Friction-driven vehicles, notwithstanding many attempts to popularise them, have not hitherto met with any marked success. Messrs. Wade have, however, devoted much time and thought to their development, and, so far as we are able to judge from a short trial run, we see no reason why the

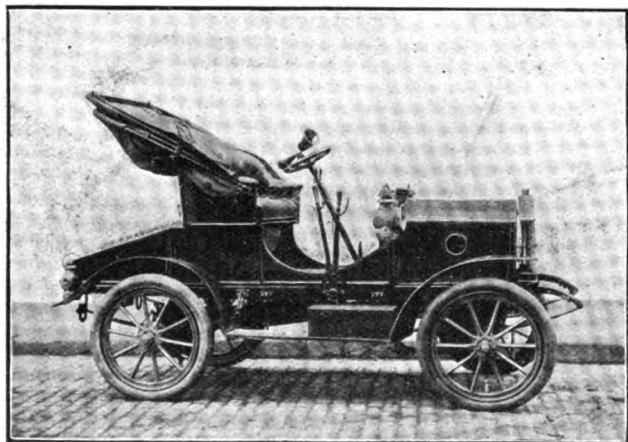


Fig. 1.—The "Forrest" 8-h.p. Two-Seated Car.

system should not in the case of the light two-seated car illustrated give satisfactory results. Certainly from the point of view of simplicity it has much to commend it, the arrangement adopted being such that by the removal of the bonnet the whole of the engine and speed-changing gear is at once easily accessible.

As will be seen from Fig. 4, the engine is set slightly to the left side of the chassis. The crankshaft, which is provided with a large ball thrust bearing, is parallel to the axles, and carries on its end a large disc A. On a shaft at right angles thereto is another disc B so mounted that while it must rotate with its shaft, it can be moved laterally along the latter. By varying the position of the driven disc, the periphery of which is leather covered, in relation to that on the engine shaft, any desired speed between zero and the maximum, about eighteen miles per hour, can be obtained in both a forward or backward direction. The facing of the disc B is formed of four leather rings, which, while lasting from 4,000 to 5,000 miles, can be readily and cheaply renewed. Special attention has been paid to securing a constant pressure between the surfaces in contact by the provision of a spring loaded device which automatically compensates for inequalities of surface of the discs, or imperfections of alignment. To this end the disc B is normally held up to its work by the pull exerted by two comparatively small coil springs E. The variation in gear is effected by depressing the pedal D, which pulls the disc B out of contact with A against the action of the springs, and through the medium of the lever M sliding B along its shaft to the desired position, when, on releasing the pedal, contact is again made between the two and the drive taken up. A stop is

fitted to prevent the disc B from being shifted across the centre of A, and so unintentionally putting in the reverse. The sliding disc and its squared shaft and operating gear are mounted on a swinging frame C, which is moved back bodily, against the action of the springs, by the pedal action, through the rack and pinion device seen in Fig. 2. Provision is made for holding the discs out of engagement when they are relatively in the neutral position—i.e., when the edge of the disc B faces the centre of the

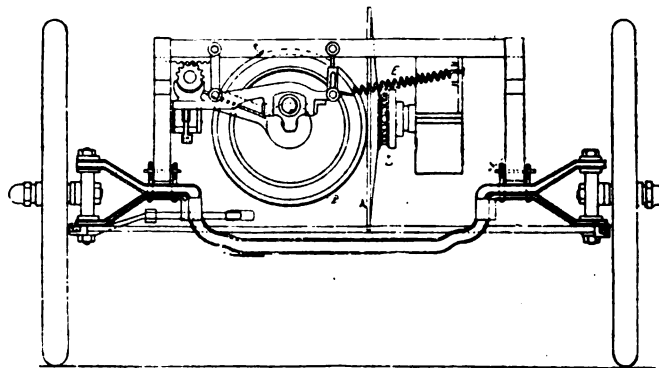
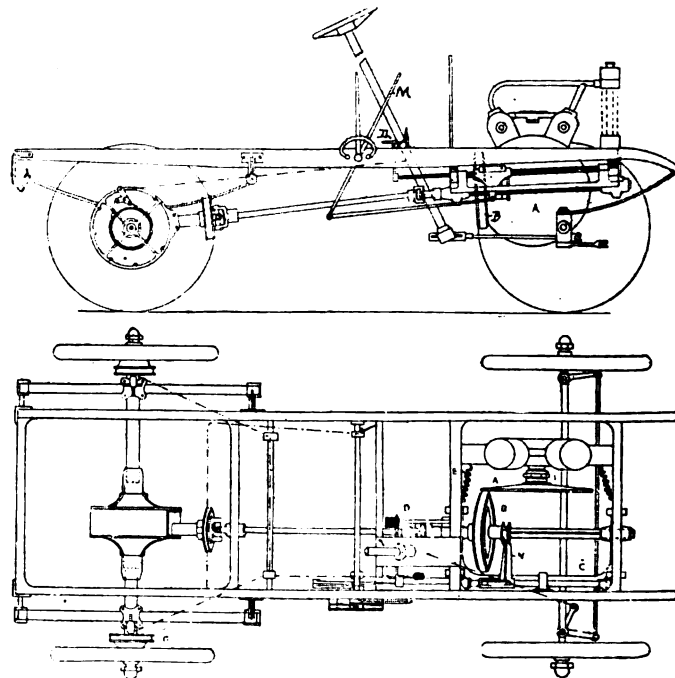


Fig. 2.—Front Elevation of Chassis of "Forrest" Car.

one marked A. Every care is taken to avoid the possibility of grease getting on to the driving surfaces, and so reducing the efficiency of the drive.

The power is conveyed to the rear live axle through a long universally-jointed shaft and bevel gear, the angularity of the different portions of the shaft being very slight, either in a horizontal or vertical plane, when the chassis is loaded, so that the wear on these joints is very small. Rack and pinion steering is employed, and ample brake power is furnished by a pedal-operated brake on the cardan shaft, and two hand-operated band brakes working on drums on the rear wheels. The wheel-base is 6 ft. and the track 4 ft.; the road wheels are shod with 750



Figs. 3 and 4.—Plan and Elevation of "Forrest" Car.

by 80 mm. tyres. In addition to the two-seated car illustrated the firm are also building, on similar chassis, a light delivery van and a three-seated brougham. The latter is of novel design; the doors are at each side, at an angle from the driver's seat (which is in the centre), thus allowing for wide entrance, and giving a clear and unobstructed view in front from either of the rear seats. A small table, which can be used for light parcels or as a writing desk, is also provided.

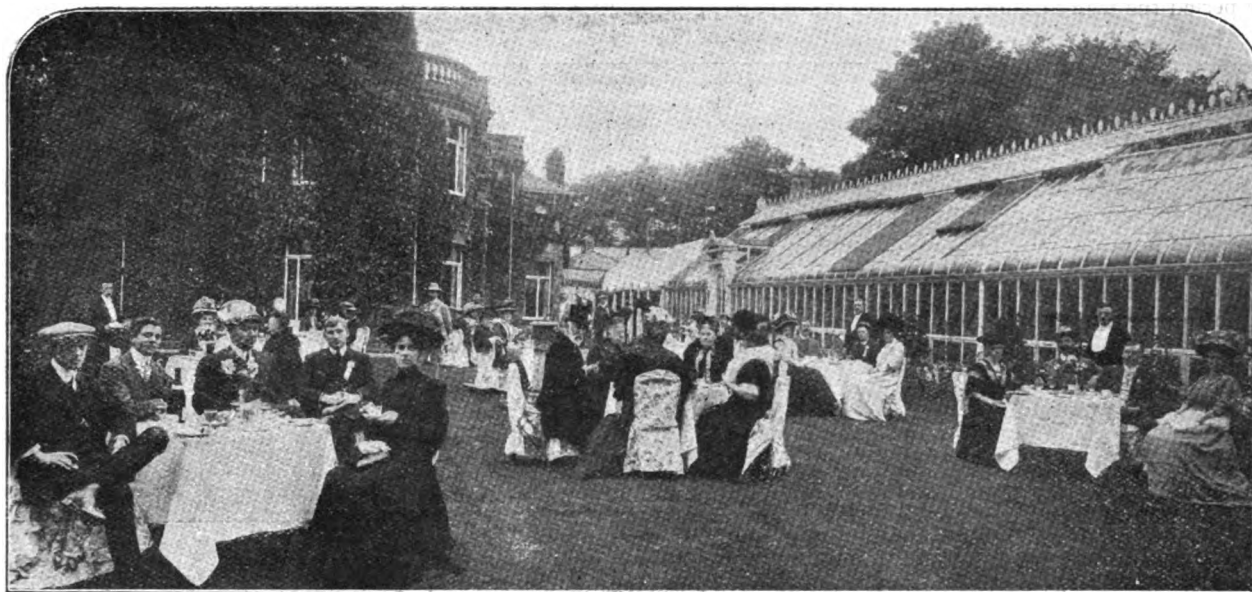
THE SOCIAL WHIRL.

THE King and Queen with Princess Victoria concluded their visit to Goodwood on Saturday. Arrangements had been made for their Majesties to motor to Portsmouth *en route* for Cowes by way of Lavant, Funtington, and Westbourne, and a special draft of police had been sent out to keep the road clear, but an alteration was made in the arrangements at the last moment, with the result that the Royal visitors spent nearly half an hour at St. Mary's Hospital, Chichester. Very few people recognised the King's two motor-cars as they turned from North Street into Priory Street shortly after three o'clock. The Royal cars were preceded by another belonging to the Duke of Richmond and Gordon, who was accompanied by his daughter, Lady Helen Gordon-Lennox. With his Majesty, in addition to the Queen and the Princess, were the Marquis de Soveral, the Hon. Charlotte Knollys, and Mr. Harry Stonor.

APROPOS of the return of the Prince of Wales from his Canadian trip, I learn that five motor-cars were supplied by the Comet Motor Company, Ltd., of Montreal, for H.R.H. and suite.

and then being whirled away to some other centre of pleasure. The railway companies, of course, are suffering from the same cause. That was clearly apparent at Goodwood last week. On one of the race days, for example, the Queen and Princess Victoria visited Arundel Castle in the afternoon, motoring from Goodwood with the Marquis de Soveral, the Countess of March, and other members of the Duke of Richmond's house party. Then, too, the West Dean Park party, which is always one of the largest, was not only conveyed to the course in cars but made quite a motoring meet when departing at the conclusion of the gathering, the guests of Mrs. William James including Lord Essex, Lord Charles Montagu, Mr. and Mrs. Arthur James and Mr. Rochfort Maguire. On the Cup day Earl and Countess Fitzwilliam motored to the races from Portsmouth Harbour, where they had been entertaining a party of friends on the Kathleen.

M.P.'s have speedily got away from Westminster, where they will be unknown until the autumn session, beginning on October 12th. Many are going abroad; but apparently more intend spending the vacation in Scotland, where Mr. Galloway Weir would like to preserve his beloved Highlands from the wicked motorists. Mr. Joseph Walton, M.P., intends to have several



The Garden Party given to the Members of the Yorkshire Club by Mr. H. B. Kirk at his residence at Castle Grove, Headingley, Leeds. (Photo by) (Owen Brooks.)

The Comet car is a Canadian product, and its use by the Prince was much appreciated by loyal colonials.

At the Brighton races on Tuesday, Wednesday and Thursday of this week a special Motor Enclosure was provided for motor-cars, the price of admittance to which was £1 per day. At Goodwood last week the number of motor-cars attending the races was greater than ever before, thus emphasising the growth which was so noticeable at Ascot. On the Cup day at the latter races an official return of the traffic showed that 1,501 motor-cars were driven to the stands between 11 a.m. and 2.15 p.m. as compared with 1,166 on the corresponding day of 1907. This year there were only 1,107 other vehicles, so that the preponderance of the automobile was completely established.

In the Whitehall Rooms of the Hotel Metropole, W.C., the other day, the Earl of Beesborough, C.V.O., C.B., gave some apt illustrations of the change that is coming over the social life of the country. As chairman of the Gordon Hotels he is well able to feel the pulse of Society in this direction; and he gave it as his settled opinion that motor-cars were directly responsible for adding to the difficulties of catering by attracting an "in-and-out business," visitors going to the hotel for only a short stay

days' motoring in Ireland, where, I would remind 'him, the police are sportsmen, and—outside Phoenix Park, Dublin—do not object to a car that is speedy as well as good looking.

A STORY was going round the smoke room of the House of Commons last week to the effect that the little daughter of a M.P. was taken to the British Museum. In the Egyptian Galleries a halt was made in front of the mummies, whereupon the following colloquy is said to have taken place: "Will you tell me, papa, why this old woman"—in allusion to the heavily-shrouded figure of an Egyptian princess—"is enveloped in bandages?" The father replied, abstractedly: "Oh, I suppose she met with some accident." "And what, please, is the meaning of the letters 'B.C. 1461' at the feet of the mummy?" "Oh, that, my child," was the rejoinder, "was no doubt the number of the motor-car by which she was run over and killed."

ACCOMPANIED by Col. Colbrook Carter, Lady Wantage motored from Lockinge House to Harwell the other afternoon to open a bazaar in the Vicarage grounds. Advantage was taken of the occasion to parade many army veterans and old volunteers who had served with the late Lord Wantage.

LOLLIUS.

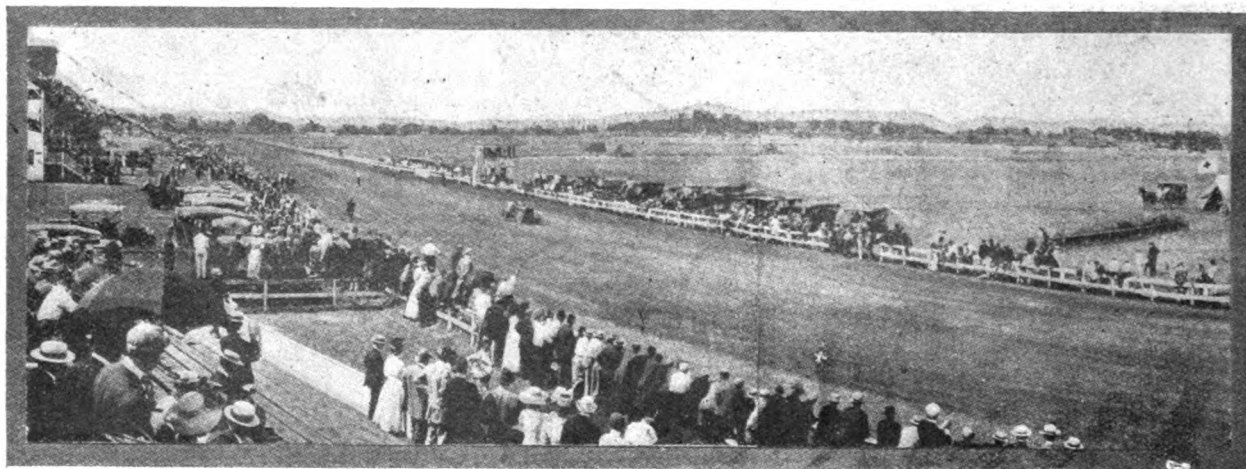
THE MOTOR-CAR OF YESTERDAY, TODAY AND TO-MORROW.

IT is said a prophet is never great in his own country, and, to quote a philosopher who lived many ages before motor-cars existed, "There is much wisdom in not prophesying unless you know." This quotation may serve a useful lesson to those who would attempt to say—"Has the car reached its finality in development?" Only a few years ago it would have been as hard for designers to contemplate the car of 1908 as for the warriors of Boadicea, who went to battle in their chariots, to have imagined the steam-engine. The motor-car is without doubt the most wonderful piece of mechanism yet produced. Until its advent, to obtain a speed of twenty miles per hour masses of metal were assembled amounting in the aggregate to anything up to sixty or seventy tons. Many express engines when loaded with coal and water exceed 100 tons. Now the position is reversed; the total weight of a high-powered racing car, including water and petrol, is under 1,200 kilos, and a speed of over 100 miles per hour is attained.

We are told by the occultist that in the world before this one propulsion by mechanical means was not unknown, and that airships were the ordinary medium of transit; but, without going into the dim and distant past, it may be interesting to follow from a less remote period the many changes that have taken place and

who ran journeys from the West End to the Mansion House, but it met with much opposition from bankers, merchants, and others, who claimed that if such things were allowed upon the roads horses would depreciate in value, and the streets would become so dangerous that an exodus of the residents and occupiers would follow!

Having traced the development of the object under review down to a comparatively recent date, viz., 1840, we find from this time that railways seemed to be the all-engrossing subject of research amongst engineers, and no real headway was made until Herr Otto produced his gas engine. This inventor, after spending considerable time and money, found much difficulty in getting anyone to work his patent. At last Messrs. Crossley took it up, and with what success is too well known to need repetition here. Events then quickly trod on the heels of one another, but not in England. Restrictions on this side of the Channel prevented any advancement being made. The speed was limited and so many other annoying regulations were made that engineers who were willing to spend time and money on evolving a workable machine gave it up for the time being. During this time Levassor, De Dion, and others across the Channel were advancing by leaps and bounds in France, which was also the birthplace of the great motor races, with the inauguration of which, in 1894, a new chapter in motor evolution was commenced. This race was won by a Panhard car at the frantic (?) speed of ten miles per hour!



Motor Racing in the United States.—A View of the Elkhwood Track, Long Branch, N.J.

brought the car to its present state of efficiency. The Far East claims to have been the introducer of the self-propelled vehicle, many years before the Christian era. Leaving, however, the fields of romance, we must come to the West for facts based on a solid foundation. The French, in combination with their neighbours in Belgium, have always been keen on producing some means of bridging space, and it was in the fifteenth century, according to a document still preserved at Antwerp, that the first mechanical vehicle was made. Nothing more is known of the machine, and we must move on some 400 years, thus bringing us to the early part of the nineteenth century, before we again hear of the Iron Horse. A car was then made and put upon the road by Trevithick; but he, like all pioneers, met with endless obstacles, and after a few trial trips the powers that were in those days proved too strong for him, and he had to reluctantly give up his enterprise. It makes one giddy to think of the possibilities of what "might have been" if such a brain had been allowed a free hand, or, better still, had received assistance instead of the reverse, for it must not be forgotten that approximately twelve years ago in England any self-propelled vehicle was only capable of, and by regulation was restricted to, practically a walking pace, while it also had to be preceded by a man carrying a red flag. The recent meeting in the City proves the truth of the old adage that "history repeats itself," for the writer remembers his grandfather saying how he was interested in a steam carriage brought out by one Hancock,

Each succeeding year saw an acceleration of speed until the first in the present century, when a Mors car beat record with an average of fifty odd miles per hour. Indeed a grand advancement from a ten miles per hour average in so short a space of time. It is not intended here to go into the details of cars, but many experts hold that a point has been reached when any radical improvement can only be obtained either by a more economical use of steam as applied to automobiles; or, as the turbine has revolutionised the propelling force of the sea-going vessel, shall we see a similar application to land transport? E. T. H.

FROM Messrs. A. E. Oakley and Co., 8, Allsop Street, Upper Baker Street, London, W., come particulars of a device known as the Shrapnel Splashguard, which they are making for a company of that name. The device, which is intended for use on the wheels of motor-buses and cabs to prevent them splashing mud in bad weather, consists of a plate or frame having near its apex a bearing of simple form which serves to carry it on the wheel hub. The lower end of the guard consists of a fabric made by meshing together steel links of great strength after the manner of "chain mail." This produces a material which is so flexible that it can be adjusted quite close to the road, and by virtue of its own flexibility, and owing to the floating method of detachment already referred to, it can strike stones without suffering damage or having its functions disorganised.

SOME CURRENT TOPICS.

The Cost of Upkeep.

Details gathered directly from the user by various makers have, in many instances, formed valuable contributions to the fund of general information on the subject of the cost of motor-ing. The outcome of a prize competition for chauffeurs recently held in America is the latest instance in point, furnishing as it does an astonishing revelation of the possible maintenance cost of new high-powered and well-made machines. In this case the first prize went to the chauffeur who drove a six-cylinder car a distance of 11,683 miles, during which time the cost of repairs only amounted to £2 9s. Ten prizes were altogether awarded, they including six vehicles with mileages ranging from 5,155 to 7,570 to their credit, on which nothing has been spent for repairs. While the cases in question may to some extent be exceptional, they are interesting as showing what it is possible to accomplish when proper care and attention is devoted to seeing that cars are kept *au point* by drivers who take a thoughtful interest in the machines under their charge.

A Long Motor-cab Journey.

That the motor-cabs in London are not merely being used for journeys in the metropolis, but are frequently called upon to make long runs, is evidenced by the appearance of the "taxi"

HERE AND THERE.

A NEW garage has been opened in South Clerk Street, Elinburgh, by Messrs. Rossleigh, Ltd.

THE question of a trial of non-slip devices for motor-cars is before the Expert and Technical Committee of the R.A.C.

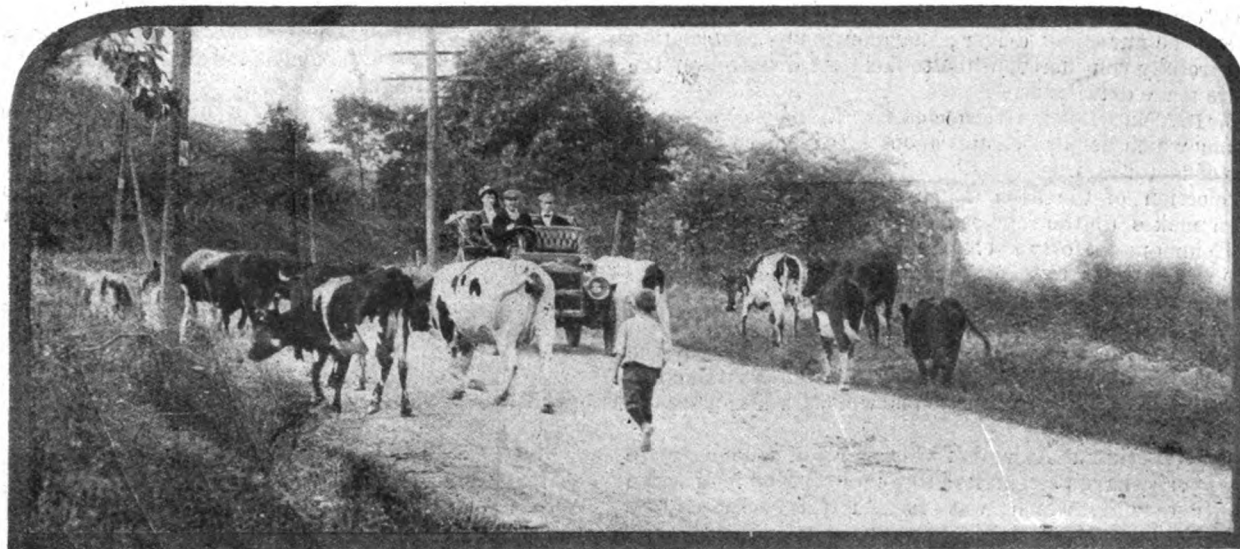
ONE of the newspapers at Indianapolis, U.S.A., is now using a number of motor-boats for the delivery of papers to the summer cottages on the banks of the White River.

THE Thomas American car, the second of the competitors in the New York-Paris motor race to finish the journey, arrived in the French capital on Thursday last week.

THE SCOUT MOTORS, LTD., of Salisbury, and Mr. W. H. Light, Gillingham, Dorset, have lately installed H.F. vulcanising plants to deal with the tyres of motorists in their respective districts.

MR. LLOYD GEORGE is about to undertake a motor-car trip through Germany, when he will make enquiries into several subjects in which, as Chancellor of the Exchequer, he is naturally interested.

IT is the intention of the U.S. Army Board of Ordnance to ask the next session of Congress for an appropriation of £200,000 to be used in experiments with dirigible airships, such as are now being tried in Europe.



A Frequent Incident in the Summer Season.

at the recent race meetings at Epsom, Newbury, Sandown and other courses. What is probably the longest trip a motor-cab driver has so far been called upon to undertake was that recently made by several members of the Eccentric Club from London to Plymouth and back. From Mr. E. Lockwood, one of the party, I learn that the journey both ways of 414 miles was performed in 31 hrs. 10 min., including stops for meals and refreshment. The cab, a 10-12-h.p. Humber, did the journey magnificently, carrying five persons and their luggage. Some of the hills met with were exceptionally severe, especially between Chard and Honiton and Exeter and Ashburton, but the vehicle negotiated them without difficulty. The machine registered £16 0s. 8d. on the journey. ARCANUM.

It is announced that the Mercedes car which, driven by Lautenschlager, won the Grand Prix, has been purchased by Mr. Robert Graves, of New York, and will be entered by him for the Vanderbilt Cup race.

MR. J. T. O'LOGHLEN, the proprietor of the Zetland Hotel, Cashel, Connemara, has become the owner of a 16-h.p. Clement-Talbot car, which he is placing at the disposal of visitors at his place for conveyance to and from the fishing. He has leased the Golla river and lakes as well as some lakes on the Ballinahinch waters for the use of visitors.

THE SECRETARY FOR WAR has given the expenditure by the War Office upon aeronautical work during the last five years as follows:—In 1903-4, £14,600; 1904-5, £19,150; 1905-6, £23,600; 1906-7, £20,750; 1907-8, £16,500. The estimated expenditure for 1908-9 is £13,750.

REGULATIONS creating an Australian Volunteer Automobile Corps have been approved by the Governor-General in Council, and have been issued to the officers commanding in the various States. Steps will at once be taken to bring into being this latest addition to the defensive forces of the Commonwealth.

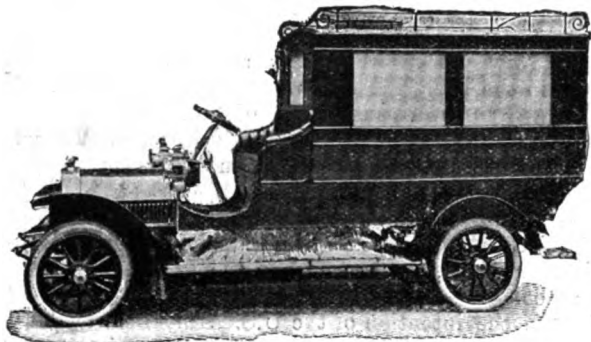
As mentioned in a recent issue, we have reprinted the table giving the details of the setting of valves of petrol motors, published in the *M.C.J.* of June 6th. Being mounted on stiff card it should prove a handy means of reference in motor repairing establishments, and we shall be glad to send a copy gratis to any reader making application for the same.

AT Wednesday's meeting of the London Corporation the County Purposes Committee submitted a report as to the more effectual regulation of motor traffic in the City, stating that in their opinion legislation is necessary to deal with it; and asking for authority to take such steps as they might be advised in reference thereto, with power to confer upon the subject with the Police Committee and such other authorities as might be deemed advisable.

CAPTAIN LORD CHARLES FITZMAURICE has lately acquired a Miesse 20-24-h.p. petrol car.

A MOTOR-CYCLE quick package and messenger service has recently been established at El Paso, Texas.

We illustrate herewith the motor ambulance recently built by Messrs. Humber, Ltd., Coventry, to convey convalescent children to and from the Plaistow Fever Hospital. The chassis, which is of the 10-12-h.p. Coventry Humber type, has an elongated body of neat and light construction, which accommodates six children on



each side, together with a nurse. By an ingenious arrangement the front portion of the seating can be converted into a cushioned surface upon which the children can lie down. The vehicle is fitted with electric light and a speaking tube for communication between the nurse and driver; the question of ventilation has been carefully considered, while to facilitate disinfection the cushions are made detachable.

AT 3, Inverkip Road, Greenock, Mr. Leslie has a motor garage, from which he also carries on a large business in the hiring out of motor-cars.

THE election of the Hon. Rupert Guinness as M.P. for Haggerston makes up the representatives of the R.A.C. in the House of Commons to forty-five.

MOST emphatic as to the growing rivalry of the car with the rail was the exodus of motor-car parties from Brighton hotels each of the days of the Goodwood meet.

WE regret to learn that as the result of a fall from the saddle, on Saturday last, Mr. Charles Friswell sustained a fractured collar-bone. His many friends will wish him a speedy recovery.

SOLDIERS serving at Aldershot whose term of colour service will expire shortly have been invited to join a class of instruction in motor-car driving, which was formed this week at the Mechanical Transport Depot.

THE postal authorities of Washington, D.C., U.S.A., have decided to inaugurate exhaustive tests of motor-cars in the collection of the mails with a view to substituting them for horses and wagons in the district of Columbia.

THE General Purposes Committee of the Worthing Town Council are recommending that speed limits of six miles an hour should be imposed on motor vehicles plying for hire in the town, this being further reduced to four miles on rounding any corners.

BETWEEN April 1st and June 30th 123 motor-cars, 79 motor-cycles, and 114 changes of ownership were registered in Surrey; 1,524 motor-car drivers' licences were issued during the same period, the total receipts on the motor-car account being £536.

MR. J. R. MORRISON suggests, in the "Financial News," that motorists should acquire the London, Chatham, and Dover Railway, the Great Central Railway, and the East London Railway, at their present share quotations, and convert the lines into motor roads.

MR. PHILIP SAYERS, who has been well known in the automobile business for some years, more particularly in the branch concerned with the designing and building of stylish motor bodies, has opened an office at 3, Long Acre, London, W.C. He will be pleased to fit the chassis of present or prospective motorists with any particular type of body—a class of work in which he has proved the possession of sound as well as original ideas.

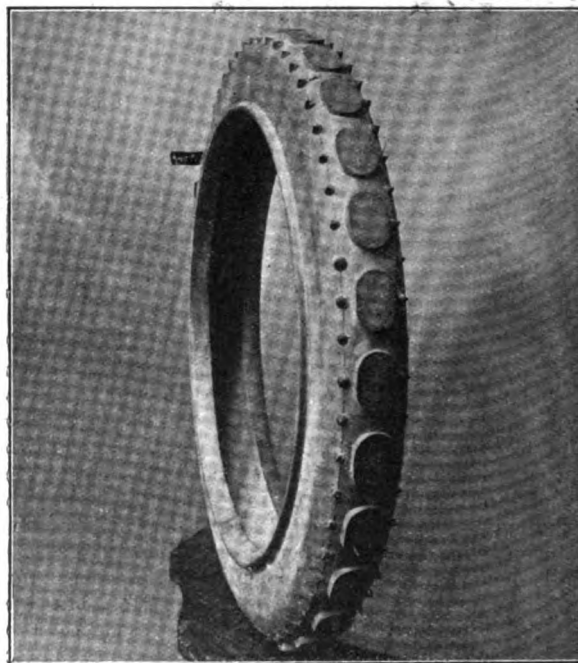
MESSRS. DENNIS BROS. have lately completed a 35-h.p. triple phaeton for Mr. G. Booker, of Barnsley; the vehicle is to be used for hire purposes, especially for taking parties on long tours. It is most luxuriously upholstered, and has ample room for luggage. Pneumatic tyres are fitted to the front wheels, solids being used at the back.

A LITTLE work on Sports Management, including a chapter on the organisation of a motor gymkhana, comes from Mr. H. Hewitt Griffin, who for a number of years has been connected with the journalistic side of cycling and motoring. Doubtless it will be of value to many who are called upon to organise such happenings. It is published by the Putney Press, Ltd., of Putney.

MOTORING visitors to Southport will find the extensive garage of Mr. R. Woodhead, adjoining the Winter Gardens in Lord Street, well adapted to their needs. An idea of the extent of the premises may be gathered from the fact that there is accommodation for 100 cars on the ground floor, a number of separate private lock-up boxes being also available. Mr. Woodhead is an official repairer to the R.A.C. and is well equipped to carry out all classes of repairs.

WHILE in Nottingham recently we made our way to the finely located and well equipped garage of the Humber Company. This is right under the shadow of the Castle, and has entrance among most pleasant surroundings, being in the main road skirting the city, and thus accessible to all visitors. It is well built for its purpose, and, in addition to the garage for cars, there is also a stockroom, repair shop, and every means of overhauling vehicles. It easily takes rank amongst the chief of the many such establishments in Nottingham.

WE illustrate herewith a new non-skid tyre devised by Messrs. H. and E. Walker, which is about to be put on the market by the Bradford Vulcanising Company, 96, Manningham Lane, Bradford. As will be seen, the feature of the tyre is that the tread is composed of rubber projections of a special oval shape evenly spaced round the circumference. At each side is a row of small studs, which can be either of steel or rubber; the



latter are set at an angle to the road, so that, should the car show any tendency to skid, the tyre, in rolling a little out of the perpendicular, causes the studs to grip the road surface and so arrest the skid. Some time ago the firm fitted a set of the cove s (380 by 120 mm.) to a car which has since been driven over 2,000 miles. Although the bulk of the running was performed in very bad weather, the firm inform us that the tyres fully responded to their expectations, no tendency to skid being shown by the vehicle.

CONTINENTAL NOTES.

British Motorists in France.

During the past week or so there has been a large influx of British motorists into France. Among those who have arrived with their cars are Lord Byron (58-h.p. Daimler); Mr. J. Ponsonby, London (35-h.p. Panhard); Mrs. Temple Patterson and Mrs. F. Robertson, London (60-h.p. Napier); Mr. Levin, London (24-h.p. Panhard); Lord Templemore (58-h.p. Daimler); Mr. and Mrs. Band (75-h.p. Mercedes); Mrs. Miller Fothergill, London (40-h.p. Renault); Mr. Hutchinson, London (45-h.p. Delaunay-Belleville); Sir Everard Pauncefort Duncombe (58-h.p. Daimler); Mr. and Mrs. F. R. Birdsall, London (35-h.p. Mors); Mrs. and Miss Mackenzie, London (24-h.p. Panhard); Lady Maryon Wilson (40-h.p. Daimler); Mr. and Mrs. Arthur E. Abrahams, London (30-h.p. Leon Bollee); Sir Richard William Levinge (24-h.p. Panhard); Mr. James Logan and Mr. Walter Ridley, London (32-h.p. Clement); and Mr. John R. A. Gibb, London (45-h.p. Napier).

Aeronautical News.

MR. ROUMÉGOUX, of Montreal, has arrived in Paris to experiment with an aeroplane of his own design, the special

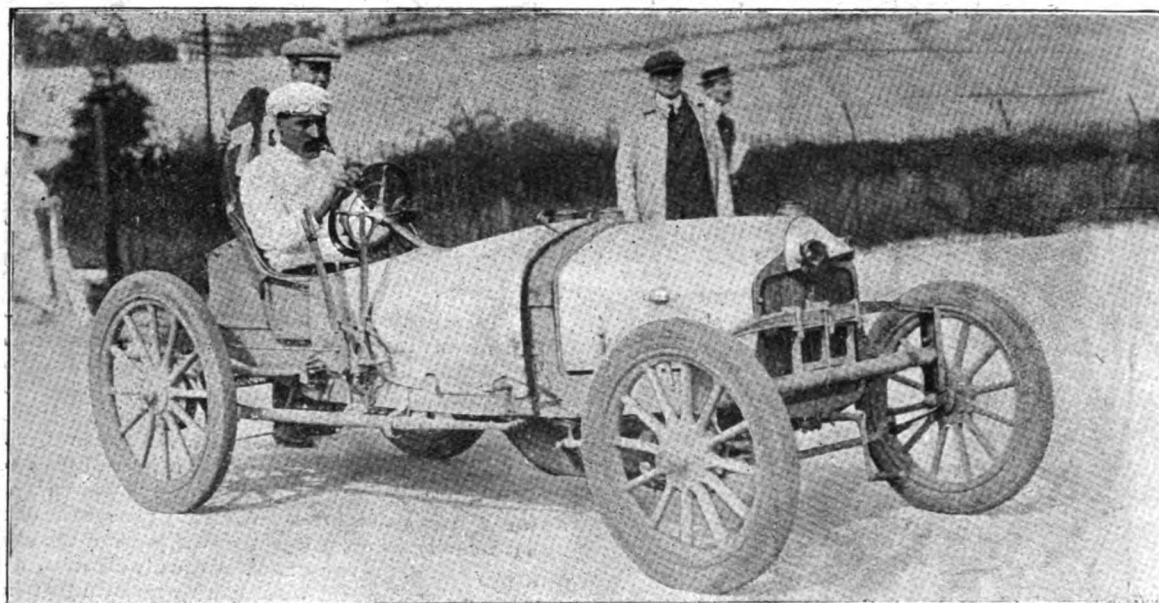
results of which the prizes will be awarded. A flexibility trial for six-cylinder cars, to show the maximum and minimum (without stopping the road wheels) speed these vehicles are capable of, will be held the same day. Entries, at the rate of £2 per car, will be received up to September 17th.

Motor Vehicles for Postal Work.

A trial of motor vehicles for postal work was recently held by the Italian Ministry of Posts and Telegraphs. Over twenty entries were received, but the number of cars actually competing was reduced to five—namely, two S.P.A.'s, a Fiat, a Fides, and a Florentia. The tests lasted for about a fortnight, the distance covered being upwards of 1,240 miles. The points taken into consideration were regularity of working, speed, and load carried, the prize being awarded to the S.P.A. Company. The vehicle, which carried a useful load of just over 2 tons, was fitted with a 28-h.p. four-cylinder motor, 110 mm. bore by 145 mm. stroke.

Public Services in Montenegro.

A contract has just been arranged between the Government of Montenegro and Messrs. Laurin and Klement, of Jungbunzlau,



Racing at Brooklands.—M. Naudin at the wheel of the Sisaire-Naudin Car on which he won the All-Comers' Handicap.

feature of which is that it can rise direct into the air without having recourse to wheels. It is stated that the aeroplane manoeuvres freely in the air, and the inventor claims to be able to lift a ton weight with his machine.—The new French Army airship République made a flight of thirty miles over Paris on Saturday last.—The first Russian aero club has just been formed at Odessa, under the presidency of Gen. Baron Kaulbars, who proposes to buy an aeroplane of the Farman-Delagrange type.—The French Minister of War has, it is announced, placed an order for a second military airship.

Speed Trials at Evreux.

As has already been briefly announced in this column, "Les Sports," of Paris, is organising a series of speed trials on the level and on a hill, to be held at Evreux on September 20th. In the racing section categories will be provided for motor-cycles, cars up to 400 kilogs., ditto from 400 to 600 kilogs., ditto over 600 kilogs., Targa Florio type vehicles, Grand Prix voiturettes and Grand Prix heavy cars. For touring vehicles there are altogether fourteen classes. The run in the morning will be over a flying kilometre, this event serving as an elimination contest, the first three or four in each category being eligible for the mile hill climb, on the

Bohemia, whereby this firm undertake to organise and maintain by their own vehicles, and on their own account, a postal motor service throughout the principality, with a subvention from the State. The contract, which is for a period of fifteen years, carries with it a monopoly of supplying and running public motor vehicles of every kind both for passenger and goods traffic. This enterprise will result in the opening up of vastly improved communication between the Austrian port of Cattaro and Cetinge, Niksic, Podgorica and other towns in Montenegro.

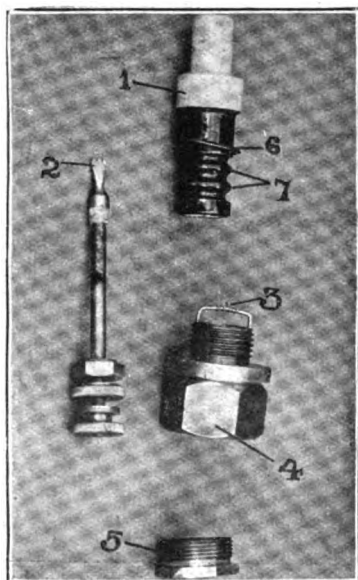
Miscellaneous Items.

M. F. Max Richard, President of the Chambre Syndicale de l'Automobile, has been appointed Consulting Engineer in Paris to the R.A.C.—An electrical fire service car is to be added to the equipment of the Fire Brigade of Aix-la-Chapelle.—The Russian Ministry of Railways and Communications has placed an order for a Laurin-Klement 3-ton petrol lorry.—The King of Greece has ordered an 18-30-h.p. Opel car.—A company has just been formed in Paris with a capital of £8,000, to be known as La Compagnie Generale des Automobiles de Livraison.—The Swiss Automobile Club is arranging to hold a reliability trial of industrial motor vehicles early next year.

MOTERING ACCESSORIES.

A New Magneto Plug.

We illustrate herewith the details of the new pattern Eisemann sparking plug for use in connection with high-tension magnetos, which has just been put on the British market by the United Motor Industries, Ltd. Differing from the old type in principle and detail, the new plug may be said to contain quite original features. The insulating material is a porcelain (1) of secret and special composition capable of withstanding high and varying temperatures. No matter how good a porcelain may be, however, if the method of ramming it in the body is faulty and no allowance is made for maximum expansion trouble is sure to ensue. In the new plug a careful study has been made of this and it is claimed that high tension leaks *via* a cracked porcelain are absolutely impossible. Another difficulty with magneto ignition is that when the current generated is increased beyond the normal the plug points almost touch after a time, by reason of the transference of metallic particles from the positive to the negative pole. This transference of material is helped by the soft nature of the metal used and its incandescent state during action. In the new Eisemann this difficulty is overcome by a triple-pronged centre electrode of nickel (2) and a negative electrode of nickel with a 4-turn spiral of platinum wire (3) securely attached thereto. By reason of the three points from which the high tension current passes it is claimed that the plug will last at least three times as long as the



ordinary single electrode pattern. The method of bedding down the porcelain is simple and clean; the top of the shoulder of the porcelain rests on a thick washer of asbestos in the body of the plug (4). The locking nut (5) binds down on two copper-mounted washers (6) which sit on the under face of the porcelain shoulder. Needless to say the binding nut is rounded to shape the latter, so that sharp pressure on the porcelain is avoided. It may be added that the porcelain is ribbed (7) with the object of increasing the surface distance between the centre electrode nuts and the body, to prevent short circuits. There is also a well in the cylinder end of the porcelain for soot and burnt oil accumulation. The plug units are all easily detachable for replacement or examination.

The New Stepney Wheel Flange Fitting.

As already explained in a previous issue, the Stepney Wheel Company have recently put on the market a new patented flange wheel, which enables the Stepney spare wheel to be fitted in position in much less time and with much less trouble than hitherto. In view of the fact, however, that many queries have been raised by prospective users, a few words dealing with these points may be of interest and assistance to many other motorists. Before the introduction of the flange the Stepney wheel could not be attached to the car wheel until the tyre was deflated in order to enable the sliding hooks of the auxiliary wheels to grip round the edge of the rim. It was found that sometimes the tyre stuck to the latter, and that in this way considerable time was lost. The new flange is a ring with the minimum of weight consistent

with sufficient strength for its purpose, which by means of bolts and nuts is fitted permanently to the wooden felloe of each of the car wheels. When a puncture occurs the Stepney wheel is no longer fixed to the bead of the wheel rim, but to the flange, the fitting of the Stepney being thus greatly expedited and simplified. The new flange further offers the advantage that the spare wheel can be fitted without deflating the old tyre and by equipping the Stepney with a steel-studded tyre this wheel can be used in wet weather as an excellent non-skid device.

For the purpose of fitting, holes are bored to the number of the spokes on the car wheel, and as some have twelve and others ten or fourteen spokes, when ordering a new Stepney wheel with complete set of flanges it is imperative that the exact number of spokes should be stated. This is important, as cars very often have wheels with twelve spokes at the back and ten in the front, even when the tyres are of the same size. When attaching the new flanges to the wheels the holes should be bored at a distance of about one inch from the spokes, while the bolts should on no account be fixed through the spokes themselves. The flange, which can be easily fitted to the ordinary standard pattern artillery wheel without the necessity of taking off either the wheel or the tyre, does not take the ordinary pattern Stepney spare wheel, but specially shaped clamps (sliding hooks) are necessary. The makers are, however, able to alter at a small cost the old pattern Stepneys to suit the new flange attachment.

The Stepney wheel, when fitted to the flange, creeps a little, but this is claimed to be an advantage, as it lessens any undue or sudden strain being given to the gears or other working parts through the clutch being too fierce, the flange giving the necessary slip. Provision is, however, made to prevent this creeping or slipping if desired. The new flange is only about one inch in width and is fixed in the middle of the wooden felloe of the car wheel, close to the rim. Although the new pattern has only been on the market a few weeks the Stepney Company have already received orders in excess of their anticipation, not only from motorists at home but also from the Colonies.

Lyxavon.

There are many motorists who find it difficult to use gloves when making small adjustments on their cars, with the result that their hands soon become dirty and greasy. It is therefore a good plan to have on hand some cleansing medium in the stable; indeed, it might be carried on the car, so as to be ready for use in emergencies. Among the many preparations of the kind is that made by the Lyxavon Company, of Prospect Place, Barnsbury, N., which, in consequence of its many advantages, is steadily gaining in popularity. Lyxavon is a special liquid soap which it is claimed does not merely remove the dirt from the surface, but actually dissolves it out of the pores of the skin. In the case of greasy hands, the preparation is equally effective, a small quantity in conjunction with cold water quickly removing not only all trace of the grease, &c., but also any objectionable smell. The new liquid soap is supplied in tins of convenient size.

Dust Coats.

The fact that we, in the south, have had so many days of fine weather with the accompanying dust upon the roadway gives added interest to the selection of motoring garments placed before those who travel on cars by Messrs. Charles Baker and Co., Ltd., whose establishment is at 137 and 140, Tottenham Court Road, London. The firm have a large selection of liveries for chauffeurs and have also a good range of dust coats for motorists generally. These are made in several materials and characterised by the same stylish design and good finish. Waterproof coats and new umbrellas motor coats are specialties of the firm, and are of particular interest to those motorists who may be preparing for rainy days.

Goggles.

Many types of motor goggles are now stocked by the leading agents for motor accessories, to the bewilderment of those who wish to make a prompt selection. Among these the Collapsible Cup motor goggles of Messrs. Aitchison and Co., whose many establishments in London are well known, and who have a Yorkshire branch at 37, Bond Street, Leeds, present features of neatness, lightness, and protection that give them distinction among such devices. The spring front Collapsible Cup goggles are made in a variety of patterns and sizes, and, whilst the glasses are devised so as not to distress the eye, the masks fit easily and close to the face, and, at the same time, they have not an unsightly appearance.

Correspondence.

[Letters to the Editor should be addressed to the offices, 27-33, Charing Cross Road, London, W.C.]

A HINT TO DRIVERS.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—Replying to Mr. Dey's letter in the last issue of the *M.C.J.* while no doubt there is much to be said in favour of his argument, there are difficulties in the way of adopting the plan he proposes. In the first place, even as an old motorist, I was unaware that the holding out of an arm was an indication that the driver was going to turn; I fancy that the signal is as frequently used to warn following traffic that he is easing up or going to stop. Secondly, in these days of covered cars, and even high-backed open vehicles, the only means a driver has to warn those behind him is by means of his right hand, for if he put out his left it would never be seen.—Yours truly,

SEASIDE.

THE DANGER OF EXHAUST GASES.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—Your contributor "Arcanum" has done well to draw attention to the dangerous effects to one's health of exhaust gases in con-

drawing office—so much so, in fact, that at a very conservative estimate the efficiency was decreased 25 or 30 per cent. After the employees had been subjected for two or three months to this poisonous atmosphere the physical condition of almost all was visibly impaired. They complained of loss of appetite; nearly all suffered constantly from headache and depression; and in at least two cases the heart action was to a certain degree affected. Eventually the testing department was removed to a large open-sided building, since which everyone in the drawing office (which was under the supervision of the writer, and, therefore, the only department of which he can speak with perfect assurance) has returned to a normal condition, and a marked increased efficiency of the department is evident.—Yours truly,

CHIEF DRAUGHTSMAN.

GRAPHITE AS A LUBRICANT.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—Referring to "Bristolian's" letter in a recent issue of the *M.C.J.* I am a firm believer in the use of graphite for engine lubrication.



The Motor Volunteer Race from Vienna to Berlin.—An Early Arrival in the German Capital.

finer spaces. I was for some time connected with a firm engaged in the manufacture of petrol motors. The drawing office, pattern shop, general offices and testing room were all in one building. The two latter occupied the ground floor and the other two departments and a store room the first floor. Between the testing room and general office was a stout wooden partition. Two stairways provided with doors, sometimes closed and more often open, and the shaft of a lift permitted the gases to rise from the testing room below to the second floor, where only a thin and poorly-constructed partition divided the drawing office and pattern shop from the main store room. At first so little testing was being done that the air appeared perfectly clear, yet slight headaches and an extreme lassitude became common.

As the amount of testing increased the condition of the atmosphere became evident to the eye, and when this work was at a maximum the air in the drawing office was quite commonly blue with smoke, and although the staff arrived in the morning in a perfectly normal condition, by eleven o'clock not one person in the room would be free from a most severe headache. Some small respite was gained during the dinner hour, but by two o'clock in the afternoon the gases had again made themselves evident, and usually the headaches were accompanied by considerable depression. Naturally, this had a marked effect upon the work of the

drive a four-cylinder car, and about once a month clean all the old oil out of the base chamber and fill it with fresh oil. I then take about two teaspoonfuls of flake graphite and divide it into four parts and blow it, with a copper tube, into the cylinders when the piston is at the end of its stroke, so that the graphite remains on the walls of the cylinders. I have been making a practice of this for two years, and have yet to have the first dirty sparking plug from the effects of the graphite.—Yours truly,

S. W. T.

MOTOR DRIVERS' LICENCES.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—Some time ago I received a complaint from a member of the C.T.C., who is a motor-cyclist, that, while in other places it was the practice of the local authorities entrusted with the power and duty of issuing drivers' licences under the Motor Car Act, 1903, to issue and renew such licences for a full period of twelve months from the date of issue or renewal, the practice in Midlothian of recent years has been to issue or renew only up to December 31st next ensuing, thus requiring those who held licences dated subsequent to

January 1st to have them extended for the balance of the period of twelve months, or run the risk of being convicted of a breach of the Act if found riding on or after January 1st following.

I have been in communication with the clerk to the County Council of Midlothian in regard to the matter, and I am pleased to inform you that I have now received a letter from him stating that he has been "in correspondence with the Secretary for Scotland on the subject, and as a result drivers' licences will in future be issued or renewed for a period of twelve months from the date of issue or renewal."

As the change in the practice of the Midlothian County Council may interest some of your readers who are resident in the county, and may help others who may have suffered from a similar practice on the part of their local authority—unless, indeed, Midlothian stands alone—I take the earliest possible opportunity of sending you the information of the alteration.—Yours truly,

ALFRED J. F. MITCHELL,

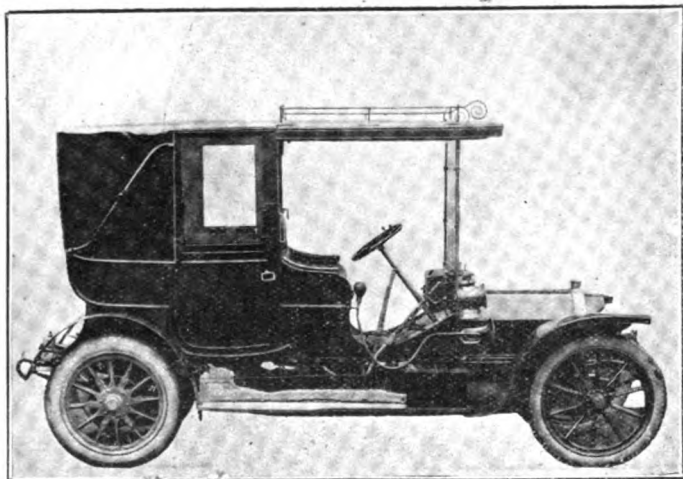
Hon. Sec. to the Lothians District Association of the C.T.C.

SIGNALLING BY HORN.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—I have seen some "Rules and Courtesies of the Road" in which a correspondent suggests a simple method of signalling by the horn an intended alteration of direction. But why devise a new method when a very satisfactory one exists already—namely, the rule of the road at sea?

One short blast means that I am directing my course to starboard (to the right); two short blasts, that I am going to port (to the left); three short blasts, that I am going astern. One long blast denotes that I am going straight ahead and gives warning to small boats, &c., to get out of the way.



The Star 16-h.p. Live Axle Landulet recently supplied by the Star Engineering Company to the Birmingham Baths and Parks Committee.

The long blasts could, of course, only be used by cars fitted with electric horns, sirens, Gabriels, &c., but a car fitted with an ordinary horn could, instead, give a rapid succession of short blasts.

The three blasts would be useful when coming out backwards from a motor house or from a lane after taking a wrong turning, &c.

There are now a large number of drivers on the road who have been taken from the Naval Motor School; they would all recognise at once these signals.—Yours truly,

W. S. LEVISON GOWER.

CAB WHISTLES.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—With regard to street noises and their abatement, one which is becoming a greater nuisance in London daily is the cab whistle. As motor taximeters are undoubtedly the most popular, although the least available at present, why should it be necessary to whistle three times for a vehicle so often required? If someone in authority would only think to make the call 1 for a motor-cab, 2 for a hansom, 3 for a four-wheeler, this neighbourhood, like many others situated in Central London and in the midst of places of entertainment, would be rendered a little pleasanter to live in.—Yours truly,

CHARLES PINOLI.

SOLID v. PNEUMATIC TYRES.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—The gravitation test referred to in the last issue of the *M.C.J.* is very interesting. What would be the result of a similar test on a 6-h.p. De Dion? Would it travel as far on Torkington tyres as on 700 mm. by 85 mm. Dunlop pneumatics pumped to 65 lbs. or 70 lbs. pressure?

sure? Perhaps this experiment has been tried, and, if so, the result would be most interesting to a large number of motorists.—Yours truly,
CL 3.

[The question raised by our correspondent is undoubtedly of interest to users of small cars. The experiment with Torkington tyres has, so far as we know, not been extended to small power vehicles. Perhaps some of our readers, who have had experience with cars fitted with solid tyres, will furnish some information as to the results obtained, especially with regard to the effect, if any, on the speed.]

IGNITION TROUBLES.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—I have had a good deal of trouble with the ignition of my 6-h.p. owing to the fusing of the platinums of the make and break. I have put in a new coil without benefit, and suspect that the charging of the accumulator of 40 ampere hours capacity is at fault. Could you give me any advice, or could you inform me whether it would be better to charge my accumulators by means of a primary battery?—Yours truly,
L. W.

[If the trouble is caused by the accumulators, it would be advisable to make certain that they are in proper order before trying charging by primary battery, as this is a somewhat expensive method to employ. First ascertain if the dilute acid in the cells is at the right strength, namely, a specific gravity of 1.200 when charged. If it is lower than this more acid must be added to make it correct. Then have the accumulator well charged, making sure that it is charged at the rate of 3 amperes for twelve hours. When fully charged it should give 4½ volts on a reliable voltmeter. Accumulators of 40 ampere hours capacity are often undercharged owing to want of thought, or they are charged at a rate which is too low for the capacity; possibly they may be charging at 1 ampere for eight hours, which is obviously not sufficient, so that the plates are never fully charged, and the accumulator soon runs down. Unless "L. W." can get them charged at the above rate, it would be better to employ four cells of a primary battery, as cells of the types mentioned will easily give three amperes if the voltage is kept up, and by the use of four cells for the primary this can be done. It should be remembered, when charging from a primary, that the current in the circuit is produced by the difference in the voltage between the accumulator and the battery, so that it is necessary to keep the charging voltage of the primary at least two volts above that of the accumulator.]

PISTON CLEARANCE.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—I should be glad if you could give me some information as to what is considered the best practice in clearance between the body of the piston and the cylinder walls of a petrol motor. In other words, what should be the difference in diameter in thousandths of the piston body and the cylinder of a motor having a bore and stroke of respectively 3½ in. by 4 in. I have been told that some manufacturers make this 4/1000 and others recommend making the piston 2/1000 smaller at the top than at the bottom, on account of the higher temperature reached by the top of the piston.—Yours truly,

R. A. S.

[The usual amount of piston clearance is from 2/1000 to 4/1000 of an inch; some manufacturers allowing more, some less, this depending greatly on the cooling surface. The clearance on a cylinder 3½ in. bore with average cooling surface would be approximately 3/1000. The principle of the piston being larger one end than the other is very seldom used, most being perfectly parallel.]

AN ENGINE QUERY.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—I have a four-cylinder 24-30-h.p. car which I have now been driving for nearly six months. I am sorry to say, however, that it is very little used on account of the trouble when mostly starting away with the car. It runs very well for the first mile or so and then one cylinder will miss fire and then another will do the same. Then the car will be running on two cylinders—first one cylinder and then another will miss fire. Next engine commences to knock and then in a few minutes all four cylinders will fire correctly and the car will go splendidly, but on coming to a small hill knocking will commence again; and it seems as if the engine has not enough power, but that I put down to the misfiring; the carburettor is correct, as there is a good flow of petrol and all seems clean. The four tremblers on the coil seem to all have a nice buzzing sound, as I have them nicely adjusted, but I may say that one cylinder misses fire more than the other, and has done so ever since the car was bought. I have wondered if it could be the fault of the coil, as everything else seems right. I have even put a new high tension wire and new plug to the cylinder that misses most, but it does not make it any better. I should be glad of any assistance you can give me in locating the cause of the trouble.—Yours truly,

CARDIFF.

[The misfiring complained of by our correspondent may be due to many causes. This kind of misfiring generally occurs when the contact breaker is dirty, or perhaps the coils are adjusted too tightly. If these are not the causes, we should recommend that the aid of a competent man be obtained to thoroughly inspect and locate the difficulty, as nothing is so annoying as electrical troubles.]

RACING AT BROOKLANDS.

—♦—

ALTHOUGH last Saturday's meeting at Brooklands was favoured both with fine weather and interesting racing, the attendance of the general public was extremely disappointing, the only part in which any degree of activity was observable being the paddock, where, among others, we noticed Prince Francis of Teck, the new chairman of the Royal Automobile Club, and Count Adalbert von Sierstorff, of the German Imperial Automobile Club.

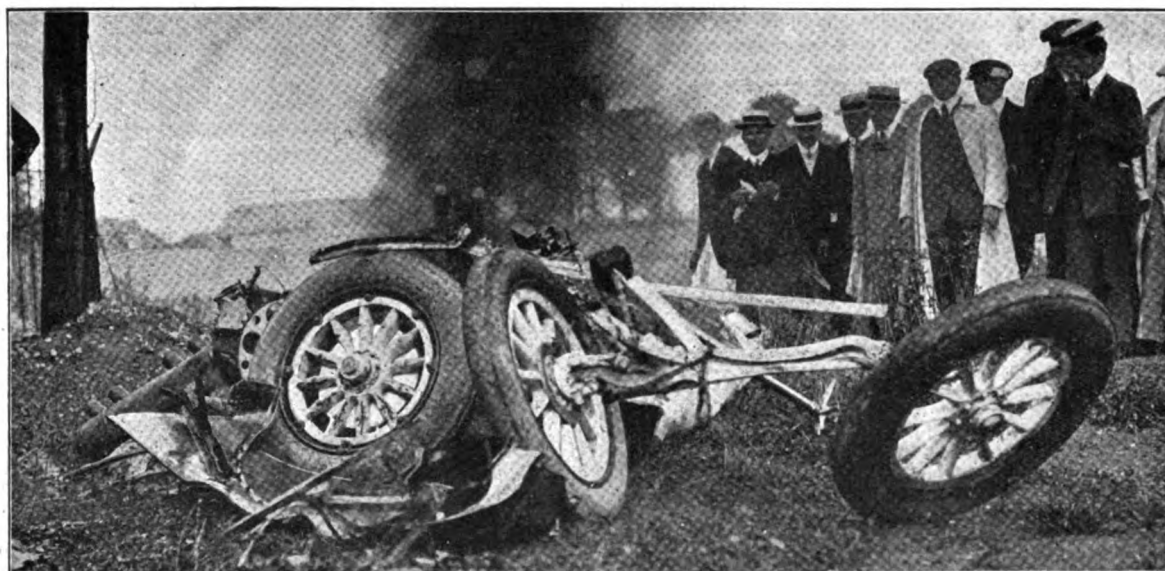
Thirty-five entries had been received for the fourth All Comers' Handicap Sweepstakes, over a distance of 5½ miles; the contest was divided into three heats and a final. There were seven starters in the first section, which resulted in the following being eligible for the final:—C. Hobson, 27.9-h.p. Nagant-Hobson (2 min. 6 sec. start); C. A. Bird, 34.5-h.p. Mercedes (1 min. 34 sec.); Sir George Abercromby, 58.1-h.p. Fiat (1 min. 4 sec.); M. L. Braithwaite, 17.5-h.p. West (2 min. 50 sec.) Some interest in the second heat was evinced owing to the fact that it witnessed the appearance at Brooklands of Louis Naudin, one of the designers of the Sizaire-Naudin car, and who took part in the recent Grand Prix des Voitures. A new British car, the 22.4-h.p. Certus with friction drive, also made a satisfactory debut on the track, A. C. Godwin-Smith, who had 2 min. 38 sec. start, driving it into third place. The Sizaire-Naudin, which had the largest time allowance (4 min. 24 sec.), completed the first lap ere all the competitors had been sent off, and proved an easy winner, Naudin finishing over a minute in advance of H. Taylor, 20-h.p. Clement-Talbot (2 min. 24 sec.). J. C. Colmore, 14.7-h.p. Humber (3 min. 6 sec.), also qualified for the final. An objection, the nature of which was not

miles per hour—the highest sustained rate that has so far been recorded on the Brooklands track. Lane was only about 60 yards behind and would have been closer had he not thought he had another lap to go and made for the fork, instead of the finishing straight; at the cost of a burst tyre he managed to pull round, too late, however, to catch Newton. Resta was third and Pyne fourth, both, however, being some distance behind. Hutton retired in the third lap and Pigot at about the half distance.

The Merit Trophy contest, which followed, brought out a field of thirteen competitors. The event was a 5½ mile handicap, the time allowance being on a cylinder dimension basis. F. A. Bolton's 59.6-h.p. Ariel was on the scratch mark, while G. F. Scantlebury's 8.9-h.p. Sizaire had the maximum start (3 min. 21 sec.). The latter was never caught, and proved an easy winner, H. G. Nalder, Berliet "Grayling" (42 sec.), being second, and C. Hobson, 27.9-h.p. Nagant-Hobson (1 min. 6 sec.), third.

The novelty of the afternoon was the 5 mile Journalists' Handicap, for which seven entries were received. Only five, however, faced the starter, there being one absentee, while R. V. Beveridge's 8.9-h.p. Sizaire-Naudin "jibbed" on the way to the starting point. J. Flatau was the first home on his 19.4-h.p. Belsize (18 sec. start); W. Whittall 8-h.p. Rover (1 min. 31 sec.), being second; and C. J. Bertelli, 7.5-h.p. O.T.A.V. (1 min. 31 sec.), third. The scratch man, J. Owen, finished fourth on his 25.6-h.p. Thornycroft, but would have run into third place had he not made for the fork instead of the straight on the last round.

Unhappily the misadventure and the fatal accident which occurred in the last race of the day are the outstanding features of the racing on Bank Holiday. The full story has already been told in the



The Accident at Brooklands.—The burning remains of the 76-h.p. Mercedes.

announced, was lodged against the winner, but was over-ruled. The third heat included two or three competitors who had been rejected from the previous runs owing to their cars not being provided with the regulation rear number disc. Mr. S. Straker's 18.8-h.p. Shamrock was not allowed to start from a similar cause. The order of the first four at the finish was J. E. Hutton, "Little Dorrit" (42 sec.); B. M. Thornton, 22.5-h.p. Ford (2 min. 30 sec.); O. S. Thompson, Austin "Pobble" (1 min. 28 sec.); and G. A. Phillips, 19.6-h.p. Humber (2 min. 6 sec.). Eleven cars turned out for the final. Naudin was again round before all the competitors had been despatched, and he crossed the finishing line fully a minute and a half before any of his rivals, thus carrying off the first prize. There was a keen struggle between the other competitors, the second place falling to C. Hobson, 27.9-h.p. Nagant-Hobson; J. E. Hutton, "Little Dorrit," being third; and G. C. Colmore, 14.7-h.p. Humber, fourth.

The great event of the day was the Second Montagu Cup race for cars of a cylinder dimension between 145 and 235, and over a distance of about thirty miles. There were six competitors, C. Lane and D. Resta each driving Grand Prix Mercedes cars, J. E. Hutton a 76-h.p. Mercedes; H. Pryne, Lord Northcliffe's 59.6-h.p. Mercedes; F. Newton a 90-h.p. Napier; and D. Pigot the "Delilah." The latter gave trouble at the starting point and only got into its stride after a delay which put it quite out of the running. Lane, on Mr. Burford's car, was the first away, followed by Resta, they leading for two laps. Newton had, however, reduced the distance between him and the latter, and in the third round ran into second place. The order was unchanged until 5½ laps had been completed, when the Napier forged to the front, the second half of the contest being a ding-dong struggle between the two rivals. Although Lane made several attempts to get in front he was unable to overhaul Newton, who crossed the line first, after completing the 30 miles at an average speed of 101½

daily press, and but the briefest chronicle need now be made. But coming within a year of the first fatality of the track, it has cast a gloom over the frequenters of Brooklands, which will not lightly lift. ¶

The first event on the programme was the August All Comers' Handicap, over a five mile course. This was run in two heats, the first five in each being allowed to compete in the final. In the first the Nagant-Hobson was the leader from the start, and reached the finish as the second and third were entering the straight. The Fiat and Austin gave a good race for second place, and the final positions were as follows:—C. Hobson, 27.9-h.p. Nagant-Hobson, 1 min. 16 sec., 1; Sir George Abercromby, 58.1-h.p. Fiat, 20 sec., 2; O. S. Thompson, Austin "Pobble," 42 sec., 3; A. H. Moreing, Daimler "Billy," 51 sec., 4; G. C. G. Moss, Arrol-Johnston "Guarded Flame," 1 min. 7 sec., 5; also ran, G. H. Levick, Napier "Perrier," scratch.

The second heat produced a field of ten starters and there was a keener result, although neither heat was productive of excitement. The close running of those behind the first two proved the excellence of the handicap. A. Van Hoboken won by about half the length of the finishing straight from C. A. Bird, and it was notable that the quartette of Mercedes cars occupied the first four positions, the placing being as follows:—A. Van Hoboken, 71.7-h.p. Mercedes, 20 sec., 1; C. A. Bird, 34.5-h.p. Mercedes, 47 sec., 2; G. E. Duveen, 33.5-h.p. Mercedes, 56 sec., 3; T. Faulkner, 24.8-h.p. Mercedes, 1 min. 9 sec., 4; W. B. R. Moorhouse, Fiat "Linda," 20 sec., 5; also ran, G. F. Scantlebury, 8.9-h.p. Sizaire, 2 min. 45 sec.; H. G. Nalder, German "Yellow Peril," 27 sec.; P. D. Stirling, Hutton "Dolly Varden," scratch; W. Whiteway, 21.4-h.p. Calthorpe, 1 min. 33 sec.; H. Agar, 17.5-h.p. Leader, 1 min. 57 sec.

The final produced the best of the three races, C. Hobson winning by about fifty yards from A. Van Hoboken, who was followed by A. H. Moreing on the Daimler "Billy."

The match between the two ladies who had competed in the first ladies' race at Brooklands gave Miss Muriel Thompson a repetition of her former victory by about 200 yards. The distance was one of three miles and the result was as follows:—O. S. Thompson's Austin "Pobble," Miss Muriel Thompson, 1; G. C. G. Moss' Arrol-Johnston "Guarded Flame," Miss Christabel Ellis, 2. Miss Thompson was at scratch, and Miss Ellis had an allowance of 9 sec.

The First O'Gorman Trophy was presented by Mr. Mervyn O'Gorman, for motor-cars without limitation of the motive power, provided that it be wholly mechanical, and without limitation as to the kind of fuel, the method of its delivery to the working parts, or the use of auxiliaries, such as compressed oxygen, acetylene, or others. The only limitation was that the cars should have two seats only. The course was one of 100 miles and the event attracted seven entrants. Of these Lord Northcliffe's 59-8-h.p. Mercedes did not start, those actually racing being S. F. Edge's 60-h.p. Napier, F. Newton, J. E. Hutton's Hutton "Little Dorrit," Owner; E. W. Lewis's 67-5-h.p. Deasy, Owner; D. Pigot's Darracq "Delilah," Owner; S. F. Edge's 59-2-h.p. Napier, J. G. Reynolds; H. G. Burford's 76-h.p. Mercedes, C. Lane. Both Lane and Reynolds were making their debut on the track at the August meeting, and evidently intended to force the pace from the beginning. The former quickly shot ahead, and, followed by Reynolds, led for seventeen laps, when he had to stop owing to a punctured tyre. Reynolds's Napier thus gained first place, Newton apparently saving himself in the first half of the race. Lane getting going again the Mercedes quickly gained, and on Reynolds experiencing similar ill-luck took up the running with Newton, whom he passed before the end of the twentieth lap. Thus they progressed another five laps, Reynolds following third. Then, as he was on the opposite end of the track from the paddock, Reynolds's Napier was seen to leave the course and overturn into the soft ground below. It was with intense relief that both driver and mechanic were seen to rise a few moments later—a miraculous escape. They were brought into the steward's room in the paddock, while the others continued their course. Then came the cry of another mishap—this time a fatal one. With only a few laps to run, and still well in front, Lane's Mercedes was seen to swerve where the track crosses the River Wey and fall backwards from the banking. The mechanic, William Burke, was killed instantaneously, but the driver escaped, although badly bruised and out about the face. The car was quickly enveloped in flames, and the engine found several yards from the chassis. F. Newton, on the 60-h.p. Napier, was completing the distance when the accident occurred, and won at the average speed of 98½ m.p.h. J. E. Hutton's "Little Dorrit" completed twenty-eight laps; E. W. Lewis, on his 67-5-h.p. Deasy, retired early. This unhappy mishap caused the abandonment of the match between S. F. Edge and C. Jarrott, which had occasioned considerable interest.

TRAFFIC REGULATIONS IN LEEDS.

THE first case under the new bye-laws of the Leeds Corporation with regard to the regulation of traffic has just been heard, when the chauffeur of a local doctor was summoned under Section 2 for not keeping to the left or near side of the crossing opposite the Midland Railway Station and not regarding the directions of the constable stationed at the crossing. The case was dismissed.

The regulations under which this case was brought to court were made in March of the present year, and apply to streets in which the tramways are laid and which are liable to be obstructed by reason of the amount and nature of the traffic. They are to the following effect:—

"Every person riding or driving shall approach, pass, and turn out of any crossing in any of the above-mentioned streets on or from the left or near side of such crossing in accordance with the direction given by word or signal of the constable stationed at such crossing to direct the traffic. Every driver or person in charge of any cart, wagon, lorry, or other heavy or slow moving vehicle in the above-mentioned streets shall (except when overtaking another vehicle) keep the same on the left or near side of the road and keep as near as possible to the footway or kerbstones on that side."

THE "FOUR-INCH" RACE.

FIVE further entries have been received for the International race to be held in the Isle of Man on September 24th, bringing the number of entries at present to forty, viz., two S.C.A.T. cars entered by Mr. John Newton, of Manchester, a third Vinot car entered by M. Vinot, a Piccard car by Mr. Morgan Donne, and Mr. H. B. Browning's Rover. The entrants are asking for the cylinders of their cars to be examined at their works during the months of August and September. This arrangement will prevent any disappointment in the Isle of Man. The cylinders of the first three cars will also be examined after the race.

MESSRS. E. J. DAVIS AND CO., of the Rapidising Engineering Works, Great Eastern Road, Stratford, E., have recently introduced a set of pliers especially adapted for manipulating piston rings, which should be of interest to motor repairers. It is claimed that by their aid a set of rings can be taken off and replaced under three minutes by an unskilled workman without fear of breaking, twisting, or damaging them in any way, and also without fear of damage to the operator's fingers.

THE KETTLEBY HILL CLIMB.

BELOW we give the final results of the competition for the Du Pre Challenge Cup held on Kettleby Hill on the 11th ult., and fully reported on page 453 of our issue of July 18th, when the times of the various cars were given. The winner of the cup was Mr. P. E. Tressider on his 15-h.p. Talbot, Mr. F. A. Bolton being credited with the fastest time on his 40-50-h.p. Ariel.

| Member's Name. | Maker's Name and H.P. of Car. | Marks. | Order of Merit. |
|---------------------|-------------------------------|--------|-----------------|
| P. E. Tressider ... | 15-h.p. Talbot ... | 77-8 | 1 |
| H. Belcher ... | 15-h.p. Talbot ... | 75-01 | 2 |
| R. G. Hogarth ... | 25-h.p. Talbot ... | 68-9 | 3 |
| A. Faruell ... | 30-h.p. Daimler ... | 63-4 | 4 |
| M. Ross Browne ... | 15-h.p. Mass ... | 62-9 | 5 |
| R. G. Hogarth ... | 8-h.p. Clyde ... | 61-6 | 6 |
| G. H. Wait ... | 14-h.p. Clyde ... | 60-4 | 7 |
| P. Graham ... | 35-h.p. Deasy ... | 58-8 | 8 |
| J. A. Doran ... | 45-h.p. Daimler ... | 57-8 | 9 |
| H. F. Leach ... | 42-h.p. Daimler ... | 56-7 | 10 |
| E. W. Lewis ... | 35-h.p. Deasy ... | 56-0 | 11 |
| Captain Byron ... | 24-h.p. Minerva ... | 55-2 | 12 |
| C. B. Warner ... | 10-12-h.p. Clyde ... | 54-5 | 13 |
| F. H. Gerard ... | 12-14-h.p. De Dion ... | 53-0 | 14 |
| F. A. Bolton ... | 40-50-h.p. Ariel ... | 52-8 | 15 |
| S. Riley ... | 9-h.p. Riley ... | 52-4 | 16 |
| H. A. Bennett ... | 16-h.p. Bell ... | 51-0 | 17 |
| Mrs. Hamshaw ... | 60-h.p. Napier ... | 50-8 | 18 |
| J. Downing ... | 14-h.p. Alldays ... | 50-4 | 19 |
| Captain Byron ... | 18-h.p. Minerva ... | 49-8 | 20 |
| W. Thomson ... | 12-h.p. De Dion ... | 48-3 | 21 |
| A. King ... | 10-12-h.p. Swift ... | 46-0 | 22 |
| Mrs. Hamshaw ... | 14-20-h.p. Renault ... | 45-1 | 23 |
| J. W. Taylor ... | 15-h.p. Humber ... | 39-4 | 24 |
| E. E. Colman ... | 20-h.p. Colmans ... | 38-7 | 25 |
| J. M. Bennett ... | 14-16-h.p. Argyll ... | 36-7 | 26 |

AUTOMOBILE ACCIDENTS.

WHILE motoring on Saturday evening from London to Bexhill, Mr. and Mrs. Kerpel met with a serious accident at Southsea, near Newhaven. When going down a hill the car ran into a telegraph pole, and the occupants were thrown out into the road, sustaining severe injuries.

A MOTOR-CAR accident occurred at Cambridge early on Saturday morning. Mr. Fred W. Barker, of Stourbridge, was driving two other gentlemen to Birmingham, and, after having been on the road all night, arrived at Cambridge at half-past four. While passing along Jesus Lane, Mr. Barker, according to his own statement, "dozed off," and the car, which ran into a pillar-box, crossed the pavement, and smashed into the wall surrounding the grounds of Jesus College. The off-side front wheel was knocked off, and the front of the car badly damaged, but the occupants escaped unhurt. Mr. Barker stated that he was driving at a medium pace.

WHEN passing through the tunnel at Reigate on Monday a motor-car is alleged to have knocked down a London cyclist, who now lies in Redhill hospital.

A MOTOR-CAR, which was being driven to Goodwood one day last week, overturned while climbing Dunton Hill. The car belonged to Mr. Percy Hall, and the occupants were a lady and gentleman and the chauffeur. The car ran back down hill. A wheel got in a ditch, and the vehicle overturned. The lady and gentleman escaped without any injuries, but the chauffeur sustained a broken collar-bone and injury to one of his shoulders.

A LAD seven years of age or thereabouts, living in Lancing, had a remarkable escape from very serious injury the other evening. He was running to and fro across the road near the Coastguard station, when he was run over by a motor-car coming from the direction of Worthing. An eye-witness says that the car was being driven very slowly, and it was impossible to avoid the lad, who ran right in front of it. The car pulled up almost immediately, but the front part of the vehicle went over the boy. No bones were broken, although the boy had, of course, sustained a number of bruises and abrasions. A constable eventually took the injured lad to the Worthing Hospital, where he was detained.

SEVERAL motor mishaps occurred on Tuesday. Near Aberdeen, two miners were severely injured by a motor-car by which they were run down; between Kenilworth and Leamington a motor-bus ran off the road into a cottage, injuring several of the passengers; and at Wroxham a car came into collision with a wagon containing some members of the Norfolk Imperial Yeomanry.

MR. H. A. SMITH, who has had a long career in the motor world, has been appointed works manager at the Deasy Motor Company, Ltd., Coventry. Mr. Smith received his early experience at the Daimler Motor Company, Ltd., as far back as 1896; later he was appointed assistant works manager for the Kingsburgh Motor Construction Company, and gained a lot of experience in omnibus work. We understand that the Deasy Company, in addition to their present standard cars of 25, 35, and 45-h.p., intend bringing out a 15-h.p. four-cylinder model for next season, and are manufacturing engines for pumping and electrical lighting purposes.

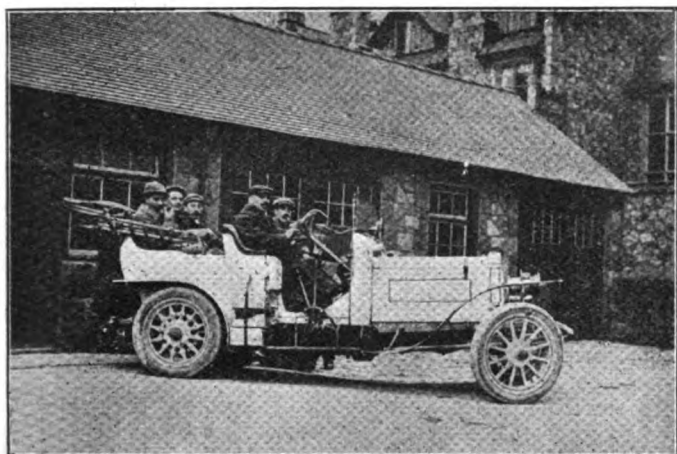
CLUBS AND ASSOCIATIONS.

ROYAL.

THE "Graphic" Challenge Trophy Race is to be held in the Isle of Man on September 23rd, entries closing on the 16th prox. On the same day the Henry Edmunds hill climb will be held on the Mountain Road in the Isle of Man, entries closing on the same date as those for the Graphic Trophy.

MOTOR UNION.

SATISFACTION was expressed at the July General Committee meeting at the work the M.U. is endeavouring to accomplish in persuading



The Lancashire Club's Hill Climb at Rivington Pike.—Mr. A. Farnell on the 30-h.p. Daimler on which he made fastest time in Class C.

local authorities to erect notices respecting alternative routes before motorists come upon watersplashes—a subject which has been urged from time to time in the M.C.J. The ford on the road between North Elmham and East Dereham, Norfolk, has frequently been complained of. An offer of two notices was made to the County Council provided the authority or the District Council would supply the posts and see to erection and maintenance. The Union also suggested that sign-posts should be put up to show that the road leads to Dereham in one direction and Elmham on the other. A reply has been received from the County Engineer, stating that a notice has been placed on the sign-post at each turn with the word "Ford" painted on it in conspicuous red letters.

MOTOR CLUB.

ON Wednesday of last week the Motor Club held a house dinner presided over by Col. W. J. Bosworth, the chairman. About ninety sat down and later adjourned to the Palace Theatre, where, thanks to the courtesy of Mr. Alfred Butt, who had a special programme arranged, a very cheery evening was spent. Amongst other things were pictures on the cinematograph of the Grand Prix at Dieppe and the Motor Gymkhana at Hastings, which was organised by the club. These pictures were, of course, of special interest to the automobile world, as they represented the two sides of motoring, sport and pleasure.

BROOKLANDS.

IN view of certain statements which have been made in regard to the speeds attained in the recent Fiat-Napier match, the tapes used with the electric timing apparatus at Brooklands have been submitted to and examined with the greatest care by the Competitions Committee of the R.A.C., and the committee has formally placed on record that it is entirely satisfied with the accuracy of the records.

LINCOLNSHIRE.

SKEGNESS is very popular among motorists, and it is therefore not surprising that over fifty fully-laden motor-cars were driven there from all parts of the county of Lincolnshire on Thursday week, when the officers of the 4th and 5th Lincolnshire (Territorials) entertained the members of the Lincolnshire A.C. The regimental sports proved very attractive.

LANCASHIRE.

THE Lancashire Automobile Club held a most successful hill climbing competition on Thursday of last week on Rivington Pike, about a mile from Horwich. Being on a private road the competitors were able to compete in peace, and it would have been in comfort had not the rain descended in quite an exceptional fashion, contriving to spoil what would have been a most enjoyable afternoon.

There were about sixty cars entered in the nine classes, each doing two runs up the hill. A gold medal was given in each class to the en-

trant of the car doing the fastest time on the first time and to the entrant of the car doing the best performance in the second, this being on a handicap based on the times taken over the first ascent.

Mr. Cross, of Blackburn, was the secretary of the meeting, Mr. J. E. Baxter judge, Mr. F. Straight timekeeper, and Mr. Ebbelwhite timekeeper and starter. The official times are as follows:—

Cars whose R.A.C. engine rating is not greater than 13-h.p.

| Name. | 1st run. m. sec. | 2nd run. m. sec. |
|---|---------------------|---------------------|
| W. Biscombe, 10-12-h.p. Zedel, four-cylinder ... | 2 12 2.5 | 2 17 3.5 |
| C. Jarrott, 9-h.p. Sizaire-Naudin, one-cylinder | 2 20 | 2 12 2.5 |
| C. Parrish, 9-h.p. Sizaire-Naudin, one-cylinder | 2 55 | 2 49 1.5 |
| V. Riley, 12-h.p. Riley, two-cylinder ... | 2 0 1.5 | 1 55 |
| Dr. Stephenson, 10-h.p. Midland, two-cylinder | 4 7 1.5 | 4 12 3.5 |
| H. Warrener, 10-h.p. Alldays and Onions, two-cylinder ... | 3 41 1.5 | — |

Cars whose engine rating is greater than 13-h.p. but not greater than 16-h.p.

| | | |
|---|----------|----------|
| C. Bertrand, 15-18-h.p. Zedel, four-cylinder ... | 2 15 2.5 | 2 32 3.5 |
| F. W. Huband, 14-h.p. Alldays and Onions, four-cylinder ... | 2 39 1.5 | 2 45 2.5 |

Cars whose engine rating is greater than 16-h.p. but not greater than 20-h.p.

| | | |
|--|----------|----------|
| W. Ashford, 16-h.p. Stella, four-cylinder ... | 2 10 2.5 | 2 37 3.5 |
| C. R. Garrard, 15-h.p. Talbot, four-cylinder ... | 1 22 | 1 19 4.5 |
| J. Hodson, 16-h.p. Bell, four-cylinder ... | 2 59 4.5 | 2 53 1.5 |
| Percy C. Kidner, 21-h.p. Vauxhall, four-cylinder | 1 14 4.5 | 1 15 1.5 |
| Mrs. E. A. Riley, 14-h.p. Belsize, four-cylinder | 2 11 4.5 | 2 10 2.5 |
| T. H. Woollen, 15-h.p. Talbot, four-cylinder ... | 1 13 1.5 | 1 22 4.5 |

Cars whose engine rating is greater than 20-h.p. but not greater than 25-h.p.

| | | |
|---|----------|----------|
| R. Crosaley, 20-h.p. Belsize, four-cylinder ... | 1 44 2.5 | 1 55 3.5 |
| O. Cupper, 26-h.p. Metallurgique, four-cylinder ... | 1 13 3.5 | 1 12 1.5 |
| J. E. Lounds, 30-h.p. Gagganau, four-cylinder | — | — |
| J. Newton, 22-h.p. S.C.A.T., four-cylinder ... | — | — |
| L. C. Rothwell, 20-24-h.p. Climax, six-cylinder ... | 2 19 1.5 | 2 24 3.5 |
| T. Rothwell, 20-h.p. Rothwell, four-cylinder ... | 2 44 4.5 | 1 59 3.5 |
| T. Rothwell, 20-h.p. Rothwell, four-cylinder ... | 2 34 2.5 | 2 25 |
| Earl of Shrewsbury, 20-h.p. Talbot, four-cylinder ... | 1 20 1.5 | 1 21 3.5 |

Cars whose engine rating is greater than 25-h.p., but not greater than 32-h.p.



The Lancashire Club's Hill Climb at Rivington Pike.—The Zedel 10-12-h.p. Car, which made the second fastest time in Class A.

| | | |
|---|----------|----------|
| G. E. Baxter, 30-h.p. Beeston-Humber, four-cylinder ... | 1 52 | 1 50 1.5 |
| I. Dootson, 25-h.p. Talbot, four-cylinder ... | 1 35 4.5 | 1 34 |
| F. Eastmead, 20-h.p. Sunbeam, four-cylinder | 1 53 | 1 54 2.5 |
| W. Smith, jun., 35-h.p. Mercedes, four-cylinder ... | 2 16 1.5 | 2 12 4.5 |
| J. E. Stanning, 30-h.p. M.P., four-cylinder ... | 1 51 | 1 50 |
| F. H. Walker, 28-36-h.p. Daimler, four-cylinder ... | 2 26 1.5 | 2 20 1.5 |

| | 1st run. m. sec. | 2nd run. m. sec. |
|--|---------------------|---------------------|
| S. Whitehead, 30-h.p. Humber, four-cylinder... | — | 3 24 3-5 |
| T. H. Woollen, 15-20-h.p. Talbot, four-cylinder ... | 1 17 2-5 | 2 13 1-5 |
| J. Ferguson, 40-h.p. F.I.A.T., four-cylinder ... | 1 33 | 1 37 1-5 |
| Cars whose engine rating is greater than 32-4-h.p., but not greater than 40-h.p. | | |
| W. Atkinson, 35-h.p. Daimler, four-cylinder ... | 1 12 3-5 | 1 13 2-5 |
| S. F. Edge, 40-h.p. Napier, six-cylinder ... | 57 1-5 | 1 3 2-5 |
| H. R. Kirk, 40-h.p. Metallurgique, four-cylinder ... | *1 56 4-5 | 54 2-5 |
| C. Wade, 35-45-h.p. Clement, four-cylinder ... | 1 32 2-5 | 2 51 3-5 |
| W. Wright, 40-h.p. Metallurgique, four-cylinder ... | 1 14 1-5 | 1 12 3-5 |

* This time was appealed against.

Cars whose engine rating is greater than 40-h.p., but not greater than 46-4-h.p.

| | | |
|--|----------|---------|
| A. Birtwistle, 35-45-h.p. Daimler, four-cylinder | 1 28 3-5 | 1 4 3-5 |
| A. Farnell, 30-h.p. Daimler, four-cylinder | 1 3 3-5 | 1 4 4-5 |
| A. Hollingdrake, 35-h.p. La Buire, four-cylinder | 1 58 3-5 | 1 51 |

B—C. Bertrand, 15-h.p. Zedel. Class C—P. C. Kidner, 21-h.p. Vauxhall. Class D—Oscar Copper, 26-h.p. Metallurgique. Class E—J. Dootson, 25-h.p. Talbot. Class F—S. F. Edge, 40-h.p. Napier. Class G—A. Farnell, 30-h.p. Daimler. Class H—H. Hollingdrake, 35-h.p. La Buire. Class I—S. F. Edge, 60-h.p. Napier.

Winners of gold medals in the handicap: Class A—C. Parish, 9-h.p. Sizaire-Naudin. Class B—F. W. Huband, 14-h.p. Alldays. Class C—J. Hodson, 16-h.p. Bell. Class D—T. Rothwell, 20-h.p. Rothwell. Class E—J. Ferguson, 28-h.p. F.I.A.T. Class F—Warwick Wright, 40-h.p. Metallurgique. Class G—J. A. Sutcliffe, 35-h.p. Daimler. Class H—E. W. Lewis, 35-h.p. Deasy. Class I—Ariel Motors, Ltd., 40-h.p. Ariel.

MANCHESTER A.C.

In our issue of the 25th ult. we reported the hill-climbing competition held by the Manchester A.C. on a hill within a short distance of the city, and having an average gradient of 1 in 12. The horse-power was ascertained by the formula $\frac{D^2 \times \sqrt{S} \times N}{5}$ and the handicap was

worked out by the formula $\frac{\text{Weight}}{\text{Time} \times \text{h.p.}}$

The 60-h.p. Napier entered by Mr. J. Newton gained the prize for

| Entrant. | H.P. and type. | Cylinder diam. | No. of cyls. | H.P. $D^2 \times \sqrt{S} \times N$ 5 | Weight. | Time above fastest. | Figure of merit. | Time placing. |
|---------------------------------------|-----------------------|----------------|--------------|---|------------------------------|---------------------|------------------|---------------|
| CLASS I. (UP TO 12-8 R.A.C. RATING). | | | | | | | | |
| 1. F. W. Hobday* | 7 Sizaire | 120 × 110 | 1 | 7-3 | t. cwt. qr. lb. 0 15 2 14 | m. s. 1 15 1-5 | 1-99 | 1 |
| 2. T. M. Young† | 8 Rover | 114 × 130 | 1 | 6-9 | 0 15 2 14 | 2 12-5 | 1-52 | 2 |
| 3. C. F. Bell | 12 Sizaire | 120 × 130 | 1 | 7-7 | 0 18 0 0 | 2 9-4-5 | 1-49 | 3 |
| 4. D. A. Parkyn | 7 M.M.C. | 90 × 120 | 2 | 8-4 | 1 0 3 7 | 4 26 1-5 | 89 | 4 |
| CLASS II. (UP TO 25-6 R.A.C. RATING). | | | | | | | | |
| 1. J. A. Bennett* | 22 S.C.A.T. (N 2830) | 100 × 120 | 4 | 20-8 | 1 11 2 0 | 1 6 2-5 | 1-73 | 5 |
| 2. J. A. Bennett† | 22 S.C.A.T. (LB 3160) | 100 × 120 | 4 | 20-8 | 1 15 3 7 | 0 53 2-5 | 1-72 | 2 |
| 3. P. A. G. Bell | 16 Bell | 3 3/8 × 4 1/2 | 4 | 16-8 | 1 6 1 14 | 1 0 | 1-67 | 3 |
| 4. J. L. Tattersall | 20 Belsize | 4 × 5 | 4 | 21-9 | 1 15 0 14 | 1 4-4-5 | 1-62 | 4 |
| 5. T. Rothwell | 20 Rothwell | 4 × 5 | 4 | 21-9 | 1 7 0 7 | 0 45 4-5 | 1-52 | 1 |
| 6. Mrs. E. A. Riley | 14-16 Belsize | 3 3/8 × 4 | 4 | 16-1 | 1 3 1 0 | 1 6 3-5 | 1-44 | 6 |
| 7. T. Rothwell | 25 Rothwell | 4 × 5 | 4 | 21-9 | 1 10 1 7 | 1 10 1-5 | 1-33 | 7 |
| 8. J. Arrowsmith | 18-24 Horbick | 80 × 90 | 6 | 18-1 | 1 12 0 0 | 1 50 3-5 | 1-27 | 8 |
| CLASS III. (OVER 25-6 R.A.C. RATING). | | | | | | | | |
| 1. W. Stones* | 40 Napier | 4 × 5 | 6 | 32-8 | 2 1 0 16 | 0 28 3-5 | 1-90 | 5 |
| 2. H. Hollingdrake† | 35-50 La Buire | 130 × 140 | 4 | 37 | 2 1 0 0 | 0 20 4-5 | 1-88 | 2 |
| 3. G. J. Crawford | 28 Lanchester | 4 × 3 | 6 | 27-7 | 1 17 0 21 | 0 37 4-5 | 1-81 | 6 |
| 4. J. Newton | 60 Napier | 5 × 6 | 6 | 54-5 | 1 19 2 14 | x | 1-80 | 1 |
| 5. C. Lings | 42 Daimler | 130 × 150 | 4 | 37-9 | 1 15 3 0 | 0 21 3-5 | 1-58 | 3 |
| 6. E. A. Gadd | 42 Daimler | 130 × 150 | 4 | 37-9 | 1 14 0 14 | 0 25 3-5 | 1-42 | 4 |
| 7. J. Arrowsmith | 20-24 Horbick | 108 × 114 | 4 | 24-8 | 1 9 2 7 | 0 55 2-5 | 1-39 | 7 |
| 8. C. H. Wallwork | 30-40 Belsize | 4 3/8 × 5 | 4 | 29-3 | 1 14 3 0 | 1 7 2-5 | 1-17 | 8 |

* First Prize in Class.

† Second Prize in Class.

J. A. Sutcliffe, 30-55-h.p. Daimler, four-cylinder ... 1 37 4-5 ... 1 35 4-5
Cars whose engine rating is greater than 46-4-h.p., but not greater than 52-8-h.p.

| | | |
|--|----------|----------|
| F. Birtwistle, 60-h.p. Mercedes, four-cylinder | — | 1 9 3-5 |
| J. Talbot Clifton, 40-h.p. Darracq, four-cylinder | 1 29 4-5 | 1 39 2-5 |
| P. Graham, 35-h.p. Deasy, four-cylinder | 1 20 4-5 | 1 10 3-5 |
| H. Hollingdrake, 40-h.p. La Buire, four-cylinder | 1 13 4-5 | 1 5 3-5 |
| F. C. Hudson, 48-h.p. Daimler, four-cylinder | 1 21 | 1 14 2-5 |
| E. W. Lewis, 35-h.p. Deasy, four-cylinder | 1 15 3-5 | 1 12 |
| Cars whose engine rating is greater than 52-8-h.p., but not greater than 60-h.p. | | |
| G. S. Barwick, 58-h.p. Daimler, four-cylinder | — | 53 |
| S. F. Edge, 60-h.p. Napier, six-cylinder | 49 | 50 |
| Ariel Motors, Ltd., 40-h.p. Ariel, four-cylinder | 1 2 1-5 | 1 1 4-5 |
| W. Watson, 60-h.p. Napier, six-cylinder | 48 3-5 | 51 4-5 |

Based on the foregoing times the following awards have been made:—

Winners of the silver cups: For the open handicap, 35-h.p. Deasy; Closed (Members') Handicap, A. J. Ferguson, 28-h.p. F.I.A.T.; for the fastest time of the day, W. Watson, 60-h.p. Napier.

Winners of the open gold medals for the fastest times in each class up the hill on the first run: Class A—Victor Piley, 12-h.p. Riley. Class

the fastest time, whilst the prize for the best performance on handicap, irrespective of class, was obtained by Mr. F. W. Hobday on a 7-h.p. Sizaire et Naudin. An interesting feature of the meeting was the appearance of the 22-h.p. S.C.A.T. entered for the Isle of Man Race, and which was only 8 1/2 sec. slower than the 60-h.p. Napier.

The results have now been officially notified as shown in the accompanying table.

MOTOR YACHT CLUB.

THE fifth annual trials of the Motor Yacht Club were held on the 30th and 31st ult., when the judges recommended that the following awards be made:—

CLASS I.

A bronze medal for reliability and engine starting to C. Grahame White for "Carissima."

A bronze medal for ease of manoeuvring to the Davis Paraffin Carburettor Company for "Davis."

CLASS II.

A silver medal for reliability, consistency of running and engine starting to Dixon Brothers and Hutchinson for "Lotus."

Bronze medals for reliability to Messrs. H. and C. Swayne for "Zonia," and to Dixon Brothers and Hutchinson for "Roxana I."

A bronze medal for reliability and ease of manoeuvring to Miss Larkins for "Cid."

A bronze medal for ease of manoeuvring and stopping and reversing to the Imperial Paraffin Boat Syndicate for "Resolute."

A bronze medal for design and construction of hull and installation to C. Maudslay for "Maudslay I."

CLASS III.

A gold medal for reliability, consistency of running, engine starting, stopping and reversing, ease of manoeuvring, design and construction of hull and installation to Capt. R. T. Dixon, R.E., for "Sphinx."

The judges also decided to award a special bronze medal to Messrs. Boulton and Paul for "Comrade," as a successful example of the application of a simple low-powered and inexpensive motor as an auxiliary to a small sailing vessel.

MANCHESTER MOTOR-CYCLE CLUB.

THE Manchester Motor-cycle Club has concluded a reliability trial from Manchester to Cheltenham and back. On the outward journey, a distance of 177 miles, the following made the run without a stop:—J. Tytler, Reed, Kettle, Heaton, Groes, and Leigh. The fastest time on the hill climb was done by A. Moorhouse, who unfortunately punctured thirty miles from home. The return home was made by way of Daventry, Lichfield, Nantwich, and Altrincham.

ROAD REPORTS.

THE Buxton Urban District Council have tried tar-spraying on portions of Park Road and Manchester Road, and other roads in the district are to be treated in a similar manner.

HELENSBURGH.—The Secretary for Scotland has granted the application of the Helensburgh Town Council for the restriction of the speed of motor-cars within a scheduled area of the town to ten miles an hour.

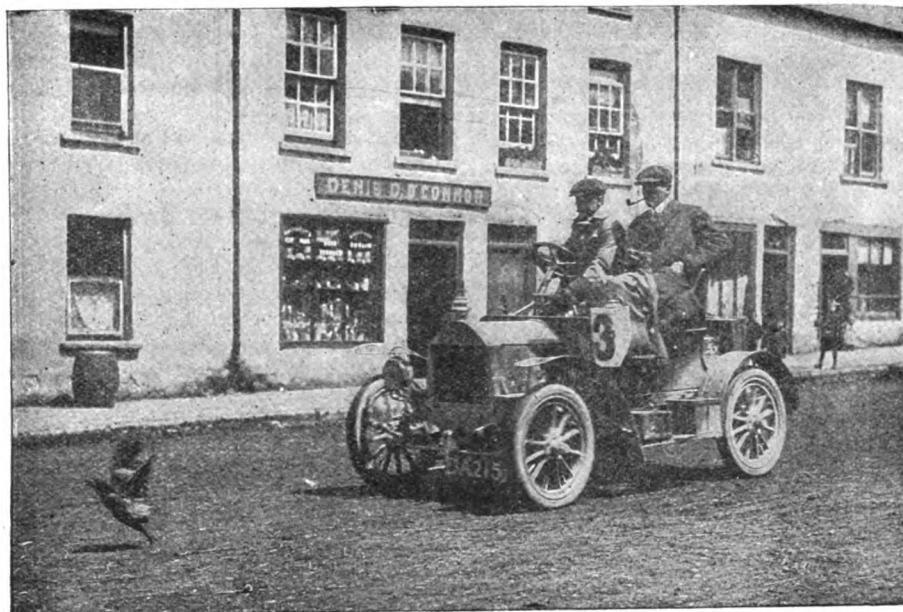
CASES AGAINST MOTORISTS.

THE LONG TRAP AGAIN.

In defending a motorist charged with exceeding the legal speed limit, at Haywards Heath, Mr. Parkes Taylor thought the long distance traps were very fair, but he considered an offending motorist should be stopped at the end of the measured distance by the police and told that he had been timed, because it might be that a motorist had a speedometer with a maximum speed. The chairman (Colonel Campion) said the Bench had found the £10 scale of fines adopted to have done good service.

"DANGEROUS" OR "EXCESSIVE."

Mrs. Julia Abrahams, a visitor to London, staying at Bailey's Hotel, South Kensington, answered at the South-West London Court to a summons, at the instance of the police, for driving a motor-car at a speed dangerous to the public. The defendant drove her car along Streatham High Road, and passing a tramcar on the off-side, ran into the rear of a trap proceeding close to the kerb on the near side, damaging the vehicle and hurling the occupants into the road. The lady's chauffeur, who was sitting behind her, leaned over and assisted to stop the car. The witnesses for the prosecution estimated the speed of the car at twenty miles an hour. Mr. de Grey at this point intervened with the remark that twenty miles an hour was the recognised speed of motor-cars. Inspector Jays referred his worship to the section which read "dangerous to the public having regard to all the circumstances and conditions of the traffic." Another witness, a tramcar driver, said that the defendant drove across the tram metals between two tramcars proceeding in opposite directions, and ran into the trap with the disastrous consequences



A Reminiscence of the Irish Reliability Trials.—The Imperial Starling 8-h.p. Car driven by Mr. R. V. Greenwood.

PRESTON.—A measured quarter of a mile from the Station Road to Barton Church, near Preston, is being utilised by the police for the capture of speedy motorists.

WORKSOP.—The Worksop Urban District Council are petitioning the County Council of Nottingham to apply to the L.G.B. for a speed limit of ten miles per hour for cars passing through the borough.

RIPON.—The Highways Committee of the Ripon City Council are recommending the County Council to apply for the limitation of speed in several of the narrow streets of the city.

COVENTRY.—Traps have lately been frequent on the Birmingham road.

CROMER.—At Cromer a trap has been established from the top of Cliff Avenue, Norwich Road, to a point opposite Mount Street.

SUSSEX.—At Flimwell the police recently set a trap for motorists, and as many as 200 cars were stopped in one day on the measured distance. The result was that several motorists subsequently appeared before the Battle Bench.

EASTBOURNE.—Owing to allegations with regard to the dangers to horses from the use of calcium chloride, the Eastbourne Rural District Council have deferred taking action on their recent resolution to make experiments with that substance in connection with the mitigation of the dust nuisance.

DURHAM.—The roadway on the main road from Gateshead to Shotley Bridge at Fugate Bar will be closed until Monday morning, the alternative road being by Whickham and Broom Lane.

REIGATE.—The main Brighton road being under repair, motorists from Brighton to London should take the Reigate main road after leaving Horley, and those going to the seaside should turn to the right at Gatton Point after leaving Merstham and then proceed through Reigate.

mentioned. Mr. de Grey said that the defendant was summoned for driving at an excessive speed, and that speed could only be ascertained by means of a stop-watch. The fact that there was an accident was no evidence of dangerous or excessive driving. Holding this view he dismissed the prosecution.

At Grantham, on Saturday, three motorists were fined £5 each for exceeding the legal limit.

Batches of cases against motorists have been heard at Hailsham, Spelthorne, Kingston, Odiham and Barnet.

COMPANY NEWS.

SCOTTISH MOTOR CARRIERS, LTD. £2,000. To carry on the business of manufacturers, merchants, owners, and repairers of, and dealers in, motor-omnibuses, automobiles, coaches, cars, cabs, wagons, ships, and other vessels, &c. Private company, with only two subscribers, viz.: W. G. Malcom, 499, Eglinton Street, Glasgow, and D. H. Penman, 180, Hope Street. £20. Registered office: 175, St. Vincent Street, Glasgow.

MR. A. G. POWER, of Dublin, has recently purchased a 12-h.p. Metallurgique; cars of the same make, of 18-h.p. and 26-h.p., have lately been delivered to Mrs. Ould and Mr. Bevan Petman in London.

A NEW process of brazing aluminium has been devised by Messrs. Griffin and Stone, Ltd., of Stonev Stanton Road, Coventry, and is being applied by them to all kinds of repairs to engine, crank cases, gear-boxes, and other aluminium castings. The repaired parts can, it is claimed, be chipped, filed, turned, bored, tapped, or machined in the same way as any other part of the casting.

FORTHCOMING EVENTS.

AUGUST.

- 8th (Sat.).—Visit of the Kent A.C. to Brasted Chart.
Bristol and Glos. A.C. at Standish House.
Essex M.C. open race meeting at the Stadium, Shepherd's Bush.
Somerset A.C. gymkhana at Fairfield, near Bridgwater.
- 13th (Th.).—Northants A.C. speed trials at Castle Ashby.
Hull and East Riding A.C.C. non-stop run of 200 miles.
- 15th (Sat.).—Coventry M.C. Motor Cycle hill climb at Newnham Hill, Deventry.
Lincolnshire A.C. hill climb at Syston.
- 19th (W.).—Cheshire A.C. Reliability Run.
- 21st (F.).—Ballinaslaught hill climb of the Irish A.C.
- 22nd (Sat.).—Annual race meeting of the A.C.U. at Shepherd's Bush.
Invitation of Sir D. Salomons to the Kent A.C. to visit Tunbridge Wells.
Manchester A.C. club run.
Southend and District competition at Laindon.
- 23rd (Sun.).—A.C. du Rhone Mont Pilat trial.
- 29th (Sat.).—Meet of the Lincolnshire Motor Club at Lincoln.
Mont Ventoux hill climb of the A.C. Vaclusien.
Leicester A.C. gymkhana at Freeman's Meadow, Aylestone Road, Leicester.
Essex M.C. 200 miles Reliability Trial.
- 30th (Sun.).—Southend M.C. run to Great White Horse Hotel, Ipswich.

SEPTEMBER.

- 4th and 5th.—Reliability Consumption Trial of the Essex C.A.C. at Norwich in connection with the R.A.C. provincial meet.
- 5th (Sat.).—Aston Hill climb of the Herts C.A.A.
Provincial meet of the R.A.C. at Norwich.
Richmond M.C.C. week-end at Henley.
- 12th (Sat.).—Brooklands A.R.C. meet.
- 17th (Th.).—Touring car competition of the A.C. of Holland through that country.
- 19th (Sat.).—Provincial meet of the Motor Union at Oxford.
North Middlesex A.C. 100 miles reliability run.
Manchester A.C. reliability run for small cars.
- 20th (Sat.).—Meet of the Hull Auto Cycle Club and the Lincolnshire Motor Cycle Club at Brigg.
Annual Hill Climb of the Bristol and Gloucestershire A.C.
Lunch of the Kent A.C. at Dover.
Herts C.A.C.'s climb for cars at Aston Hill.
- 26th (F.).—Welsh A.C. reliability trial for motor-cycles.
- 26th (Sat.).—N.W. London M.C.C. petrol quantity judging competition.
Invitation to the Kent A.C. by Mr. and Mrs. Schlentheim to Chislehurst.
- 27th (Sun.).—Southend M.C. run to White Hart Hotel, Braintree.

OCTOBER.

- 2nd (F.).—Gaillon Hill Climb.
- 3rd (Sat.).—Brooklands A.R.C. meeting.
- 11th (Sun.).—First International Road Congress and Exhibition at Paris.

NOVEMBER.

- 26th (Th.).—400-mile International Grand Prize Race of the Automobile Club of America.

LIGHTING-UP TIMES—LONDON.

| | | | |
|-----------------|-----------|-----------|-----------|
| August 8th—8.35 | 10th—8.33 | 12th—8.30 | 14th—8.26 |
| 9th—8.34 | 11th—8.32 | 13th—8.28 | 15th—8.22 |

To find the approximate lighting-up time in August for Birmingham 12 minutes should be added to the above times, 17 for York, 21 for Manchester, and 43 for Glasgow.

THE Belfast depot and show rooms of the Maddox Street Motor Company, Ltd., are at 48, York Street.

MESSRS. FRISWELL, LTD., have just received at their showrooms, 1, Albany Street, N.W., a new 60-h.p. six-cylinder car of the well-known Peugeot manufacture, and will be pleased to give a trial run to any interested motorist.

AT a special meeting of the Motor Manufacturing Company (1907), Ltd., held last week, when Mr. Ashley Lumby was appointed a director, it was announced by the chairman that, owing principally to the great success of their six-cylinder engines, the entire output of the company had been sold for a period of two years.

THE Duke of Portland was one of the first notable motorists to adopt Dunlop detachable rims; the latest is the Duke of Manchester. There is every indication that its racing successes have convinced the automobile world of the merit of this rim, the number of wheels received weekly for treatment having increased to such an extent as to necessitate the opening of new works in London.

BUSINESS NEWS.

ON the 25th ult. the North West London M.C.C. held a consumption test, which resulted in a win for a private owner, Mr. W. A. Jacobs, on a 3½-h.p. Rex motor-cycle, the consumption working out at no less than 178 miles to the gallon—surely a record in fuel consumption.

THE UNITED MOTOR INDUSTRIES, LTD., recently sent one of their Simplex speedometers to the Royal Automobile Club for a test on the calibrating instrument. On the certificate that has been issued in regard thereto we find that the recorded error at a speed of twenty miles per hour, equals .34 per cent., and at thirty miles .85 per cent., a degree of accuracy that has rarely been reached in these instruments before.

MR. M. STOCKS and Mr. Boyle Laurence, of London, Mr. E. O. Quike, of Exeter, and Mr. W. Gresham, of Torquay, are four recent purchasers of Metallurgique cars. That of Mr. Laurence is of 40-h.p., and the other three are 40-h.p. models.

MR. E. W. EVANS, of Dolgelly, has written to the Star Engineering Company stating that he recently climbed the very steep hill at Fishguard on his 7-h.p. Star car, which he has now driven over 8,000 miles.

MESSRS. GEORGE POLKEY, LTD., whose lamps are well known to motorists, ask us to remind readers that motor lamps sent to them for repair should be despatched to the Hockley Lamp Works, Pilsford Street, Birmingham, and not to their London office at Finsbury Pavement, E.C. At Birmingham they have every facility for the repair as well as for the manufacture of such accessories.

As compared with previous years there has been a considerable falling off in the number of craft in the roadstead for the Cowes week. "I do not think I have ever in my life known Cowes roadstead to look so empty on a Saturday before race week," said an official of the London Yacht Club on the 1st inst. He attributed it to commercial depression and—of course—motor-cars.

WE have received a copy of the latest volume of the road map issued gratis to owners of Humber cars by Messrs. Humber, Ltd., Beeston and Coventry. The map under notice, which covers the south-east portion of England, has been specially prepared for the use of motorists, and has been produced in handy form for the car pocket. The map scale is five inches to the mile; it is very clearly printed, and the twenty sections into which the portion of England referred to has been divided are canvas backed, and are extremely easy to follow, running as they do consecutively from left to right. Included in the work is an index to the various towns and places given on the maps, together with the names and addresses of Humber agents. In addition the book contains 121 motoring routes, giving the distances between towns. The map is contained in a neat transparent celluloid cover, and is certainly an acquisition to the motorist's library.

TO CORRESPONDENTS.

All communications intended for insertion in this Journal or relating to Editorial matters should be addressed to THE EDITORIAL DEPARTMENT, MOTOR-CAR JOURNAL, 27-33, Charing Cross Road, London, W.C., and must be written on one side of the paper only. Letters must in all cases be accompanied by the name and address of the writer, as no notice will be taken of anonymous communications.

To insure insertion communications and contributions must be in the Editor's hands by Tuesday forenoon of the week in which the same are intended to appear. Disappointment may be caused by non-compliance with this rule, and to avoid this earlier receipt, if possible, is necessary.

Photographers, both professional and amateur, are invited to send photographs of current events or of motoring scenes and incidents. The fee, if any, required for reproduction should be stated in each case, otherwise no liability will be accepted.

The Editors cannot undertake to return MSS. or drawings, although every effort will be made to do so in the case of rejected communications. Where such are regarded as of value, correspondents are requested to retain copies.

The Editors do not hold themselves responsible for the opinions expressed by their correspondents, or for statements and facts which do not appear in the editorial columns.

The Editors and Publishers beg also to state that they will accept no responsibility for unsolicited contributions, even if used, unless payment for same is directly specified in forwarding, and the terms arranged before publication.

THE Motor-Car Journal.

VOL. X.]

LONDON, SATURDAY, AUGUST 15, 1908.

[No. 493.

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"STANDS SCOTLAND WHERE IT DID?"

WHEN the Royal Automobile Club determined to hold trials which should invade Scottish territory, the representatives of automobilism north of the Tweed determined to assert themselves, with the result that the Scottish Reliability Trial was continued as a separate entity; and the larger event became overclouded by the one of lesser extent.

Apparently the policy of attempted interference with the rights of Scottish motorists is being developed by the Society of Motor Manufacturers and Traders in a way that has been fully explained in our columns by Mr. David A. Fairley, the secretary of the Scottish Motor Trade Association. This organisation has hitherto held an Exhibition which has been most useful to the motor trade of Scotland. Now the Society meeting in London has decreed that none of those who have become "bonded" together shall exhibit at Edinburgh, or, indeed, at any provincial exhibition—a dictatorial assumption that is naturally resented by the Scottish traders, who are unanimous in their intention to go forward with their plans for 1909. Their position is perfectly consistent and they can be trusted not to be overawed by the menaces of a southern body. The latter should take heed of the lesson of the Scottish Trial, which, as the letters on the Trial question on another page amply show, is regarded as of more importance than the British event.

Naturally the many firms that have hitherto kept outside the pale of the Society's influence are watching the position with something akin to eagerness. They see in the Edinburgh Exhibition an excellent opportunity of reaching the Scottish market and of opening agencies in places from which they may have hitherto been excluded; and the Scottish agents, for their part, are showing a disposition to avail themselves of the help of the "free and open" manufacturers who have held aloof from the "bond," recognising that its continued operation will prove irksome to many of the signatories. Hitherto there has been a section of the trade that (like the animals mentioned in ancient writ, without any regard to the ultimate deep place to which they descended, went gleefully forward), have simply done certain things because other people have thus advised them.

The Scottish trade, however, is resolved on making a strong stand—a stand which should give a profitable opportunity to those firms that have withstood the blandishments that have tempted others into the web.

As a matter of fact, those who have not signed the bond are in a most favourable position, and at Edinburgh, Manchester, and again at the Agricultural Hall, London, will have full opportunities of extending their business to an extent that will excite the envy of those who have subscribed to the "bond."

MR. W. MORRISS, an ex-member of the Longton (Staffs) Town Council, has designed a new flying machine of the heavier than air type, which he claims will move against any ordinary head wind. The power will be supplied by a 20-h.p. petrol motor.

At the moment of going to press we learn that the period of practicing for the forthcoming races in the Isle of Man has been extended to three weeks, a concession that will be appreciated by the competitors. The R.A.C. has also been able to arrange for an extension of time in the morning from 7.30 to 8 a.m.

COMMENTS.

Motor-cars in Racing Centres.

NEWMARKET is seriously agitated by reason of the presence of so many speedy motor-cars in the streets leading to the grounds whereon racing horses are exercised. The activities of the police do not, according to the speakers at a meeting held in the town on Monday afternoon, eliminate the risks that are run; and so the trainers of racehorses have resolved to ask Mr. C. D. Rose, M.P. for the division, ex-chairman of the R.A.C., and a good sportsman as well, to suggest to the L.G.B. that it would be reasonable to grant a ten mile limit for motor-cars in the district. Newmarket is not the only locality that is periodically disturbed by the presence of the automobile. Last week it was the turn of the hamlets about Chichester. The presence of the motor-car in racing quarters is not like'y to decrease, as the organ of the Royal Society for the Prevention of Cruelty to Animals testifies in its current issue, wherein reference is made to the excellent custom of its Windsor branch in giving water free to the horses taking people to the Ascot racecourse. This year over four thousand gallons of water were given away from the water carts which went round the course quenching the thirst of the animals. "We hope," adds our contemporary, "that the branch will be able to continue it year by year—at all events until the day when the many thousands attending the races will all be brought to the course by motor-cars."

Traders' Cars.

IN view of the way in which the public mind is being inflamed against the motor-car it behoves every user of an automobile to consider his relation to the whole body of the motoring world. More especially would we impress upon the heads of firms in the motor industry the necessity of exercising strict supervision over those who drive cars bearing traders' numbers. Often have these been responsible for outbursts directed against private motorists. Hence the warning thus mildly conveyed in the hope that those driving trade cars will accept the hint and recognise the harm they can do to the industry by neglect of what is the first duty of motorists, viz., to respect other users of the road.

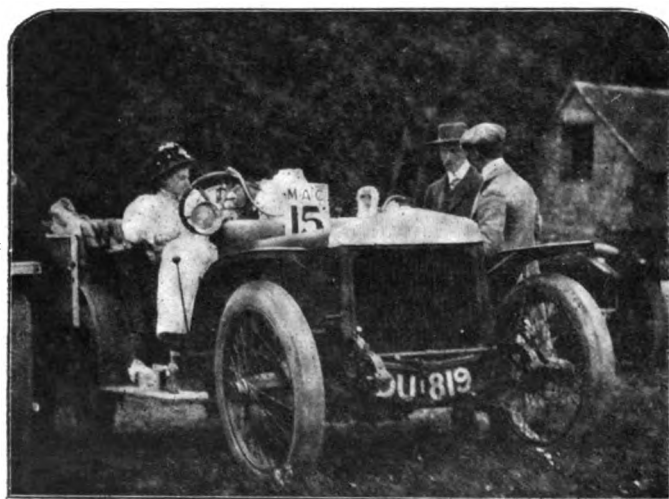
Motor-car Imports and Exports.

THE renewal of activity which occurred in June in the imports of foreign motor-cars and parts into this country proved to be of a temporary nature, the returns for July showing a decrease as compared with the corresponding month of 1907 of £34,808. Of complete cars 421 were imported during the month, of the value of £145,142. The number of chassis imported was 306, valued at £99,076, while parts were responsible for £166,760, giving a combined total for July of £410,978, as against £445,786 in the corresponding month of last year. The gross imports of cars (2,724 in number), chassis (1,882), and parts during the first seven months of the current year amounted to only £2,598,076, as contrasted with £2,934,688 in the corresponding period a year ago. Turning now to the section relating to the exports of British automobile productions, these again show a slight decrease—from, in the aggregate,

£108,836 in July, 1907, to £83,993 last month. Altogether 137 complete cars (£54,665) and 5 chassis (£1,725) were despatched from this country in July, as well as parts to the extent of £40,730. The gross shipments during the seven months ending with July are returned at £677,139, which contrasts with £692,542 in the similar period of last year.

The Speed of Trams.

NOT only has the Local Government Board made known that it is willing to investigate the merits of any devices that may be introduced to mechanically prevent motor-cars from exceeding a certain limit, but the Board of Trade is also displaying interest in indicators of the speed of tramcars. Intimation has been sent to the organisations concerned with the tramway world to the effect that the Board is now inquiring into a suggestion that speed indicators should be fitted to tramway cars, complaints of excessive speed having been general and frequent. The Board asks to be furnished with information the organisations may possess regarding the trustworthiness and the cost of any speed indicators now on the market. They add that for the purposes of tramcars it is desirable that the indicator should be reliable for speeds as low as four miles an hour as well as for maximum speeds.



Mrs. E. M. C. Instone at the wheel of the 58-h.p. Daimler which made fastest third time at the Shelsley Walsh Hill Climb. Mr. Instone is seen standing by the side of the car in conversation with Mr. G. S. Barwick, a director of the Daimler Company.

The Roads and the Dust.

IN view of the International Road Congress which is to be held in Paris in October next, the experiences of the county surveyors who have lately given scientific attention to the subject of the prevention of dust proves of more than usual interest. It is understood that Mr. H. P. Maybury, who has done much for the Kentish highways, will read a paper showing the improvements he has effected, and that reference is also likely to be made to the excellent roads of Mr. E. Purnell Hooley in Nottinghamshire. We have lately gone into the subject with the county surveyors of two or three typical English districts, and their conclusions should be of considerable value to readers who may be taking part in or following the proceedings of the Congress. Mr. H. E. Stilgoe has tar sprayed over 100 miles of macadam road in Birmingham this season with very beneficial results, so much so that it has been unnecessary to use the water cart on any of the macadam roads thus treated. He has also used tar macadam and has employed a bituminous binder in lieu of the ordinary material generally used for binding macadam roads. Mr. F. F. Bull, the county surveyor of Cheshire, agrees that tar macadam is the least likely to add to the dust nuisance and is now trying experiments with

this material, the results of which should give some reliable data as to its efficiency. Nearer south, Mr. G. W. Manning, surveyor to the Staines Rural District Council, believes that the best material for road construction, having regard to the needs of motor traffic, is Tarmac, while an equally satisfactory result has also been found with ordinary roads when stone bound with a tarvia binder. In Surrey Hahnite has given good results, and so sanguine are the surveyors that we believe the next few years should witness a great advance towards perfection.

The Position in Scotland.

IMPORTANT action is now being taken between the Scottish Automobile Club and the Chief Constables of many of the leading counties north of the Tweed with regard to the complaints which have been made from time to time as to fast, reckless and inconsiderate driving of cars upon public roads. Several warnings have been given both by the police and by the Committee of the Club, but in a minority of cases they have been unheeded, with the result that the official representatives of automobilism in Scotland have now resolved to assist the police in dealing with what they regard as an evil of the present position. Arrangements have consequently been made to co-operate with the guardians of the law in the selection of places where cars should be timed, and the Scottish A.C. has appointed special agents to take the time of vehicles in conjunction with the police, who are to be supported in the prosecution of offenders. This action will have relation to the driving of cars in populous towns and villages or in places where both parties to the arrangement agree that speeds exceeding the legal maximum are improper in the circumstances. In return for this support the Club has been able to secure an insurance that "timed distances" will be suspended in many places where they have hitherto been noticeable.

Ninety Years Ago.

NINETY-TWO years ago the Attorney-General of that day rose in the House of Commons to move "for leave to bring in a Bill, the object of which was the protection of the lives and limbs of His Majesty's subjects, by correcting the enormous abuses of stage-coach drivers. Within these few days [we quote from Hansard] it would be hardly credible what a number of applications he had received on this subject. Some accounts were enough to freeze one with horror. A gentleman of veracity had informed him that on Tuesday, May 21st, at 5.30, the Trafalgar and Regulator coaches set off from Manchester, and got to Liverpool at 8.20, doing this journey in 2 hrs. 50 min., at the rate of twelve miles an hour." We do not know what would happen if the present Ministry brought in a Bill to restrain gentlemen travelling northward for "The Twelfth" to a speed of twelve miles an hour. The revival of this speech is, however, opportune at the present time, when so many correspondents are filling the columns of three London "dailies" with attacks on the speedy travel of motor-cars. Probably in a hundred years their letters may be quoted as instances of the slowness of the people of the early years of the twentieth century.

Motorists and the Dust.

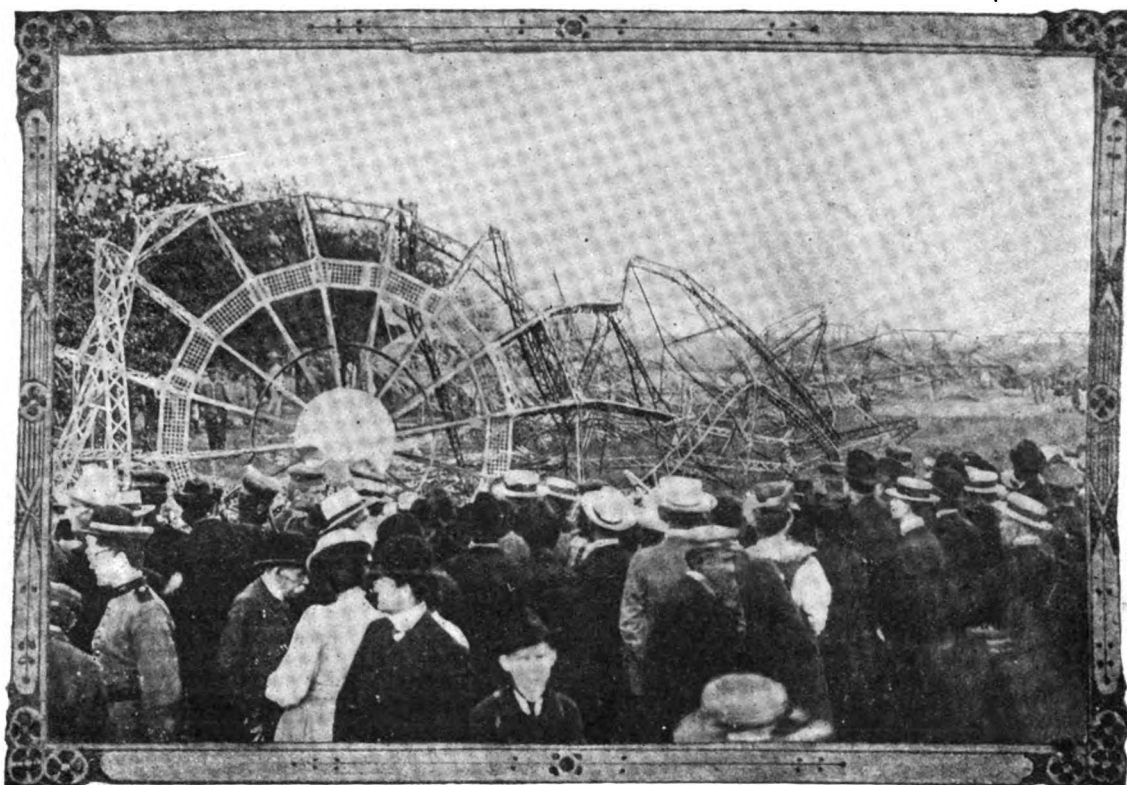
WE commend to the notice of anti-motorists an unimpassioned article in the "Spectator," in which it is rightly urged that "the normal motorist is specially alive to the dangers of the road, owing to the fact that he uses the road so much more than the non-motorist," and that he "is quite as anxious not to be run into as he who hates all forms of self-propelled traffic with a deadly and unreasoning hatred." That the motorist is really anxious to make the conditions of travel more pleasant than they now frequently are is also apparent from the report of the Berkshire A.C. on another page. That organisation recently voted the sum of £50 for tar spraying in the county of Berkshire; and the money is now being distributed in the

form of bonuses upon any sums raised locally in the villages of the county. Thus there is practical evidence of the real desire of the motorist to secure the easy and safe passage of all users of the roadway as well as the comfort of residents.

At the Garden City.

ORIGINALLY it was hoped that the motor-car would play an important part in the development of the Garden City at Letchworth; but, thus far, only one firm that has been located there has utilised the motor-lorry to any extent. Every night the residents of the new city hear the wagon of Messrs. J. M. Dent and Co., the publishers, setting forth on its journey to London, and those who do not come to town may see it again in the morning. On the side roads of the estate an occasional motor-cycle is seen, but motor-cars frequently pass along the main roads between Norton and Letchworth. The city is divided by the railway, and all traffic has to pass under a long and narrow railway arch that should be

Now and again, however, it is well to be brought face to face with the actual facts of the matter. On Monday at Arundel a dozen motorists were summoned for exceeding the legal limit, the fines aggregating £33 and costs. On the same day motorists provided the chief business at the Steyning Petty Sessions, the defendants having been caught at Washington, Upper Beeding and Henfield. In six cases the fines totalled £30, a warrant was threatened in one instance where the defendant did not appear, and the licence of a Brighton chauffeur was suspended for three months. Haywards Heath was busy from the same cause on the same day and nine cases produced over £100 in fines. On Saturday several summonses were heard at another court, and in one case the prosecution was instituted by the police on the complaint of the Mid Surrey Cycling Club; in all nine cases produced nearly £30, to say nothing of the costs. Other benches which have lately distinguished themselves in this way are Kingston, Winchester, Shoreham, Wokingham—to mention only four. But the profitability of the motorist to the county funds is not confined to the south.



The Remains of the Zeppelin Airship after the Disaster.

widened—not only for the convenience of those who travel, but the safety of those on foot. Recently the main residential avenue has been laid with tar so effectually that the dust nuisance is unknown, and now that the estate owners of the Garden City have shown such a regard for motorists as well as themselves, the County Council of Hertfordshire is seeking to impose a ten mile limit on some of the roads leading to the northern part of the place, notably the Norton, Willian, and London roads. Similar restrictions are also sought for roads in the neighbouring town of Baldock.

Excessive Fines.

WE sometimes wonder if motorists realise the extent to which they contribute to the county funds. Every week in our "Cases against Motorists" instances are given of the profitable nature of the hauls that are made by the police from time to time, but so numerous are the cases that we cannot possibly find room to record all the reports that reach us.

Several northern Petty Sessions are becoming notorious in this respect—notably Macclesfield, Tadcaster—where nine motorists were fined on Monday—and Grantham. Equally disturbing reports come to us from Launceston, Hereford, and some of the Western counties.

Victorian Enterprise.

WE have received a copy of No. 1 of the monthly journal of the A.C. of Victoria, of which His Excellency the Governor, Sir Reginald Talbot, K.C.B., is the president. The news is varied, and among the items recorded is the organisation of a motor-car meet in September for the officers of the American fleet, who will then be visiting the Colony. A dangerous hill is being avoided by the construction of a new road, advocated to the Ministry by the club, and reference is also made to a revision of traffic regulations in Melbourne, the erection of danger signs outside the city, and the occupancy of a club room by the members, who now number 300.

A TRIP INTO KENT.

"To Eltham will I, where the King is."

SO says Exeter in Shakespeare's Henry VI., and doubtlessly many a motorist has passed this ancient town without thinking of its many interesting associations, being probably more intent on the trap that, anyway last year, existed in the neighbourhood. Henry VIII. came and kept Christmas here, and, according to Hall's Chronicle, Cardinal Wolsey took the oath as Lord Chancellor in Eltham Chapel. Another authority has it that Richard II. resided there and took much delight in the pleasantness of the place. Princess Bridget, fourth daughter of Edward IV., too, was born and baptised there. But I fear I weary my readers with this town of old memories and so must on. Court Road, the first turning out of Eltham Court, is a good route to Chislehurst. On the left, a little to the side of the road, is the Eltham Golf Club, the clubhouse of which was concerned in the scandal that wrecked Mr. Parnell's career. Soon the Common is reached and Camden Place should be made for. Outside, a tall cross commemorates the Prince Imperial's death. Here lived Napoleon III. and here he died in 1873, and probably many a time did the Empress drive from the Place through Eltham, up Well Hall Road to the Shop at Woolwich, as the Royal Military Academy there is called, and where the Prince Imperial was educated. Under Camden House are some



The Entrance to the Hall of King John's Palace, Eltham.

very interesting caves; according to tradition they at one time were used as a hiding place by the Danish invaders—hence they are called "Daneholes." Some romantically say that they were made by smugglers, and that at times they held much contraband; others declare they were prehistoric flint workings, and the more prosaic declare that they are mere chalk quarries, the chalk being used for road making as well as for ballast for the ships that were at one time built at Woolwich.

The pits are certainly worth seeing, and a very short run will take the would-be underground explorers to the Bickley Arms. After leaving Camden House, pass through a gateway, and then carefully descend a hill; at the bottom turn to the right, and just past the railway on the opposite side is the Bickley Arms. Mr. Field, who has an office at the adjoining stable, is the owner of the caves, and I have to express my thanks to him for his kind permission to reproduce the photograph which illustrates this part of the article. He provides guides, without whom it is not safe to enter, as there are some sixty miles of passages, which wander in all directions. Having obtained the necessary leader and the also useful lamps which are provided, the journey can soon be started. Near the commencement is a narrow opening, by which there is a ledge, and the guide tells how on that seat in the old days the sentinel guarded or slept. Passages innumerable are traversed, and

finally a chamber of fair dimensions is reached. This was said to have been a chapel, and near is a recess—the priest's room; in fact, if for a moment the external surroundings were forgotten, and if only the walls were of darker colour, you could easily imagine you were in the catacombs of St. Calixtus in the Via Appia, outside of Rome. All that is required is to dress the guide as a monk—the recesses are there, the earthy smell is present, and with a little imagination you can add where the bodies should be as well as the broken flask that in Rome is said to have held the blood of the early Christian martyrs. The forty-six feet deep well is shown, as well as the bones of some pre-historic ox.

The central road should be taken across the common, and then, *via* St. Paul's Cray Common, through a lovely district, to St. Paul's Cray, where there is a flint church, the west doorway of which has some peculiar toothed ornamented mouldings. Keeping to the right, St. Mary's Cray and Orpington can be reached. At this latter place Mr. Ruskin not only printed, but also made the paper, for his books. I advise turning to the left at St. Mary's Cray and going among the hop-bearing and strawberry fields by Kevington and Crockenhill to Eynsford. At the latter place turn sharply to the right and the lovely valley of the Darent is seen, with its blooming nursery gardens and cherry orchards. Eynsford Castle has an outer wall that is horseshoe in shape; the old gateway is on the north side, and there is a small chamber, or remains of one, hollowed out near the doorway. In the Norman period it must have been an imposing pile. There is a story that the owner in the time of Henry II. was excommunicated after Becket's martyrdom; and that since then the castle has been untenanted except, of course, by ghosts. A little further on, on the right, is Sir W. Hart Dyke's Jacobean seat, Lullingstone Castle, where there is an ancient music room, with a handsome ceiling. Among the treasures to be seen is an ancient copper bowl, decorated with enamelled Roman ornaments. It was found in 1860, when the railway was being built, and was probably the memorial of some female grave.

Close by the house is the church, that contains some interesting memorials to the various lords of the manor, including a most imposing one to Sir John Peche. I always think that the poet Drayton must have been thinking of this neighbourhood when he wrote these lines about the county:—

Oh! famous Kent,
What county hath this Isle that can compare with thee?
Thou hast within thyself as much as thou canst wish—
Thy wines, venison, fruit, thy sorts of fowl and fish:
As what with strength comports, thy hay, thy corn, thy wood,
Nor anything doth want that anywhere is good.

Two miles, and Shoreham is reached. Here in the church are some relics of Commander Cameron's expedition, and the rood screen is worth seeing. Another two miles and the former site of the Archbishop of Canterbury's palace is seen—Otford. But a small octagonal tower and a little of the cloistered side remain. Near is a spring, St. Thomas's Well, and legend has it that the water came only after Becket had struck the ground with his staff, and that the saint used it for his bath. For many a year after his death the water was credited with marvellous healing powers, and people came from far away to get their ailments cured.

Those bound Maidstone way should here turn to the right by Beechy Lees, along the old Pilgrim's Way—the road the old pilgrims took to Canterbury—and those desiring, and not minding an extra few miles, can likewise take it, even if they be going to Tonbridge, as by turning off at Wrotham they can run straight down by Ightham, Shipborne, through Frith Wood and so to Tonbridge. It is a much prettier route than the more direct one *via* the Bat and Ball to Sevenoaks and thence by River Hill. It was in November last that I took this way, and the view was glorious. It brought to my mind those words of Longfellow:—

There is a beautiful spirit breathing now
Its mellow richness on the clustered trees,
And from a beaker full of richest dyes,
Pouring new glory on the autumn woods,
And dipping in warm light the pillared clouds.
Morn on the mountain, like a summer bird,

Lifts up her purple wing, and in the vales
The gentle wind, a sweet and passionate wooer,
Kisses the blushing leaf, and stirs up life
Within the solemn woods of ash deep-crimsoned,
And silver beech, and maple yellow leaved,
When autumn, like a faint old man, sits down
By the wayside a-weary.

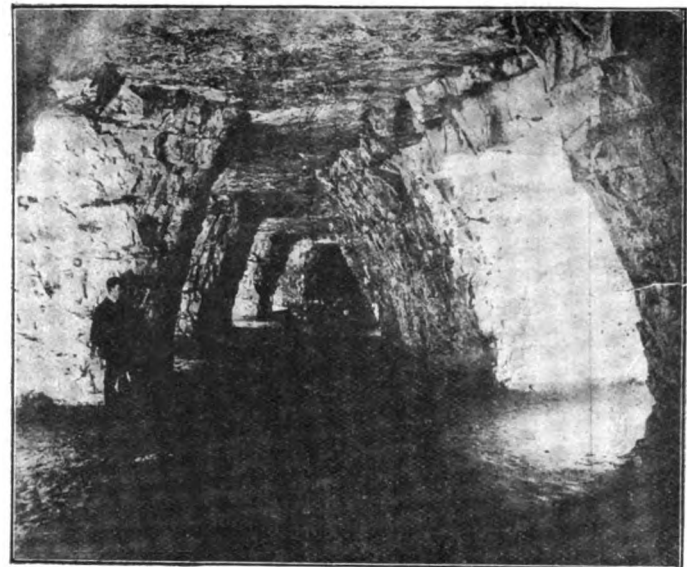
I had, anyway, to sit down, as the road was bad, and one of the back tyres punctured, and the work of putting in a fresh tube and pumping it up made a roadside rest desirable. While waiting I encountered a fellow motorist, who had had better luck than I; just before he kindly stopped to see if he could render aid, he had heard a loud roar; undoubtedly he thought one of his tyres had gone; on getting down they were found to be intact, and while inspecting them he heard another explosion, which on investigation was found to come from the Maxim Company's private artillery range, where some cannon were undergoing tests.

About five miles and Wrotham is reached, the road being a little distant from any villages. Seemingly some of the early pilgrims were not above the failings of the modern tramp, and the inhabitants probably wisely built their houses at some distance from the roads taken by them. A small edible snail, that is to be found along this track, is reputed to have been originally introduced by the pilgrims. Just below the Way, on the right, some two miles from Otford, is Kemsing Church, which is built on the site of an old castle. The church contains an interesting brass in memory of Thomas de Hop. It was at Wrotham that Sir Thomas Wyatt's adherents were defeated in the time of Queen Mary. The church is partly Early English, and contains a fourteenth-century oak screen, as well as some very fine brasses. Turning to the right at Wrotham the road to Borough Green can be followed; here, again, turn to the right and that beautiful old village Ightham is speedily reached. The houses are very old, and the gables are enriched by carved barge boards. The church dates from the twelfth century. There are some fine monuments, including one to Dame Dorothy Selby, who foiled the gunpowder plot by deciphering the warning letter sent to Lord Montague.

After seeing the church I suggest a walk through the village. Near where the roads fork is an old-fashioned grocer's shop, and here until quite recently lived Mr. Benjamin Harrison, who in his spare time has done much original work, and in the opinion of many authorities has pushed back the antiquity of man to a period much more remote than had been previously proved, and on the plateau of the chalk downs near him has found the very earliest traces of man. Pass the Sevenoaks road, ascend a steep lane, and after leaving the schools and the gorse-covered green, and having obtained permission and the needful key, mount the steep fir-covered spur, passing a most picturesque gnarled and moss-grown beech tree, as well as some silver birches, and Oldbury Camp is reached, and the stone roof-covered shallow caves known as the Rock Shelters. Here, according to the old flint implements found, once resided a race who hunted, and, what is more, used primitive needles, for bone needles have been found, as well as flake stone knives, which, it is conjectured, were used to skin the beasts slain. What wondrous tales these old stones tell! The walk through the camp is most enjoyable; it is like a bit of Scotland. The walk should be continued to Ivy Hatch and Rose Wood, where neolithic pit traces can be seen. The man who lived here was probably short and dark haired, somewhat like the Bretons of to-day; the hippopotamus had died out, as well as the cave lion, and he was no more a mere hewer out of caves, and, though he still hunted the reindeer and urus, he also cultivated the soil, as is proved by the primitive spades or digging sticks found, as well as by the "cultivation terraces" seen in this part. Those who are interested can spend hours and may, perhaps, in some of the old pits find many a relic of long, long ago.

If time permits, the outpost of Oldbury Camp, Raspit Hill, should be visited. This is also known as Beacon Hill, which in Queen Elizabeth's time was used to transmit intelligence as to enemies, &c., via Coxheath and Crowborough, and so on to Hampstead Heath and London. Ightham can be reached by

returning through Stone Street and Styant's Bottom, or, what is better, the car can be sent on, and after seeing the camp can be mounted at either Ivy Hatch or Stone Street, and then, in about a mile, the Moat House is reached. It was not far from here that attempts were in recent years made to find coal, but, after sinking some hundred feet and not bottoming clay, the operations were abandoned. The Moat House is, without doubt, one of the most interesting and charming of all the old houses in Kent. Its situation is ideal. The moat is fed by a neighbouring stream, and probably the original house was built on a little island, thus the name of the house and village, eyot meaning island—Ightham or Eyotham being the hamlet of the eyot—but this is disputed. The oldest part dates back to Edward III., and was built in 1180 by Sir Ivo de Haut; anyway, he started the building, and at different periods it has been added to. The grim walls, the Tudor gateway, the quaint gables, Elizabethan outbuildings, the chapel and the painted ceiling, in which can still be noted the badges of Henry VIII. and Katherine of Arragon, all lend a romantic interest to the place. It brings one back to the days of one's childhood. In such a place the Sleeping Beauty may have been found and awakened by Prince Charming; here secret passages must surely exist; here may many a baron robber have issued forth, raided the neighbourhood, and brought home a beautiful, unwilling bride. What



The Caves at Chislehurst.

fantastic dreams it conjures up, what stories of the "good old days" thought of in our youth, when the stories of Harrison Ainsworth were read and believed in.

Yet over all there hung a cloud of fear,
A sense of mystery the spirit daunted,
And said as plain as whisper in my ear,
The place is "haunted."

The billiard-room is an ideal spot, with its comfortable recessed fireplace, and just outside the moat, merely a door to open, and but a step, and the unsuccessful player can, if he so desire, commit suicide by drowning. What delight to sit at twilight in the summer near the door!

(To be concluded.)

THE Automobile Club of America has definitely announced the course at Savannah, Ga., for its "Grand Prize of America," and work has been started to prepare it for the race. The route is 26.73 miles long, and will be covered fifteen times, making a total distance of 400.85 miles. While the road surface is excellent, no record-breaking speed can be expected on account of the great number of turns. There are at least a dozen right-angled corners, and two or three even sharper; the longest straightaway stretch is about two and a half miles.

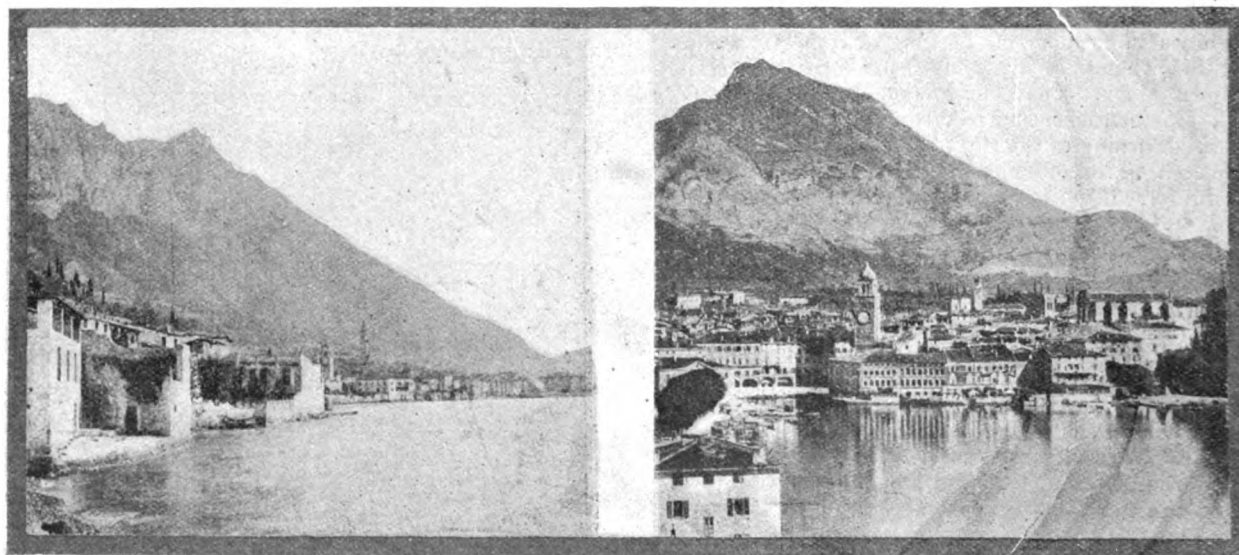
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GOSSIP FROM PARIS.

WILBUR WRIGHT is the hero of the day, and he deserves all the admiration he has awakened. His performances at Le Mans convinced the last of the French sceptics that he really flew in 1905. It was not only that he repeated in public the feats he formerly accomplished in private, but it was the manner in which it was done. Farman, Delagrangé, Bleriot, Esnault-Pelterie and others have flown, but in Wilbur Wright's flights there is that stability of the machine which opens up an almost immediate future for the aeroplane as a means of locomotion. It would be difficult to exaggerate the importance of this epoch-making demonstration of the conquest of the air being an accomplished fact. Compared with those of other aviators Wilbur Wright's machine is a marvel. It has a smaller bearing surface, is propelled by a heavy, but much less powerful motor, turning two propellers making no more than 400 revolutions a minute. Nevertheless, it flies! People wondered to see Wilbur Wright choose the little racecourse of Le Mans for his experiments, on the success of which depended the £20,000 to be paid by M. Lazare Weiller for the right to work his patents in France. When they saw him turn and twist about in the air at will like a big sea-gull, thanks to his system of bending the wings of his

invaded by steerable balloons." "What about the aeroplanes?" I inquired. As he has been studying the solution of the problem of flight by the heavier-than-air for a number of years, and as he was, I believe, the first man in France to construct an aeroplane, it is natural he should feel confidence in them. At any rate, he replied by declaring that if the English were not likely to see a French army fly into their country with the object of conquering it as the Normans did, it would, nevertheless, be safe to bet that a man on an aeroplane would cross the Channel before the end of 1910. He added, "I am acquainted with more than one aviator who cherishes the ambition of accomplishing the feat and who is studying the best means of making his flying machine float in case of an accident happening to it during the crossing."

EVERY tourist motoring in France has experienced the annoyance, and perceived the danger resulting from the railway level crossings so numerous in the country. A law has been made prohibiting the creation of any more by new lines, but those which exist will remain. The regulations concerning them are puzzling, yet on their observance depends the responsibility of the railway company in case of accident. At level crossings where trains are constantly passing the gates should be closed at night and be provided with two red lights, while at less fre-



Gargnano.

Riva.

TOURING IN ITALY.—TWO VIEWS ON LAKE GARDA.

machine, their wonder was dispelled and transformed into admiration. Captain Ferber, who, so to speak, introduced the Wright Brothers to the European public by publishing in the August, 1905, number of the "Revue d'Artillerie" the documents concerning their flights sent to him from America by Mr. Chanute, told me he was convinced the aeroplane would in a short time operate a greater revolution in the world than even the automobile has effected. Another enthusiastic French aviator said to me, "What Wright has done is admirable, but his machine is not perfect, far from it. The American has shown us that something practical and nearer perfection can be made, and we will make it."

ONLY a few hours before the destruction of the "Zeppelin" I was sitting with Captain Ferber at a café on the Boulevard Montmartre talking about the future of steerable balloons and aeroplanes. He was certainly very far from foreseeing the imminence of the disaster which befell the German airship, but it was quite evident the captain was well aware of the possibility, not to say the probability, of a serious accident happening during the twenty-four hours' flight of the monster steerable balloon. The misfortune goes far to give weight to the remark he made jokingly, "Oh! John Bull need not be afraid of seeing his island

quented crossings one light is sufficient at the closed gate during the night. However, at level crossings where the gates are, on an average, opened less than fifty times in the twenty-four hours, the railway company is not obliged to put any light, but the gates should be left open and only closed during the passage of a train. There is, however, yet another category of level crossings which is particularly dangerous for motorists on unfrequented roads at night. The gates at these crossings should always remain closed, and their presence is not necessarily indicated by any light at all. It is, perhaps, no very great consolation to know that if a motorist dashes against a gate which should remain open during the night the railway company is responsible, but it is deplorable to think that if an automobilist travelling on an unfrequented road wrecks his machine against a closed level crossing gate which he cannot see in the dark he is precluded from claiming damages from the railway company.

MARNEY.

DR. D. W. CURRIE, of Hilden, Tillicoultry, N.B., has written to the Rover Company, Ltd., stating that the other day his Rover 8-h.p. car without any preparations climbed with ease the hill at Amulree which was found so severe a test by many competitors in the recent Scottish Reliability Trials.

THE SOCIAL WHIRL.

THE PRINCESS OF WALES motored from Frogmore on Saturday morning to meet the Prince of Wales on his return from his Canadian visit and from Cowes. On Tuesday the Princess, accompanied by Prince Edward of Wales, returned by motor, calling at the Franco-British Exhibition on the way to Frogmore. His Royal Highness has since gone to Scotland for the shooting, visiting Mr. Arthur Sassoon, at Tulchan Lodge, Advie, where the motor-car will be largely *en evidence*. Motoring will also be in the programme of the Premier, who is staying with his family at Slains Castle, Aberdeenshire, whither his new 45-h.p. Napier preceded him.

PRINCESS VICTORIA of Schleswig-Holstein and the three Princes of Battenberg, who are staying in the Isle of Wight, motored from Osborne to Yarmouth on Tuesday afternoon and visited the old castle, which now forms part of the Pier Hotel. The royal visitors remained for afternoon tea, and after a stroll round the ancient town returned to Osborne.

THE MARQUIS OF BREADALBANE, whose motoring enthusiasm was related in the *M.C.J.* of the 25th ult., where also appeared a portrait of his lordship on his car, has let his place at Auchmore, Perthshire, to Mr. A. O. Worthington. This has 11,000 acres for sport and is a magnificent residence at the head of Loch Tay, familiar to all Scottish motorists.

MRS. KIDSTON, the wife of the Premier of Queensland, has been motoring in Ayrshire during the last few days. Unfortunately, while on the Howwood and Beith road, near Roadhead, Lochwinnoch, the car in which she was riding collided with a motor-cyclist, who sustained fatal injuries. Sir Robert Finlay, the ex Attorney-general for England, was motoring along a rugged road at Inverfarigaig Pass, on the shores of Loch Ness, Inverness-shire, when the car went over an embankment. Sir Robert happily escaped uninjured, as did also the chauffeur. I hear of another accident which will probably be recorded as a "motor mishap," although the automobile was wholly blameless. The Hon. A. G. Mulholland, who is the eldest son of Lord Dunleath, was motoring in the north of Ireland last week. Going from Newcastle, co. Down, to Downpatrick, a horse took fright and jumped into the car, the motorists having an alarming experience and a wonderful escape.

SOME important trigonometrical surveying has been done by the Royal Engineers in Perthshire during the last few days, and the work will be continued during the present month. Capt. L. W. King is in charge of the party, which has been divided into two sections, one being stationed at Dunkeld and the other at Aberfeldy. Logierait is the centre for consultation in connection with the survey, and motor-cars are being used for transport purposes as well as maintaining constant communication between the two sections.

MANY motor-cars were to be seen in the neighbourhood of Guisborough, in Yorkshire, on the occasion of the water tableaux which attracted considerable patronage from the gentry round about. A garage was thoughtfully provided for those who travelled from the Darlington and Northallerton districts, each about twenty-four miles from Guisborough, the roads being in good trim.

It is becoming the custom in many places for parties to go by motor-car to distant parts of the country for purely social purposes. Under the guidance of Mr. W. O. Utting, of Walsall, fourteen local councillors and friends had a delightful run through East Anglia the other day. They trained to Fakenham and started on three automobiles for a splendid tour, skirting the park of Lord Hastings at Melton Constable, and going on to Sheringham and Cromer, making a stay at the Royal Links Hotel at the latter place. After a ramble a re-start was made

from the Grand Hotel to Wells and the seat of the Earl of Leicester at Holkham Park. Thence the way was to Hunstanton, Sandringham, Lynn, and back again to Fakenham—an ideal day's holiday.

A WORTHING week is likely to be one of the attractions of the south coast this year, the event developing out of the annual regatta, which generally takes place at the end of August. On one day a motor carnival will be held, and Mr. G. H. Warne, who has already been promised a run of the Lancashire A.C. to Worthing during next month, has consented to assist in its organisation. Mr. Warne is, of course, known to all visitors to the town, and the additions to his hotel, lately noted in the *M.C.J.*, are proving gratifying to visitors as well as to the enterprising owner.

MR. FRANCIS A. BOLTON, J.P., is the president of the Derby and District A.C., and on the occasion of a recent competition invited all the members to his picturesque residence at Moor Court, Oakamoor, North Staffordshire. Unfortunately the weather was treacherous on that occasion. Mr. Bolton again invited his motoring friends to Moor Court on Saturday last, when a most enjoyable time was spent. Mr. Bolton has been a keen motorist since 1900, during which time he has owned more



Mr. Francis A. Bolton, J.P., the President of the Derby and District Automobile Club.

than a dozen cars of various types, his latest acquisition being a 40-50-h.p. Ariel, on which he participated in the Midland A.C.'s recent hill climb at Shelsley Walsh.

AN interesting social event has been arranged by the North-Eastern Automobile Association to take place on the Polo Grounds, Gosforth Park, Newcastle-on-Tyne, to-day (Saturday). This will consist of a combined gymkhana for polo-ponies and motor-cars—quite a unique association, and one that I understand from Mr. J. E. Hodgkin the motorists of the North-east coast are organising in conjunction with the Northumberland Polo Club.

MR. RICHARD HAMPSON JOYNSON, of Chasefield, Bowden, Cheshire, and of Alt Skeith, Aberfoyle, Perthshire, whose death was recently announced in these columns, left estate valued at £241,009 18s. 8d. gross. He bequeathed £10,000 to his son-in-law, Mr. W. Joynson-Hicks, M.P., the chairman of the Motor Union, and to his daughter, Mrs. Grace Lynn Joynson-Hicks, property worth £200,000, including all his jewels, household and personal effects, horses, carriages, and consumable stores, and his residences, Chasefield and Alt Skeith, as well as £100,000.

LOLLIUS

Should a 2,000 Mile Trial be held in 1909?

VIEWS OF PARTICIPANTS IN THIS YEAR'S EVENT.

INTRODUCTION.

LAST week we referred to the discussion which had taken place at a meeting of the Committee of the Royal Automobile Club as to the advisability of holding a trial next year on similar lines to that of 1908. So far as the Club is concerned the matter is still in abeyance, and the whole subject will come up again at the next committee meeting. We have on several occasions written of the absence of any real necessity for such tests in these days of reliability, and our views have met with considerable support from those who have been closely identified with the industry. With regard to the future we feel strongly that such long-drawn-out trials are unnecessary, and that if the Club would give the trade a year's rest from the worry attached to the preparation for, as well as the participation in, such an event, it would be rendering its greatest service to the industry.

Our invitation to the contestants in this year's 2,000 mile and also the Scottish Trial has produced replies which amply confirm the view expressed in recent issues, and should cause the Committee of the R.A.C. to pause in any attempt which may be made to devise another expensive and extensive programme for the automobile manufacturer and agent. Owing to the holidays some well-known names are absent from the Symposium, but we hope to continue the publication of a series of letters from competitors in this year's Trial, which should prove conclusively that there is no desire for a repetition of the 1908 event.

UTTERLY UNNECESSARY.

Messrs. H. M. Hobson, Ltd., are of the opinion that the "Royal Automobile Club long-distance trials for touring cars will, in the future, be utterly unnecessary. They are enormously costly to the manufacturers, and the general public do not fully appreciate the trials and difficulties through which the cars have to pass, nor recognise the fact that even for a car to have completed the whole trial is a proof of the extraordinary endurance of the machine. In the early days of the motor trade no doubt long-distance trials were of the utmost importance to enable buyers to gauge the durability of motor-cars in general, and give them an opportunity of forming an opinion of the most reliable firms with whom to place their orders."

Messrs. Brown Bros., Ltd., write:—"One of the main points is, we certainly do not think it is any good having another similar trial to this if the manufacturers are going to be allowed, the same as they were this year, to put in cars which were not of their standard manufacture. We do not consider a trial of a car that is specially built up for a special purpose to be a trial at all, as it does not show in any way what the manufacturer's regular selling car will do. But, on the other hand, it gets advertised to the public as though it were one of the regular cars which he manufactures, and to manufacturers who enter their regular touring cars we consider it is most unfair. As to the question of whether a trial of this description is any good to the manufacturers, it is really very hard to say. We certainly do not think there is any necessity to put a car through the trials that the Scottish Club put cars through in Scotland. No man would require to go over the road they sent their cars over, and we think it quite useless to have trials over roads which no tourist ever thinks of going over. As a firm, we are of the opinion that it is very questionable if any more of these trials will do any good. We think enough have been held."

A REST TILL 1910.

Mr. T. Blackwood Murray, B.Sc., writing on behalf of the Albion Motor Car Company, Ltd., is "certainly of opinion that the R.A.C. would be well advised not to hold any further Reliability

Trials before 1910. If such trials are not held too often the public undoubtedly take a greater interest in them, and they are of correspondingly greater value as an advertising medium to the manufacturer."

NOTHING PROVED.

Messrs. Middleton and Townsend, of Edinburgh, were not competitors in the 2,000 miles trial this year, but were competitors in the Scottish Trials. Their views are as follows:—"Personally, we do not think the 2,000 miles trial is desirable and think that the Scottish Trials are quite severe enough to test any car thoroughly. The journey of the cars in the 2,000 miles trial, with the exception of the Scottish run, to us proves nothing. It merely shows that a car is capable of going slowly along good level roads with an occasional hill-climb of practically no severity, and the finish of the trial at Brooklands we think is quite out of place for touring cars."

TRIALS ARE USELESS.

The Junior and Otav Cars Company, Ltd., "consider that a trial similar to the 2,000 miles lately concluded is not only unnecessary, but absolutely useless. In common with other manufacturers of first-class cars, we entered a 20-24-h.p. Junior for these trials, and as the performance of our car was one of the outstanding features, we think we can speak with some authority on the subject. Our car, as you are aware, went through the whole of the trial with a loss of only six marks for reliability (four for changing a sparking plug, and two for adjusting chain, on the rank, before starting in the morning), but we do not consider this proves very much to the buying public, as we guarantee every car we sell for a period of two years, which represents a distance of between 6,000 and 10,000 miles. While, we are, at all times, prepared to put our cars to the most stringent tests, we should not be willing to waste any money by entering them for a reliability trial, should one be held next year, as we far prefer to give the public the benefit of the money thus saved."

NO ORDERS TRACEABLE.

Messrs. Sidney Straker and Squire, Ltd.:—"Although we have participated in most of the public trials, commencing with the War Office Trials in 1901, we have never yet been able to trace a single order to any trial in which we have taken part. Further than that, we are distinctly of the opinion that trials no longer afford the manufacturer any information which is of any value in regard to his productions. Of course, some years ago, when the self-propelled vehicle was in an admittedly imperfect state, trials of this nature were of very considerable value, but since that time it may be said that, generally speaking, the self-propelled vehicle has arrived at such a state of perfection that it is obviously impossible to institute a trial of sufficient length to be of any great value either to the manufacturer or the user. Generally speaking, the manufacturer can only improve his vehicles now from the data which he accumulates himself from those vehicles which are in daily use, and where the use extends over an infinitely longer period than could be possibly covered by any official trial. Our own experience is that the using public, knowing a great deal more about motor vehicles than they did a few years ago, attach little or no importance to the results of trials of this nature. So far as commercial vehicles are concerned, they are guided almost entirely by the results obtained by their friends, or from trials instituted and observed by themselves, and no doubt this to a very large extent, especially in regard to the former procedure, is applicable to the pleasure car trade. The expense entailed by manufacturers is very considerable, and is altogether out of proportion to any benefit derived from trials of this nature."

LITTLE PUBLIC INTEREST.

Mr. Thomas Shaw, of Dundee:—"My own opinion is that if the club goes on with it they will get even less support than they received this year—and there were so few cars finished in the various classes that the public could really not be expected to take very much interest in it, and the honour of securing the awards is rather an empty one. In the first place, if conducted on similar lines it occupies too much time; and at the busiest part of the season it must be very inconvenient for all except the large firms to have their best men occupied for at least six weeks at a time when they must be very badly wanted for other work. In the second place, it is so long from start to finish that long before the finish the public have lost all interest in it, therefore I do not think in the present state of the trade that any trial should be held which occupies more than a week.

Scotland is admirably suited for reliability trials, and I am strongly of the opinion that they should be left to the Scottish Club. I do not want to belittle the R.A.C. Trial, but I am quite sure the cars that received awards in the Scottish one will reap more benefit from a commercial point of view. Everyone, I think, admits the Scottish Trial was a very severe one, and anything beyond that, I consider, was a waste of time and money."

A TRIPLE OBJECTION.

Mr. P. C. Kidner, of the Vauxhall Motors, Ltd.:—"Our objections to this year's trials may be entered under three heads, i.e., tremendous expense, length of time taken, inadequacy of the trials to really test a car.

We do not consider that 2,000 miles at 20 m.p.h., even with a few stiff hills, really tests the modern touring car. Our car, as you know, came off after the Brooklands race in a perfect condition and has since done 3,000 more miles, including numerous hill-climbing competitions, without being touched in the way of overhaul or repair. At the same time we feel that a longer trial is impossible for several reasons, expense being the chief one. Another point we should like to see included would be a careful inspection and trial of each car by a competent committee of judges on the lines of the Motor Yacht Club's reliability trials for motor-boats, who would note and publish the points, good or bad, in the competing cars both of construction, road running, hill climbing, cleanliness, accessibility, and many other points.

We must confess we are unable to suggest any method of satisfactorily testing the modern car on the spur of the moment, but before other trials are decided on we should strongly urge the authorities promoting them to call a meeting of manufacturers and agents to thoroughly ventilate the subject."

THE SCOTTISH TRIAL SUFFICIENT.

Mr. Thomas Cureton, of the Sunbeam Motor Car Company, Ltd., writes:—"We did not enter for the last R.A.C. Long Distance Trial because we do not think it would serve any useful purpose so far as the public or motor manufacturers are concerned. We believe that the most useful trials are the Scottish Reliability Trials, which are most carefully carried out, and the cars run under ordinary touring conditions. In our opinion, anyone wishing to buy a car cannot do better than investigate its performances in these trials, and if the car has done well, it can be taken as positive proof that the vehicle is reliable. Moreover, we consider that the eight hundred miles of the Scottish Trials is quite enough to prove all that can be proved by a reliability trial, because to test the modern car to destruction would take more like twenty thousand than two thousand miles; therefore, seeing that the Scottish Trials are sufficient to teach the public or makers all that is required, why go to the additional expense of the R.A.C. Trials?"

Messrs. Wilfrid Foulis, Ltd., of Edinburgh, say, "that in our opinion the Scottish trials, which have been so successful in the past, fulfil all the requirements of a reliability trial."

Mr. Herington, of Ariel Motors (1906), Ltd., thinks "the matter in question should be left solely to the discretion of British manufacturers, and we would suggest that the R.A.C. take a vote on the matter from British manufacturers only. It is a question which we think should be left entirely for the trade to decide for or against."

A NEW SPLASH GUARD.

IN a recent issue we referred to a new splash guard which has lately been put on the market by Messrs. A. E. Oakley and Company to prevent motor vehicles splashing mud in bad weather. This week we are able to illustrate another arrangement having a similar object which has been devised by Mr. C. Chetwynd Ellison, of Monckton, near Barnsley. As will be seen from Fig. 1, which shows the guards fitted to a 15-h.p. Humber car, they are made of leather and are attached to a bar

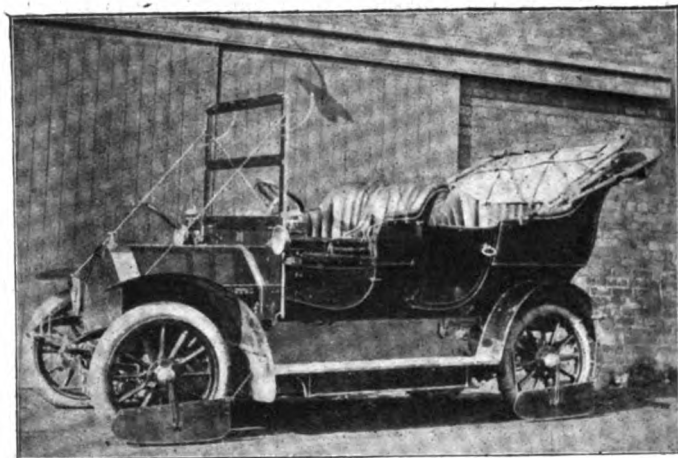


Fig. 1

or T piece pivotally supported on a small stud secured in the axle cap, and held in place by a split pin passed through the stud. The guards are so arranged that they can move vertically or laterally, should any obstruction be met on the road, any excessive movement being, however, prevented by means of a light connection between the leather and the wings of the car. Provision is made so that the guards can be adjusted at the proper height from the ground. In dry weather, when the guards are not required, they can be removed in the space of about a minute and refitted equally as quickly.

Mr. Monckton has used them on his car for some time and has had some photographs taken to show their efficacy in preventing plashing. In Fig. 2 a man is seen standing at the side of a muddy

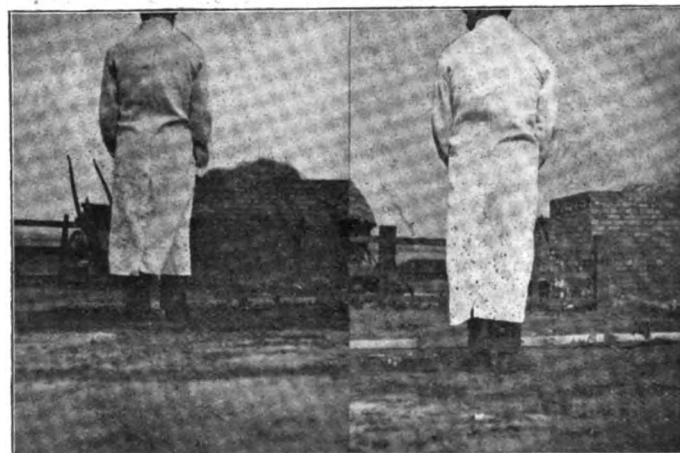


Fig. 2.

road wearing a white dust coat, the effect of driving the car past him, with and without the guards, at a speed of 20 miles per hour being clearly depicted. The idea is one which is well worthy the attention of those interested in the running of motor-bus and cab services, as, with the increasing number of vehicles now in use, the question of preventing mud splashing to the annoyance of pedestrians is one that may have to be seriously considered in the near future.

SOME CURRENT TOPICS.

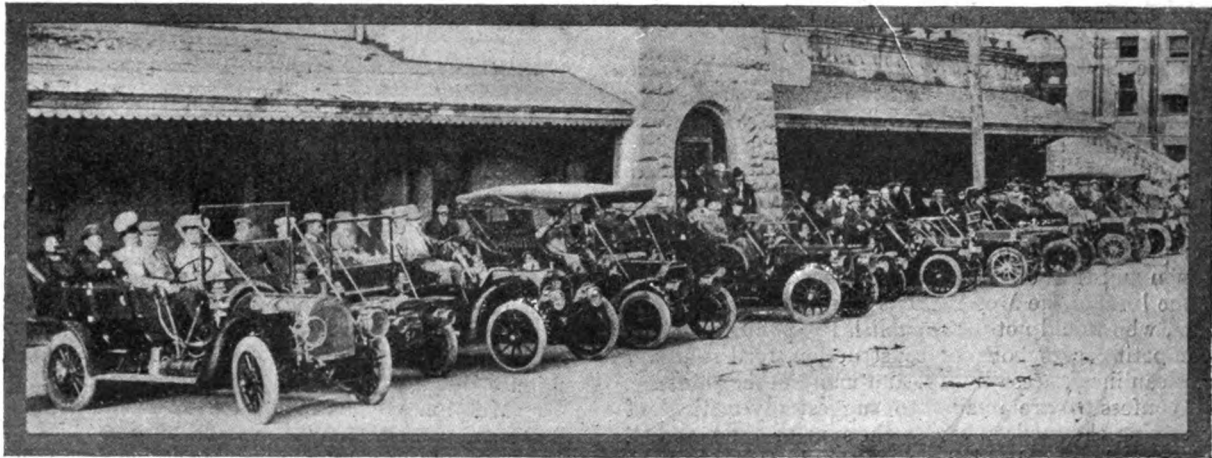
The Cost of Repairs.

Now that the touring season is in full swing motorists are meeting with new experiences, some pleasant and some otherwise. Particularly is this the case as regards the variations in the prices for petrol, oil, and other accessories that rule in different parts of the country. In connection with repairs, too, automobilists are often somewhat surprised at the extent of the bill when the same is presented for carrying out any little job that has been found necessary on the car. One of the readers of the *M.C.J.*, who has recently been touring in the Lake district, has sent in particulars of an instance of what he considers an excessive charge. Finding two small holes in the pipe which conveys the oil from the crank case of the engine to the mechanical oil distributor, he stopped at a small roadside garage and asked for a man to take the pipe down, which was done. The pipe was then tested in a bucket of water and two pieces of solder were applied to make the hole up. The motorist in question adds: "We put the whole thing back and the time taken was 30 min. The whole job was done on the road side, the charge for which was six shillings. I consider that, seeing no tools were used with the exception of a movable spanner and soldering iron, this is extortionate, and it only makes people who are on tour chary of calling at any garage on the road. As showing the other side

ment. But when the garage owner has a clear idea of the advantages of cleanliness and order, he is usually able to do a great deal toward remedying even this defect in his surroundings. The question of charges, too, as is pointed out above, is one which needs careful consideration. Once a garage, no matter how limited its scope, has been placed on an orderly basis, and organised along right lines, it becomes attractive to motorists.

A Deasy Souvenir.

Calling on Mr. W. G. Williams, at the depot of the Deasy Motor-Car Manufacturing Company, Ltd., at 10, Brompton Road, Albert Gate, London, S.W., on Tuesday, I found him busily perusing the latest publication of the well-known concern. This is a delightful souvenir of the creditable performances of the Deasy cars in the recent 2,000 miles and Scottish Trials. The excellent sketch map will convince readers as to the arduous nature of the Trial, and the lucid chronicle of each day's running of the two cars will be proof of the reliability of this particular type of vehicle, whose irreproachable records are official testimony that should stand them in good stead with prospective motorists. I had previously assured myself as to the fact that the 35-h.p. and the 25-h.p. cars engaged in the Trials were standard productions as supplied to customers, and since the trials Mr. Horace Walker, of Bristol, has gone over practically the



Motoring in Canada.—A Meet of the Winnipeg Automobile Club.

of things, on my return I had to call at a garage in Kendal, owing to having lost a fan belt, and to one of the oil pipes being made up. I was in the place about half an hour, and the firm supplied the fan belt and did the small necessary repair, yet I was only charged the sum of 2s. 6d. This firm, I am pleased to say, hold the appointment of the R.A.C. as repairers."

The Needs of the Country Garage.

The motoring tourist has many opportunities of contrasting broadly the garage conditions afforded by the typical establishment in large towns and the average country equivalent which stands as substitute for it by necessity, though seldom from choice. A garage may be considered as serving a three-fold purpose, namely that of a store for the supply of fuel, lubricant and other necessities; a machine shop, where repairs of any kind may be carried out; and a repository for the safe storage of cars when the same are not being used. In view of the relatively small amount of business as compared with a large town garage, it is not to be expected that a country establishment shall be so perfectly equipped and carry such a large stock of supplies and spare parts as those in busy centres, yet there is no doubt that considerable improvement could be effected in many of them. It is true that in a small garage it is difficult to separate the various divisions of work, and that confusion and its kindred difficulties follow very often merely through lack of space, and possibly want of funds to establish a systematic arrange-

whole of the Scottish course on his Deasy car with not a single involuntary stop—proof that a private owner can obtain as good results as those credited to the appointed driver. Our columns have lately testified two more recent successes of the car, notably at the Lancashire A.C.'s hill climb at Rivington Pike, and London readers will be interested in an inspection of the show-rooms of the Deasy Motor-Car Manufacturing Company, Ltd., which are immediately opposite the Knightsbridge "tube" station. Readers interested in the picturesque as well as the practical should apply for a copy of this souvenir.

ARCANUM.

NEWS is to hand from Australia that another attempt to cross the Continent by motor-car is being made by Messrs. Dutton and Auger. It will be recalled that a short while ago these two adventurous motorists attempted to cross from Adelaide to Port Darwin, but were defeated when they reached the Northern Territory by the heavy tropical rains and were compelled to temporarily abandon their 20-24-h.p. Talbot car at Tennent's Creek and return by train, as the country had become impassable. Mr. Dutton has now purchased a new 25-h.p. Talbot car to do the journey over again, and, guided by the experience gained on his initial trip, there is every possibility of his succeeding. It is the intention of the motorists when they reach Tennent's Creek to pick up the 20-24-h.p. car they left there and drive it on.

CONTINENTAL NOTES.

The 1909 Prince Henry of Prussia Touring Competition.

It is reported that a new route is being mapped out for the 1909 Prince Henry of Prussia touring competition, and that the finishing point will be in South Germany. The speed trials will be again held in the Forstenrieder Park, Munich, while the hill-climb will probably take place in Austria.

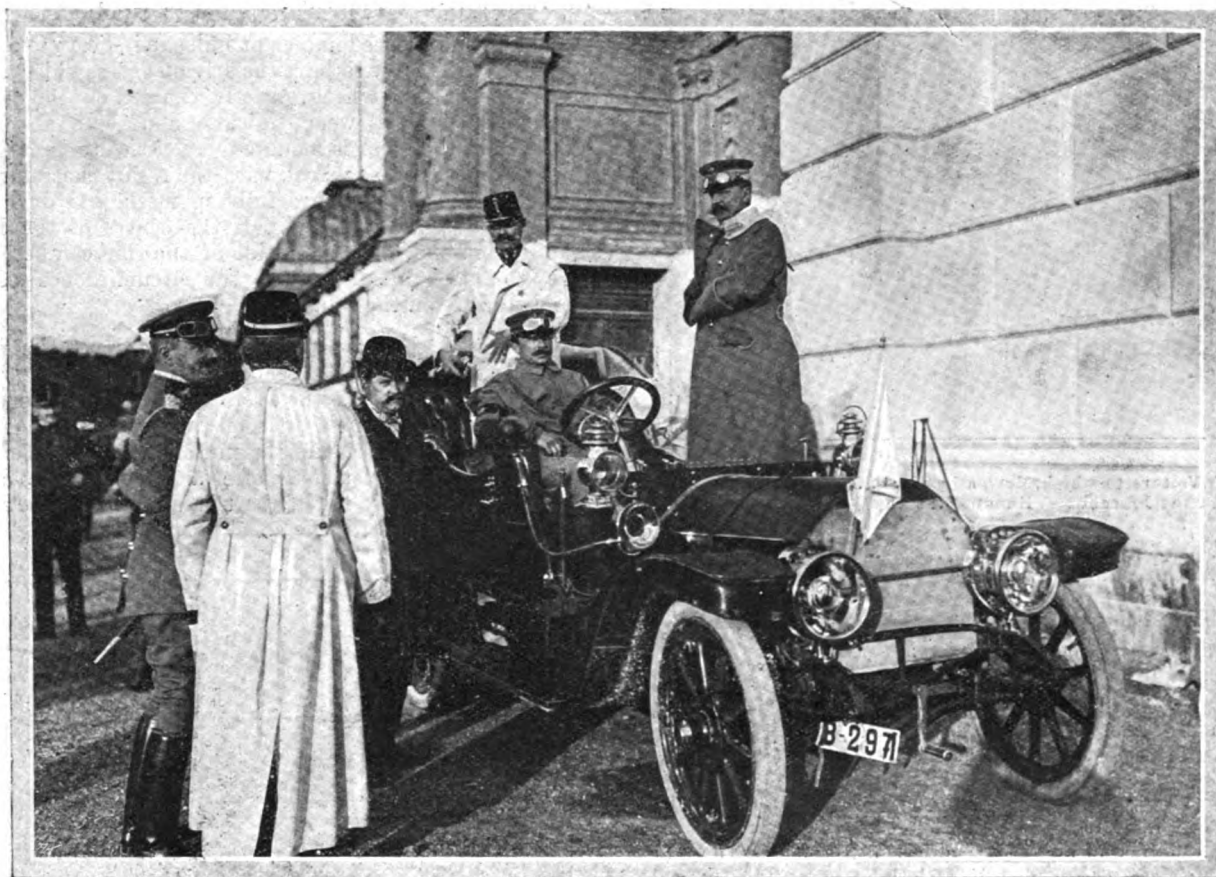
British Motorists in France.

Recent British visitors with their cars to France include :— Mr. and Mrs. Grunenbaum, London (60-h.p. Daimler) ; Mr. Shepard, Birmingham (24-h.p. Fiat) ; Sir William Adby (24-h.p. Rochet-Schneider) ; Mrs. Dunlop, London (15-h.p. Mors) ; Mr. Houston, London (40-h.p. Siddeley) ; Mr. and Mrs. Sharp, London (60-h.p. Napier) ; the Marchioness of Casteja, Scarsbrick Hall, Lancashire (Delaunay-Belleville) ; Mr. S. D. Samuel, London (40-h.p. Panhard) ; Mr. and Mrs. Bennett, London (50 h.p. De

low weight and small space occupied, six ; ease and rapidity of fitting and dismounting, and maintenance of apparatus in good order, four ; cost, six ; quickness of inflating operation, twelve ; inflation of tyres by ordinary air, twelve. Entries, at the rate of £1 per apparatus, will be received by the Commission de Tourisme de l'A.C.F., 8, Place de la Concorde, Paris, until December 1st. A sum of £80 will be divided in prizes in connection with the competition.

Aeronautical News.

The leading events of the week in the aeronautical world have been the disaster to the Zeppelin dirigible airship and the success of Mr. Wilbur Wright's first public trials with his aeroplane. The former took place at Echterdingen, near Stuttgart, last week, the airship catching fire during a storm and being entirely destroyed. At Le Mans, France, on Saturday, Mr. Wright succeeded in flying nearly two kilometres in 1 min. 46 sec. without mishap. Again on Monday and Tuesday he made successful



Prince Alexander Sols of Austria—next to the driver—preparing to follow the competitors in the recent Motor Volunteer Run from Vienna to Berlin. [Allgemeine Automobil Zeitung.]

Dietrich) ; Mr. and Mrs. J. Barker, London (24-h.p. Delaunay-Belleville) ; the Duchess of Manchester (40-h.p. Fiat) ; Sir Henry Samuel (30-h.p. De Dion) ; and Baron J. Von Knoop, London (40-h.p. Argus).

A Competition of Tyre Inflating Devices.

During the course of the Paris Salon, in December next, the French Automobile Club will hold an international competition of all classes of tyre inflating apparatus, excepting those which employ compressed gases in separate receptacles. Firms may enter one or more different arrangements, and where it is intended that the same is to be operated by the engine, it must be properly installed on a car. The tests will be carried out on a 935 by 135 mm. tyre, which will have to be inflated to a pressure of 6 kilos. per sq. centimetre. The award will be made on a point basis, the maximum number to be gained being, certainty of operation and durability of apparatus, twelve ; ease of adaptation to different cars, eight ; ease of operation, twelve ;

flight. Through the aid of private contributions the Austro-Hungarian military authorities are acquiring a dirigible airship of German construction.

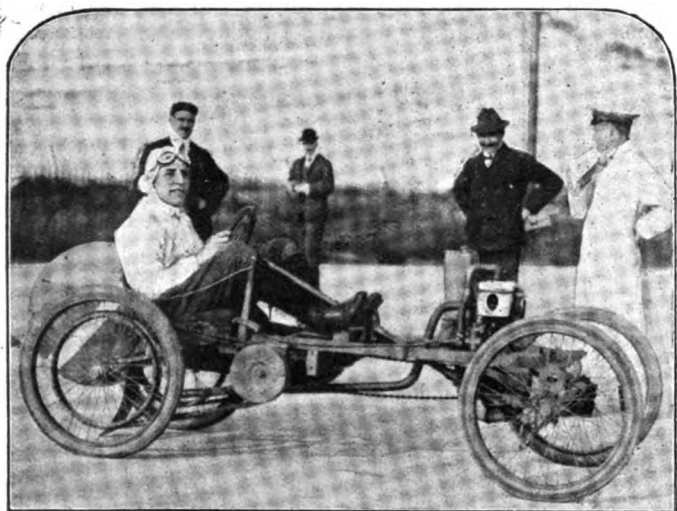
Motor Vehicles in the French Military Manoeuvres.

The French Ministry of War has invoked the aid of the Chambre Syndicale de l'Automobile in procuring at least eighty motor wagons for use in connection with the military manoeuvres, which are to extend over twelve days next month, in the Blois, Tours, Chateauroux, and Bourges district, and in which over 100,000 soldiers will take part. The vehicles, which will be used exclusively for the transport of provisions and water to the troops, must have a minimum load capacity of two tons and be capable of covering sixty to seventy miles daily, loaded over half the distance. The eighty trucks will be divided up into classes, according to their weight and speed, a certain number being placed at the service of each army corps or division. Fuel, oil, and grease are provided by the Government, and, in addition,

a station is provided for each convoy, where necessary spare parts can be kept and slight repairs undertaken. The indemnity to the owners of the trucks is one franc per horse-power per day. Two men must accompany each wagon; they will be granted payment at the rate of two and a-half francs a day for their services, and will rank as reserves in the motoring corps.

An International Automobile Congress.

The International Congress on Automobilmism which, at the instigation of the French Minister of Public Works, is to be held in Paris in October next, has been fixed for the 5th of that month. The object of the gathering is to consider means of facilitating the entry of motorists and their cars from one country to another. The French Touring Club has already proposed



The O.T.A.V. Voiturette which, driven by Mr. G. J. Bertelli, secured third place in the Journalists' Handicap at the August meeting at Brooklands.

The vehicle, which was only received from Italy two days before the race, and had therefore not been tuned up, is a standard car, the body, &c., having been removed for the purpose of the race.

that the authorities in France should not require visiting motorists on arrival to register their cars and obtain a *permis de conduire*, but should recognise the official number plates and driving licences issued in other countries. As the desirability of encouraging motor touring is being increasingly recognised, this may serve as a basis of discussion at the Congress.

Miscellaneous Items.

A Mercedes six-cylinder car was last week driven from Paris to Carlsbad, a distance of about 650 miles, in 23½ hours, the net time, deducting stoppages, being 19½ hours.—The Grand Duke Paul of Russia has ordered a Lorraine-Dietrich 15-h.p. six-cylinder car.—The members of the International Road Congress to be held in Paris in October are to be officially received by the Paris Municipal Council at the Hotel de Ville on the 12th of that month.—The Automobile Club of Spain has succeeded in inducing the Spanish Government to adopt the triptique system, by means of which foreign motorists belonging to recognised automobile clubs will be able to take their cars into the country free of customs duty.—Owing to difficulties with the authorities it has been decided to abandon the Mont Cenis hill climb this year.—Motorists who intend driving from Calais to Paris should take note of the fact that a thick layer of broken stones has been put on the Paris-Calais road at a point near Airaines, 20 kilometres from Beauvais. There is no warning sign-post, and the layer of stones, which extends right across the road, cannot, owing to a bend, be seen until a car is within a few yards of the spot.—A motor-bus service has lately been started in Moscow. At present only two sixteen-seated vehicles are at work.—Some experiments are being made in Munich with a new dust-preventing preparation known as "Epphygrit."

SOME USEFUL NOTES.

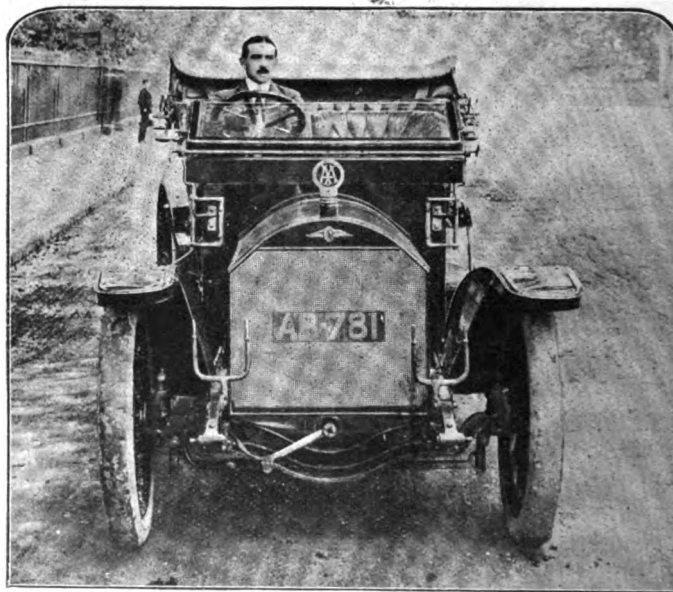
EVERY owner should possess a plan of the wiring of the ignition system of his car. If it is not supplied by the makers, he should draw out one himself, so that it is always ready for reference.

Too much care cannot be taken in seeing that no dirt or waste is put into the oil reservoir of a car, as one or more of the leads from the same may be clogged up, and before it is noticed a bearing may be ruined.

MOVING the steering wheel while the car is at rest tends to unduly strain the joints between the wheel and the front road wheels. Of course, there may be times when it is difficult to avoid moving the steering gear while the car is at rest, especially when turning in narrow roads; but as far as possible the rule should be adhered to of never forcing round the steering until the road wheels are moving.

IN fitting a speedometer or mileage-indicator to a car it is absolutely necessary to have the driving gears, which are mounted on one of the road wheels, exactly centred on the latter, otherwise the gears will wear quickly and will also be noisy. Occasionally the gear is mounted eccentrically in regard to the bearing centre of the wheel, with the result that during part of the revolution the teeth are fully in mesh, and during the rest only the edges are engaged. If the centre of the hub cannot readily be found, then the inside of the rim can be used, taking care to have all points on the circumference of the gear equidistant from the rim.

MOST of the parts of motor-cars are occasionally cleaned from necessity rather than choice, but the silencer is frequently entirely neglected. To the average driver the silencer is simply a sheet iron case, which by some means prevents the noise of the exhaust from becoming a nuisance. Consequently the interior of most exhaust boxes after a time resembles a coke oven, and when eventually taken apart is far from a pleasant thing to handle. The deposits can sometimes be removed with a brush,



Mr. Ruggeron, who represents the Ariel Company in Portugal, at the wheel of his new 30-40-h.p. Ariel Car.

but a scraper is needed in most cases. Most silencers create some back pressure, which is due to the constricting of the stream of exhaust gases and to breaking them up. When a deposit lines the walls it becomes necessary after a while to use a cut-out. This is particularly true on small motors, where the power loss may be as great as 35 per cent. in case of dirty silencers. The remedy is obvious.

At the foot of Pains Hill, at Cobham, on the Portsmouth road, will be found the well-equipped establishment of the Cobham Motor Works.

A MOTION urging the Town Council to apply for a L.G.B.

restriction of the speed of motor-cars to 10 m.p.h. is about to be moved at the meeting of the Sheffield Corporation.

THE late Mr. Thomas Thursfield left his motor-car and its accessories to his man-servant, Philip Tudor, "for his kindness to his brother and myself."

A NEW liquid metal polish known as "Electra," for cleaning the bright parts of motor-cars, has lately been put on the market by Messrs. Lane Bros., of the Electric Works, South Lambeth, S.W.

AT the Victoria Garage, Nottingham, Messrs. Andrew King and Company, Ltd., have good facilities for serving motoring visitors, and also conducting a growing business in the sale and exchange of automobiles.

A CARDIFF taxi-cab driver recently drove his cab, a 10-12-h.p. Coventry Humber of standard pattern, containing three passengers, from Cardiff to London and back—a matter of 340 miles, at an average speed of sixteen miles per hour.

A NEW garage at Settle, specially erected for Messrs. Lancaster, is now practically completed. The premises, which are spacious, well lighted and admirably fitted for the housing and repairing of cars, are located near the main road from Hellifield to the North.

FROM the Vacuum Oil Company comes a copy of the new edition of their handbook dealing with Mobiloils. This gives full particulars of the various brands of these well-known lubricating oils, and will be found well worth perusal by motorists who take a practical interest in their vehicles.

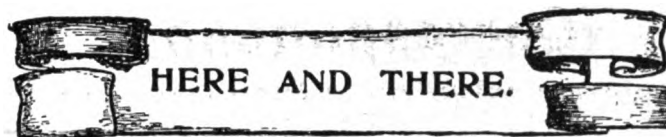
WE learn from the Wolseley Tool and Motor Car Company, Ltd., that the output of Siddeley cars from their works at Adderley Park, Birmingham, during the months of June and July totalled 298 vehicles, in addition to a considerable number which were despatched from their factory at Crayford.

THE County Chemical Company, Ltd., Birmingham, have lately introduced a new spring terminal for use in connection with sparking plugs which appears to possess features of merit. No nut is employed to fasten the terminal, which, while perfectly secure, can be instantly attached and detached even while the engine is running and without danger of shock.

THE latest American motoring accessory is the Nasalfilter, a little device to keep the nose and head passages free from dust. It consists of a frame of sterling silver, held in place by springs, and fine linen stretched inside the ovals. It is claimed that the filter fits snugly and comfortably into the nostrils, and that when worn the only portion that is visible is the silver wire bridge connecting the two ovals.

A HORSE in a garage certainly seems out of place, but that is what the curious may see any day at the Zacharias Motor Garage at Asbury Park, N.J., U.S.A. The animal is used to haul cars to and from the washing stand, instead of having them pushed by man-power, and the owner states that he gets the moving done in one-third the time. There is also a considerable saving in wages, as some five or six men are dispensed with by the new arrangement.

MESSRS. SHIPPEY BROTHERS, of 13 and 14, King Street, Cheapside, E.C., are placing on the market a new compound known as "Chemical Decarbonizer," to be used for cleaning and renovating petrol and gas engines. It is supplied in sealed cans of two sizes—No. 1 for single and double-cylinder motors, and No. 2 for four and six-cylinder engines. It is claimed that by removing carbon deposits from an engine every month by means of the new preparation the power of the average motor will be increased from 15 to 25 per cent. by its use, according to the age and construction of the same, and further that it will reduce the petrol consumption. Messrs. Shippey are issuing an interesting pamphlet describing the merits of the new compound, copies of which will be sent on application.



MR. LLOYD GEORGE has just motored from Carlsbad to Bayreuth.

APPLICATIONS of oil-tar are being made on the Hampton Court Road, Surrey.

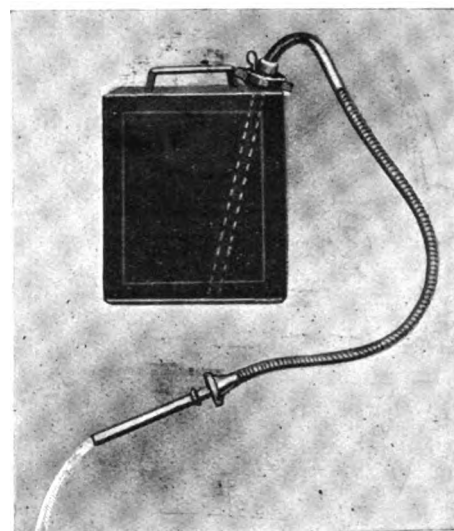
A NEW steam car known as the "Arden" is being put on the market by the Arden Works, of Fenton Road, Halifax.

THE increase in the cost of road construction in Cheshire is this year, 22 per cent. more than last.

THE Rev. Henry Russell Wakefield, rector of St. Mary's Church, Marylebone, has recently purchased a Standard 20-h.p. car.

MR. F. NASH has a motor depot in Fisherton Street, Salisbury, where he is doing business with local and visiting motorists.

IN a recent issue we referred to the ingenious auto-syphon for transferring petrol from tins to the car tank without loss or danger which had been devised by Mr. W. Dean Williamson, of Orrell, Wigan. The device has now been taken up by Messrs. Alfred Dunhill, Ltd., Euston Road, London, N.W., who are putting it on the market as the "Dunhill Auto-Syphon." To empty a tin of petrol it is only necessary to attach the apparatus by means of the screw cap, which is of a convenient shape for



tightening by hand, and then press in the sides of the tin, the latter being placed on a higher level than the tank. A very slight pressure only is required to start the syphoning, after which the tin is emptied automatically. It is impossible to lose any petrol by splashing or otherwise where the Auto-Syphon is employed, and all particles of dust, &c., which may be in the spirit are effectually prevented from entering the tank by means of a filter.

MR. E. W. HILL, of Bridgwater, has kept a careful record of his costs since February, 1907, in running a 30-h.p. Beeston Humber. During twelve months the car covered 5,430 miles at a total cost of £42 14s., made up as follows:—Petrol, £17 10s.; lubricants, £4 14s. 6d.; tyres, £17 2s. 6d.; charging accumulators and carbide, £3 7s. The car did an average of eighteen miles per gallon of petrol, and it will be seen that the total cost of running works out at rather less than 2d. per mile.

MESSRS. SLATER, BATTY AND COMPANY, of Hitchin, are becoming well known throughout the county as motor-car advisers. Mr. W. J. Willmott, who is a resident of the town, has had a 6-h.p. car supplied by them which he has run several thousand miles in eighteen months without a breakdown, while the Daimlers, Argylls, Vulcan and other vehicles advised to clients have brought glowing eulogies to the firm. They not only advise but they know how to overhaul cars before handing them over to future owners.

Correspondence.

(Letters to the Editor should be addressed to the offices, 37-38, Charing Cross Road, London, W.C.)

AN ENGINE TROUBLE—AND ITS SOLUTION.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—
"Though plunged in ills, and exercised in care,
Yet never let the noble mind despair."

These words of Phillips seem surely to apply to motor torts, and I came across a case recently which appeared to show that this aphorism could be used with regard to motor worries, and as the case in point seemed of interest, I thought that maybe your readers might like the history of it. Scene: a country garage; dramatis personæ, a worried and perplexed motor-car owner, who drives and looks after his own automobile; the still more worried and harassed garage owner and fitter; crowd of sympathetic motor owners and chauffeurs. The motorist was expatiating on his case; the car, a single-cylinder one, was, as a rule, a dream, but now she was the opposite of angelic. The engine started, but the horses, or

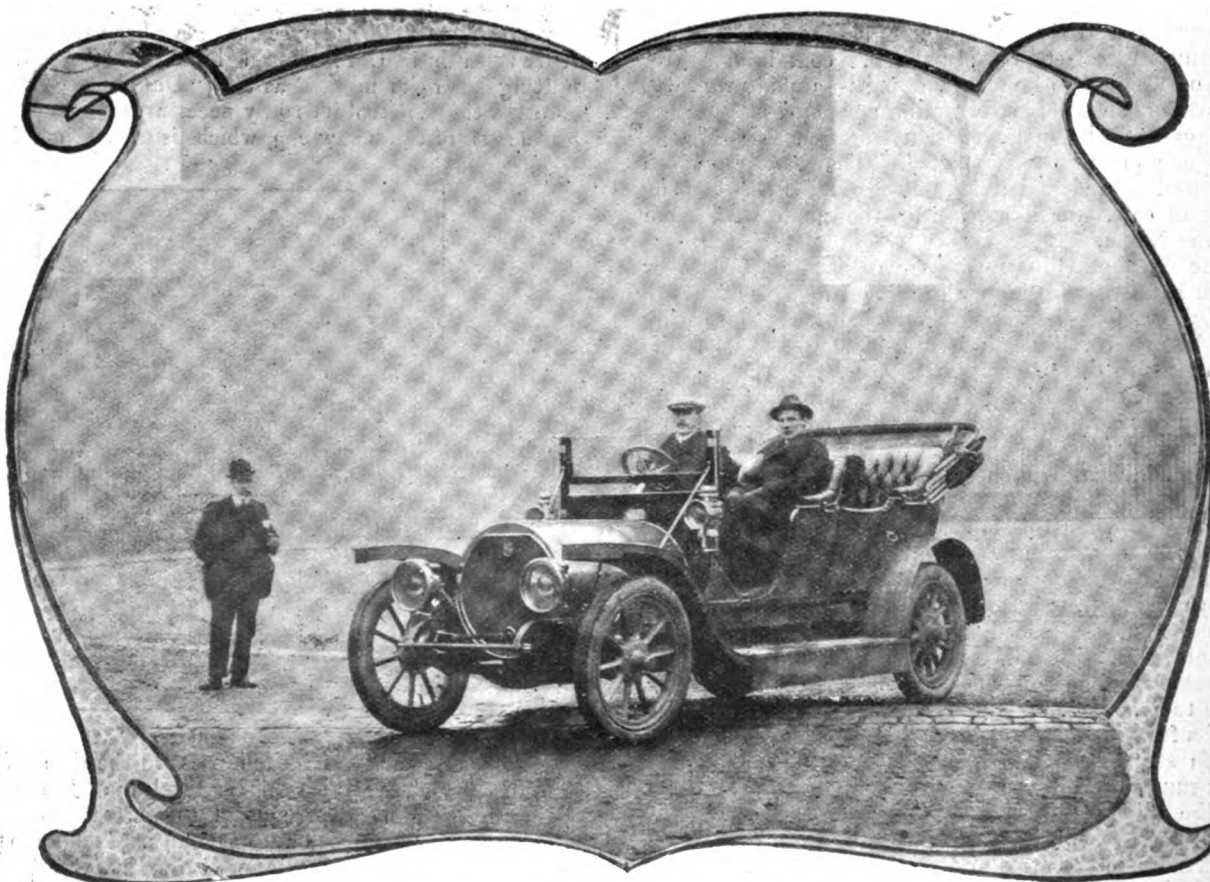
spindle, and, as a result, though the lift was correct, the tension of the spring was too strong, and so the valve did not open soon enough, the engine, consequently, not getting a sufficient charge. As soon as the cap was slackened back a few turns the fault was cured and once more the engine pulled, as she then got her proper charge. When the motorist had filled up with petrol and was leaving they were all jubilant. Truly, most motor worries are due to poor trifles, which the noble mind neglects and scorns.—Yours truly,

C. T. W. H.

RACING AT BROOKLANDS.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—Referring to the races at Brooklands on Saturday, the 1st inst., it appears that an impression exists that the Sizaire car which won



Mr. Percy Richardson at the wheel of one of the latest 45-h.p. Sheffield-Simplex Cars at the entrance to Alnwick Castle, Northumberland.

most of them, had fled; there was no power on the road. The cotter of the automatic inlet valve had broken, and the motorist had fitted a new inlet valve cap and pin, and since then there had been a marked loss of power. He was a careful man and had a gauge for the inlet valve lift, and that was all right. For a whole day they wrestled with the problem; the compression was good; still they had ground in the inlet and exhaust valves, and had inspected the piston and rings, which were in splendid condition. The sparking plug was cleaned, the coil trembler platinum points adjusted and dressed with a file, the accumulators tested and found to give 4.4 volts. Then the carburettor was dismantled, the jet was clear, the gauze at the air intake was clean, as well as the strainer washer where the petrol pipe opened into the float chamber. They had even gone further and inspected the gear-box and its shafts and bearings; there was no play, and after running they were cool, as were also the brake drums. Still the engine felt as if there was a brake on. The water circulation had likewise received attention and was found faultless, and even the commutator wipe was ideal, and the fibre wheel did not show any irregular wear, and was perfectly true with the wipe.

The riddle seemed impossible of solution, when a quiet little chauffeur solved it. It was, though they had not noticed it, the inlet valve; the new cap had a longer stem that screwed on to the valve

the Merit Trophy was a special vehicle built for racing purposes. The race in question, however, was one in which the car was handicapped under ordinary R.A.C. rating according to its size, and the result proved that the 12-h.p. single-cylinder Sizaire was the most efficient car amongst the whole of the entrants. The car was owned and driven by Mr. Scantlebury, a private user, and was a standard 12-h.p. car, sold by us to him in the ordinary way of business. In view of the special preparation which cars usually receive when they are intended to compete at Brooklands, we think this award of merit given to the Sizaire is noteworthy.

In connection with the All-Comers' Handicap, a car was entered by Mr. Jarrott which was specially constructed for racing. It was a 4 in. bore and travelled at the remarkable speed of over fifty-five miles an hour. This was partly due, no doubt, to the very skilful handling of the car by M. Naudin, but as indicating the extraordinary efficiency of the Sizaire this performance is also worthy of a great deal of attention. We cannot see that the handicappers were to blame, by reason of the fact that it was the first time this car had competed, and it was not to be expected that a single-cylinder car of such small dimensions would obtain such an extraordinary speed.—Yours truly,

CHARLES JARROTT AND LETTS, LTD.

THE ACCIDENT AT BROOKLANDS.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—I have heard it stated in connection with the unfortunate accident to the Mercedes car at Brooklands, that the gear-box and some of the ball bearings were badly smashed, thus leaving an impression that the cause of accident might be attributed to the breakage of some of these parts. I had occasion on Wednesday last week to visit the scene of the accident, and I made a careful inspection of the remains of the vehicle on behalf of "Lloyd's," with whom the car, driver and mechanic were insured under a "Red Cross" Brooklands policy. In view of the statement above referred to, I feel it only fair to the makers of the car to state that there was no sign whatever of any such breakages. The gear-box and its bearings were intact, and the point which impressed me most was the almost complete absence of broken parts, notwithstanding that the chassis, axles, driving shafts, and steering connections were twisted out of recognition. So far as the insurance was concerned, I advised the underwriters to pay the full amount insured, and this has already been done.—Yours truly,

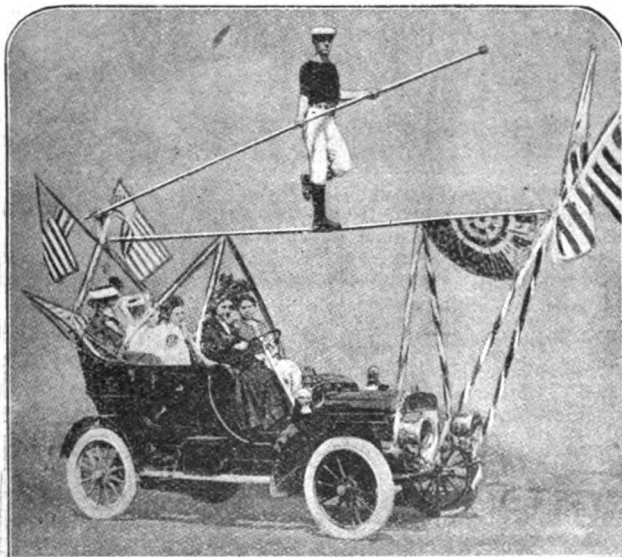
W. C. BERSEY.

ACCESSIBILITY.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—As it may be presumed that motor-car designers are just now busy getting out the plans for next year's models, the moment is opportune to draw attention to the need for greater accessibility of those parts requiring adjustment or lubrication from time to time. There are still many vehicles which leave considerable room for improvement in this direction. I know that there are some who hold the opinion that if parts are put up in the best manner, they very seldom need attention or adjustment. However, this may be, I myself am strongly in favour of accessibility, as usually the buyer has no assurance that crank shaft bearings, which are difficult to get at to adjust, are necessarily so made and placed as to be long lived. Such parts as the contact maker are still too often placed in inaccessible positions. Valves are now usually rather easy to get at, but there is considerable scope for improvement as regards the facility with which the valves and springs can be removed even on many of the latest models. There are other parts which I might mention as being worthy of attention, but I will conclude by stating that infrequent need of adjustment does not form an adequate excuse for making a part very difficult to get at, especially upon vehicles likely to be used for touring. Accidents and breakages will occur, even on the best made machines, and these may render replacement necessary where skilled labour is not to be had.—Yours truly,

COUNTRY MOTORIST.



A Circus Parade Novelty.

To demonstrate the smooth running of the modern automobile a motor-car agent at Saginaw, Mich., U.S.A., recently took part in a circus parade in that town in the way depicted in the above illustration.

AN ENGINE QUERY.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—In reply to the inquiry by "Cardiff" in the last issue of the *M.C.J.* re engine trouble, there is no doubt whatever that the cause of the trouble is due to a choked exhaust. If "Cardiff" will disconnect the silencer he will find that the car will run as it should do; when disconnected take silencer to pieces and clean same.—Yours truly,

A. D. BARTON.

AN OLD CAR.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—Your correspondent "A. A. A." says it would be interesting to know how some of the old stagers who have kept their original possessions running are getting on. I think my own experiences will be of interest to him and others. On the 9th ult. I started with three others on "Peggy," my little 6½-h.p. Darracq, as shown in the accompanying photo taken on our return, for a fortnight's tour in the South of England. We touched Marlborough, Stonehenge, Taunton, Glastonbury, Cheddar, Weymouth, Southampton, Brighton, Tonbridge, covering altogether about 560 miles, the car running perfectly the



whole time, without a single involuntary stop, using only about sixteen gallons of petrol. This is the more remarkable, as the car was built in 1900, and has been in constant work ever since. I should very much like to know if any other vehicle of a like age is putting through such a creditable performance this season as mine has done.—Yours truly,

GEORGE HAMILTON.

AN ENGINE TROUBLE.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—When my car is at rest, with the motor, which has four cylinders, running as slow as possible—about 250 revolutions per minute, on pulling the throttle open any additional amount the engine will slow down before speeding up. If the throttle is pulled open quickly the motor will stop entirely. The carburettor is the so-called automatic type, with a separate air valve held closed by a light spring. I should be glad if you could assist me in locating the cause of the trouble.—Yours truly,

GLOUCESTER.

[It is very difficult to determine the cause of this trouble, as our correspondent does not state the type of carburettor fitted to his car. It would appear, however, from the symptoms given that the air valve requires a slightly stronger spring to prevent too much air passing in upon opening the throttle.]

THE SIZE OF BEVEL PINIONS.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—I should be glad if any reader of the *M.C.J.* could inform me what is the smallest size of bevel gear pinion it is desirable to use on a motor vehicle. I have made many enquiries on the subject, but find a difficulty in securing any definite and reliable information.—Yours truly,

LINDUM.

FOUND, on Tuesday, the 4th inst., between Kidderminster and Stourbridge, a Hill's patent tyre inflator gauge. Owner can have same on application to Mr. C. Bray, Broadwaters Cycle Depot, Kidderminster.

A SMALL lever key, with the label attached "key motor tools," was picked up on the road near the premises of Messrs. Hoskins, Oates and Co., at Wellington, Somerset, on the 9th inst. It can be obtained by the owner on application to that firm.

A TAIL lamp has been found on the road between Andover and Salisbury. If the loser will communicate with the secretary of the Automobile Association, Princes Buildings, Coventry Street, W., with a full description of the lamp, every assistance will be afforded him in recovering same.

MR. E. C. JONES, of Carmarthen Street, Llandilo, will be glad to hear from the owner of the car on which he left his overcoat, in the pockets of which were sparking plugs and various tools. The occasion was the last Sunday in July, and the incident occurred in connection with a break-down at St. Clear, Pembrokeshire.

CLUBS AND ASSOCIATIONS.

ROYAL.

IN conjunction with the third provincial meeting of the R.A.C. General Committee, which takes place at Norwich on Saturday, September 5th, an inter-club meet will be held. The programme has been arranged as follows:—

Saturday, September 5th.—10.30 a.m., reception of the Club by the Mayor of Norwich, and meeting of the General Committee at the Blackfriars Hall; 12.0 mid-day, visit to the Cathedral; 3.30 p.m., gymkhana at Crown Point; 7.30 p.m., third provincial dinner of the Royal Automobile Club and annual dinner of the Norfolk Automobile and Launch Club.

Sunday, September 6th.—10.30 a.m., run by cars to Wroxham, meeting at the Horse Shoe hotel, going thence by motor-boats (provided by members of Norfolk Automobile and Launch Club) to Horning; 1.0 p.m., lunch at the Swan Hotel, Horning; 4.0 p.m. to 5.0 p.m., tea at Rivercroft, Wroxham, by kind invitation of Mr. and Mrs. H. L. Clark.

The headquarters for the week-end will be the Maid's Head Hotel, Norwich. At Norwich the proprietors of the following motor houses will allow free accommodation for motor-cars of members and associates taking part in the meeting:—Messrs. Howes and Son, Chapel Field; Messrs. Mann, Egerton, and Co., Ltd., 5, Prince of Wales Road; Mr. A. Spaul, Castle Hill; Messrs. Thorn, St. Giles; the Victoria Garage Company, St. Stephen's Road.

The first entries received for the Henry Edmunds Hill Climb are from Mr. S. F. Edge, who has entered two cars for the "Graphic" trophy race.

Journey).—M. W. Randle, E. Nelson, H. R. Mayo, Miss Muriel Hind, L. Cutler, A. D. E. Craig, J. O. M. Dixon.

THE Auto-Cycle Union's annual ride from London to Plymouth and back, which began from Thames Ditton at 9 p.m. on Friday, finished on Saturday night. Of twenty-nine original starters, twenty-one reached Plymouth, and that number set out on the return ride on Saturday morning. The first rider to reach Thames Ditton was H. G. Cove, on a 4-h.p. H.G.C., who arrived at a quarter past eight. He was followed by six others before 9 p.m., so that these seven qualified for awards, other than certificates, for accomplishing the double journey in twenty-four hours. W. O. Bentley, 5-h.p. Rex, and W. H. Bashall, 3½-h.p. Triumph, arrived at 8.17 p.m.; W. E. Burkin, 2½-h.p. Laurin and Klement, G. L. Fletcher, 2-h.p. Moto-Reve, and Eli Clark, 2½-h.p. Douglas, at 8.19 p.m.; and C. H. Barfield, 3½-h.p. Triumph, at 8.47 p.m.

BROOKLANDS.

ON Saturday, 12th Sept., the races to be run under the auspices of the Brooklands A.R.C. will include the sixth 36-h.p., the fourth 40-h.p., the third 60-h.p., and the fifth 90-h.p. race—all of 150 sovs. The programme will also include an All-comers' Handicap Sweepstakes, the September Sweepstakes, for cars of a horse-power of not less than 22-h.p. R.A.C. rating and not more than 36-h.p. R.A.C. rating, the following cars being barred:—Hutton, Metallurgique and Napier; the Large September Sweepstakes, for cars of a horse-power of not less than 35-h.p. and not more than 59-h.p. R.A.C. rating, the 48-h.p. Brasier being barred; the Change Sweepstake and an Obstacle Race. Entries for all these events will close on the 4th Sept. The distance of the race



Last week Mr. F. A. Bolton, J.P., gave an "At Home" at his residence at Moor Court, Oakmoor, Staffs, to the Members of the Derby and District Automobile Club, of which he is the President. The photograph reproduced above depicts a group of the visitors on the Terrace.

MOTOR UNION.

SEVERAL additional subscriptions have been received by the Motor Union towards its Legal and Legislative Defence Fund, but there is still a considerable excess of expenditure over income in regard to this fund for the current year.

AUTO-CYCLE UNION.

THE committee of the Auto-Cycle Union has confirmed the recommendations of the judges, and has made the following awards in the recent Land's End to John o' Groat's Trial:

Gold Medals: No Marks Lost (Trade Entries).—W. H. Wells, M. Geiger, G. Lee Evans, J. Slaughter, J. Marshall, P. H. Cockroft, R. Moore, C. A. Palmer. Gold Medals: Marks Lost (Trade Entries).—O. C. Godfrey, 18 marks; F. W. Applebee, 7 marks.

Gold Medals: No Marks Lost (Private Owners).—J. Tassell, S. W. Carty, A. D. Nicholson, Gordon Gibson, F. Dover, F. C. Mustard, C. E. Murphy, R. W. Duke, H. C. Harrott, A. Manning Lomax, H. H. Dommett, Robert King, J. Haslam, Sir R. K. Arbuthnot, Bart., R.N., W. E. Merritt, J. Ewing Adam, A. M. Tatham, A. E. Wilding, H. D. Seale, and H. R. Dougal. Gold Medals: Marks Lost (Private Owners).—F. S. Barnwell, 79 marks; W. H. Outwin, 8 marks; A. H. Omerod, 10 marks; T. K. Hastings, 17 marks; W. Milnes, 13 marks; H. B. Lewis, 11 marks.

Silver Medals: Marks Lost (Trade Entries).—A. J. Sproston, 195 marks; F. W. Barnes, 92 marks. Silver Medals: Private Owners).—E. Gwynne, 125 marks.

Bronze Medals (Trade Riders Finishing the Journey).—G. L. Fletcher, J. V. Robinson. Bronze Medals (Private Riders Finishing the

will be 3, 3½ and about 5 miles, save in the case of the 90-h.p. race, where the distance is 21½ miles.

On October 3rd the Brooklands Grand Prix race will be run.

RECORDS OF SPEED.

THE following certificate, signed by Mr. E. de Rodakowski, official timekeeper to the Royal Automobile Club for the Brooklands electric automatic chronograph, has been given of performances in the first race for the O'Gorman Trophy on the 3rd inst.:

(1) Time of race from start to finish of winning car (Mr. S. F. Edge's 60-h.p. Napier, driven by F. Newton): 71 min. 31.88 sec., equal to 83.88 miles per hour. (2) Ten laps, with flying start (laps starting at mile post 1 m. 10 ch.) completed by leading car (Mr. H. G. Burford's 76-h.p. Mercedes, driven by C. Lane) in 17 min. 34.65 sec., equal to 94.6 miles per hour. (3) Twenty laps, with flying start (laps starting at mile post 1 m. 10 ch.) completed by leading car (Mr. H. G. Burford's 76-h.p. Mercedes, driven by C. Lane) in 38 min. 24.45 sec., equal to 86.43 miles per hour. (4) Thirty laps, with flying start (laps starting at mile post 1 m. 10 ch.) completed by leading car (Mr. S. F. Edge's 60-h.p. Napier, driven by F. Newton) in 58 min. 27.7 sec., equal to 85.17 miles per hour.

Fastest flying lap accomplished by each of the competing cars (laps starting at mile post 1 m. 10 ch.): No. 1 car, Mr. S. F. Edge's 60-h.p. Napier (driven by F. Newton), 24th lap, time 110.15 sec., equal to 90.39 miles per hour. No. 2 car, Mr. E. W. Lewis's 67.5-h.p. Deasy (driven by E. W. Lewis), 3rd lap, time 123.8 sec., equal to 80.42 miles per hour. No. 3 car, Mr. S. F. Edge's 59.2-h.p. Napier (driven by J. G. Reynolds), 5th lap, time 101.95 sec., equal to 97.67 miles per hour. No. 4 car, Mr. H. G. Burford's 76-h.p. Mercedes (driven by C. Lane), 5th lap, time 98.9 sec., equal to 100.675 miles per hour. No. 6 car, Mr.

J. E. Hutton's 25.6-h.p. Hutton "Little Dorrit" (driven by J. E. Hutton), 4th lap, time 119'05 sec., equal to 83'625 miles per hour.

KENT.

THE last luncheon meet of the season of the Kent Automobile Club was held at the Dolphin Hotel, Herne Bay, on Saturday the 25th ult., when nearly forty members were present. Sir Alfred Watkin took the chair, and the guests included Mr. Iggulden, the chairman of the Urban District Council, Mr. Jubb, the Clerk to the Council, and Mr. Palmer, Surveyor to the Urban District Council. After the usual loyal toast had been honoured Dr. Tamplin proposed the health of Sir Alfred Watkin and alluded to the interest Sir Alfred manifested in the affairs of the club. Dr. Styan in a very happily worded speech stated how pleased the committee were to see the chairman and officials of the Urban District Council there as their guests, and thought that much of the friction which occurred in some districts was due to the want of better acquaintance between the authorities and the motorists. Mr. Iggulden in replying thanked the members for the cordial way in which they had received the toast, and referred to the fact that his council had always done their best to meet motorists on equitable terms, and he trusted that the Kent A.C. would make a point of visiting Herne Bay again. After the Chairman had proposed a very hearty of thanks to the hon. secretary for the trouble he had taken in connection with the club, the party broke up temporarily whilst the committee meeting was being held.

DERBY AND DISTRICT.

ON Saturday last the members of the Derby and District Automobile Club and their friends, by invitation of the president, Mr. Francis A. Bolton, J.P., visited his picturesque residence, Moor Court, Oakamoor, this being Mr. Bolton's second invitation this year. Oakamoor is a tiny little village on the Churnet, lying well to the left of Ashbourne and Leek, in the prettiest part of North Staffordshire. Surrounded by chains of hills whose slopes are deep with verdant woods, approachable by elevated terraced roads and wealthy in spots of quiet pastoral beauty, it would have been impossible to have chanced upon a more delightful meeting-place. On Saturday, however, the district bore a very animated appearance, and about three o'clock cars of all descriptions began to arrive from Derbyshire, Nottinghamshire, Leicestershire and the northern parts of Staffordshire, and these were lined up in the park surrounding Moor Court and the members and their friends were received in the inner grounds by Mr. Bolton and his household.

The afternoon turned out beautifully fine and full advantage was taken of the opportunity afforded to stroll through the conservatories and beautifully laid out gardens.

Mr. Bolton left nothing to chance with regard to the comfort and enjoyment of his guests, selections being rendered in the park by the Oakamoor brass band. A further attraction was provided in a secluded corner of the south lawn, where, on a tastefully arranged natural stage, beneath a canopy of rich foliage, Mr. J. W. Gibson, Longton, at intervals gave a very pleasing programme of songs, sketches, &c. Soon after six o'clock the guests commenced to disperse, all being loud in their praise of the kindness of the president in affording them such an enjoyable afternoon.

Amongst those present were Mr. Alfred Swingle, Smalley; Mr. Wm. Hart, J.P., and party, Derby; Mr. Arthur Ford and party, Uttoxeter; Mr. and Mrs. Geo. B. Fletcher and party, Derby; Mr. and Mrs. A. R. Robotham, Quarndon; Mr. Alan Ford and party, Uttoxeter; Mr. A. E. Chambers and party, Uttoxeter; Mr. C. Turner Leech and party, Quarndon; Mr. and Mrs. Barnard Sadler, Burton-on-Trent; Rev. Currey, Mr. F. E. Currey and party, Turnditch; Mr. and Mrs. Chas. J. Allin and party, Derby; Mr. Harry Ford and party, Uttoxeter; Mr. Jas. A. Doran and party, Leicester; Mr. F. G. Keeling and party, Uttoxeter; Miss Kniveton, Derby; Mr. Percy E. Joule, assistant secretary, &c.

ESSEX.

THE Essex Motor Club had a successful day at the Stadium at the Franco British Exhibition, on Saturday last. There were four motorcycle events and good racing delighted the spectators.

In the final of the five miles handicap for racing motor-cycles H. V. Colver (2½-h.p. Matchless) won by about 600 yards in 5 min. 44.3-5 sec.; W. M. Genn (2½-h.p. Eland), was second and D. R. Clarke (2½-h.p. New Century) was third.

The ten miles handicap for tourist machines was run in heats over distances of five miles, the full journey being made in the final, which resulted as follows:—1, R. O. Clark (5-h.p. F.N.); 2, C. Gibson (3½-h.p. Triumph); 3, W. W. Genn (2½-h.p. Eland).

Several attempts were made at the one mile record of 1 min. 2 sec. standing to the credit of C. R. Collier, but the nearest approach was that of H. V. Colver (2½-h.p. Matchless) in 1 min. 3.4-5 sec.

Excitement occurred in the one hour record race for the Du Cros Challenge Trophy. In this the engines were limited to 76 mm. by 76 mm. H. V. Colver (2½-h.p. Matchless) covered 49 miles 220 yds.; C. E. Bennett (2½-h.p. Mansfield) 44 miles 1,150 yds., and G. H. Gerhard (2½-h.p. Brookland) 42 miles 1,030 yds. Colver's handlebar broke off near the central lug at the end of his tenth mile, while Bennett's machine caught fire shortly after, the Diamond powder recently referred to in our columns being used effectually to extinguish it.

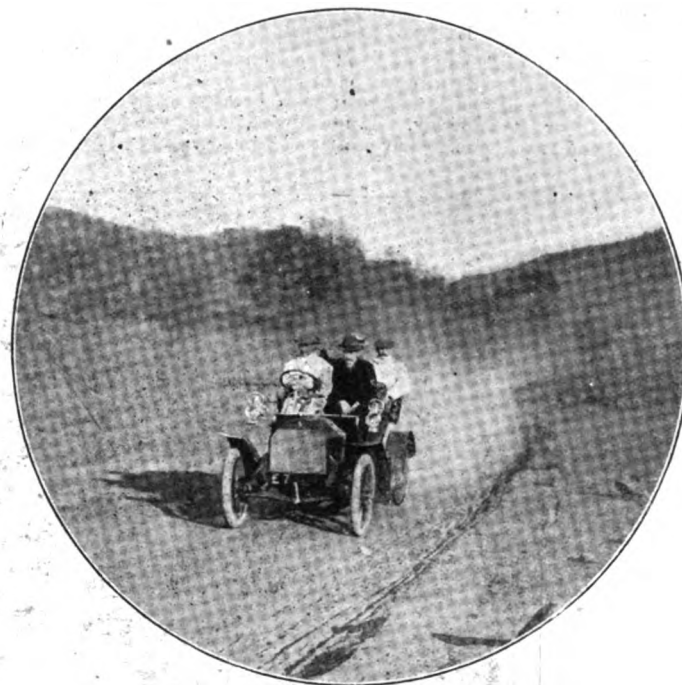
BERKSHIRE.

A MEETING of the committee of the Berkshire A.C. was held on Saturday last at the Great Western Hotel, Reading. Major E. R. Portal (chairman) presided, and there were also present Messrs. S. à Court, L. H. Baxendale, C. H. Dodd, the Marquis of Downshire, Messrs. Robert Harrison, E. A. Potter, and Shrapnell Smith (treasurer).

It was decided to hold a "closed" hill climb at Red House Hill, Wantage, on Saturday, the 29th inst., first run at 12 noon. An invitation to take part will be extended to the members of the North Berkshire A.C.

The Marquis of Downshire invited members to hold a gymkhana at Easthampstead Park, Wokingham, on Saturday, September 19th, and this date was agreed to.

An invitation was received from Mr. A. F. Clarke for a meet of the members at his residence, Midgham House. It was noted, with regret, that the date proposed—August 29th—had already been allocated to the Wantage fixture.



At the recent Hill Climbing Contest held by the Transvaal Automobile Club at Turfontein Nek, a typical South African gorge up the side of a mountain, two Star Cars won second and third places and a gold medal for best all-round performance in the contest. The above illustration depicts one of the successful vehicles ascending the hill.

A considerable amount of routine business was transacted. The hon. secretary reported that the £50 voted by the club for tar-spraying in the county of Berkshire was being usefully turned to account in numerous villages in the form of bonuses upon any sum raised locally.

MANCHESTER MOTOR.

THE trials from Manchester to Cheltenham and back (347 miles), with a hill-climbing competition on Lurking Hope Hill, were brought to a successful finish. Out of twenty-two entrants only five survived the ordeal of completing the course with a non-stop run without loss of marks. These are:—H. Reed (4-h.p. Dot), J. Tytler (3½-h.p. Triumph), C. Kettle (3½-h.p. Triumph), O. Gross (4½-h.p. Eagle Runabout), W. Heaton (5-h.p. Twin Rex).

A MIXED hill climb will be held by the Southern Motor Club on the last Sunday in the present month or the first Sunday in September.

Mr. A. MCALPIN, the secretary of the Leicestershire A.C., informs us that the gymkhana to be held by his club on the 29th inst. in aid of the Leicester Cripples' Guild will be open to all motorists, whether connected with the county or not.

AMONG the delegates of the Institution of Municipal and County Engineers to the International Roads Congress in Paris on October 11th and the following day will be Messrs. E. P. Hooley (Nottingham), J. A. Brodie (Liverpool), H. E. Stilgoe (Birmingham), and the County Surveyors of Hampshire, Buckinghamshire, and Middlesex.

MR. H. VERLEY, Mr. A. Welling, and Mr. G. Owen are among recent London purchasers of 26-h.p. Metallurgique cars.

CASES AGAINST MOTORISTS.

LIGHTS ON CARS.

At Mortlake Petty Sessions, Benjamin Farley, of Westmorland Road, Paddington, was fined £6 and costs for driving a motor-car at night without exhibiting a light showing the direction in which the car was travelling. A constable deposed to seeing defendant driving a motor-car across Barnes Common at two o'clock on the morning of July 23rd. There were no lights on the front of the car, and when witness stopped him he said the lamp had just gone out. Defendant was driving at about twelve miles an hour. There was a light at the rear of the car.

HIGHER FINES AT CHRISTCHURCH.

At Christchurch several motorists have lately been summoned for driving in a manner dangerous to the public. During the hearing of the cases the chairman stated that hitherto the Bench had been very lenient, but that in future it was their intention to materially increase the amount of fines levied on motorists.

EXCEEDING LEGAL LIMIT.

The penalty of £20 and £1 10s. 9d. costs was imposed at the Guildford County Bench on Saturday upon Frederick J. Lightfoot, of Shepherd's Bush, for having driven a motor-car at a greater speed than twenty miles an hour at Thurley. Defendant said his employer was wet through, and asked him to drive fast to get home. Five previous con-

ROAD REPORTS.

TRURO.—The police have lately instituted motor traps in various parts of Cornwall. One is near Green Bottom, between Truro and Chacewater.

NORTH DEVON.—Largely through the generosity of Lord Fortescue, who has given most of the land, a new road has been cut from Somerset to North Devon. Constituting the trunk road from Lynton to Dulverton and Exeter, it has a gradient of one in eleven, and will be appreciated by motorists, whose only access to this part of the country from Somerset has been by way of the precipitous Countisbury Hill. The road, which has taken several months to construct, is now ready for use.

BUCKINGHAMSHIRE.—Sir Edmund Verney, who is himself a motorist, has been advocating to the Buckinghamshire County Council that they should ask the L.G.B. to issue an order limiting the speed of motor-cars to ten miles an hour wherever there are continuous human habitations on either or both sides of the thoroughfare for a quarter of a mile.

GODSTONE.—In consequence of motor traffic the life of a road in the Godstone (Surrey) district, so it was stated at the last meeting of the Godstone Rural District Council, was only two years, compared with four formerly.

BEDFORDSHIRE.—Motorists passing through the village of Sharnbrook, Bedfordshire, should pay particular attention to the caution signs, and are asked to drive with the utmost consideration, firstly because the



Farmers and Motor-Cars.

Many of the farmers in Kansas have within the past few years become enthusiastic motorists. The above illustration depicts a meet of farmers at Garden City, Kansas, U.S.A. [Motor Age.]

victions for driving to the common danger and at excessive speed were proved.

ALLEGED MANSLAUGHTER.

At Hoveham Police Court, Harold Burnett Gylee, of 2, Lawreston Gardens, Larkhall Rise, Clapham, London, S.W., has surrendered to his bail, charged, on a coroner's warrant, that he did feloniously kill and slay Mabel Mary Denman, at Shipley, by running over her with a motor-car on the 3rd inst. The magistrates decided to adjourn the hearing till 10 a.m. on Wednesday, the 12th inst. Bail was applied for and allowed prisoner in his own recognizances in the sum of £100 and Mr. W. C. Holloway as another surety in a like amount.

UNSUCCESSFUL CLAIM FOR DAMAGES.

At Westminster County Court Messrs. H. and G. Duffield sued the Earl of Ronaldshay, M.P. for Hoveham, for damages to a horse and cart. Mr. Cranstone, for the plaintiffs, said that they were cartage contractors, and on April 1st they sent an uncovered cart to 47, Pall Mall. The vehicle was pulled up there, and the driver went into the shop. He came out again, and got into the cart, with instructions to go to Duke Street. He had just started when a motor-car came along, and the hub of the rear hind wheel caught the front wheel of the plaintiffs' cart, tearing away the front part and knocking the horse on to the pavement. The defence was that the motor-car was being driven at a moderate pace, when the van was pulled out, without the carman giving any signal. His Honour Judge Woodfall held that the plaintiffs had failed to make out their case and gave judgment for the defendant with costs.

corners are cramped, and, secondly, in recognition of the reasonable attitude which the authorities in this county have always adopted towards drivers.

NUNEATON.—There is a dangerous corner leading to the market place at Nuneaton at which several accidents have lately occurred. The other day a coroner's jury expressed the view that the Corporation should acquire the site at that particular corner with a view to securing the safety of the public.

WESTMINSTER.—Grosvenor Square is about to be given over to the road repairers, and is to be entirely repaved at a cost of £5,000. The Westminster City Council are spending nearly £20,000 on road repairs in Westminster this season. Northumberland Avenue, from Villiers Street to the Embankment, will be "up" until the 31st inst., and the same thoroughfare at the Whitehall Place end will be under repair from August 17th to September 7th.

MR. T. S. LEA, formerly northern traveller for Argylls Ltd., has been appointed sales manager to the Clement-Talbot Company, Ltd. The Stanhope Motor-cab Company, of 11, Queen Victoria Street, London, E.C., is operating 10-12-h.p. Darracq vehicles fitted with bodies by Messrs. E. and H. Hora, Ltd., of Peckham.

MESSRS. H. P. ROSE, LTD., of Frith Street, Shaftesbury Avenue, London, W.C., have lately opened a large motor garage at Bedford Place, Brighton, where provision is made for carrying out repairs of all kinds. Messrs. Rose are also district agents for the Singer and Riley cars.

ROADS AND DUST.

IN the course of a paper read at the annual meeting of the Institute of Cleansing Superintendents, Mr. H. Percy Boulnois, Deputy Chief Engineer to the Local Government Board, gave the following as the principal reasons for excessive dust on the roads:—

- (1) The great speed at which motor vehicles are driven.
- (2) The draught under the car, especially where the body is low, thus forcing the dust through a sort of funnel.
- (3) The sucking action of the pneumatic tyres on the surface of the road.
- (4) The centrifugal force of the periphery of the wheels tending to throw particles of dust a considerable distance.

With regard to the supply of dust he gave the following as the chief factors:—

- (1) The disintegration of the materials with which the surface of the road is constructed, by the traffic, and by climatic influences. The amount of this depends largely on the class of materials used.
- (2) Imported dirt, or mud, from other roads, from the wind blowing it from the fields in the country, and from yards and other places in towns.
- (3) Animal droppings, which are considerable both in towns and in the country.
- (4) The "spewing up" of the earth foundation in the case of improperly constructed roads.

Preparations of tar, specially prepared so as to be thoroughly viscous, have recently been used in this country and abroad with fairly good results.

The tar can be applied to the surface of existing macadamised roads, either by hand or by one of the several tar-spraying machines now on the market. In order to get any beneficial and lasting effect the following points, among others, require special attention:—

- (a) The surface of the road must be brought to a proper and even contour, and be thoroughly swept and brushed before the tar is applied.
- (b) The weather must be dry during the operations, and immediately after.
- (c) The tar must be in a sufficiently viscous condition and applied at a temperature of about 200 deg. Fahr.
- (d) The tar must be carefully and evenly spread over the surface of the road.
- (e) The tar should, if possible, penetrate well into the interstices of the road metal.

THE BROOKLANDS FATALITY.

AT Weybridge an inquest has been held into the circumstances attending the death of Herbert Mark Burke, the mechanic, whose death on the Brooklands track on Bank Holiday we reported last week. The witnesses were the father of the deceased, Mr. J. E. Hutton, and some eye-witnesses. In summing up, the coroner congratulated the driver of the car on his escape, and told the jury that he did not think they would be justified in saying that there was anything defective in the manufacture of the gear. He could not see what good could come of these races. It might be satisfactory to a man to be able to say that he had been round the track for some many thousands of miles in so many hours, but the matter ended there. So long, however, as they kept to the track they could hurt only themselves. He was fond of motoring himself, yet he was afraid there was a tendency of this motor track to induce people to drive fast. There was a very strong feeling at the present time against motor-cars, and he could not help thinking that these races were doing more harm to the industry than they would ever gain by this breaking of records. The jury found that the death was purely accidental. They suggested that if there were any defects on the track they should be brought to the notice of the authorities.

POLICE "CONTROLS."

IN Sussex the Pulborough to Arundel road has become the scene of police activity.

AMONG police traps in frequent operation north of the Tweed are those on the road from Killiecrankie to Pitlochry, and around Callender, Dumfries, Arbroath, Helensburgh, Stirling, Bridge of Allan, and Coupar Angus.

THE three measured distances that have lately been the cause of many motorists appearing at the Steyning Petty Sessions have been at Rock, Washington; Dacre Gardens, Upper Beeding; and at Henfield Common.

THERE is a trap near the Bramham cross roads, Tadcaster.

THERE is a measured distance between Compton and Otterbourne, in Hampshire.

TWYFORD is now the scene of a measured half mile.

NEW traps are reported from the main road to Scotland, just beyond Preston.

CAPTAIN MITCHELL-INNES, Chief Constable, says that circumstances have made it imperative for increased supervision of traffic on the Sleaford to Lincoln high road, and on the Lincoln to Newark high road, within the parts of Kesteven, Lincolnshire.

A MEASURED quarter of a mile is often watched by police in the Wrexham district.

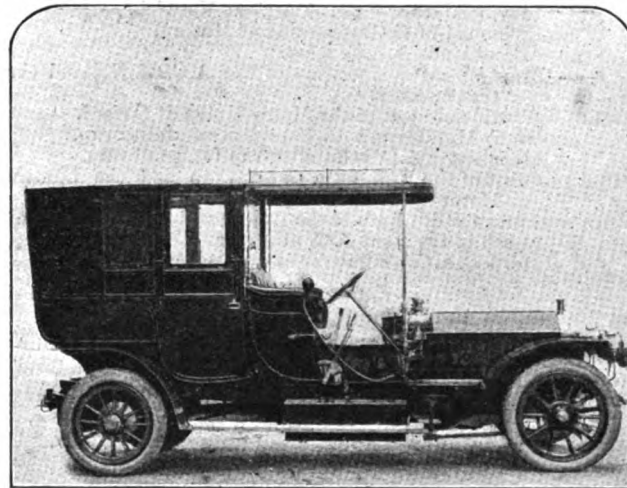
A NORFOLK WARNING.

THE following notice issued by the Norfolk County Council is a courteous and sensible effort likely to repress inconsiderate driving:— "Whenever in the opinion of a policeman a car is being driven at a dangerous rate, he is to stop the car by holding up his hand, inspect the driver's licence, and make a note of it, and inform the driver that in his opinion he is going at too great a speed having regard to the circumstances of the locality. He is to caution the driver and to inform him that the caution will be recorded, and if he is subsequently found to be driving at a speed dangerous to the public, he will be proceeded against, and the fact of his previous caution will be mentioned to the magistrates. The policeman will also politely request the owner of the car, if present, to direct his chauffeur to drive with due consideration for the convenience of other users of the road."

THE "FOUR-INCH" RACE.

COMPLETE list of entries for this event is as follows:—

Messrs. J. K. Starley, Rover; S. F. Edge, Hutton; Ernest A. Rosenheim, Arrol-Johnson (two); Harry Smith, Rover; J. W. Stocks, De Dion-Bouton; J. E. Hutton, Hutton; A. Rawlinson, Darracq; A. Loe Guinness, Darracq; John Hargreaves, Darracq; L. Coatalen, Hillman-Coatalen (two); J. Newton, S.C.A.T. (two); Thomas Hampson, Vulcan; Walter Phillips, Coventry-Humber; T. C. Pullinger, Beeston-Humber (two); Warwick Wright, Metallurgique (three); J. E. Hutton, 24.8-h.p. Berliet (two); Tom Thornycroft, Thornycroft; D. S. Hodge, Thornycroft; P. D. Stirling, Hutton; Gordon Usmar, Vinot; Roland Outhwaite, Vinot; G. W. Hands, Calthorpe; T. Russell Fletcher, Calthorpe; Philip Graham, Deasy; Edmund W. Lewis, Deasy;



The Napier 45-h.p. Six-Cylinder Car recently delivered to the Rt. Hon. H. H. Asquith, the Prime Minister of England.

This car is fitted with a double landaulet body to seat five in the interior, and is designed with a view to being used either in town or in the country.

Geoffrey Moss, Arrol-Johnston; Guy V. Baxendale, Thornycroft; A. Gaal, Westinhouse (two); L. Molon, Vinot; Morgan Donne, Piccard; Harold S. Buckley, S.C.A.T.; H. B. Browning, 23.3-h.p. Rover. All save the three exceptions noted are of 25.6-h.p.

COMPANY NEWS.

ROYAL AUTOMOBILE CLUB BUILDING COMPANY, LTD.—Registered with a capital of £100,000 to acquire lands or buildings in London and to provide and maintain a club building or buildings. Registered office, 112, Piccadilly, W.

MOTOR INDUSTRY FINANCE COMPANY, LTD.—Capital, £100. To carry on the business of dealers in motors, motor-cars, and appliances for motor-cars and vehicles, financiers, &c.

RIGFORD TYRE COMPANY, LTD.—Capital, £25,000. To acquire and turn to account certain patents.

MOTOR firms who are stock-taking will be interested to learn that Mr. Spong, of 205, Shaftesbury Avenue, London, W.C., is open to buy any scrap or job lines of tyres, &c.

REO MOTORS, LTD., Broad Sanctuary, Westminster, have just received a cable from America showing the remarkable performance which the Reo made in the recent Glidden Tour. The telegram received is as follows:—Reo touring car finished Glidden Tour, Saratoga, July 23rd, perfect score, defeating six cars costing over 3,500 dol. each besides eleven other machines higher priced than the Reo. The Reo Roadster has beaten all the Hower Trophy contestants for machines costing under 2,500 dols.

FORTHCOMING EVENTS.

AUGUST.

- 15th (Sat.).—Coventry M.C. open motor cycle hill climb at Newnham Hill, Daventry.
 Essex M.C. twenty-four hours' ride for members only to York and back to Woodford.
 Lincolnshire A.C. hill climb at Syston.
 North-Eastern A.A. gymkhana, Polo Ground, Gosforth Park, Newcastle.
 Walthamstow M.C. run to Hunsdon.
 19th (W.).—Cheshire A.C. Reliability Run.
 21st (F.).—Ballinaslaught hill climb of the Irish A.C.
 22nd (Sat.).—Annual race meeting of the A.C.U. at Shepherd's Bush.
 Invitation of Sir D. Salomons to the Kent A.C. to visit Tunbridge Wells.
 Manchester A.C. club run.
 Southend and District competition at Laindon.
 23rd (Sun.).—A. C. du Rhone Mont Pilat trial.
 29th (Sat.).—Meet of the Lincolnshire Motor Club at Lincoln.
 Mont Ventoux hill climb of the A.C. Vauclussen.
 Leicester A.C. gymkhana at Freeman's Meadow, Aylestone Road, Leicester.
 Essex M.C. 200 miles Reliability Trial.
 30th (Sun.).—Southend M.C. run to Great White Horse Hotel, Ipswich.
 31st (M.).—Closing day for the entries for the Army Council Light Tractor Trials to be held in February, 1909.

SEPTEMBER.

- 4th and 5th.—Reliability Consumption Trial of the Essex C.A.C. at Norwich in connection with the R.A.C. provincial meet.
 5th (Sat.).—Aston Hill climb of the Herts C.A.A.
 Provincial meet of the R.A.C. at Norwich.
 Richmond M.C.C. week-end at Henley.
 12th (Sat.).—Brooklands A.R.C. meet.
 17th (Th.).—Touring car competition of the A.C. of Holland through that country.
 19th (Sat.).—Provincial meet of the Motor Union at Oxford.
 North Middlesex A.C. 100 miles reliability run.
 Manchester A.C. reliability run for small cars.
 20th (Sat.).—Meet of the Hull Auto Cycle Club and the Lincolnshire Motor Cycle Club at Brigg.
 Annual Hill Climb of the Bristol and Gloucestershire A.C.
 Lunch of the Kent A.C. at Dover.
 Herts C.A.C.'s climb for cars at Aston Hill.

LIGHTING-UP TIMES—LONDON.

| | | | |
|------------------|-----------|-----------|-----------|
| August 15th—8.22 | 17th—8.18 | 19th—8.14 | 21st—8.10 |
| 16th—8.20 | 18th—8.16 | 20th—8.12 | 22nd—8.8 |

To find the approximate lighting-up time in August for Birmingham 12 minutes should be added to the above times, 17 for York, 21 for Manchester, and 43 for Glasgow.

"SHE."

She has a thousand whims and ways,
 She's changeful as the sky above her—
 And, dear as are her charms to me,
 Her faults are plain for all to see,
 And yet—I love her!

To-day she's docile, patient, sweet,
 And none could find a cause for chiding;
 For, like a saint, submissive, mild,
 She'll follow meekly as a child
 My gentle guiding.

To-morrow she's a wayward thing—
 A creature full of moods, caprices;
 And only when the day is past,
 And we with anger part at last,
 The conflict ceases.

My blessing—curse! My hope—despair!
 And these within an hour I vote her;
 Yet tho' she prove my death at last,
 Thro' storm and shine I'll hold her fast—
 My pride—my joy—my—motor.

—Brooklyn Life.

AUTOMOBILE ACCIDENT.

At the inquest at Kirkclevington, near Stockton-on-Tees, on Andrew Priestley, chauffeur, who was killed through the overturning of a motor-car while rounding a corner on the main road between Thirsk and Stockton, another chauffeur described the corner as one of the most dangerous in England. The jury returned a verdict of "Accidental death," adding the opinion that the corner should be made safer.

STEALING A MOTOR-CAR.

At Audover County Bench, last week, John Blythe and John Scanlan, two privates in the Royal Scots Greys at Tidworth, were charged with stealing a motor-car, valued at £500, the property of Major McEwen, of the Cameron Highlanders. The prosecutor said he left the car in a shed at Tidworth Barracks, and the next morning it was gone. The men were apprehended at Freefolk, near Whitechurch. When charged Scanlan said: "We went to the shed, lit the lamps, and drove the motor away. We ran out of petrol or you would not have caught us." The men were each sentenced to six months' imprisonment with hard labour.

BUSINESS NEWS.

FROM the Pendleton Radiator Company, Claremont, Bolton Road, Pendleton, Manchester, comes a copy of the new catalogue they have just issued; the list gives illustrations and full particulars of the various types of radiators, engines, silencers, mudguards, petrol and oil tanks, &c., they are now turning out for the trade.

A CLIENT of the Crypto Electrical Company, of 155 and 157, Bermondsey Street, London, S.E., has written to the firm stating that with the Crypto Motor Generator he purchased in June, 1905, he has so far charged 1,612 ignition accumulators of all sizes, and that the machine is still running night and day.

THE next motor auction sale of the London and Paris Exchange Motor Agency, of Shaftesbury Avenue, W.C., will be held on the 26th inst.

BENZ MOTORS, of 160-196, Great Portland Street, London, W., inform us that they are now prepared to accept orders for motors specially built for boats, of the following sizes:—8-h.p. single-cylinder, 12-h.p. two-cylinder, and 24-h.p., 35-h.p., and 45-h.p. four-cylinder.

THE Mors car which Mr. Charles Jarrott was to have driven in the match with Mr. S. F. Edge at Brooklands on the 3rd inst., and which was fitted with Dunlop detachable rims and tyres, has been entered, so equipped, for the races at Bologna, Italy, on September 6th and 7th next.

AT Brooklands, on the 1st inst., the first, second, and final heats of the All Comers' Sweepstake were won by users of Shell motor spirit, as was also the Montagu Trophy. On the second day, August 3rd, the second heat of the August Trophy race and the O'Gorman Trophy were also secured by cars propelled by Shell.

A LOSS of 447,000 passengers by the L. and S.W.R. Company last half-year is attributed by Sir Charles Scotter to the competition of tram-cars, motor-buses, and motor-cabs in the suburbs of London.

MESSRS. THOS. H. NICE AND COMPANY, who have establishments at Stowmarket, Diss and Ipswich, have just opened a new garage and repair works at 21, Abbey Street, Bury St. Edmunds. This is well equipped for all classes of motor repairs, and there is a special department for dealing with motor tyres by the H.F. process. The works are under the management of competent engineers, and Mr. Nice personally supervises all the work carried out.

TO CORRESPONDENTS.

All communications intended for insertion in this Journal or relating to Editorial matters should be addressed to THE EDITORIAL DEPARTMENT, MOTOR-CAR JOURNAL, 27-33, Charing Cross Road, London, W.C., and must be written on one side of the paper only. Letters must in all cases be accompanied by the name and address of the writer, as no notice will be taken of anonymous communications.

To insure insertion communications and contributions must be in the Editor's hands by Tuesday forenoon of the week in which the same are intended to appear. Disappointment may be caused by non-compliance with this rule, and to avoid this earlier receipt, if possible, is necessary.

Photographers, both professional and amateur, are invited to send photographs of current events or of motoring scenes and incidents. The fee, if any, required for reproduction should be stated in each case, otherwise no liability will be accepted.

The Editors cannot undertake to return MSS. or drawings, although every effort will be made to do so in the case of rejected communications. Where such are regarded as of value, correspondents are requested to retain copies.

The Editors do not hold themselves responsible for the opinions expressed by their correspondents, or for statements and facts which do not appear in the editorial columns.

The Editors and Publishers beg also to state that they will accept no responsibility for unsolicited contributions, even if used, unless payment for same is directly specified in forwarding, and the terms arranged before publication.

THE Motor-Car Journal.

VOL. X.]

LONDON, SATURDAY, AUGUST 22, 1908.

[No. 494.]

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COMMENTS.



SINCE we circularised the competitors who took part in this year's trial with regard to that event, the Society of Motor Manufacturers and Traders have issued a letter to their members which seems to have been little to the taste of some of the leading traders—judging from the reply of Mr. G. Du Cros to the communication, and which finds a place in our symposium this week. It has been abundantly evident that the trade has become heartily tired of the 1908 trials and that its members have had enough of such tests for many years to come. Not all the flogging of the committee of the R.A.C. can revive vitality in the 2,000 miles. It is as lifeless as the proverbial door nail. That point settled, it now remains to be seen whether the industry requires anything of a trial of the car *per se*. Certainly there is no enthusiasm for such an expenditure, and many will support the suggestion of Mr. Du Cros that once in a decade is quite often enough. There would undoubtedly be time for improvements to be effected by designers, and those engaged in the trade could be earning money in the meantime. If we are to have trials, they should be limited to special points where something is demanded by the public, and the Club would be better employed in suggesting means by which automobiles could be rendered less pronounced disturbers of the dust on the road surface than in projecting a plan for expending the maximum of money in the minimum of time. It has gravely collected a number of photographs and its committee is busily cogitating over recent runs at Brooklands. Meanwhile the plain man is asking "What is the good of it all?" We shall see.

A L.G.B. Circular.

ONE result of the agitation that has been conducted in the columns of the daily Press is seen in the promised issue of a circular letter by the Local Government Board to the local authorities—apparently to appease the wrath of "Constant Reader" and the other gentlemen who write to the papers. This is to be issued by the President of the Local Government Board, asking for information as to the effect of motor-car traffic on the roads within their jurisdiction. It is understood that among the interrogatories sought will be a query as to how far the main roads are monopolised by the users of motor-cars and motor-traction-engines, and with what danger to vehicles and passenger traffic. The circular may be the precursor of new legislation next year.

Transatlantic Visitors.

As the "Empress of Britain" was leaving the Liverpool landing stage the other day, a motor-car drove up, giving the occupants, Mr. and Mrs. W. H. Beale, of Chicago, three minutes in which to catch the boat. Evidently some of our Transatlantic visitors do not waste time; and the way in which they see England by motor-car would surprise many stay-at-home Britishers. Often they bring their own cars, the arrangements for transport being made by such firms as Messrs. G. W. Sheldon and

Co. What actually takes place is seen in the following instance:—About ten days before Mr. B. anticipated leaving New York he ran his car into the firm's packing warehouse in Chicago, where it was cased and sent on to New York. There it was shipped to Naples by the same steamer by which the owner was sailing. At Naples the car was uncased by the packers' agent and delivered to the chauffeur, the case being knocked down and shipped back to Messrs. Sheldon and Co. The owner toured through Italy, Germany, Switzerland, Spain, France and England, finally arriving at Liverpool just in time to join the steamer on his return passage to Chicago *via* Canada. The representatives of the shippers met Mr. B. on the gangway of the vessel and took over his car and chauffeur. They are now recasing the car in the original case in which it was shipped to Naples and are despatching it to Chicago by the s.s. "Celtic." The owner has no trouble whatsoever in the matter; he simply releases his car a few days before leaving Chicago, takes it up on his arrival at Naples, uses it until the actual time of his sailing on his return passage, and takes it over again a few days after his arrival in Chicago.

The "Four Inch" Race.

PRACTISING over the course for the "Four Inch" Race in the Isle of Man has, as we were able to announce last week, now been extended to three weeks instead of two, namely, from Monday, 31st inst., until Tuesday, 22nd prox., both days inclusive, Sundays excepted. The Isle of Man authorities have also extended the time for practising from daylight until 8 a.m. under certain restrictions, and not 7.30 a.m. as previously arranged. After 8 a.m. no car entered for the race will be allowed on the course, and no competitor will be allowed to drive on the course, or on any part of it, on any car after that hour on any day, either as a passenger or otherwise. Before landing for the purpose of practising every car must have its number distinctly painted on the radiator in figures not less than 12 in. high and 1½ in. wide. On landing the cars have to be registered at the office of the Highway Board, Athol Street, Douglas, before they can proceed on to the roads. The 25·6-h.p. Rover cars which were entered in the "Four-Inch" Race by Mr. J. K. Starley and Mr. Harry Smith have been withdrawn, as Mr. Smith states that the cars cannot possibly be ready in time for the race. The only Rover car now competing is entered by Mr. H. B. Browning.

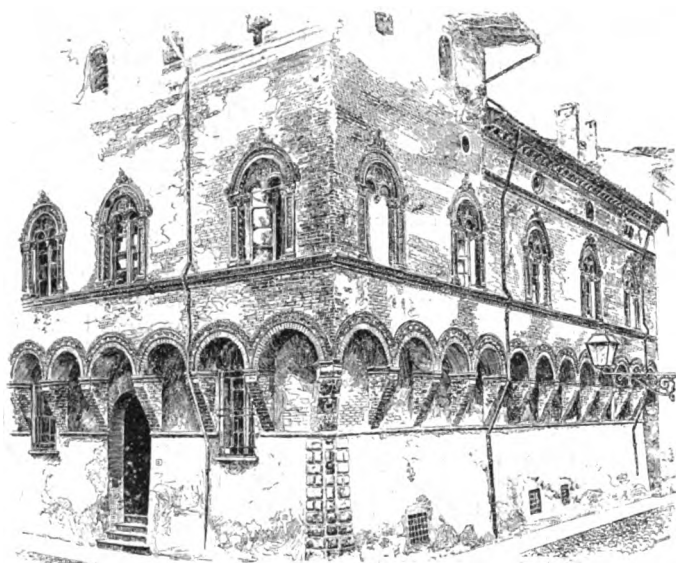
Street Cleaning in Town.

MOTORISTS who use their cars for pleasure, and who have regard for the credit of the automobile, will join with the City Engineer of London in expressing the hope that the companies responsible for the motor-bus services in town will take steps to secure the emptying of the trays now provided to catch the oil that has hitherto been deposited on the surface of the streets. At present about 77,000,000 gallons of water are used every year in street cleansing in the City of London. Considerable additional work has been given the department owing to the large quantity of oil deposited by motor-buses, and attention is drawn to the fact that although the Commissioner of Police for the Metropolis has given orders that suitable trays should be provided for intercepting the oil, the nuisance

continues—though, it is acknowledged, in a lesser degree. Due provision should now be made for emptying these trays and so preventing that addition to the substances on London pavements that add to the dangers and the difficulties of the streets.

A Triple Success.

IN the Mile End Road, in East London, where motor-bus mishaps and onslaughts on their drivers have lately alternated, the police have measured an eighth of a mile, at either end of which is an officer with a stop watch, one giving to the other a signal by handkerchief as any motor vehicle suspected of excessive speed enters the officially "controlled" area. The other day the police had a varied haul, catching the driver of a trolley and trailer who was travelling at eight m.p.h. instead of the maximum of five m.p.h.; a motor-bus driver who should not have been going more than twelve m.p.h., was driving at the rate of twenty m.p.h.; and, thirdly, a motor-cyclist was journeying at twenty-six m.p.h. instead of a maximum of twenty m.p.h. Naturally, after hearing such a variety of cases, the magistrate gave a little judicial admonition, which was summed up in the reflection that "life need never hurry at such a rate."



Touring in Italy.—The House of Carracci at Bologna.

Pleasure Services.

IN the August number of the "Industrial Motor Review"—the reduction of the price of which to 2d. per month is a matter of considerable concern to all who are interested in the commercial motor vehicle—gives a specimen programme of a Welsh pleasure service, indicating how well visitors to Llan-dudno are catered for in the matter of motor trips. This year more than in any previous season the motor vehicle in public use at the seaside and inland holiday resorts has demonstrated its value. Mishaps, too, have been so infrequent that reliability has been equally well proved, and altogether it may now be said that the day of the horse-drawn vehicle for pleasure purposes when on holiday bent is nearly at an end.

The Proposals of a Motorist.

A MOTORIST who subscribes himself the owner of three automobiles has been writing his proposals to deal with the problems attendant on the coming of the car. He would abolish the speed limit—as would, we believe, Mr. John Burns if the eyes of certain M.P.'s were not watchful—and institute special restrictions in places of populous resort. On the occasion of an accident the driver of the car should, according to this suggestive person, be imprisoned; and, should the owner of the

vehicle be abroad at the time of the trouble, the car should be prohibited from carrying passengers for some term of months, or, "it may be, for years." Then he would, being the owner of three cars, raise the taxes to £5 for those below 10-h.p.; to £10 for those between 10 and 15-h.p.; to £15 for all from 15 to 20-h.p.; and £20 if the cars were over that rating. To the licences the photos of the owners should be attached, and it should be compulsory that the licences should be taken out and the cars registered in the districts in which the owners reside. Accompanying these expensive notions is the proposal that the revenue thus obtained should be devoted to the maintenance of the roads, so that the motorists should reap some of the advantages of the heavy imposts. But they must not be specially taxed; all forms of traffic should bear their share of the burden.

Medical Officers and Motor-cars.

COUNTY surveyors and similarly situated officials connected with the local government of the country have long recognised the importance of the motor-car as a means of easing their duties, and also rendering it possible to perform the maximum of public service in the minimum of time. Now the medical officers of the country, having seen the assistance that the automobile has proved to their professional confreres in private practice, are apparently desirous of adapting it to their branch of the profession. Speaking at a meeting in Westmorland the other day, Dr. Craven, the medical officer for a western district of the county, said the time was coming when it would be necessary to provide medical officers with motor-cars. It was absurd, he said, to pay officers good fees and then to allow them to waste their time riding bicycles. Everyone now recognises the value of time—save the bucolic authorities that sometimes thwart the progress of motoring in their districts—and hence the transition from the bicycle to the automobile is only barred by one consideration in many places, viz., the initial expense.

Modesty its own Reward.

ANOTHER owner of a motor-car is wanted—not by the police, but by the members of a cycling club who have become conscious of the fact that motorists are quite as human as other people. In the neighbourhood of Rutley, on the Eastbourne road, recently, one of the members of the Rutland Cycling Club was upset by some sheep and was rendered unconscious. He was conveyed to a cottage, but the nearest doctor lived some five or six miles away. The first motor-car that came along was, however, stopped, and the owner conveyed the injured man to Uckfield Cottage Hospital. Both the Rutland Cycling Club and the member who was the victim of the accident are anxious to get in touch with the owner of the motor-car and to thank him for his signal service.

The Considerate Motorist and the Inconsiderate Public.

WE are glad to see that the Earl of Cranbrook, who has only recently become the owner of a car, has joined in the correspondence now flooding the London papers with a letter that should convince the reasonable man of the justice of the position taken by the average motorist. He never drives himself, but keeps a very careful eye upon the chauffeur, and "I see how badly dogs, children, and the public, especially cyclists, seem to look after their own safety, and how important it is that a chauffeur should never pass another vehicle at rest, or indeed drive anywhere where people are about, except at a pace which enables him to stop at once should anyone step into the road before him, as people are only too apt to do. I would add to this that any driver, whether of a motor or horse vehicle, or cyclist, causing an accident and not pulling up to assist, and giving his name and address, should be liable to imprisonment without the option of a fine. I cannot agree with the suggestion to prohibit the use of the horn. When indiarubber tyres were first introduced, people found it necessary to put bells on their horses to

enable foot-passengers to cross the road safely, as even the feet of the horses did not make noise enough to attract attention. Motors are absolutely silent, and the danger to the public without some system of calling attention would be immense. In the country every cart goes in the middle of the road, many of the drivers are asleep, and it would be necessary to pull up and shout every time you came to a vehicle. In villages, without some noise, children would be constantly crossing the road to their own great risk."

The R.A.C. at Norwich.

LAST week we gave the detailed programme of the R.A.C. provincial meet to be held at Norwich in September. There will be the usual mayoral reception, meeting of the general committee and visit to the cathedral—motorists seem to have a partiality for assembling in these cathedral cities, Chester, Hereford, and Lincoln having already been thus favoured, and Oxford being on the present year's list. A gymkhana and the dinner will conclude the Saturday's proceedings, while the members of the Norfolk Automobile and Launch Club will provide the craft for a trip on the Sunday. Several local garages are providing free accommodation for the cars of members and associates taking part in the meeting.

Farmers and the Car.

AT the annual show of the Harrogate Agricultural Society, Dr. Neville Williams, the mayor of the town, arrived on the show ground in an automobile—an incident which a speaker at the luncheon compared to a vivisectionist attending a rabbit show. A remarkable feature of the speeches was the absence of the vituperation which was wont to mark "agricultural oratory" on such occasions. Most of the speakers acknowledged that the motor was not exactly the bugbear to farmers that it was once said to be, and that it could even be turned to their advantage.

London Traffic Report.

WE are promised next month an addendum to the report of the Royal Commission on London traffic issued three years ago. There is more congestion of traffic in the streets of London to-day than ever before, notwithstanding that several thousand motor-cars, including nearly two thousand motor-buses and cabs, have replaced far more than the equivalent of horsed vehicles. The congestion is the more noticeable owing to the speed with which a crush of vehicles gets together. Of the traffic hold-ups which take place at such places as the Mansion House and Wellington Street, eighty per cent. of the vehicles are motor driven. In the pre-motor vehicle days it took several minutes for ten or fifteen horsed vehicles to collect. Now twenty and thirty motor vehicles will be held up within thirty seconds. The cause of the increasing congestion of traffic appears from this bare statement to be the speed of the motor vehicles. This view is in some respects correct. The real cause of the congestion, however, is the slowness of horsed vehicles. Something must be done quickly in order to prevent absolute confusion in all the busy metropolitan centres, and slow moving traffic should be relegated to the side streets—and the sooner the better.

Traffic in the City.

WE understand that the members of the Corporation of the City of London are by no means satisfied with the present state of affairs with regard to motor traffic in their small but important area. A special meeting is shortly to be held to consider proposals for a bill dealing with the noise as well as the speed of motor vehicles, chiefly omnibuses, in the City. It is understood that Mr. A. J. Balfour is willing to introduce a Bill on the subject in the House of Commons. This, of course, he

will do in his capacity as senior member for the City of London, and the fact that he is a motorist, as we are able to picture in the accompanying illustration, gives confidence to those who are leading the agitation in the City.

Mr. Balfour as a Motorist.

WE are able this week to give the latest photograph of the Right Hon. A. J. Balfour. This was taken only a few days since outside his London residence, just as he was about to start on a lengthy journey. The car is his latest six-cylinder Napier, his eighth car of that type. Mr. Balfour is thoroughly *au fait* with everything in connection with automobilism, and evinces the greatest interest in its development. The landaulet body is on novel lines, and is the outcome of Mr. Balfour's own ideas and suggestions. The whole of the roof is of leather, and is constructed to fold right back with the portion behind the rearmost window, and when so folded forms a com-



pletely open touring car. On account of his multifarious duties Mr. Balfour finds his cars of the greatest service. At the same time he takes full advantage of the pleasures to be obtained from motoring, his favourite seat being alongside the driver.

THERE is nothing to worry about in the suggestion made by a London morning journal which ought to have known better, that Mr. John Burns is likely to prohibit the Four Inch Race in the Isle of Man. Manxland is beyond the sphere of influence of the L.G.B.

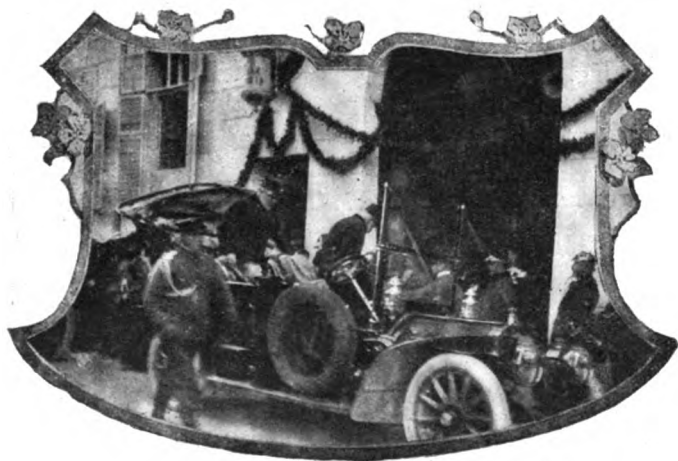
AT a meeting of the joint committee of the creditors and shareholders of Argyll Motors Ltd. (in liquidation), it has been decided to continue the business of manufacturing pleasure and commercial motor vehicles, and to keep all depots fully supplied with cars and spare parts. The committee expressed confidence in the future of the Argyll cars, and are making arrangements looking to a reconstruction of the company in a manner calculated to benefit all concerned.

THE SOCIAL WHIRL.

THE King has been enjoying several motor rides in the Ischl district, a noteworthy incident of his visit to the Emperor of Austria being the latter's first motor-car trip. On Wednesday of last week the Emperor Francis Joseph called for King Edward at the Hotel Elisabeth, Ischl, in a car belonging to his son-in-law, Prince Leopold of Bavaria. The King and the Emperor went for a drive along the valley of the Traun, Prince George of Bavaria being seated by the chauffeur to direct the pace. At Weissenbach they stayed awhile, alighting at the hotel where the accompanying photograph was taken.

THE Queen of Spain spent Friday night of last week at the Grosvenor Hotel, London, and on Saturday morning she received several visitors. Just before noon she left in a motor-car for luncheon at the Spanish Embassy. The Queen left the Embassy soon after half-past one o'clock in a motor-car for Southampton, where she was met by Princess Henry of Battenberg, Princess Christian, and Princess Louise and the Duke of Argyll. The latter had motored from Osborne Cottage to Cowes on the way to meet their Royal relative.

NEW members of the Royal A.C. include the Earl of Carnarvon, D.L., Lord Castletown, D.L., Sir J. Murray Scott,



King Edward VII. and the Emperor of Austria returning to the Hotel at Weissenbach after the latter's first motor ride.

Bart., J.P., Sir Vincent Caillard, Mr. C. J. O'Donnell, M.P., and Mr. F. H. Lambert.

THE marriage of Mr. Winston Churchill on the 15th prox. will be one of the principal social events of the autumn, and apparently the daily papers are already prepared to give him and his fiancée much publicity during the few days that intervene. On Monday he motored with his mother, Mrs. Cornwallis West, and Miss Clementine Hozier from Salisbury Hall, St. Albans, to London, and subsequently the ladies drove off from 12, Bolton Street, W., in the car for some shopping—facts which were of such transcendent importance that they have not only been paragraphed but they have also been pictured in the Press.

CONSIDERABLE interest has been taken at Scarborough in the motor-car used by Lieutenant-General Baden-Powell, commanding the Northern Division of the Territorial Army. The caravan character of this enables it to be used as an office by day and a sleeping apartment, if necessary, by night. For three weeks the famous soldier has been almost continuously on the car, without which he could scarcely have accomplished the work he has done in connection with the Territorials.

CAPT. W. ALLANSON and Miss Katherine Poland, a niece of the famous K.C., were married at St. Peter's, Cranley Gardens, London, on Tuesday. Coming out of the church the newly-

wedded pair entered a motor-car and started on the honeymoon trip, the bridegroom acting as his own chauffeur. To the rear of the car a pageboy had surreptitiously attached a lucky shoe.

IF all motorists were as considerate as the Princess of Wales, public opinion would be much more inclined towards the movement. While motoring from Frogmore to Wrest Park, Silsoe, Ampthill, the residence of the American Ambassador and Mrs. Whitelaw Reid, the Princess of Wales's car accidentally ran over and killed a favourite fox terrier dog belonging to Mr. Robert Edmonds, proprietor of the George Hotel, Rickmansworth. The Princess immediately stopped the car and sent for the owner of the dog, to whom she expressed her great regret. A letter has since been received by the owner, again conveying the Princess's sincere regret at the accident, and in sending a fox-terrier puppy the Princess expressed the hope that in course of time it may replace in the children's affections their late favourite.

AN exciting motor-car accident occurred on the Ferry to Lake Side road, on the west side of Windermere Lake, the other night. Mr. Joseph Bliss, of Boarbank Hall, Grange, prospective Liberal candidate for North Lonsdale, had been touring in company with Mrs. Bliss, Mr. James Travis, Liberal agent, and a chauffeur, and in ascending Cūnsey Hill the steering gear and brakes of the car failed to act. The vehicle swung round and turned over, Mr. and Mrs. Bliss being pitched into the roadway. The chauffeur was pinned down, and Mr. Travis was under the car. The latter, however, was able to get out uninjured, but the car had to be raised to release the chauffeur. Mrs. Bliss was cut and bruised on the face and wrist. Mr. Bliss was but slightly bruised, and, fortunately, the chauffeur suffered only from shock.

SIR HORACE PLUNKETT continues his interest in the work of the Irish A.C., and is a most assiduous chairman of the committee. At the last meeting I understand that arrangements were made for having the additional garage which is being taken at 134, Lower Baggot Street, Dublin, got ready for the Horse Show week. Previously the pressure at the Dawson Street garage has been very heavy at such times, and the new building will be a great convenience.

THE R.A.C. is fortunate in being able to introduce a novelty into its provincial meeting at Norwich, next month. In addition to the gymkhana on the Saturday, which Mrs. Russell Colman will permit to be held at Crown Point, there will be a motor-boat run on the Sunday, after which Mr. and Mrs. H. L. Clark, whose hospitality is known throughout East Anglia, will entertain the visitors to tea at Rivercroft, Wroxham.

MR. AND MRS. HAMILTON MCKOWN TWOMBLY and their daughter have gone on a motoring expedition to Cumberland to visit the lakes. They return to the Ritz Hotel, London, in a few days. Other Americans who have been motoring here recently include Mr. Manson, who spent five days in exploring the south coast, Major Hoppin and Mr. and Mrs. Cortlandt Bishop, the latter just come from Paris.

MOTORISTS and residents interested in Overstrand village, a select residential resort, which is much frequented by those touring in Norfolk, will be glad to learn that, at the instigation of Sir Edgar Speyer and Mrs. Macmillan, the Roads Improvement Association has approached the Norfolk County Council with a view to the road through the village being tar painted. The Association was authorised to offer the Council £20 towards the cost, and the County Surveyor (Mr. T. H. B. Heslop) has now been able to give instructions to the District Surveyor to put the work in hand.

MR. R. E. EDMONDSON, the Secretary of the Motor Club, informs me that that enterprising organisation is inviting Mr. Wilbur Wright to visit England and demonstrate the capacities of his flying machine on the track at Brooklands.

LOLLIUS.

Should a 2,000-Mile Trial be held in 1909?

VIEWS OF PARTICIPANTS IN THIS YEAR'S EVENT.

FOLLOWING the views of participants in the 2,000 miles and Scottish Trials which were given in our last issue, we now continue the Symposium with further letters received from other leading competitors. The unanimity that has been expressed against holding such a long and arduous contest as that which diverted the attention of the trade from ordinary business for a month of the present year amply justifies the action of Mr. Lionel Rothschild, at the meeting of the R.A.C. Committee, when he secured the postponement of the discussion to the next meeting of that body.

It is evident that those who have had actual experience in the matter are convinced that the Scottish Trial not only gives a test which is greater than any ordinary touring car is likely to have to undergo in ordinary service in the same period of time, but that the expense of the longer event is out of all proportion to the results obtained. We believe that the public will uphold the views of the trade to a greater extent than is officially recognised, and that if it were possible to have a plebiscite of the motoring community the universal view would be against an expenditure which leads to very little actual improvement in the cars. Of course we recognise the value of the trials in the past—a fact which is proved when we remind the newer generation of motorists that the first organised trials on the road in this country were those initiated by the *M.C.J.* in connection with one of the early exhibitions at the Agricultural Hall, London; but those days have passed, and individual manufacturers and agents can be trusted to do all that is necessary without the expensive incentive to improvement said to be provided by these trials.

NO ADEQUATE RETURN.

Mr. George Du Cros, of Messrs. W. and G. Du Cros, Limited, replying to our letter on the subject, sends us a copy of a letter written to the Society of Motor Manufacturers and Traders on the subject, in which he says:—"In reply to your circular issued on the 10th August, *re* the 2,000 miles trials, I do not think it is necessary to deal with this subject in the form in which you have sent it out, as the conclusion we have come to as a result of taking part in the recent trials is that these are no longer necessary for the trade. The trial which we took part in was supposed to be for standard cars: we are of opinion that very few standard cars were run with the exception of our own. The term touring body is very elastic, as may have been noticed on some of the freaks which were accepted by the Automobile Club under this category. I do not consider the system of judging a good one when the element of luck is taken into consideration. The expenses are extremely high to the manufacturer and a number of them unnecessary. I am certainly of opinion that the trade will be well advised not to support trials of this nature, except once in ten years, both from the point of view of expense and public interest."

Messrs. H. Coltman and Sons' opinion is not very favourable to long trials such as the 2,000-mile trial held this year. "We cannot see that there is an adequate return for the trouble and expense incurred by entrants, excepting perhaps the makers of the winning car. Results of trials in the past have not proved that the most reliable car for the general buyer is that made by the makers of the successful cars in these long distance trials. So much depends on the road risks and the driver that it seems impossible for equality of conditions for each competing car in such long through town and country trials."

Mr. J. W. Stocks, managing director of the De Dion-Bouton (1907) Ltd.:—"With reference to your comments in the issue of the *M.C.J.* of the 8th inst., I do not think that it is necessary or desirable to hold any long trial, at any rate next year.

As far as my own firm is concerned, the amount of time expended over these trials would be more profitably employed in other directions."

IRISH AND SCOTTISH TRIALS SUFFICIENT.

Messrs. Chambers Motors, Ltd., "still hold the same opinion as regards the R.A.C. long distance trial as we did before it came off. An entrance fee of £50 is much too large for a small car, and, added to the expense necessarily incurred during the time the trial lasts, makes a considerable sum, practically prohibitive to all except very large firms. There is too much expense already in the motor trade through trials, shows, hill-climbs, &c., without adding to the number. The ratio of weight to power in the class (B) which we are personally interested in is too high. We have always aimed at building our cars as light as possible, consistent with strength, and the proof of our endeavours is to be seen in the Scottish Trial results of 1907 and 1908. Finally, we consider the Irish and Scottish Reliability Trials are quite long enough, taken in conjunction with the awful roads which exist practically all over Ireland and a considerable part of Scotland, to test a car severely."

NO SUPPORT.

Messrs. Bell Bros., write:—"Our opinion is that we entirely disagree with such a trial, not, however, that we have the slightest fear of our productions failing to stand such a test, but that we do not see our way to go to the great expense and trouble that such tests cost. In a week's trial, such as that in Scotland, we are firmly of opinion that a car can be tested to the fullest extent, and therefore one to run on the more level roads of England with a speed test on Brooklands is not required. The public are not requiring racing machines, and as the last R.A.C. trial was run that was practically what ought to be supplied if one desired to come out successful."

The improvement in the general touring vehicle is what is wanted, and not freaks specially got up for such competitions. Further, in our opinion, the need for such trials is far less to-day than three or four years ago, as, generally speaking, such great improvements have been made in every make of vehicle, that for it to cover two or three thousand miles in short time is nothing out of the way. If the R.A.C. run a similar trial in the coming year to that held this year, we shall decline to support it."

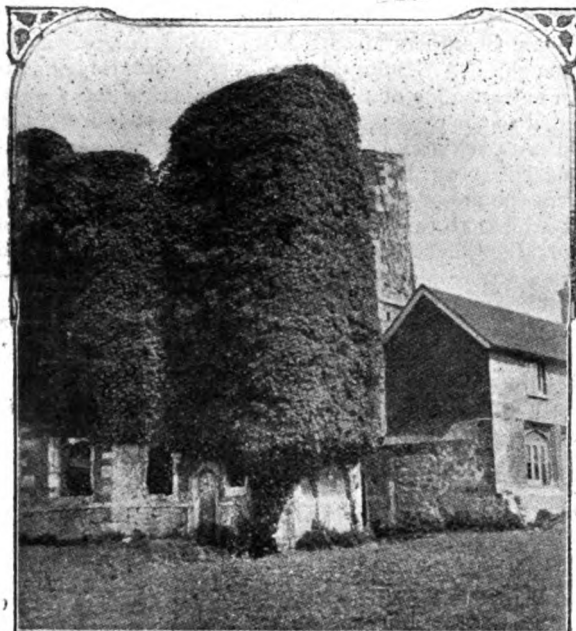
WRITING on the subject of Ordnance maps, Mr. J. T. Wood, of Chandlersford, Hants, suggests that all contour lines should be shaded in colour or stippled. This would enable users of the map to take in the lie of the country at a glance, and save the wearisome tracing out and the following up of the contour lines for any specific purpose.

MEETINGS of creditors and shareholders were held on Tuesday under the winding-up order made against West (Ltd.) motor-car manufacturers, of London and Coventry. The liabilities were returned at £11,716, of which £5,187 is expected to rank, against assets £6,493, subject to debenture claims for £5,000. The deficiency as regards shareholders is returned at £26,080. The company was formed in July, 1905, to acquire the businesses of C. J. West and Co. (Ltd.) and the West (London) Motor Company (Ltd.), carried on in Coventry and London respectively. The whole of the capital was subscribed by the directors and their friends. The loss on the trading was explained by the cost of production in proportion to the selling prices, to changes in design, cost of advertising, and money expended on Motor-Car Trials. A receiver on behalf of debenture holders was appointed in May, 1908. Mr. Oscar Berry, chartered accountant, was appointed trustee.

A TRIP INTO KENT.

(Concluded from page 523.)

THE road should be retraced as far as Ivy Hatch, then turn sharp to the left, and, skirting the wood and leaving the inn on the left, the border of the wood can be followed as far as Godden Green. At this point a turning to the right pierces the wood and leads to Seal, a quaint old village, worthy of a visit, if merely to see the brasses in the church. We had, however, spent rather longer than we had intended at the old camp, so, instead of turning



Ruins of Otford Palace.

to the right and reaching Sevenoaks by Seal, we journeyed to the left and so entered Sevenoaks just above Knole Park, the entrance to which is opposite the church. A sloping avenue of beeches, and then between two picturesque lodges, and after passing along a wood-crowned hill, the old house of the Sackvilles is seen. Here it was that Henry VIII. was entertained in 1509; Queen Elizabeth, too, stayed here, and Cranmer used it as his residence when not at Otford. Since 1603 it has been in the possession of the family of the present owners—the Sackvilles. The house is a typical baronial hall and most imposing, with its square towers and embattled gateways. There are some hundred rooms, but only seventeen are shown on Fridays when the public are admitted. Passing through the porter's lodge, where an entrance fee of 2s. per head has to be paid, the Green Court is entered. On one side is a statue of Venus rising from the bath, on the other a cast of the gladiator Repellens. The surrounding rooms are mostly private apartments of the owners. A gateway, surmounted by a fine oriel window, leads to the Stone Court. Here there is an Ionic colonnade, supporting an open gallery, above which a stone shield attracts attention. Beneath, under the gallery and fixed in the wall, are the fossil remains of a great Irish elk, which, according to Professor Owen, is one of the finest specimens of that extinct species in the whole country. From here the Great Hall is entered. At the lower end is an elaborately carved music gallery; the windows are decorated with the arms of Queen Elizabeth and those of the Earl of Essex. The fireplace contains some fire-dogs brought from Hever Castle; they bear the arms of Henry VIII. and Anne Boleyn. Incidentally it may be remarked that few old castles exist in which the initials of that monarch with those of one of his consorts are not to be discovered.

On the raised floor at the end is a statue of Demosthenes, bought in Italy by the third Earl of Dorset; the arrangement

of the drapery is superb. The paintings are mostly portraits by Van Dyck, Reynolds and Lawrence; the one of George IV. by the latter is worthy of note. Under the staircase is a fine marble, representing the goddess Egeria, and half-way up, in case, are the coronation robes of the third Duke of Dorset. Gardini the violinist, by Gainsborough, should be seen. In the Brown Gallery are many historical portraits, including Cromwell by Walker and Lely's Charles II. On the old furniture, which is chiefly of the time of Elizabeth and James I., we noticed little bags that some facetious members of our party thought contained sweets and were placed there for the benefit of "bored" visitors. Inspection, however, proved the contents to be camphor, which, in addition to being a restorative, is reputed to have an opposite effect on moths. Our facetious friends found further subject for remark in Lady Betty Germaine's bedroom, where the ancient fire screens brought forth the suggestion that that lady was in the habit of indulging in the popular, but perhaps vulgar, game of "Aunt Sally" in her bedroom; the fire screens certainly had a resemblance to the figures used on Hampstead Heath for that pastime. The bed, with its embroidered counterpane, said to be the work of Lady Betty herself, is beautiful, if, perhaps, not quite in accordance with modern hygienic ideas. Here there are two pictures by Wouvermans that should be seen—a landscape and a stable; Teniers' "Quack Doctor" is also very fine. This last is in the sitting-room, as is Ferrare's "The Offering of the Wise Men" and Garafalo's "Judith with the head of Holofernes."

A piece of tapestry merits attention; it shows Van Dyck and the master of the tapestry works, Sir Francis Crane. In the spangled dressing room a portrait of Nell Gwynne and one of La Belle Stewart, Duchess of Richmond, will certainly attract attention. The billiard room and Leicester Gallery is likewise full of portraits, a Van Dyck portrait of Sir Kenelm Digby seems to show the very soul of an English gentleman of the period. In the Venetian Bedroom there is a Paul Veronese, a Doge of Venice, that reminds one of the famous picture by that artist in the Vatican, the Vision of St. Helena, the colouring is so typical



The Inner Court Yard of the Moat House, Ightham.

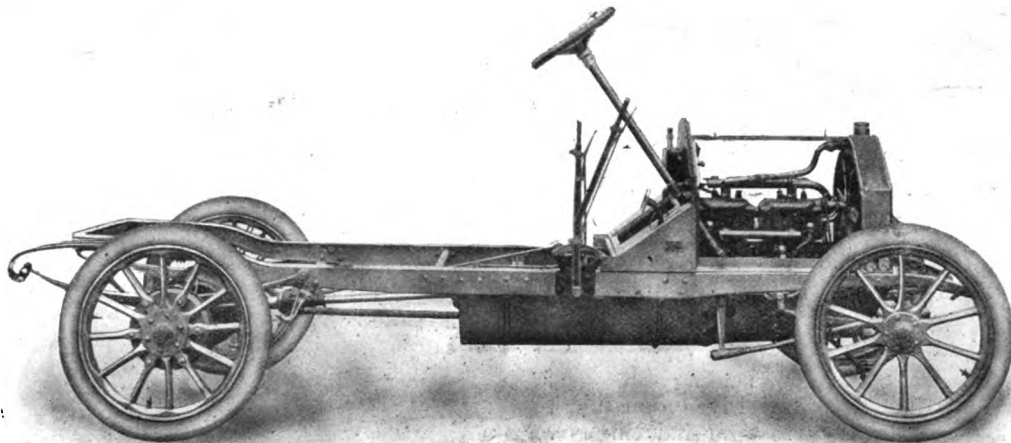
of his work. The furniture of ebony and silver originally prepared for King James will attract attention. The ballroom has panelled walls and a finely ornamented ceiling. Those who wish to see some really fine works of art should reserve their time for a prolonged stay in the Crimson Drawing Room. The Quakeress, and Count Ugolino and his two sons starved to

death in the prison at Pisa, will demand anyone's attention; the expression, the clear colouring is marvellous. Peg Woffington, the actress, and the Gipsy Fortune Teller may also be mentioned. The dining room is hung with portraits, chiefly of literary men, including one of Dryden. He once stayed in the house, and after dinner, perhaps in the very room in which his portrait now stands, the guests, to pass the time, agreed that each should write an impromptu, and that Dryden should decide on their respective merits. All excepting Charles, the sixth Earl of Dorset, took their self-imposed task most seriously; he, however, but penned a line and threw it on the table, and yet his effort received the prize. All will understand Dryden's choice, for the Earl's effusion ran as follows:—"I promise to pay Mr. John Dryden or order £500 on demand."

In the Cartoon Gallery there are some copies by Mytens of the Raphael pictures, the originals of which are in Hampton Court; they illustrate the Sacrifice at Lystra, Christ's charge to Peter, the Miraculous Draught of Fishes, St. Peter and St. John healing the Lame Man at the Gate of the Temple, the Sorcerer who was struck with blindness, and the Death of Ananias. The furniture is chiefly of the 17th and 18th century, and the settees and chairs are covered with crimson figured velvet. The fire dogs are of silver and beautifully chased. The chapel should be visited; the tapestry there is beautiful; that on the north wall represents scenes from the Passion of Christ and is said to be the

THE INTERNATIONAL ROAD CONGRESS.

THE programme of the International Road Congress, which is to be held in Paris in October next, has now been issued. The proceedings of the Congress will be divided into eight sections, and altogether ninety-nine papers will be read, France contributing thirty-seven, Great Britain seventeen, Belgium fifteen, Germany twelve, the United States eight, Holland three, Austria and Switzerland two each, and Italy, Portugal and Russia one each. As has already been mentioned in these columns, the points to be considered at the Congress include the materials used in constructing roads, the means of counteracting wear and dust, watering, turnings and obstacles, the deterioration caused by new kinds of locomotion, and signals and sign-posts indicating dangerous gradients, distances, altitudes, and the like. Not only the wear and tear caused by motor vehicles but the reciprocal action of different kinds of thoroughfares on tyres and cars generally will be discussed. The Congress will open with a reception on October 11th; on the 12th there will be a full meeting at the Sorbonne followed by the opening of the exhibition in the Tuileries Gardens; the various sections will meet on the morning of the 13th and in the afternoon there will be visits to various places of interest in the Paris district.



Chassis of Vinot 12-16 h.p. Car.—(See next page.)

gift of Archbishop Cranmer. Over the altar, under the east window, there is a representation in carving of the Crucifixion, the figures—of which there are some twenty—stand out as if alive.

I have, of course, only touched upon the many wonders and beauties of Knole, but I am sure that the view in driving up to the house would alone repay for the journey, and in addition the drive there is through the most beautiful part of Kent, but with only one blot—on the main roads police traps abound. Still, on those I give, when I did the trip they were conspicuous by their absence, and the art treasures of Knole are bound to interest all visitors. If time permits I advise staying the night at Sevenoaks. The Crown I know, from actual experience, to be a most comfortable hotel, and the surroundings of the garden lend an extra fragrance to the after dinner coffee and cigar. In addition good car accommodation is provided. C. T. W. H.

GALASHIELS has a capital garage in its Market Square, thanks to the enterprise of the Border Cycle and Motor Company, Ltd.

THE White Bulletin just to hand from the White Company, Carlow Street, Camden Town, N.W., is an interesting specimen of the commercial literature issued from the United States. The illustrations are interesting and prove the variety of the uses to which the White cars are put. Mr. Frederic Coleman will be pleased to send copies to readers of the M.C.J.

The programme on the ensuing days is as follows:—October 14th, excursion to Versailles; October 15th, meetings of sections; October 16th, excursion to Fontainebleau; October 17th, closing meeting; October 18th to 20th, excursion to Nice and district; October 21st, visit to Monte Carlo.

The Roads Improvement Association of Great Britain is taking an active part in the Congress, papers being contributed by five delegates. Colonel Crompton will deal with "Improvements in Self-Propelled Vehicles so as to Reduce Road Wear," the Hon. C. S. Rolls on "The Effect of the Road Surface on Vehicles," Lord Montagu of Beaulieu on "The Value of Good Roads," and the hon. secretary (Mr. Rees Jeffreys) on "Systems of Highway Administration Compared—Their Influence on Cost and Efficiency." A paper is also being contributed by Dr. H. S. Hele-Shaw, F.R.S.

AN automobile tour through Patagonia has recently been completed by Doctor Molinary Laurini on a 20-h.p. Fiat car.

NEW uses of the automobile are not easy to find, but variants are constantly coming into notice. For instance, a party of the Milwaukee Chamber of Commerce recently made a tour of the southern Wisconsin harvest fields for the purpose of getting some idea of the crop conditions. Instead of making use of the railway trains and hired horse-drawn vehicles, they made the journey on a large touring car, covering about 350 miles in two days.

THE VINOT 12-16-H.P. CAR.

THE new model lately put on the market by Messrs. T. J. Harman and Co., the British agents for the Vinot cars, comprises numerous points of interest, and bids fair to quickly become as popular, even if not more so, than in France, where it is built. From the general view of the chassis on page 545, as well as from the description appended, it will be seen that the vehicle, although of medium power, is throughout on up-to-date lines.

The motive power is supplied by a four-cylinder engine (Fig. 1), which, in accordance with the R.A.C. rating, develops

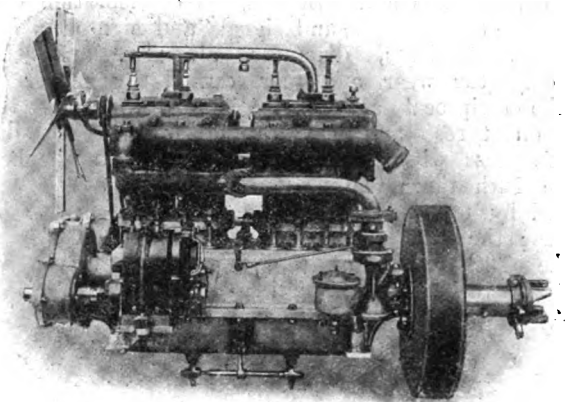


Fig. 1.—The Vinot 12-16 h.p. Four-Cylinder Engine.

16-h.p. The cylinders, which have a bore of 80 mm. and a stroke of 110 mm., are cast in pairs; the valves are all located on the left side and operated off a single cam shaft. The valve tappets are provided with means of adjustment, and the top of each is fitted with a rubber buffer, which add to the quiet running qualities of the engine. The timing gear is enclosed in an aluminium casting independently of the crank-case, and provision is made for supplying this with lubricant through a detachable brass filling cap. The water circulation is maintained by a gear-driven centrifugal pump and a framed ribbed-tube radiator with air-inducing fan.

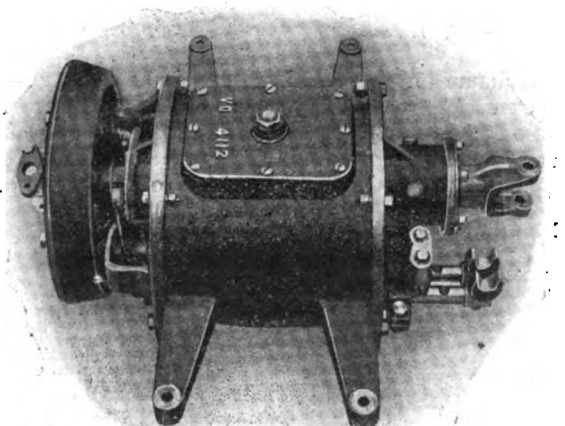


Fig. 2.—The Vinot Change Speed Gear Box.

The mixture is furnished by an automatic carburettor provided with a throttle controlled both by hand and foot levers. The ignition is by means of a gear-driven Simms-Bosch high-tension magneto; the point of ignition is fixed, the usual advance and retard lever being thus dispensed with. The crank shaft, which is of forged steel, is supported on three long bearings of special metal. The oiling of the motor is effected by a mechanical lubricator mounted on the dashboard and driven by a belt off the rear end of the cam shaft.

The clutch is of the leather faced cone type. Light springs

are fixed below the leather, these being adjustable by means of a series of six studs. The shaft which connects the clutch with the gear-box is provided with a double universal joint to allow for any want of alignment between the two parts, and to permit of either being dismantled without disturbing the other. Fig. 2 gives a view of the somewhat novel form of change speed-gear box employed. As will be seen, it is built up of a steel—in place of the usual aluminium—cylinder with detachable ends, a large inspection lid being also provided. Three speeds and a reverse, with direct drive on top, are provided by a double train of sliding pinions which work on a hexagonally-shaped shaft. The control is by the Vinot Company's special system of vertical gate, which has been in use for several seasons past. The slots in the gate are set one above the other, a trigger on

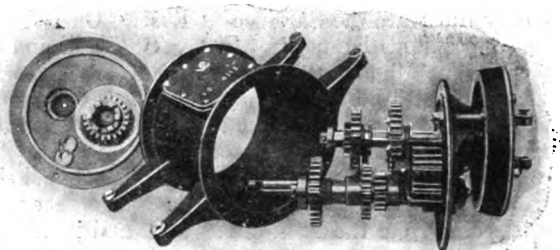


Fig. 3.—The Vinot Gear-Box Dismantled.

the change-speed lever moving a sliding pin, which, when in position for one slot of the gate, automatically closes the other. In action the driver merely has to lift or release the trigger, and push or pull the lever according to the speed required, in lieu of moving the lever laterally, as is the case with the more conventional type of gate change. The final transmission is by a cardan shaft and bevel gear to a live axle of strong design. The torque is taken up by a pressed steel bar of substantial dimensions; the top half of the differential casing is so arranged that it can be readily detached to allow the bevel gear to be inspected.

The frame is of pressed steel, narrowed in front to increase the lock of the steering wheels, and raised at the back to clear the differential casing. Special attention has been devoted to the suspension, long semi-elliptic springs being fitted at the front and three-quarter elliptics at the rear. The usual foot and hand con-

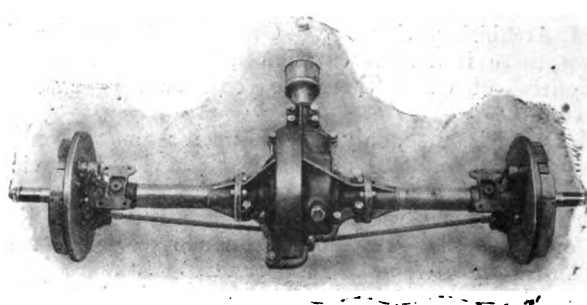


Fig. 4.—The Vinot Live Axle.

trolled brakes are fitted, they being all of the internal expanding metal-to-metal variety, with ample provision for easy adjustment. Ball-bearings are, it may be added, fitted to all parts except the engine. The wheel-base is of ample length to allow either a closed or open side-entrance body to be fitted to the chassis. The car is extremely quiet in operation, especially on the top direct speed, on which the bulk of the running is done. Altogether the new vehicle is an excellent example of a modern four-cylinder vehicle of medium power and moderate price.

QUEEN MARGHERITA OF ITALY arrived at Chamonix on Tuesday, after crossing the Great St. Bernard Pass, where she lunched with the monks at the hospice.

CONTINENTAL NOTES.

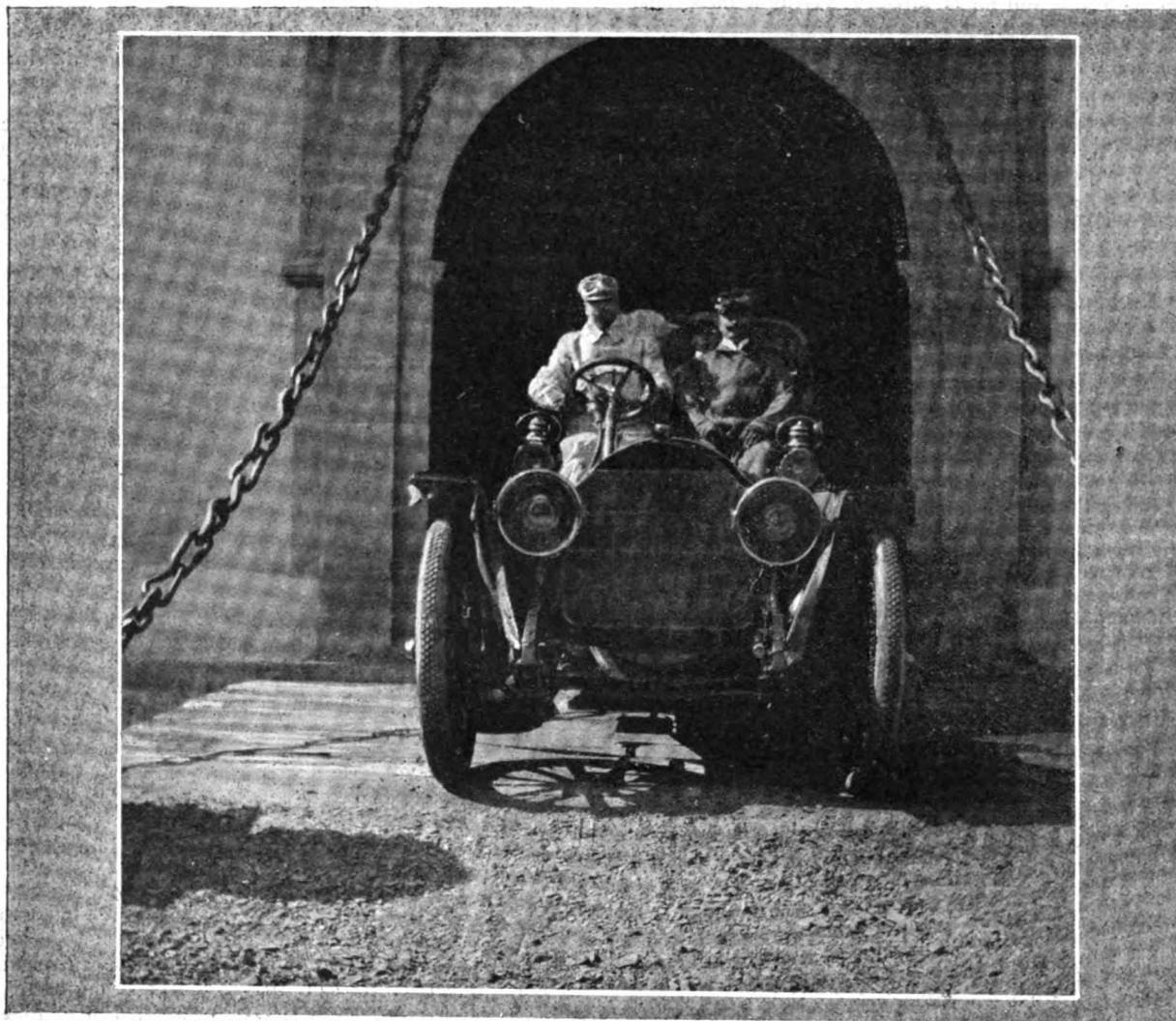
The Coupe de Normandie.

A light car race organised by "L'Etoile Sportive Caennaise" was run off on Saturday last on a 62 kilometre course, taking in Caen, Bayeux and Tilly-sur-Seulles, this having to be covered four times to give a total distance of 428 kilometres, or 267½ miles. There were seven starters in the category for cars of the Grand Prix de Voiturettes type, Barriaux on an Alecyon shod with Dunlop tyres proving the victor in 2 hours 49 min. 25 sec., Bac on a Werner being only 27 seconds behind. The winner's average speed was equal to nearly fifty-five miles per hour.

(45-h.p. Mercedes); Mr. Thew, London (35-h.p. Berliet); Miss E. Van Wart, London (40-h.p. Pilain); Mr. Gulback, London (40-h.p. Berliet); Mr. Mackintosh, London (60-h.p. Napier); Mr. Maurice Farkoa and Mr. and Mrs. Dennis, London (24-h.p. Peugeot); Mr. W. Cunard and Mr. and Mrs. Hurn, London (40-h.p. Itala); Mr. Demas (35-h.p. Berliet); and Mrs. Douglas (24-h.p. Vinot-Deguingand).

Touring in France.

The Motor Union of Great Britain and Ireland has appointed M. P. B. Hamon, Rue des Cordiers, St. Malo, an agent for the purpose of passing members' cars through the French Customs, and obtaining for motor driving licences at this



Count Alexander Androway, the President of the Hungarian Automobile Club, at the wheel of his 40-h.p. Fiat.
(Allgemeine Automobil Zeitung.)

The Provence Automobile Meeting.

The automobile club of Salon is organising a series of flying kilometre and five kilometre speed trials for the 27th inst. They will be held on the road between Salon and Arles, France, and be open for all classes of vehicles. Prizes will be awarded to the winners in each category, while in addition the fastest car in the racing section over the five kilometres will carry off the Rothschild cup.

British Motorists in France.

British motorists touring on the Continent with their cars include:—Mr. Porter, London (75-h.p. Itala); Mr. Labouchere, London (35-h.p. Daimler); Mr. and Mrs. McAllister, London (45-h.p. Renault); Mr. and Mrs. Toudiman, London (60-h.p. Fiat); Sir Richard Martin (30-h.p. Berliet); Sir John Campbell

port. This makes the fifth agent the Union has appointed in France, the other ports at which they have representatives being:—Havre, M. H. Burton, 7, rue Beranger; Boulogne, M. P. Sergeant, 14, rue Victor Hugo; Dieppe, M. Maurice Beck, 24, rue de Sygogne; Marseilles, Messrs. Gellatly, Hankey and Co., 8, rue de la République.

Aeronautical News.

The Aero Club de Belgique is offering a Grand Prix d'Aviation of £800 to the owner of a Belgian built aeroplane which within three years from August 1st last flies a distance of twenty-five kilometres without touching the earth. The German airship "Parseval" made successful trial flights round Berlin on Friday and Saturday last week, the vessel being in the air nearly three hours. It was out again on Monday, when, owing to a

somewhat hasty descent, Captain von Krogh, who was in charge, sustained a broken leg. Owing to the syndicate under whose auspices Mr. Henry Farman took his aeroplane to the United States not having fulfilled its obligations, he set sail on Saturday last from New York to Cherbourg. Mr. Wilbur Wright, who made several flights on his aeroplane at Le Mans last week, met with a slight accident on the 13th inst., when one of the wings of the apparatus was damaged. The work of repair was put in hand at once, and the intrepid aeronaut expected to be able to restart his trials on Thursday. So far his longest flight is one of 8 min. 13½ sec. duration, but Mr. Wright hopes to considerably improve on this in the near future. He has obtained permission to practice on the military drill ground at Anvours, about twelve kilometres from Le Mans, and he is already having a shed constructed on the spot. The grounds cover a large level space several miles long, and here he will have a better opportunity for undertaking long flights. The French military steerable balloon République made a two-hours' trip around Paris on Monday. The distance covered was about sixty kilometres.

Motor Vehicles in Military Operations.

The latest adaptation of the automobile is a motor plough, by means of which an army on the march will be able to throw up entrenchments easily and quickly. The machine, which has been designed by M. Riester, an engineer of the French Ecole Centrale and an artillery reserve officer, will, it is claimed, dig

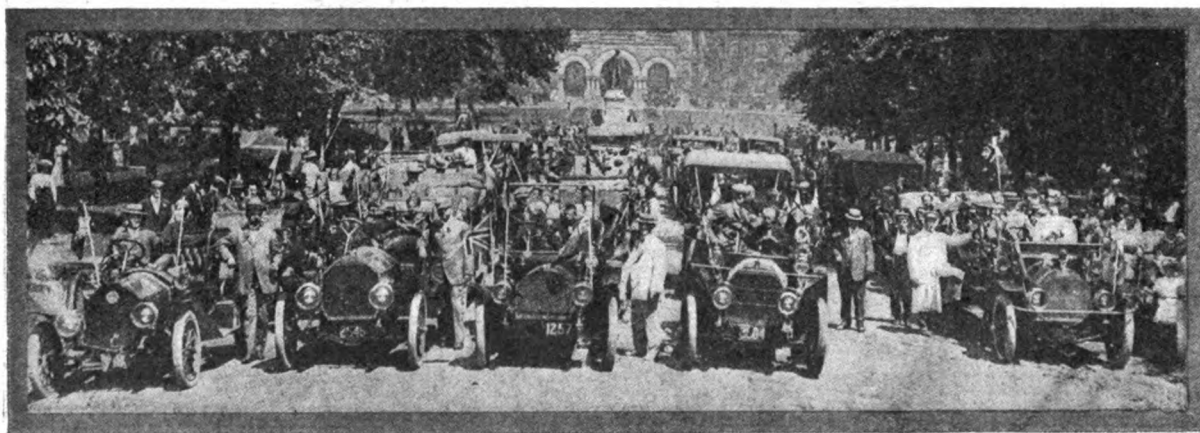
SOME USEFUL NOTES.

AN excellent cleaning medium for the reflectors of acetylene lamps is liquid ammonia, '880, which removes all the deposit. The reflectors should afterwards be polished with metal paste.

THE toggle mechanism of the foot brake at the rear of the gear case, and the pin holding together the two brake shoes, should be occasionally lubricated, as well as all the joints in the operative mechanism from the pedal to the brake itself.

To prevent rust on wheel rims it is a good plan to paint them with a mixture of shellac and finely pulverised flake graphite, mixed to a stiff paste. After treating the rims as indicated, it will be found that they are very even and a waterproof film of great smoothness is formed. The graphite is absolutely inert and there need be no apprehension regarding a detrimental effect upon the rubber.

FORTUNATELY, most cars are now fitted with covered oil retainers or grease cups on the pivot pins of the steering rods, and sometimes on the joints between the steering arms and the cross bar. If these and other joints of the steering gear are so fitted or are surrounded by grease bags, they are likely to be well oiled, but otherwise they require an occasional application of the oil can. This applies to all ball or pin joints in the gear. Failure to attend to the above leads to the rapid accumulation



The Start of the Outing given by the Ontario Motor League to the Orphan Children of Toronto.

trenches 1½ ft. deep and about 4½ ft. broad, at the rate of six miles an hour, a bank 2½ ft. high being at the same time thrown up.

Miscellaneous Items.

A public motor-car service has lately been inaugurated between Dauba and Hirschberg, Bohemia.—A motor-car service for the conveyance of both passengers and goods is being established between Amerigo and Berja-Adva, Spain.—The aeronautical section at the forthcoming Paris Salon promises to be of a much more interesting character than hitherto, as quite a number of new designs are expected to be on view.—A company is being formed to inaugurate a public motor-car service between Domfessel and Altwiler, Germany.—According to a recent return there are at present twenty-two motor-cars owned and in use on the island of Corsica, of which eight are employed in public service work.—Close upon thirty entries have been received for the Calvaire hill-climbing competition, which is to be held at Trouville on Sunday next.—An 180-kilometre race for light cars, known as the Circuit du Languedoc, is being organised by the Sporting Club de Nîmes for October 11th next. It will be held on a thirty-kilometre course, which, starting at Saint Gervazy, takes in Bezouze, Lafoux and Collias, this having to be covered six times.—Seventeen entries have been received for the Coupe Florio race for big cars, which is to be held on the Bologna circuit on the 6th prox., while for the Targa Bologna, contest for vehicles with engines of a maximum bore of 130 mm. to be run off on September 7th, there will be twenty competitors.

of slack in the steering system, with the attendant danger and inconvenience.

WHEN separating sections of gear-boxes or crank cases, it will sometimes be found that the parts stick together after the bolts have been removed. Care should be taken in separating them, especially if the parts are of aluminium, as is usual. Driving a chisel or screw driver between their edges may make a nick which will spoil their oil-tight fit, or a burr may be raised which will prevent the parts from coming together properly. The application of too great force may cause the parts to spring. Gently prying at a large number of points after the stuck parts have been tapped all around with a light hammer will generally separate them without damage.

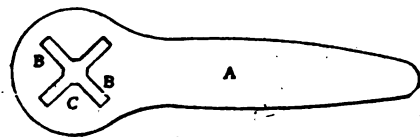
AFTER using a car for a long time a motorist becomes very sensitive to any change in running conditions, both as to variations in the sound of its operation and its motion. A squeak, due to some unlubricated part, is very sure to be detected, and the sensation due to the car running on a flat tyre is not likely to elude the driver's attention for any great distance. He will also very quickly notice if any one of the feeds of the sight feed lubricator ceases to work and will be quick to detect any change in the working of the water circulation indicator, if one is used, and no conscious attention, practically, is required to attend to these matters, the care which is shown for them becoming entirely involuntary.

THE Victoria Motor Works and garage at Mablethorpe are owned by Messrs. Berry Brothers, who also stock petrol, tyres and accessories.

IT is gratifying to learn from a letter which Col. W. H. Campion, the chairman of the Haywards Heath Bench, has addressed to the papers, that "the Haywards Heath Bench have no prejudice against the proper use of motor-cars."

THE Hon. Wm. Kidston, Premier of Queensland, who is now in this country, has bought a large car to take with him to the Colony when he leaves next month.

A USEFUL wrench for easily loosening the security bolt of tyres and other wing nuts is described in a recent issue of our French contemporary, "Omnia." The device is made of flat steel and is about three-sixteenths of an inch thick. The handle A is of a convenient length, depending on the size of the wing



nut, about five times the spread of the wings being the usual practice. Two slots, B, are cut at right angles to each other in the circular body, and their intersection, C, is enlarged to accommodate the screw or bolt upon which the wing nut turns. The wrench is placed on the wing nut so that the wings enter the slots and are operated by the movement of the handle.

MR. L. A. VAN RIJN, of Singapore, Straits Settlements, has recently taken out a patent for a disc wheel made of rubber in one piece or in several parts vulcanized together, the wheel being thicker at the centre than at the periphery. The rubber disc is attached to the hub by gripping it between two flanges drawn together by bolts.

A TRIAL of R.R.H. patent wheels commenced on the 18th inst., over the route of the 1908 Scottish Reliability Trial, and additional ground, to make a total of 1,000 miles. The car, a 16-20-h.p. Mass, is in charge, for entrants and patentees, of Mr. W. S. Macharg, and is officially observed for the Scottish Automobile Club by Mr. William Reid.

THE signposting of the London-Dover-Folkestone road, which has been undertaken by the Motor Union, has commenced. The first sign, a special cast iron one, has been erected by the London County Council on Westminster Bridge. The enamelled signs for the remainder of the road have also been delivered to the Kent County Council, who have undertaken the erection.

AFTER discussing a proposal to apply for a speed limit in the highways in their locality, the Burley in Wharfedale District Council have consented to the application. One of the speakers remarked that if the Council omitted to use the steam roller it might go hard with the tyres of motorists—a suggestion which, however, was apparently disregarded by other members of the local body.

IN connection with the scholarships offered by the Daimler Motor Company, Mr. J. A. Mackle, of Liverpool, who was educated at St. Francis Xavier's College and Liverpool University, has been awarded the major scholarship. Minor scholarships have been granted to Messrs. R. B. Burton, of Nottingham, G. S. Bower, of Marsden, near Huddersfield, H. C. Harrison, of Norwich, and Gordon Avery, of London.

MESSRS. STAREYS AND WOOLLEYS, at Nottingham, have a long lineage, the former firm dating back in the history of the carriage building industry of Nottingham some 130 years and the latter going back more than a quarter of a century. The recent combination has given them a very strong position, the joint business being one of the largest of the kind in the Midlands. They have devoted much attention to motor-car bodies, and we lately had the opportunity of confirming the opinions of satisfied patrons that engineering knowledge and technical skill work in association on their premises.

HERE AND THERE.

A SERVICE of motor omnibuses has just been established by the London and North-Western Railway Company between Mold station and the Loggerheads.

THE District Council of Redruth are considering the placing of signs warning motorists of dangerous places in their district.

THE War Office are inviting tenders for the supply of a number of motor vehicles.

MESSRS. CONNELLY AND SONS have put a motor-bus into service in the city of Hereford, and already it has proved its convenience to the public.

AT the request of the local motorists the Camelford District Council is communicating with the responsible authorities concerning stones laid on the road at Otterhead and not rolled.

THE Municipal Council of Dartmouth (Devon) are in the market for either a covered motor (steam or internal combustion engine), dust wagon, or a light steam tractor and two trailers suited for harbour purposes.

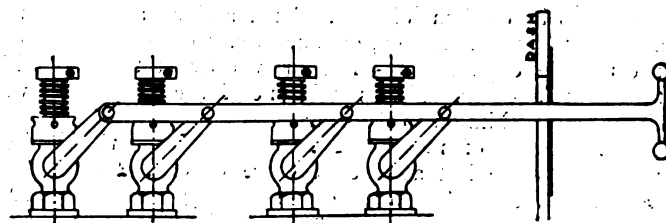
THE Craven Automobile Company, whose headquarters are at Skipton, are about to open a fine new garage on the highway between Ilkley and Leeds, which should prove useful to motorists on that particular stretch of road.

MR. G. T. RICHARDS has opened an office at Mansfield Chambers, 17, St. Anne's Square, Manchester, where he intends to specialise on the designing of automobile chassis both for pleasure cars and petrol-driven commercial vehicles.

AT the annual meeting of the Great Southern and Western Railway of Ireland, Sir William Goulding, Bart., said the first class receipts showed a slight reduction of £745, which was mainly attributable to the more general use of motor-cars.

ONE of the great features of the Industrial Exhibition recently held at Winnipeg, Canada, was a series of trials of light agricultural motors, which was inaugurated to compare their performances with those of horse-drawn implements. The competition was of an eminently practical nature, being carried out in the open field. The various tractors, among which were the "Universal," of Messrs. Saunderson and Company, of Elstow, Bedford, and the "Marshall," of Messrs. Marshall and Company, Ltd., Gainsborough, were set to draw ploughs, harrows, seedling drills, &c. The turning capacity and ease of manipulation of the motors and ploughs when entering and leaving the field at the headlands were thoroughly demonstrated. Traction tests on rough tracks with loaded wagons and the belt power capacities of the motors for driving threshers were also included in the competition.

AMONG the many useful fittings marketed by the United Motor Industries, Ltd., is the Alpha compression valve, by means of which the amount of compression in a petrol motor may be regulated so as not to exceed a predetermined limit when starting the engine, and so prevent the danger of back firing. The device is so arranged that, when in action, any surplus contents of the cylinder above the amount necessary to produce such



predetermined pressure automatically escapes to the outer air. The valve body carries an outwardly opening valve normally retained on its seat by means of a spring; the lead at which the valve will open is readily adjustable by means of a nut on the valve spindle. We illustrate herewith the latest innovation in connection with the device—an arrangement for opening and closing the compression valves of a four-cylinder engine from the dashboard of the car.

IN Barnton Street, Stirling, Messrs. Henderson Bros. have a large garage together with a completely-equipped motor repair shop.

MR. W. K. VANDERBILT has ordered an Isotta-Fraschini car of the type which took part in the recent A.C.F. Grand Prix des Voiturettes race.

THE Mexican Electric Omnibus Company has started a service of electrobuses between the Zocalo and the Colonia Roma, in the city of Mexico.

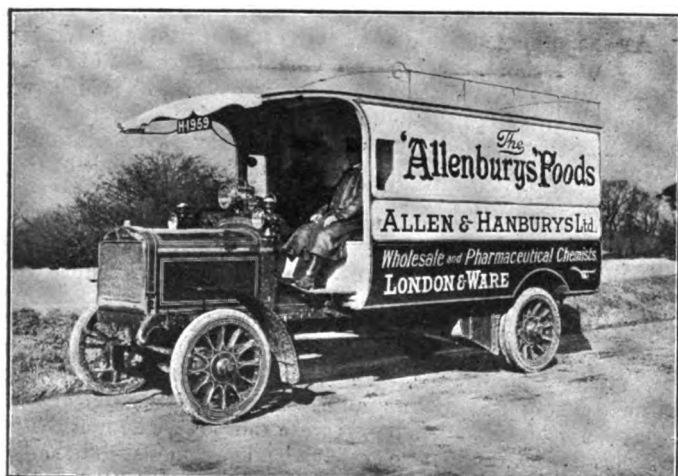
ON Saturday an examination in connection with their driving certificate was held by the R.A.C. at the Ordnance College Workshop at Woolwich.

MESSRS. FRISWELL, LIMITED, have just received the first delivery of the new Peugeot 12-16-h.p. live axle cars, which can now be inspected by interested motorists at their depot at 1, Albany Street, London, N.W.

THE Metropolitan Asylums Board are inviting tenders for the supply of two motor-omnibuses, such to be delivered by the 31st inst., at the offices of the Board, Embankment, London, E.C.

FROM the Ordnance Survey comes a new map of Warwick and Leamington, in which the routes are marked in the now well-known style, so as to be of real service to motorists. These maps are published by Mr. T. Fisher Unwin.

WE illustrate herewith the 24-26-h.p. van supplied early in December last by Commercial Cars, Ltd., to Messrs. Allen and Hanburys, Ltd., of London and Ware. Although of two-ton



capacity, the average load of the vehicle is only 20 cwts., and the daily journeys about 56 miles, the total mileage during the first six months being 8,400. The firm have altogether three vans, and report that they have displaced five horse vehicles and do more work. The vehicle illustrated usually does long country journeys, whereas the two others, which are of a smaller type, are mostly employed on town and suburban routes. The latter are at the present moment doing the work of two horse vans each.

WHEN Sir William Vincent, Bart., arrived at the Surrey Quarter Sessions at Kingston, on Tuesday, to preside over the first court, he explained his late arrival by stating that his motor-car broke down. Fortunately one of the grand jury was passing and took him on to the court.

THE exports of motor-cars and parts from the United States during June last attained a value of only £142,144 as compared with £146,410 in the corresponding month of 1907. Great Britain heads the list with £58,600, Canada being second with £28,310, and France third, with £20,895.

AT Chester, on Monday, Lord Kenyon presided over a meeting of subscribers to the fund for the purchase of a motor-car, which it is proposed to present, on behalf of the diocese, to the Bishop of St. Asaph. It was reported that £606 had been received. It was decided to close the subscription list on September 29th, and to appoint a small committee, including Lord Kenyon and Lord Harlech, to decide on the car to be purchased.

A MOTOR brake is now running daily between Dover and Whitstable via Canterbury.

ORIGINALLY the Brooklands track was assessed at £3,500. The assessment was reduced to £1,500, and the Chertsey Union Assessment Committee has now further reduced the amount to £1,000.

THE Corporation of Southampton are inviting tenders for the supply of an 8-h.p. two-seated motor-car with a long wheel base. They should be delivered to the Town Clerk on or before the 1st prox.

THE Manchester Watch Committee has reversed its previous decision as to the licensing of motor-omnibuses for use on the southern side of the city and has granted licences for the running of such vehicles.

MR. CHARLES GARRETT, of the Grange Gardens, Alresford, Hants, the head gardener to Lord Ashburton, has won the Argyll car offered by Messrs. Lipton's, Ltd., in connection with their recent Limerick competition.

BEFORE the lamented death in France of Mr. Hall Watt he had agreed to entertain the crippled children of Hull to a motor drive which was being arranged for them by local motorists. Although his benevolent intention was frustrated by his untimely death, the children are to have their motor drive, this taking place to-day (Saturday), to Hornsea. Dr. Melbourne and Mr. H. Walker are making the necessary arrangements in connection with the event.

ACCORDING to a consular report, there exist up to the present very few cars in Greece, the majority being owned by the Royal Family. Owing to the bad roads, absence of stores where fuel can be purchased, and want of repairing shops in the country, it will be a considerable time before this means of transport becomes general. Recently a few motor-lorries have been put on the road between Marathon and Athens, for the conveyance of passengers and fresh fish.

THE American Automobile Association has secured permission from the Board of Supervisors of Nassau County, Long Island, to hold the elimination trials for the Vanderbilt Cup race on October 10th, and the contest itself on October 24th. The association is required to give a bond of £5,000 to repair any damage done to the roads, and it further agrees to guard the course with 1,200 men, in addition to the sheriff's deputies. The course as laid out is said to be very fast, it being fairly level, with macadam roads. It will be over a stretch of 11 miles of the new Motor Parkway, which will be completed in time for the elimination trials. The remainder of the course lies along adjoining roads, the total distance round being 25.4 miles, with eight sharp turns and one level crossing.

THE Attorney-General for Queensland has recently had a run of 3,000 miles through the Colony on a motor-car, and has thus demonstrated the suitability of that Colony for automobiles. The worst obstacles encountered were the dry river beds of a soft sand, on which the wheels of the vehicle could not get a grip. The broken country between Charleville and Chinchilla, with its wash-outs and mud holes, was also difficult, but only meant slow travelling. On the Darling Downs the roads proved distinctly good. The experienced chauffeur, when interviewed after the trip, said: "Western Queensland, in my opinion, is one of the finest countries in the world for motor-cars. For ten months of the year, judging by what I saw, it is very well suited for motoring, except for some of the rivers, and places here and there, which could be made good locally at very little cost. Comparing the western country roads with the roads of similar districts in America, they are more than favourable. They are quite on a par with the roads of the north-west provinces of Canada, which I have motored over, and are supposed to be the best in the world. As a fact, a motor-car can go anywhere where a horse and vehicle can." In regard to a question as to whether a special car should be designed for Queensland roads, he said, "I do not think a big clearance is necessary. What is wanted is particularly strong springs, wide wheels, a light body, and large power. Now that the practicability of the western country for motor-car travelling has been made absolutely clear, I expect to see some of the big pastoralists procuring cars of their own."

GOSSIP FROM PARIS.

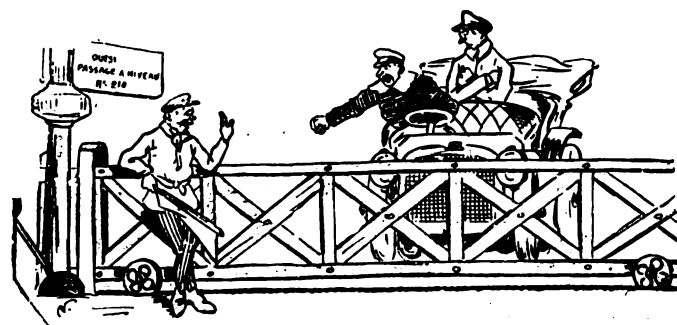
"It is easier and less dangerous than what I am doing here," was Wilbur Wright's reply to my question as to whether he could cross the English Channel on his flying machine. He had been occupied three days in repairing the broken wing of his aeroplane, and had had time to recover from the annoyance he felt, not at the accident, which he described as nothing, but an incident due to his being a little out of practice in directing his machine, and at the public that invade his operating ground whenever it is thought he will fly. He was, therefore, quite calm and collected while he was showing me his wonderful machine and explaining to me the advantages of his means of starting and of the light sledge on which his aeroplane is mounted. With his sledge he could, after crossing the Channel, alight almost anywhere. I cannot affirm he has the intention of attempting to achieve the feat, but, when I said that in the case of his undertaking such a sensational flight I hoped he would take me with him, he replied quietly he thought it would be better to go alone. Wilbur Wright scouted the idea of starting from the beach, skimming over the water, and alighting on the sands of the opposite shore. If he ever crossed the Channel on his aeroplane he would start from the cliff, keep at about 100 yards above the water and come down well inland. At that altitude the people in the boats which would surely be following him would, if anything happened to the motor, see him glide down and would come to his rescue, whereas if he were flying low they might not know what had happened. Wilbur Wright considers that all that is required to cross the Channel on an aeroplane is fairly fine weather, a smooth sea, and a motor which can be relied on for at least three-quarters of an hour. When he has remained in the air sixty minutes and covered in that time a distance of thirty-one miles, as he confidently hopes to do before he leaves Le Mans, Wilbur Wright will be able to say whether he thinks his motor is sufficiently reliable to enable him to undertake an aerial trip from France to England.

"No invention has ever proved useless, and the flying machine will certainly not be an exception." Wilbur Wright is quite sure of that, especially as he foresees that in the near future every army will be provided with a fleet of aeroplanes destined to render eminent services in reconnoitring. "They can be easily transported to the scene of operations, and a simple tarpaulin thrown over them is sufficient to protect them against a gale of wind which would prove fatal to a big steerable balloon, for which an enormous shed must be provided." The American aviator will not, however, admit that the utility of flying machines will be limited to war. They will, he is confident, be employed for many other useful purposes of which we have no idea at the present moment. The machine has "come to stay" and unsuspected uses will be found for it. The flying machine will not be simply a reconnoitring instrument and a toy in the hands of the rich, but it will be a means of civilisation and progress. The American's method of starting and landing have been severely criticised by various French aviators, but, from a careful inspection of the starting apparatus, I must confess it is not cumbersome. A couple of them could be packed in a military wagon, and Wilbur Wright has demonstrated at Le Mans he can return to his starting point, and that with his two long wooden skate blades, resembling the Swiss skis, he can land on rough ground which would demolish the steel wheels and framework on which the French aeroplanes are mounted.

I HAVE asked a good many people what good result they expect from the International Road Congress which will meet in Paris next October. "Oh, it will begin and end in talk," was the reply of a gentleman who has participated in more than one international gathering. Most of the other personalities whom I questioned were less pessimistic, though they almost all pointed out that even supposing the discussion at the Congress should demonstrate clearly the best kinds of roads for town and country and the most effectual manner of keeping down the

dust, the main question, that is to say, the means to provide the money which would be required to carry out the suggestions must necessarily remain to be found. "I do not pretend to know what will be done in other countries, but I can confidently predict there will not be much done in France for a long time, at least not in the rural districts," was the opinion of a man who, from his long experience as a Government official, knows what the French Administration is. However, if, so far as I have been able to discover, no very important immediate practical results are expected from the Congress, great preparations are being made for it. Learned reports, supported with official information and statistics, are being prepared on all questions concerning roads and road-making, and will be presented at the gathering. That assembly will doubtlessly nominate commissions to study the documents and to report on the reports. In the end the Congress, at a plenary meeting, will surely adopt the conclusions of the reports of its commissions, and that would be the end of it, if a very agreeable tour through France had not been organised to enable the Congressmen to judge of the condition of the French highways.

THE fatal accident which happened to Mr. Sands at Poissy has been seized upon by a good many enemies of the self-propelled vehicles as a pretext for attacking automobilism in general and for demanding severe penalties for fast driving. Marquis De Dion, in answering one of those attacks which appeared in the "Matin," puts the affair in a nutshell. He says



From a Sketch] A French Level Crossing. [in La Locomotion Automobile.

"An American motoring from Deauville to Poissy went at an average speed of 100 kilometres an hour and killed himself on arriving at his destination. You demand the application of severe regulations which would be vexatious for all motorists because unfortunately a certain number of them travel at exaggeratedly high speed and constitute, you say, a danger for the public. Well, the motorist of whom you speak as having been a danger for the public, has just proved that he could travel very fast without injuring anyone on the road. Then the penalty which could be inflicted on him if the Bill presented to Parliament by the Minister of Public Works were to be voted by the Chamber and Senate and promulgated as law would be very benign in comparison to that which he applied to himself, since he condemned himself to death, and at the same time suppressed, in so far as he was concerned, the prerogative of the President of the Republic to commute his sentence."

MARNEY.

AN ingenious yet simple device for cleaning front glass screens has recently been put on the market by the Glass Front Cleaner Manufacturing Company, of Chicago. The device, which is known as the "Lookout Cleaner," consists of a light squeegee hinged to the frame on the right of the screen; by means of a light handle it can be turned through a quarter of a circle, thus clearing the glass of any rain or moisture which clouds the screen and prevents the driver having a clear view ahead. The cleaner can be readily attached and detached, so that it need only be kept in position in bad weather.

MOTORING ACCESSORIES.

The Autoclipse Motor Lamp.

We have lately been afforded a demonstration by Messrs. Brown Bros., Ltd., at their depot in Great Eastern Street, London, E.C., of the many scientific points of construction in the Autoclipse motor lamps, for which they are the sole licensees for the British Empire. The lamp is made on really sound lines, while the strong and serviceable materials of which it consists give the Autoclipse lamp a position of favour which cannot be ignored by motorists anxious to provide for the shortened day that is now coming upon us.

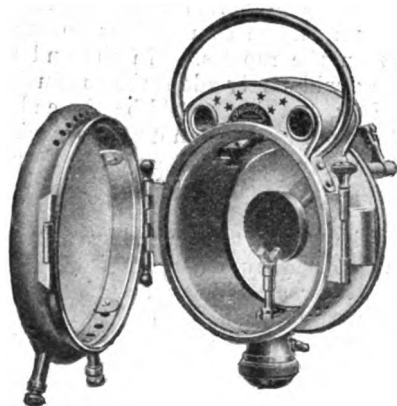


Fig. 1.

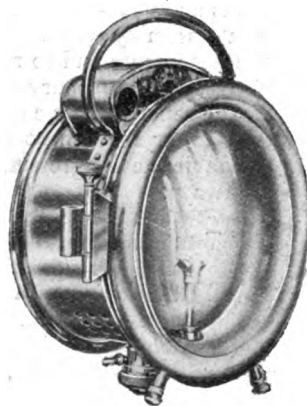


Fig. 2.

Briefly stated, the main point of this device is the provision of a self-ecliping mechanism enabling the driver to eliminate the dazzling glare of the central rays from his light when meeting other traffic, or when passing through towns, whilst the long distance rays which are projected far ahead show the road beyond. The side rays serve an important function in illuminating hedges or other objects on each side of the road. When the ecliping mechanism is put into operation the motorist is still provided with a light which enables him to easily thread his way in and out of the traffic, but without making himself a positive nuisance to other people on the roadway or the pave-

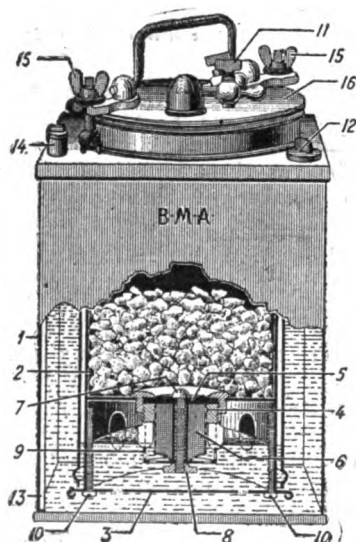


Fig. 3.

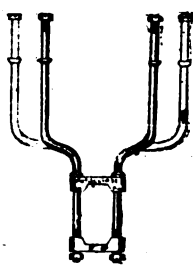


Fig. 4.

ment. In Fig. 1 is shown the ecliping disc when in actual service. It will be noticed that this is interposed between the burner and the reflector, being operated by a lever at the rear of the lamp. So that this lever shall be pulled down on both lamps on the car simultaneously a Bowden flexible wire is provided, thus enabling the device to be easily and instantly worked whenever desired. When the Autoclipse disc is placed out of action a very powerful light is given, consisting of intense parallel or long-distance rays emanating from behind the flame striking the hyperbolic reflector, from whence they are reflected and directed against the plano-convex lens.

Here they are focussed and projected in rays of great penetrative power. This special combination permits the use of lens of large diameter and long focus in a comparatively small lamp. On the other hand, the short distance rays from the light emanating from the front of the flame are thrown directly on the lens, being magnified and diffused at the sides as is familiar to those who have observed the growing use of the Autoclipse lamp by motorists throughout the country. The light is exceptionally penetrating, and even when running at a high rate of speed it is not in any way deteriorated. We notice that with each size of lamp is given an exact statement of the candle and projection power. That shown in the illustration Fig. 2 is the model B with 4,200 candle power. Its projection power is 600 ft.; that combined of two lamps is 850 ft.

In connection with the Autoclipse motor lamp the generator should be of a relative size to correspond with the lamp. That supplied is entirely automatic, securing a uniform light and enabling a high quality of illumination until the whole of the carbide is exhausted. The generation also ceases as soon as the water cock has been shut off, and the device can be used at a later time without re-charging. The generator is on the diving bell principle, the gas being produced by the water soaking through the capillary pad at the bottom of the carbide reservoir. When sufficient gas has been evolved the water is automatically forced away from the carbide, so that no more is generated until the first supply has been used. In Fig. 3 we show a sectional sketch of the device which is self-explanatory when we say that 1 represents the water reservoir, 2 the carbide chamber, 3 bottom of the same, 4 the zinc cage, 5 cotton filter washer, 6 felt capillary pad, 11 the gas tap, 12 stopper for filling, 13 escape for excess of gas, 14 extra water valve, 16 condenser.

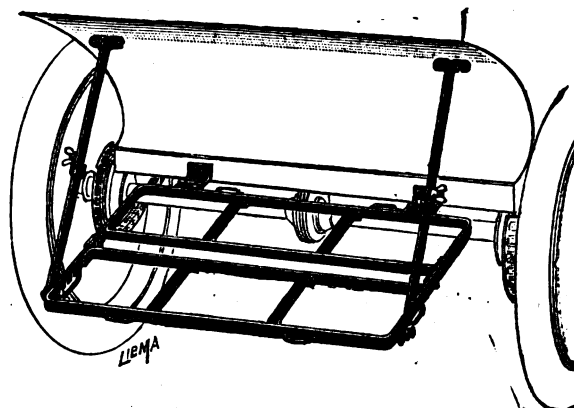


Fig. 5.

In connection with the Autoclipse lamp reference may also be made to the lamp bracket shown in Fig. 4, which is adjustable from 4 to 6 in. in width, and can easily be set at any desired angle so as to show the light where it is required.

If desired, the Autoclipse motor lamp can be supplied without the self-ecliping mechanism, in which case the motorist is provided with a brilliant light from a lamp of sound workmanship and construction designed on thoroughly scientific lines with a view of giving the best possible results. In the device we have referred to Messrs. Brown Bros. have a speciality likely to find increasing favour with motorists.

The "Dewhart" Luggage Carrier.

Messrs. A. J. Dew and Co. have established themselves at 8, Hart Street, High Holborn, W.C., near to Mudie's Library and of convenient access from many parts of London, as dealers in motor requisites of every description. They have issued an excellent pocket handbook of their "Dewhart" motor accessories for the motorist. At the present moment attention may well be drawn to their luggage carrier, which, when open, gives an appearance such as we are able to illustrate in Fig. 5. This is self-explanatory from the sketch. It will suffice to say that the device is 29 in. by 20 in. and will fit any car. It is well finished in black enamel, the side supports being plated, and the carrier thus gives a good appearance to the rear of the vehicle, as it can be easily fitted and folded up when not in use into a small space and be of no inconvenience whatever. The utility of Messrs. Dew and Co.'s new luggage carrier is such as should lead to a consideration of its claim even by those motorists who have nearly finished their touring for the season. The fact that it can be so easily folded up when not in use is an advantage which should lead to its permanent adoption on the cars of those owners who frequently get away from crowded centres into the heart of the country.

Correspondence.

(Letters to the Editor should be addressed to the offices, 27-33, Charing Cross Road, London, W.C.)

THE TRIALS OF 1909.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—I notice in your issue of the 15th inst. that many of the well-known competitors in connection with the trials organised by the Royal Automobile Club have been giving their views as to the desirability or necessity of holding in 1909 such a test as kept many from more profitable business in 1908. Perhaps you will allow me, as a member of the public, to congratulate the trade on the unanimity shown in the character of the correspondence in your columns. I am afraid that a good many firms have hitherto been led to participate in these trials by anticipating the entry of their rivals. They have felt that if Messrs. So-and-So entered they could not afford to stand outside the circle, but the views of many firms which you have published should convince the Club that even if they do attempt a programme approaching in any degree the ambitious project of this year, they will be doomed to disappointment if not to failure. The truth is that neither the trade

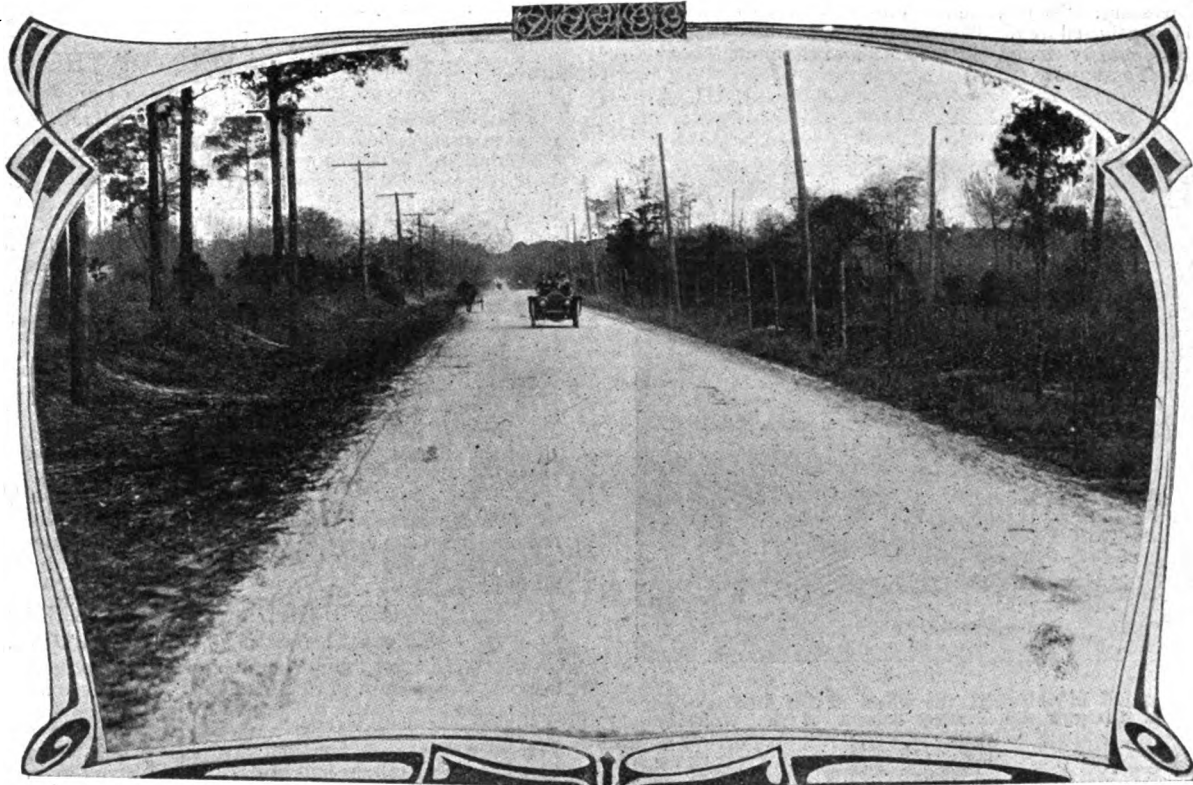
THE POSITION AT NEWMARKET.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—At a meeting held at Newmarket, certain statements were made likely to cause misunderstanding as to the policy and work of the Automobile Association. Will you, therefore, kindly grant me space for the following plain statement of fact?

Newmarket has received attention of the most friendly nature from motoring organisations in general and the Automobile Association in particular. For the best part of one year we have defrayed the expense of a special "point duty" patrol, whose instructions have been to arrest the progress of all motorists, and draw attention to the fact that a special speed limit was in force, and that, apart from this, the greatest care must be observed through the town.

We failed to understand why the local authorities in the shape of one or two police officers could object to the assistance of our official until, on one occasion, they thought fit to take proceedings against him.



A View on the Course in Savannah on which the International Race for the Grand Prize of the Automobile Club of America will be run in November next.

nor the public want these trials, the industry having now risen to such a position that the prospective motorist feels he can rely in a great measure upon the private performances of vehicles without so much regard to the official declarations as to what they have done in circumstances much more severe than they are likely to be called upon to do in ordinary work.—Yours truly,

W. B. WALKER.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—The correspondence which you have published from firms engaged in the industry concerning the trial question has caused me an inquiring mind. Why cannot the Society of Motor Traders undertake this work? It is generally understood that they have large funds which have accumulated during recent years, and their employment for the development of the industry would be regarded with pleasure by those of the public who wish to see the trade prosper as it ought to do. Perhaps it might be well if, at the next meeting of the society, or even at that which is to be held in connection with the exhibition question, some declarations were made as to the amount of these funds, the purpose for which they are intended, and whether it is proposed to devote any of them to the promotion of reliability or other trials of a similar character.—Yours truly,

AN OBSERVER.

The reason then became apparent to every observant student of human nature. It was obviously better that motorists should not know of the existence of a speed limit, should not even be reminded of the fact, and having quite unwittingly broken a regulation, should be stopped, summoned, and fined. So far as can be judged from the evidence, it was far better for Newmarket that a motorist should not be told, in order that his unwitting breach of regulations might involve proceedings, conviction, and a fine which automatically relieved the local expenditure. The A.A. official was prosecuted for obstructing the police in what they were pleased to think was their duty. The point was one of most vital importance, not only to automobilists, but to the peace of the community who use the roads. The case was dismissed without calling on the evidence for the defence.

A report of the Newmarket meeting, from which it was apparently deemed advisable to exclude representatives of the Press, was issued for publication on Monday evening. One of the suggestions implied that in the case referred to a Bench composed of three motorists and one non-motorist had merely given the Association the benefit of the doubt. The obvious innuendo as to bad faith on the part of His Majesty's magistrates will probably be dealt with locally. Suffice it to say that the innuendo was framed in such a way that no single person could be held responsible for it.

I appeal to the impartiality of the Press on one point and on one point alone. We did our utmost to improve the state of affairs in that

town. We have incurred an expense of close upon £100 in order that danger and discomfort to racehorses should be minimised. Apparently Newmarket, as represented by a body of gentlemen whose opinions could not bear the light, does not want any protection from us. We will, therefore, save our money for the future and withdraw our man.—Yours truly,

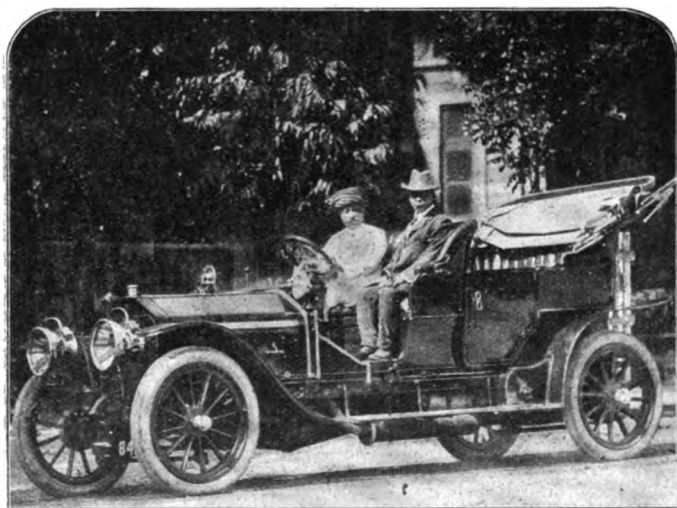
STENSON COOKE.
Secretary, A.A.

THE SIZE OF BEVEL PINIONS.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—Replying to "Lindum's" inquiry in the last issue of the *M.C.J.*, it is often desirable to use a pinion with a small number of teeth in a bevel gear drive. This is generally the case where a large reduction ratio is desired, as otherwise the gear would be so large as to necessitate a casing of almost impossible dimensions. Thirteen teeth are about the smallest number that should ever be used in a bevel pinion, if the teeth are of the ordinary form. But some manufacturers are using pinions with eleven teeth, and I believe that gears with as few as ten teeth have been occasionally used. There are two objections to the use of pinions with a small number of teeth. First, it concentrates the wear on a few teeth, so that the wear of each tooth is large and frequent adjustment is necessary. Second, the teeth are undercut so much that their strength is greatly reduced. This latter objection has been overcome in a few instances by changing the relation of the pinion teeth to their pitch cone.—Yours truly,

R. H. A.



The Maharajah Sahab of Morvi at the wheel of the Daimler Car supplied to him through the Bombay Agents of the Wolseley Company.

MOTORISTS AND JUSTICE.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—On Friday evening last, at 6 p.m., whilst driving a voiturette through Kingston, and when just the London side of the bridge, a man obviously very much the worse for drink staggered in front of our car and held up his arms for me to stop; the car at the time was travelling at a crawl. Immediately upon my stopping the man stepped up and dealt my passenger, Mr. Cecil Nathan, a director of the Certus (Gearless) Company, Ltd., a violent blow with his fist. My passenger was just in time to receive the force of the blow upon his arm instead of his head, for which it was intended. Luckily for us the whole incident was witnessed by many persons, including the constable on point duty, and who had just signalled to me to proceed. He at once rushed forward and arrested the man. Although at considerable inconvenience to us both, we decided to prosecute the assailant in the interests of motorists in general, to prevent a premium being placed upon assaults of this unwarrantable and vindictive type on motorists, and especially as the constable desired us as witnesses. On Saturday morning the prisoner was sentenced by the Kingston magistrates to pay a fine of 20s., or in default to go to prison for fourteen days for being, "Drunk and disorderly, and for committing a most unprovoked assault."

Now we venture to suggest that the cause of justice is scarcely served by such a slight sentence in comparison with the amounts of the fines inflicted by magistrates upon motorists for exceeding the twenty miles per hour speed limit, which speed, it can hardly be gainsaid, in nine cases out of ten, is not in the least degree dangerous, or that a car at that speed is not under perfect control. Had we been exceeding the ten miles per hour limit in Kingston, in the eyes of the police, we should have been allowed no defence and should have been fined for the first offence the sum of £5 and 9s. 6d. costs. In addition to this, on sentence being passed

the prisoner called out that he would "see us later," or some such words. Whether the prisoner is to receive further punishment for this threat of violence or not I do not know. We leave it to the British public to judge whether justice has been meted out to motorists as a whole in this case.—Yours truly,

GODWIN SMITH.

ECONOMIES ON ROADWAYS.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—A few days ago I noticed in one of the London dailies a paragraph re the cost of roads, in which it was stated that an additional expense of several thousands of pounds has been incurred through having to treat the roads with tar, and this was entirely owing to motor traffic. It will be read with interest by many thousands of your readers that in the same paper of the 17th inst. it states:—"Tar dressing so adds to the wear-resisting qualities on the highways that so far as can now be seen it will more than repay its cost by the saving it effects in road maintenance."

This is important; but there is a further saving in scavenging and watering. In many parishes, before the roads were tarred, they were swept daily. Now the rule is to sweep them about once a week and they are not watered. The saving on these two items must be immense.—Yours truly,

E. WHOMES.

RAISING THE BODY OF THE CAR.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—For my holiday in August I generally drive some hundreds of miles in an open dogcart, through Staffordshire, Shropshire, Wales, and Cheshire, and, speaking generally, I find that drivers of motor-cars are less reckless than they were a year or two ago. Chauffeurs, when driving alone, are the chief offenders.

The construction of the present car is at fault. The body should be about two feet from the ground. This would not only lessen the toll of human life and the plague of dust, but it would also steady the drivers—they could not then swing around turns at the pace they do. Moreover, they would command a better view of the road. I am glad to know that my views have met with considerable, and perhaps I may say general, approval. At present it is practically, if not absolutely, hopeless for any man to be run over by a motor without being crushed to death. For that reason alone there should be the space I have mentioned from the body of the car to the ground, with no levers or anything else to spoil this humane improvement. A farmer has just remarked to me that dogs and sheep would also often be spared by the improvement.—Yours truly,

T. H. PEATE.

[Perhaps some of our readers will favour us with their views on this suggestion, of the Rev. T. H. Peate, who is well known in Buxton, and whose familiarity with the road is not confined to the hills of Derbyshire.]

ACCUMULATOR TROUBLES.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—I have lately been having some trouble owing to my accumulator constantly running down. I have examined all the wiring and can find no flaw in the same. Similarly I have tested the contact maker and other parts, but without locating any cause for the trouble. I recently went for a run, and having gone about forty or fifty miles found the accumulator had run down. The voltmeter at starting had registered 4½ volts, and the car had run quite well up to the time of stopping, when the accumulator only showed about three volts. I should feel obliged if you or any of your readers could assist me in the matter.—Yours truly,

R. H. T.

[Provided that the voltmeter is accurate, and that no fault of an intermittent character exists in the wiring, the most probable cause of the trouble is that the accumulator requires fresh acid and rinsing out with water to clear all loose particles of material in the cell. The capacity of an accumulator rapidly declines when the density of the acid falls below a certain point, and if the acid is old, the voltage may fall as soon as the density has dropped below the amount that charging has brought it up to. "R. H. T." should test a little of the acid with a hydrometer; to be correct it should be at 1.200 approximately. If it should be as low as 1.0 the accumulator cannot be properly charged.]

MESSRS. W. H. SMITH AND SON write with regard to the reference to the Garden City in our last issue to say that they have had a petrol motor vehicle running at Letchworth for the past year, and that this week they are putting on a new and more powerful car. "In the future," continue the firm, "doubtless all manufacturers of any but very heavy goods will use commercial motors for journeys not exceeding fifty miles from London, especially when, as in our case, deliveries have to be made to many different points in London. Manufacturers have hardly yet grasped the great convenience of motor delivery enabling them to deliver goods practically unpacked, which avoids the expense and worry of collecting empties. Commercial motoring is still in its infancy, but it is a lusty infancy that is bound to develop into an industry of the first importance."

CLUBS AND ASSOCIATIONS.

ROYAL.

UNDER the scheme of association founded by the club this year the number of motorists now included in that organisation is 15,287. Four additional bodies have accepted the scheme, viz., the Coventry Motor Club, the Hull and District Automobile Club, the North-Eastern Automobile Association and the Society of Road Traction Engineers.

ROADS IMPROVEMENT ASSOCIATION.

EARL CADOGAN, K.G., in his capacity of president of the Roads Improvement Association (Incorporated), has addressed a circular letter to the road authorities of Great Britain asking them for certain statistics respecting what has been done to deal with the dust problem. This information is specially required for the International Road Congress, convened by the French Government, which is to be held in Paris in October. A form has been circulated asking for a return of the length, area and cost of the roads (a) laid with dustless road material, (b) treated with a surface coating of tar and (c) treated with other palliatives. Information is also sought as to the comparative cost, results, notes of efficiency, &c. The returns when collated and summarised will be of considerable value to road authorities and will be very useful to the Paris Congress. It is estimated that the cost of collecting and summarising these reports will be about £150, and contributions towards this expense will be gladly received by the hon. secretary of the Roads Improvement Association (Incorporated), 1, Albemarle Street, Piccadilly, London, W.

LINCOLNSHIRE.

By the kindness of Sir John Thorold, Bart., the annual hill climb of the Lincolnshire A.C. for the President's Cup was again held at Syston Park, near Grantham, on Saturday last. The day was a charming one, and a large number of spectators and non-competing members in their cars attended the meet, which is always of an enjoyable nature. The competition was held under the closed competition rules of the Royal A.C., and the handicap was arranged by the Competitions Committee of the Lincs. A.C. Each competitor was allowed two runs, the best to count. The total distance was 1,240 yards, and varied in gradient between 1 in 46 and 1 in 9.6, which was the slope for the last 330 yards.

Dr. Hogarth again won the cup with his 7.5-h.p. Clyde, although, as a matter of fact, the highest marks were obtained by Mr. R. M. Wright's 20.08-h.p. Talbot, which was not eligible for the cup, but which took the prize for the best performance on the handicap open to all members of the club. The fastest run of the day was that of Capt. H. E. Newsum's 55.8-h.p. Daimler.

The following are the results, cars being placed in order of merit:—

CLASS A (cars not exceeding 14-h.p.)

| Competitors. | Make of car. | H.P. as per R.A.C. rating. | Time in sec. | |
|-----------------|--------------|----------------------------|--------------|----------|
| | | | 1st run. | 2nd run. |
| † R. G. Hogarth | Clyde | 7.5 | 170½ | — |
| T. W. Mays | De Dion | 13.94 | 122½ | 122 |
| W. E. West | Alldays | 11.24 | 167 | 182½ |

CLASS B (cars not exceeding 25-h.p.)

| | | | | |
|-----------------|--------|-------|------|------|
| † R. M. Wright | Talbot | 20.08 | 76½ | 78 |
| † W. Nissler | Talbot | 20.08 | 93½ | 95½ |
| W. A. Tomlinson | Humber | 19.6 | 150 | 140½ |
| B. Smith | Masa | 22.3 | 149½ | 128½ |

CLASS C (cars exceeding 25-h.p.)

| | | | | |
|-----------------|----------|------|-----|------|
| † H. G. Nalder | Germain | 30 | 75½ | 75 |
| H. G. Nalder | Berliet | 35.7 | 88½ | 67 |
| H. E. Newsum | Daimler | 55.8 | 63 | 60½ |
| R. G. Hogarth | Talbot | 27.6 | 85 | 82½ |
| R. H. Fowler | Siddeley | 25.1 | 115 | 110½ |
| Sir H. B. Bacon | Wolseley | 32 | 91 | 93 |
| C. W. Pennell | Siddeley | 34.2 | 96½ | 95 |
| R. M. Wright | Daimler | 35.7 | 80½ | 80 |
| J. A. Cole | Humber | 35.7 | 100 | 98 |
| G. E. Sanders | Berliet | 35.7 | — | 96 |
| T. W. Mays | Napier | 38.5 | 117 | — |

* Winner of President's Cup.

† Not eligible for Cup or Class Prize, but winner of Special Prize.

‡ Winners of Class Prizes. Capt. Newsum takes the second prize in Class C.

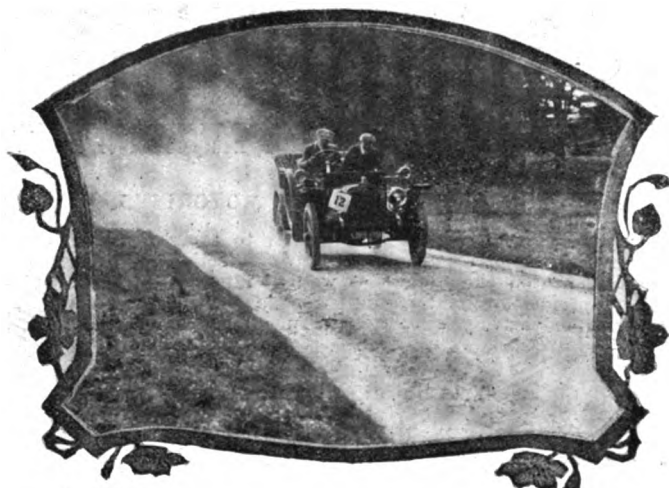
NORTH EASTERN A.A.

A MOTOR-CAR and polo pony gymkhana, organised by the North-Eastern Automobile Association and the Northumberland Polo Club, took place on Saturday afternoon on the Polo Ground, Gosforth Park, Newcastle-on-Tyne. Happily the complete success of the proceedings was assured by charming weather, and the faultless management of Mr. J. E. Hodgkin and Mr. R. E. Lambton. How easily the modern motor-car is controlled was strikingly illustrated in the Bending Race. There was a gallant struggle for supremacy between Mrs. F. T. Maling and Mr. A. E. George,

and the fact that the latter, one of the principals of the firm of Messrs. George and Jobling, motor engineers, only secured the verdict by the narrow margin of a single point, strongly emphasises the great nerve and accomplishments of Mrs. Maling as a motorist. Mr. H. E. Galloway on a 10-h.p. Stanley steamer gained a decisive win in the motor bomb race. In the musical chairs event the ladies were alert aspirants for honours. It resulted in a victory for Miss Leather, who was an occupant of a 40-h.p. Berliet, driven by Mr. E. W. Leather. Mr. H. E. Galloway secured the Lord Barnard Challenge Cup with the highest aggregate of thirty-five points for the several events. The Association Cup was awarded to Mr. E. W. Leather for the next best aggregate, namely twenty, and the Association silver medal to the driver of J. R. Perrett's 25.38-h.p. Richard-Brasier for scoring the highest points in the paid drivers' class.

NORTHAMPTONSHIRE.

ABOUT 140 members and friends of the Northamptonshire A.C. were recently entertained by the president of the Club, Sir Thomas Hesketh, Bart., to a garden party at Easton Neston. During the afternoon a gymkhana was held on the lawns in front of the hall. Dr. Simpson very kindly acted as judge, Dr. Hope and Mr. A. N. Mobbs as clerks of the course and observers, and Mr. Sidney Harris (the hon. secretary) as starter. Mr. C. W. Bartholomew, Mr. Wood, and others gave useful assistance in setting out the course for the various events, which were as follows:—Crawling Race: 1, Mr. H. R. Greening; 2, Mr. H. Lineham. Motor House Race: 1, Mr. A. Wicksteed; 2, Mr. W. B. Moorhouse. Rolling Race: 1, Mr. C. Wicksteed; 2, Mr. W. B. Moorhouse. The Academy Stakes: 1, Mr. Wood; 2, Mr. H. R. Greening. At the conclusion of the even's the judge awarded the first prize to Mr. H. R. Greening and the second prize to Mr. W. B. Moorhouse.



The Lincolnshire Club's Hill Climb.—Mr. W. Nissler on the 20-h.p. Talbot.

COVENTRY.

In the Coventry Motor Club's hill climb at Newnham the first in Class 1 was Mr. P. Baker, on his 2½-h.p. Minerva; in Class 2, Mr. J. Marshall (3½-h.p. T. T. Triumph); Class 3, Mr. A. A. Scott (3-h.p. Scott); Class 4, Mr. A. A. Scott (3-h.p. Scott); Class 5, Mr. A. M. Startin (5-h.p. Riley tri-car); and Class 6, Mr. Scott, on the same machine that had been successful in Classes 3 and 4, it being fitted with the Scott gear for the purpose of the classification.

KENT.

MEMBERS of the Kent A.C. are notified of some important alterations in their fixtures for the autumn. The meet which was to have been held to-day (Saturday) at the house of Sir David Salomons has been postponed till September 5th, as will be seen from reference to the forthcoming events on another page. On the following Saturday a visit will be paid to Mr. W. Willis, at the Philippines, Brasted Chart.

SCOTTISH.

THE Scottish A.C. has made some new arrangements with the North British Railway Company with regard to the ferrying of motor-cars at Crianlarich and other places. The charges will be as follows:—Crianlarich to Tulloch, £1 5s. 1d. per ton; Crianlarich to Fort William, £1 11s. 7d.; Bridge of Orchy to Tulloch, 19s. 1d.; Bridge of Orchy to Fort William, £1 8s. These charges are all per ton, station to station, and the minimum charge is as for one ton per car. If covered trucks be used an additional charge of 10s. each will be made for them, and the agents at the forwarding station will, under ordinary circumstances, be

able to supply a suitable vehicle at one day's notice, but they cannot, of course, guarantee this in every instance.

THE Accrington and District Motor Cycling Club has now thirty-eight members, and has commenced its career with a midnight run to Rhyll.

In the Manchester Motor Club's annual cycle reliability trials the winner of the Triumph cup, gold medal, and prize for the hill climb on formulae was Mr. Otto Cross.

ENTRIES for the closed hill-climbing competition of the Yorkshire A.C., at Pateley Bridge, on the 12th prox., close on September 7th. They should be made to Mr. C. P. Wilson, 24 and 25, Basinghall Buildings, Leeds.

THE Hertfordshire County A.C. has adopted a novel club car badge in the form of a stag's head, thus utilising a feature which is prominent in the arms of the county and supplying the motorists of that club with yet another badge with which to decorate their cars.



The 35-h.p. Talbot Limousine-Landaulet recently completed by Messrs. Clement-Talbot, Ltd., for Mrs. E. M. Cox, Radipole Manor, Dorset.

THE TIRADE AGAINST MOTORISTS.

IN our comment on page 540 we refer to the present outburst of feeling against motorists, and herewith give a selection from the newspaper correspondence on the subject as well as references made in public meetings, prefacing the interesting chronicle with a reprint of a handbill now being extensively circulated in rural districts, to the following effect:—

MEN OF ENGLAND!

Your Birthright is being taken
from you by
Reckless Motor Drivers.

You have the same right to use the public roads as you have to use the houses you live in, without having your lives endangered.

Reckless Motorists drive over and kill your children.
Reckless Motorists drive over and kill both men and women.
Reckless Motorists kill your dogs.
Reckless Motorists kill your chickens.
Motorists fill your houses with dust.
Motorists spoil your clothes with dust.
Motorists, with dust and stink, poison the air you breathe, thus injuring your health.

Reckless motorists have compelled one hundred thousand people to withdraw their horses and carriages from the public roads. It is estimated that one hundred thousand men have been thrown out of employment in consequence. It is estimated that five hundred thousand cyclists have been compelled to give up cycling through the reckless driving of motorists. You cannot ride, drive, or walk on the public roads without the danger of being killed by reckless motorists.

Men of England, will you stand this tyranny any longer? Rise up, join together, and bring pressure upon your representatives in Parliament, and otherwise make it unpleasant and costly to the tyrants who endanger your lives.

Mr. C. Gould suggests that, to diminish reckless driving, a carefully planned system of licensing should be adopted, and "upon presentation at the end of a year, a licence free from marks of demerit should entitle the driver to a service stripe and a certificate of merit, and he should be known as an efficient and expert driver according to the number of stripes so attained.

All cars which are capable of exceeding the maximum legal speed limit should be painted a certain distinctive colour, says one correspondent of the "Daily Mail." When taking out a Government licence the owner should state how many counties he wishes to travel in and pay, say, five shillings for each; at this rate a complete touring licence for England and Wales would cost only about £15.

At the meeting of the Northwich Rural District Council a member

said that the term "motor devils" was the only name he could give the speedy motorists who passed his way.

Presiding at a luncheon in connection with the Haxby Show, Mr. H. H. Riley Smith referred to the motor nuisance and said that the real remedy was to revert to the toll-bar system. Not to have a toll-gate at every four or five miles, but to have a toll-office at every entrance to a county, and to adopt a system whereby a motorist could obtain a ticket which would entitle him to use the roads.

CASES AGAINST MOTORISTS.

MAGISTERIAL DISCRETION.

In imposing a penalty on a motorist summoned to the Leeds City Court the Stipendiary Magistrate (Mr. C. M. Atkinson) said that ordinarily he imposed a fine of £5 for exceeding a speed of twenty-five miles an hour and £3 for a speed of between twenty and twenty-five miles an hour. In this case, however, he understood that the defendant was not one of the usual wealthy class of motorists, but one who drove his car for a living, so the fine would be on the lower scale.

In fining a motoring defendant £5 and costs at Bromsgrove, the Chairman (Major Wiggins) said the Bench was dealing leniently with him, and future cases would be more severely dealt with. They were determined to put a stop to dangerous driving. With public feeling as high as it was motorists were now on their trial.

HEAVY HAULS.

Four motorists have been fined at Torpoint.

Several motorists were summoned at Grantham on Saturday for exceeding the speed limit of twenty miles an hour. Fines of £2 and costs were imposed.

At Worthing, on the 12th inst., seventeen cases were heard against motorists, the fines imposed ranging from £2 to £4. On the same day at Hailsham six motorists were summoned, one of whom was fined £21 11s. on two summonses.

COMMITTED FOR TRIAL.

Harold Gylee, of Clapham, was on the 12th inst. charged at Horsham on a coroner's warrant with the manslaughter of Mabel Denman, at Shipley. The Bench decided that the case must go for trial at the assizes.

EXCEEDING LEGAL LIMIT.

At Stranraer four motorists have lately been fined for exceeding the legal limit on the highway. Traps had been set on the road from Sandmill to a cottage at High Balyett.

On Saturday at the Petworth Petty Sessions seven motorists were fined amounts ranging from 10s. to £3 for various offences, chiefly exceeding the legal limit at Coldwaltham.

DISMISSALS.

William Jones, chauffeur, living at Bettws-y-coed, was charged at Carnarvon, on Saturday, with driving through Llanberis at a speed dangerous to the public. Defendant said he did not exceed ten miles an hour. He was driving several American gentlemen, one of whom told him not to "lick creation," as they wanted to view the scenery. The case was dismissed on payment of costs.

John Douglas, chauffeur, was charged at Alnwick with driving a motor-car to the danger of the public at Alnmouth on the 2nd inst. The chairman said, as there seemed to be some doubt in the case, it would be dismissed.

At Wigtown Sheriff Court, Robert Lumsden, Newton-Stewart, was charged with exceeding the speed limit on the road between Newton-Stewart and Glenluce on July 21st. Two policemen gave evidence to the effect that the accused was driving at the rate of twenty-four miles an hour. Mr. W. M. Kelly, agent for the defence, in cross-examining the witnesses, brought out the fact that the stop-watches used by the police cost only 20s. each, and a watchmaker stated in the box that watches of that class were not to be depended upon to give accurate timing. Mr. Kelly also contended that the evidence of two constables stationed a mile apart was not sufficient to secure a conviction, as there was no corroboration of their statements that they started their watches at the times stated. The Sheriff, in finding the charge not proved, said that according to the Act he could not accept the evidence of one witness as sufficient, even if he had every confidence in the witness. Accordingly he must dismiss the case.

James W. Barber has been summoned at Deal for driving a motor-car at a dangerous speed. The police-constable estimated the pace at 10 to 12 miles per hour; a local J.P. at 30 m.p.h. and the defendant at 5 m.p.h. In giving their decision, the Mayor said they did not think the evidence was sufficient to warrant a conviction. The Bench dismissed the case.

TUESDAY'S RECORD.

On Tuesday five motorists were fined at Shoreham, six at Newmarket, nine at Odiham, three at Lewes and several others at Newcastle, Rugby, and elsewhere. In one case at Newmarket three leading trainers gave evidence against the driver of a car. News of only one escape reached us, viz., at Westminster, where on magisterial suggestion a summons was withdrawn.

OWING to the expiration of the lease the plant and stores of the Halle Spring Wheel Syndicate, Ltd., at Tunnel Avenue, East Greenwich, is to be put up for sale by auction on September 9th.

ROAD REPORTS.

CROYDON.—The Addiscombe Road and Shirley Road, at Croydon, are under repair, and Wickham Road is being tarred. The tramway route from East Croydon Station to Addiscombe along Cherry Orchard Road will be under repair during the next few days. The Selsdon Road, which is the main road to Selsdon from the Brighton Road, is being paved with wood at the Brighton Road end, and will be under repair during the next three weeks. The repairs on this road can be avoided by entering it *via* Junction Road from the Brighton road.

HULL.—The Beverley road is being repaved. Special caution should be exercised at the bridge over Holderness drain on the Hedon Road. This bridge is in course of reconstruction, and in the meantime cars must use as an alternative the Tenywrury bridge alongside.

KENT.—The bill for tar-painting the roads in Kent, says the county surveyor in his annual report, amounted to £3,500—a charge entirely due to motor-car traffic. On the main trunk roads, the inspector states, high-speed cars with armoured tyres continue to cause much damage.

FRECKLETON MARSH.—A little grievance exists in connection with the toll at Freckleton Marsh, on the Blackpool road. If a member of the Lancashire A.C. presents his badge he is allowed to pass the toll on a payment of 4d., while if he has forgotten the badge the full six-penny toll is demanded.

EAST GRINSTEAD.—The main portion of the High Street at East Grinstead is to be made up in the way that has been successfully done at Eton and Staines during the last two years. This process consists of the binding of metal with a special preparation of tar mixed with fine

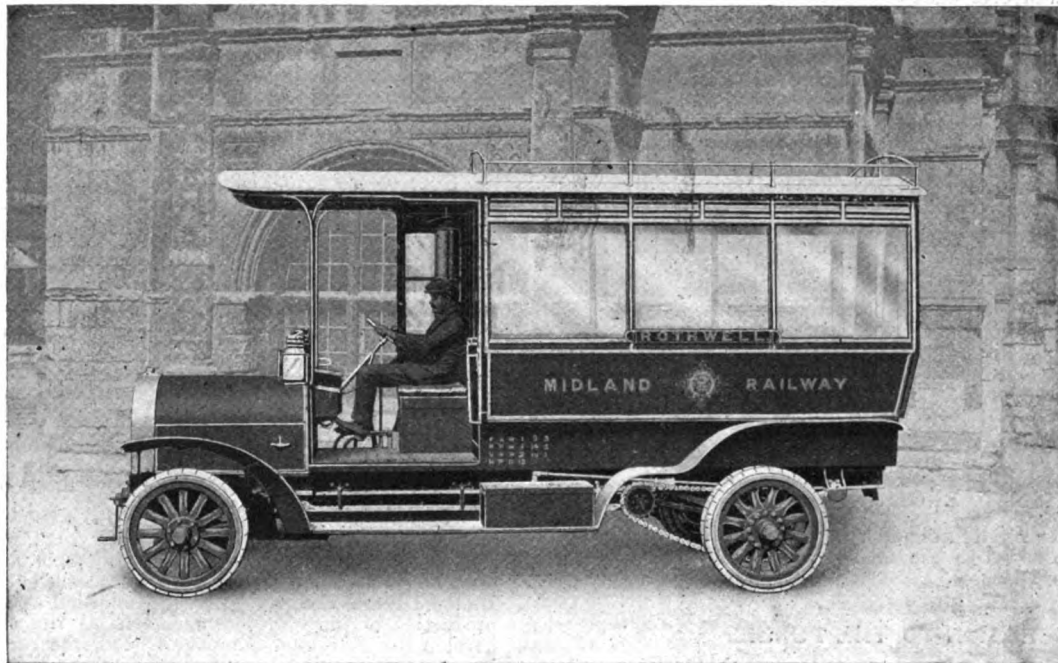
EAST SUSSEX.—The following main roads in East Sussex will be under repair during next week:—Road between Silverhill (Robertsbridge) and Ticehurst Boundary on Flinwell road. Road between Harrow Bridge and Westfield. Mr. George W. Warr, district surveyor to the Steyning East Rural District Council, reports that the steam rollers will be at work on the Dyke Road Avenue, Dyke Road, just beyond the tram terminus, until about the 27th inst.

AUTOMOBILE ACCIDENTS.

ON Saturday Mr. George Robey, who is appearing at the Palace, Blackpool, was driving his motor-car along the Marine carriage drive, when he knocked down a nine-years-old girl, Eliza Gomersall. Mr. Robey took the child in his car to a surgery, and then home. Fortunately no bones were broken.

A MOTOR accident has occurred on the outskirts of Denbigh, in which Mr. Timson, partner of the accessories firm of Timson Bros., Birmingham, has met his death. The car appears to have skidded in the neighbourhood of Fael Gwaryrog, running into a wall and toppling over. Mr. Timson was pinned beneath it, the other occupants being seriously but not fatally injured.

MR. HALL CAINE had arranged to preside on Monday at a swimming fête in Ramsey at which Mrs. Hall Caine was to distribute the prizes. During the afternoon, however, the following telegram was received from him: "Motor-car ran down the carriage drive and is completely wrecked. Nobody injured at all, but my nerves utterly broken. Cannot possibly be with you to-day. Extremely sorry."



The 30-h.p. 12-seated Single-Deck Motor-Bus recently supplied by the Maudsley Motor Company, Ltd., to the Midland Railway Company for service between Desborough and Rothwell.

granite chippings. A coating of this is first put over the road and then the metal is rolled until the preparation begins to work through. Another coating is then put on top, rolled in, and finished off.

WORCESTER.—Consideration has been given by the Worcester Shopkeepers' Protection Association to the speed of motor-cars, and a resolution has been passed that, owing to the enormous damage sustained by the shopkeepers on the main roads of the city by their goods being spoiled by dust raised by motor traffic, a request be made to the local authority to frame immediately a bye-law limiting the speed to eight miles an hour.

OXFORD.—According to the county surveyor of Oxford, seventy-one signs have been put up in various parts of the county under the Motor Car Act. Although he reports that drivers of cars rarely take any notice of such signs, he urges landowners to continue the policy which has been begun by some of them of cutting down the high hedges at awkward corners.

WALES.—As evidence of the improvement that has taken place in the Welsh roads, we learn of a motorist who toured in North Wales on a 20-h.p. Beeston Humber car, his headquarters being established at Barmouth. The vehicle carried five passengers and their luggage from Dolgelly and over the mountain passes to Dinas, Mawddwy and Bala. The summit of the mountain road is 1,700 ft. above sea level, and for nearly seven miles the road is rising, gradients varying from one in five to one in twelve for a great part of the distance. These roads had hitherto been regarded as almost impassable to wheeled vehicles, but apparently have no terrors for the modern motor-car.

WHILST a large motor-car belonging to Messrs. Whiteley's was proceeding along White Horse Road, Croydon, on Tuesday, it collided with a private motor-car owned by Mr. William M'Blane, of Croydon. Both were travelling in the same direction. Whiteley's car, the rear vehicle, caught one wheel of the other, and swung it round into a pony and trap owned by a grocer, which were standing just outside the shop. Both pony and trap were knocked through the shop window, wrecking it entirely. The cart was smashed, and the pony severely injured.

A MOTOR-CAR accident, resulting in the death of a chauffeur and serious injury to an Inverness doctor, occurred on Tuesday afternoon on a precipitous road on the western shore of Loch Ness, near Fort Augustus. Dr. John Kerr and a chauffeur named Robert Hamilton were motoring to Fort Augustus on a car of 10-12-h.p. When they were running along a steep hill road the car failed to take a bend, and striking the parapet of a small stone bridge it dashed over an embankment, falling a considerable distance. The chauffeur was killed instantly, while Dr. Kerr was badly injured and rendered unconscious. On learning of the accident Dr. Luke motored to Fort Augustus to attend to the patient.

FROM the United Motor Industries, Ltd., comes an illustrated circular of the "A.E.C." carburettor they have lately put on the market. A feature of the apparatus is that provision is made for adjusting the air and petrol from the outside, and that there are no small or delicate parts to get out of order. It is claimed to be not only very economical but to render the engine extremely flexible.

FORTHCOMING EVENTS.

AUGUST.

- 22nd (Sat.).—Annual race meeting of the A.C.U. at Shepherd's Bush. Manchester A.C. club run.
Southend and District competition at Laindon.
- 23rd (Sun.).—A. C. du Rhone Mont Pilat trial.
- 29th (Sat.).—Meet of the Lincolnshire Motor Club at Lincoln. Berks A.C. closed hill climb at Wantage.
Mont Ventoux hill climb of the A.C. Vauclusien.
Leicester A.C. gymkhana at Freeman's Meadow, Aylestone Road, Leicester.
Essex M.C. 200 miles Reliability Trial.
- 30th (Sun.).—Southend M.C. run to Great White Horse Hotel, Ipswich.
- 31st (M.).—Closing day for the entries for the Army Council Light Tractor Trials to be held in February, 1909.
Daily practice begins for the Isle of Man Trials, from daylight to 8 a.m.

SEPTEMBER.

- 4th and 5th.—Reliability Consumption Trial of the Essex C.A.C. at Norwich in connection with the R.A.C. provincial meet.
- 5th (Sat.).—Aston Hill climb of the Herts C.A.A.
Lancashire A.C. gymkhana.
Invitation of Sir D. Salomons to the Kent A.C. to visit Tunbridge Wells.
Provincial meet of the R.A.C. at Norwich.
Richmond M.C.C. week-end at Henley.
- 12th (Sat.).—Brooklands A.R.C. meet.
- 17th (Th.).—Touring car competition of the A.C. of Holland through that country.
- 19th (Sat.).—Provincial meet of the Motor Union at Oxford.
North Middlesex A.C. 100 miles reliability run.
Manchester A.C. reliability run for small cars.
Meet of the Hull Auto Cycle Club and the Lincolnshire Motor Cycle Club at Brigg.
Annual Hill Climb of the Bristol and Gloucestershire A.C.
Lunch of the Kent A.C. at Dover.
Herts C.A.C.'s climb for cars at Aston Hill.
- 23rd (W.).—Graphic Trophy and Henry Edmunds Competitions in the Isle of Man.
- 24th (Th.).—The "Four Inch" Race in the Isle of Man.
- 25th (F.).—Welsh A.C. reliability trial for motor-cycles.
- 26th (Sat.).—N.W. London M.C.C. petrol quantity judging competition.
Invitation to the Kent A.C. by Mr. and Mrs. Schlenheim to Chislehurst.
- 27th (Sun.).—Southend M.C. run to White Hart Hotel, Braintree.

LIGHTING-UP TIMES—LONDON.

| | | | |
|-----------------|------------|-------------|-------------|
| August 22nd—8.8 | 24th—8.3 | 26th—7.59 | 28th—7.55 |
| " 23rd—8.6 | " 25th—8.1 | " 27th—7.57 | " 29th—7.53 |

To find the approximate lighting-up time in August for Birmingham 12 minutes should be added to the above times, 17 for York, 21 for Manchester, and 43 for Glasgow.

CONCESSION TO THE PUBLIC.

WRITING to the "Times," Mr. Max Pemberton suggests that the concessions to be made by the motorist to the public should be as follows:—

- (1) Submission to and a strict observance of a speed limit of twelve miles an hour in all villages and in such urban districts as seem fit and proper to the central authority.
- (2) A faithful observance of the following rules of safe driving:—
 - (a) Never to take a sharp corner at more than a walking pace.
 - (b) Never to overtake another vehicle upon a corner.
 - (c) Never to drive the engine down hill.
 - (d) To slow down upon passing pedestrians and other traffic.
 - (e) To avoid the mania for taking doubtful openings in traffic, a habit very exasperating to the public and attended by much risk.
 - (f) Not to drive faster than twenty miles an hour at night under any circumstances, and to limit the speed to ten or fifteen miles an hour wherever other traffic or pedestrians are likely to be met.
 - (g) To slow the car down to ten miles an hour at all cross-roads where a clear view is not obtainable.
 - (h) To give cyclists plenty of room and avoid the inconsiderate and ungentlemanly practices by which they suffer so much inconvenience.
- (3) The general habit of unselfishness, thus lessening the evils of the dust question and appeasing a large section of the public which would bear no hostility to the motor if it were not for the dust question.
- (4) The suppression of the open exhaust, dear to the heart of wild chauffeurs and of vain and foolish owners.

These are simple matters, and their observance should be a pleasure to every considerate driver, according to the novelist.

THE balance-sheet of Messrs. Benz and Co., of Mannheim, Germany, for the last financial year shows a net profit of £34,608, out of which a dividend of 8 per cent. is being declared.

POLICE "CONTROLS."

THE police have now a measured 1,200 yards down the Lickey Hill, on the old Birmingham road at Bromsgrove.

VISITORS to Folkestone from London should be extremely careful, many traps having been established on the road.

IN the Colsterworth district of Lincolnshire, and also about Grantham, Newark and Stamford, great care should be taken.

NEWMARKET is again the scene of trapping.

TRAPS are being worked on both sides of Shooter's Hill every week end.

AMONG the Hampshire traps, which are many, special intimation has recently been received of those on the London side of Petersfield, at Romsey, on the Winchester and Salisbury road, and near the barracks on the Christchurch-Bournemouth road.

A POLICE TRAP is reported from Church Street, Cromer.

THE police are frequently watchful of motorists in the Matlock district and a trap may be met anywhere between the station at Rowsley and Homeford Cottage, on the Derby road. We understand the trap is in operation every Sunday.

COMPANY NEWS.

CERTUS GEARLESS COMPANY.—£25,000. To acquire the assets and liabilities of the Certus (Gearless) Company, Ltd., and to carry on the business of engineers and manufacturers of motor and other cars, &c. Minimum cash subscription, £6,400. 43-4, Great Windmill Street, W.

DUNLOP GARAGE AND MAINTENANCE COMPANY.—£40,000. As title. Agreement with Dunlop Pneumatic Tyre Company, Ltd. Private. 14, Regent Street, S.W.

BURTON MOTOR COMPANY.—£3,000. To take over business of automobile and general engineers, &c., carried on by A. M. Mason and R. G. Mason, at Burton, as Mason Brothers. Private. 1, Bridge Street, Burton-on-Trent.

STEALING A CAR.

LAST week we recorded a case at Andover in which two men were sentenced to imprisonment for stealing a motor-car. A similar case has occurred at Middlesbrough, where John Peacock and Carl Blower were charged with breaking into the garage of Dr. Glen, of South Bank. They had broken the lock of the garage door, taken the car out, altered the number from D 121 to D 12, and then had a drive into the country. After a trip of about twenty miles they ran into a ditch near Northallerton. The prisoners were sent to gaol for two months without hard labour.

BUSINESS NEWS.

THE Motor House, whose accessories department is at 318, Euston Road, London, N.W., have issued a new list of special accessories they have now in stock at prices which should suit the motorist of moderate means.

THE Dunlop detachable rim has, until a few weeks ago, been manufactured by the Stevenson Wheel Company, of Coventry. The enormous growth in demand has, however, led to the organisation of a new concern, absorbing the Stevenson Company, with the title of the Dunlop Rim and Wheel Company, Ltd. In addition to taking over the entire production of the well-known detachable rim, the new company will develop the Stevenson Company's fixed wheel and rim business. The increase of manufacturing facilities afforded by the new concern will result in a speedier production of detachable rims and a more ready conversion of fixed into detachable rims.

WE had a run a few days since on a 25-h.p. Maudslayi two-ton lorry. The vehicle had been temporarily converted into a char-a-banc to carry twelve passengers. Although fitted with twin solid tyres we were agreeably surprised at its smooth running at twenty miles per hour. All ordinary gradients were taken on the top speed. What struck us most, however, was the absolute rigidity and firmness when travelling at high speed, and consequently freedom from excessive vibration.

MESSRS. C. F. F. WEARNE AND CO., motor engineers, Singapore, have recently taken delivery of a Standard 20-h.p. six-cylinder car, and are at present engaged in a run through Java and Sumatra, giving demonstrations of the vehicle's capabilities to intending clients.

THE MOTOR CAR EQUIPMENT COMPANY, 1727, Broadway, New York, has recently introduced a useful fitting in the form of an electric fan intended for use in limousines. The fan, the motor of which is worked off a six volt battery, is intended to be placed in the roof of the car, and, being very powerful, keeps the air inside always cool and fresh.

SIR BACHE CUNARD is one of the latest to acquire a "Sheffield-Simplex" six-cylinder car, which he has been using in Scotland during the past few weeks. He writes in glowing terms of the silence and smooth way it runs and its ability to take hills at top speed.

MR. C. W. SPENCER, lately superintendent of the Canadian Northern Railway, has purchased a White steam car for use in Montreal.

UNDER the title "Is your Tyre Pressure Right" the Palmer Tyre Company, Ltd., of 119-123, Shaftesbury Avenue, W.C., have just issued a booklet, a perusal of which should prove useful and instructive to all motorists. A copy can be obtained by application to the Palmer Company.

THE Motor-Car Journal.

VOL. X.]

LONDON, SATURDAY, AUGUST 29, 1908.

[No. 495.

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COMMENTS.



DANIELS MOTOR BICYCLE (1885)

ON several recent occasions we have pictured the interest of the President of the United States, and also of the two rivals for succession to his high office, in the motor-car, and now, apparently, the automobile is to play an unusual part in the Presidential election. The Board of Governors of the Professional Chauffeurs' Club of America, at a representative meeting, have resolved that "the organisation take an active and energetic part in the coming election of President of the United States." At the assembly it was pointed out that the drivers of motor-cars could control the conveyance of voters in connection with elections, and if they were organised doubtless could considerably harass, or otherwise, the voting strength of any candidate. Evidently they do not in the first instance propose to play any tricks upon the contestants such as are reminiscent of the hustings days in this country. Instead, they have adopted a political platform and are asking for (1) the abolition of prosecutions for merely technical violations of law, (2) the abandonment of vicious police traps, (3) the removal of biased judges from the Bench, (4) the general improvement of the roads of the country. Motorists in this country could equally well subscribe to such a policy.

To Norwich.

NEXT Saturday the R.A.C. will hold a provincial meeting at Norwich, when H.S.H. Prince of Teck will preside. The route recommended for those Londoners motoring to the Meet from London is as follows, the distance being 114 miles:—London, Finchley, Chipping Barnet, Potter's Bar, Hatfield, Hertford, Ware, Braughing, Barkway, Barley, Babraham, Six Mile Bottom Station, Newmarket, Barton Mills (Mildenhall on left), Thetford, Attleborough, Wymondham, Norwich. Those travelling by car from Nottingham should go *via* Bingham, Bottesford, Grantham, Great Ponton, Colsterworth, Bourne, Spalding, Holbeach, King's Lynn, Swaffham, East Dereham, Norwich (118 miles). From Northampton the route of 110 miles is:—Yardley, Hastings, Turvey, Bedford, Roxton, St. Neots, Eltisley, Cambridge, Newmarket, Barton Mills (Mildenhall on left), Thetford, Attleborough, Wymondham, Norwich. Motorists are urgently requested to exercise the utmost caution and to display every consideration in driving through Newmarket, as a number of race-horses are continually upon the roads, and especially upon those leading to the Heath.

The Motor Union Handbook.

THE latest evidence of the activity of the Motor Union is the production of a Foreign Handbook, which will prove of the greatest value to all contemplating a tour on the Continent. The publication, without being bulky, is extremely complete, and includes the full customs and road regulations for France, Algeria and Tunis, Austria-Hungary, Balkan States, Belgium, Bulgaria, Denmark, Egypt, Finland, Germany, Greece, Holland, Italy, Norway, Portugal, Roumania, Russia, Servia, Spain, Sweden, Switzerland, and Turkey, and also gives con-

siderable information on these points as to America, Australia, South Africa, and Asia, India, China, and Japan. An alphabetical list of the principal towns and villages, with the leading hotels, garages, and motor repairers, forms a very useful section, while an itinerary of twenty-one selected routes, lists of reliable maps, road books and guides, references to places of interest near the towns, an excellent dictionary of technical phrases in English, German, French, and Italian, touring notes, railway and steamship facilities, &c., are other sections of a valuable production. In the 200 pages there is a mass of useful information, and, so far as we can see from a cursory examination, no point has been overlooked. The Handbook is of a size that can be conveniently carried in the pocket.

A Small Census.

How thoroughly the automobile is becoming the ordinary vehicle of the road is suggested by some figures which have been published as the result of a census taken by the Malden and Coombe Council in connection with a petition to be presented to the Surrey County Council. During twelve days recently at Coombe Lane twelve traction engines, the same number of trailers, and 693 motor-cars passed along—few of which were owned by local residents. The actual comparison of horse and motor traffic works out as follows:—

| | | | | |
|-----------------------------------|-----|-----|-----|--------|
| Heavy 4-wheeled trade vehicles | ... | ... | ... | 1,293 |
| Light 4-wheeled trade vehicles | ... | ... | ... | 1,041 |
| Heavy 4-wheeled pleasure vehicles | ... | ... | ... | 99 |
| Light 4-wheeled pleasure vehicles | ... | ... | ... | 2,292 |
| Light 2-wheeled pleasure vehicles | ... | ... | ... | 1,421 |
| Cycles | ... | ... | ... | 12,725 |
| Traction engines and trailers | ... | ... | ... | 12 |
| Motor-cars | ... | ... | ... | 693 |
| Horse riders | ... | ... | ... | 408 |
| Pedestrians | ... | ... | ... | 83,012 |

Motor-cars are, considering that they have only been introduced during the last few years, quite a conspicuous feature of the census.

Teaching the Public.

THE return of the London school children to their lessons seems to give added reason for the letter from Mr. Samuel Roberts, M.P., to the Education Committee at Sheffield suggesting that school children should be cautioned against crossing the roads in front of motor-cars. The teachers could, as we have previously pointed out, do a great deal to compel attention to the folly associated with playing on the roadway when motor-cars are likely to come along. Unfortunately, however, the negligence of the public is not limited to children at school, but many grown-ups are often as careless and as hesitating in crossing the roadway as are the members of the younger generation.

Licences in Scotland.

IN our issue of the 8th inst. attention was drawn to the way in which the licences of motor drivers were being issued by the Midlothian County Council, which refused to issue permits to drivers of motor-cycles and motor-cars extending beyond the 31st December in the year of issue, thus causing great inconvenience. Thanks to the efforts put forth locally by

Mr. A. T. Mitchell, the hon. secretary to the Lothians District Association of the C.T.C., who raised the matter in our columns, the County Clerk has now decided, after correspondence with the Secretary for Scotland, to issue, or renew, drivers' licences for a period of twelve months from the date of issue or renewal, as is general elsewhere.

A Trio of Tragedies.

ON Monday an inquest was held at Islington on the body of a man who had had fourteen ribs fractured by the wheel of a van drawn by three horses passing over him; at the same court the same coroner (Dr. Danford Thomas) inquired into the circumstances attending the death of a labourer run over by a horse-drawn dray. This occurred in the Green Lanes, and a doctor who was passing in his motor-car at the time of the accident said the deceased was killed almost instantaneously. And, again, on the day when these inquests took place a third was held in Islington in connection with the death of a child who had been fatally injured by a van drawn by a horse. This series of fatalities were published together in a morning paper under the heading of "Street Fatalities—Difficulties of London Traffic," as though they were but incidentals of the day's work. Had motor-cars been concerned the title would have been far more emphatic as to the daily "Toll of the Motor," or some equally obtrusive and insolent reference to a modern convenience.



From a Sketch

An Up-to-Date Prison Van.
(in La Locomotion Automobile.)

The Clubs and the Central Organisation.

ON two or three occasions we have reminded our readers that the time is drawing near when the compromise in the affiliation of clubs to the central bodies will have to come to an end and those in the provinces will have to declare one way or the other. With a view to bringing about a clear understanding the Manchester A.C. has taken a tactful part in the attempt to induce the R.A.C. and the M.U. to accept a joint scheme of affiliation. Upon this matter they are now circularising those clubs which accepted the compromise last year, and thus it is hoped to avert the inconvenience that is likely to arise should the clubs be compelled to affiliate with one or the other organisation named and yet unable to affiliate with both.

Police as Patrols.

APPARENTLY the resources of magisterial wisdom are not yet exhausted, and the presiding magistrate at the Linton Petty Sessions, near Newmarket, has suggested a means of checking the speed of motorists which will commend itself to those who are advocating the revival of the toll-gate and other ancient means of stopping the excessive speed of vehicular traffic. He suggested that an effective method of stopping the present speedy rate of things would be for a number of police

constables to travel along the road on motor-cars at 20 m.p.h., and stop every car that passed them. Provided that the police carried a red flag—or some other conspicuous device—above the car, so that its whereabouts would be revealed, few motorists would object to the innovation. Certainly they would not try to pass the police, whose public presence on automobiles would find many supporters in the industry. Objection to the police has generally arisen when they have been concealed behind hedges.

A Fair View of Things.

AT last week's meeting of the Lancashire County Council, Alderman Shuttleworth reported that the cost of road maintenance had increased from £223 to £246 per mile within the last twelve months. According to the officers who had been specially asked to report on the matter a very large proportion of the increase was due to the heavy motor wagons, the Lancashire main roads not having been constructed for heavy traffic of that description. In his view pleasure automobiles were not to blame to any considerable extent. This impartial view of things is quite refreshing after the many outbursts that have lately occurred at meetings of councils of much less importance than that which is concerned with the County Palatine.

A Parish Council in a Police Trap.

THE Clayton Parish Council at their last meeting fell into a kind of motor trap. A strong protest was sent to the Chief Constable about a Sunday motor-cycle competition recently on Clayton hill. The official complaint caused enquiries. The police could not ascertain that any motor competition took place, and the story appears to have come to this, that the Chairman of the Parish Council saw motor-cycles practising up and down the hill, the residents saw a gathering of some sort, and a newspaper report of a hill climb was taken to confirm the conclusion arrived at that motor-cycles were concerned, whereas the competition was confined to the ordinary cycle. Many complaints about motorists are almost as groundless.

Passive Resistance.

A NEW form of the Passive Resistance movement was suggested on Monday when Mr. Harold Wallis, of Stroud Green, objected to pay his rates because the Borough Council of Hornsey had declined to do anything to regulate or reduce the speed of motor-cars passing through that district. He told the magistrates at Highgate that though the Council had the power to limit the speed to ten miles an hour, and though he had brought the matter forward on many occasions during the past five years, they had done nothing. Seeing that there had been many accidents caused by motor-cars in the neighbourhood, he took that form of calling attention to the inaction of the Borough Council in the matter. Apparently he was satisfied with the verbal protest, and now will probably pay his rates in peace if not exactly in content.

A new Missionary of the Road.

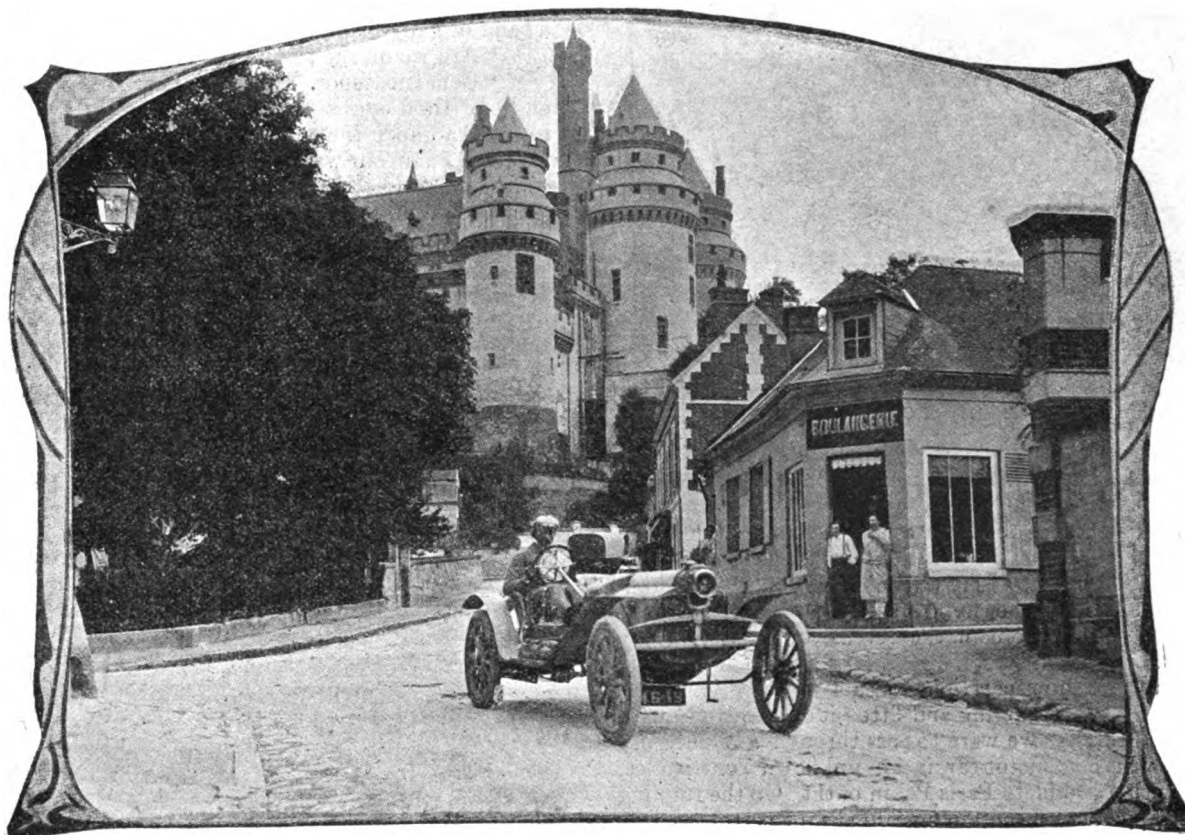
THE efforts of men—as vain as was Mrs. Partington's effort to withstand the Atlantic with her mop—to stay the advance of the motor-car would be amusing but for their association with a blind, and often a blatant, prejudice which seeks to thwart all progress. The Highways League has lately flooded the newspapers with columns of figures detailing the mishaps credited to the motor-car; now from Hove comes news of another effort to arrest the advance of the automobile movement. Mr. William Mayner, who resides in the pleasant suburb of a town which has profited greatly from the motor-car, is forming an Anti-Dangerous Motorists' League, which is to print handbills and posters calling on Englishmen to use their public roads in safety

from the motor-cars. These will be circulated by Mr. Mayner throughout England from a dog-cart on which he is to tour the country. It would have been more interesting had he travelled by means of a motor-car, and so given the British nation an opportunity of learning what he regards as the legitimate speed at which a car should pursue its way.

Organisation in India.

RECENTLY we referred to a scheme which was being developed in India for the formation of an Automobile Club for the whole of the country. This has been formulated by Major D. Warren, and would not only cultivate reciprocal relations with kindred institutions in England and abroad, but would be organised on almost identical lines to the Royal A.C. in these islands. Owing to the enormous size of India, however, it

shall be able to make use of the railway from Blantyre—which I had not counted on—the motor was absolutely indispensable if only for that journey. I am going to start on my European round. To-morrow I celebrate at Likwenu, Sunday at Zomba, then on to Blantyre and Chiromo. Realise the fact of eleven motors in Zomba, four in Blantyre, over twenty in the country; a motor union in Zomba for petrol and spares; a motor-car of 8-h.p. lately arrived for the Governor; a chauffeur for the Government; and a traffic motor-wagon to run between Zomba, Blantyre, and Liwonde. My motor has already covered well over five hundred miles in the service of the mission, and this, be it noted, during the rainy season." It should be pointed out that the distance from Liwonde, in the north of the territory, to Blantyre, the rubber and coffee growing capital in the centre of the country, is ninety miles *via* Zomba; whilst Chiromo, another station mentioned in the letter, is eighty



A View of the Course on which the Coupe des Voiturettes Contest will be held in France next month. A Sharp Turn at Pierrefonds.

might be found advantageous to divide the Dependency into four sub-divisions, namely, north, south, east and west, giving to each district some local authority and retaining the supremacy for the central organisation. Several matters which have long been settled in this country would require attention from the club for India, such as the delivery of petrol in places a distance from Calcutta and Bombay, matters of insurance and the establishment of repair depots. All these are aspects of the subject in which India is at present lacking.

Motors and Missions.

NOT only are bishops in this country becoming motorists, but we learn that on some of the mission fields of Africa the automobile is being utilised in the interests of missionary effort. The Rev. A. M. Jenkins, of the University Mission in Central Africa, is now regularly using a motor-bicycle in connection with his work. It lessens his time spent in travelling very considerably, and, to use his own words, "The motor-bicycle is a tremendous boon. I am expected to visit Chiromo at least once a quarter, and were it not that I

miles due south of Blantyre, and to reach it from the capital necessitates the motor crossing two ranges of hills.

As we went to Press the members of the conference convened by Prince Francis of Teck to consider the Isle of Man races were assembling at the R.A. Club-house.

THE entire Manx course will be hand-swept before the dust-laying operations begin. For the dust-laying itself a cheaper and more rapid method has been devised than previously, namely, the use of traction engines and trailers. This work can start at Ramsey and at Quarter Bridge at the same time, and be continued until the two operations reach mid-way. The mountain road is in reasonably good order; that part from the White Gate below the Bungalow to the Keppel gate is somewhat loose, but the Highway Board has promised to remove all the loose stones before the practice begins, and to continue that operation from time to time, so that on the day of the race it will be clear of loose stones. Permission has been given to tar the road for 100 yards from the Sulby Bridge towards Sulby, and to take all other precautions that the R.A.C. may deem advisable for the protection of the bridge.

MOTERING TO THE KILLARNEY OF MEXICO.

By FRED M. DEAN.

TWO reasons prompted us to take the trip. In the first place we were in dire need of recreation from business cares. What better way to spend a vacation than by motoring over the mountains to that Killarney of Mexico, Lake Chapala. The trip would furnish plenty of exhilarating sport and excitement, and perhaps some manual work, the best



Motoring in Mexico.—A Strip of Good Road near Jalos.

panacea for overworked minds, and the Lake would furnish us the finest duck shooting in the world. Lastly, we wanted to silence by something conclusive the scoffers at the Club, who held that it was impossible to drive any motor across the sand and rocks between Aguascalientes and Guadalajara. For two years my 1905 Reo car had served me faithfully in carrying me between Aguas and the mines at Asientos, and I was confident that if the feat were in the realms of possibility my old car would do the trick.

We hurriedly made preparations for a two weeks' absence. I gave the car a good overhauling and fitted it out all round with new tyres and tubes. As we were to pass through a practically virgin country, where a motor-car is an unknown contrivance, we stocked it with a complete Paris-Pekin outfit. On the running boards we strapped cases containing 50 galls. of petrol. Extra tyres adorned the bonnet, and on the luggage carrier at the rear we carried a huge box of provisions to last us for several days. The tonneau we filled with bedding, block and tackle, spade, pick, crowbar and sledge, only leaving room for a seat for the Doctor's Mozo Juan, who was to act as cook, valet, and general help. Before the days of the good Diaz the country which we were to traverse was a hotbed of brigands, and lest the clans had failed to realise the merits of our twentieth century steed, we took with us also two shot guns, one Winchester rifle, two revolvers, and 600 rounds of ammunition. We certainly were a formidable expedition, and the car, fully equipped, would have tipped the scales at nearly 30 cwt. In appearance we would have rivalled the German around the world contestant before the German army came to its assistance.

Our start from Aguas on January 26th of the present year was uneventful. Far ahead lay the brown undulating mountains, over whose gashed and riven flanks we must pass in order to reach the goal ahead. As far as Teocaltiche we followed a typical Mexican road—two ruts and a hog's back between. But long practice had made me more or less expert at these high-ways, and the 70 kilometres were covered in four hours—not Brooklands speed, of course, but a pace which, if persisted in, would land us without trouble at the lake. The road still stayed with us as we rolled out of Teocaltiche. But our joy was

short-lived, for at Morisco it abruptly ended. Before us stretched endless ploughed fields and further ahead still stone covered hills. A reconnoitre discovered not even a mule trail, and so, commending ourselves to the kind fates, we found an opening in the stone fence and dropped into the furrows. To the blasé motorist in search of thrills I can strongly recommend a ploughed field. Like a ship in a storm we swayed and careened over a good two miles of fertile soil. The field traversed, we came to the bank of the creek. Could we make it? The Doctor and Juan descended and waded knee deep across, and then gave us the signal to make an attempt. I open the throttle wide, and the good old car snorts through the muddy water and rushes triumphantly up the dry bank to the other side. More ploughed fields greet us and we again start our swaying career towards the distant mountains. A few miles further on we come to a barbed wire fence; we cut it ruthlessly and emerge on to a broad rock strewn slope. For hours we have seen not a sign of life, but as we emerge we view in the distance a band of gaily-blanketed peons.

"Are we on the right trail to Jalos?"

"Como no, senor. Follow the curve of land towards the hills," and our tired eyes sight along brown hands that point the way towards a gap in the rugged horizon. We tack on to a new burro trail and bump our way painfully along until we come to an abrupt hillside of solid rock. Its sides and flanks bristle with outcropping rocks. There is no way to surmount it unless we cut out a path, therefore we bring the sledge and crowbar into commission. In an hour or so we have the face of the mountain fairly well manicured; the largest obstacles we prise into the valley below. The small rock teeth we smash into some semblance of smoothness, and then comes the block and tackle. We fit a Spanish windlass at the top, connect it by rope with the nose of the frame of the car, and then laboriously pull and push until the car finally surmounts the rugged crest. We feel we are entitled to a rest and we sink to the ground with satisfaction. The climb finished, we are inclined to make light of our efforts,



Motoring in Mexico.—A Halt for Lunch.

and between puffs of our cigarettes we smile at the rocky teeth below us. But how little we knew really of the trials that awaited us.

(To be continued.)

THE owner of a motor-boat plying for hire without a licence in the Bay on Bank Holiday has been fined 5s. and costs at the Barry Police Court, for contravention of the local bye-laws.

THE SOCIAL WHIRL.

KING EDWARD gave a luncheon at the Hotel Weimar, Marienbad, on Monday, in honour of the Duke and Duchess of Saxe Coburg and Gotha. The guests arrived in their motor-cars and subsequently drove with the King to the golf links. His Majesty showed great interest in the automobile of the Duke of Saxe Coburg, which carried six lamps surmounted by crowns.

DURING her stay in this country Her Majesty the Queen of Spain is using a Daimler car of the standard 42-h.p. Milverton landaulet type, painted the royal colours—blue, lined red—the chassis being painted red, lined blue. The upholstery is in mottled drab cloth and the front seats in leather to match. The doors are embellished with the Spanish coat of arms, and the car looked very smart on Monday when the Queen and her brothers drove from Osborne Cottage to Bembridge for tea.

THE Duchess of Wellington was motoring on Monday afternoon with her daughter from Ewhurst Park, Basingstoke, to London, and when near Kew Bridge the chauffeur was passing an electric tramcar. At that moment a horse and van emerged from a yard, and the van and motor-car came into collision, the driver of the former being severely hurt. The occupants of the car were not injured.

THE Earl and Countess of Malmesbury have left Heron Court, near Christchurch, on their motor-car to pay some visits in the North of England. They will be away till the end of September.

THE Earl of Clarendon, the president of the Hertfordshire County A.C., is at Brides-les-Bains. He will not return to The Grove, Watford, where he recently entertained his fellow motorists of the county, till the third week of next month.

LORD and Lady Londonderry were entertaining friends all last week for the Stockton races, and each day took their party to the course in motor-cars.

ROMAN Catholics of South London, having gathered £500 to purchase a motor-car for Dr. Anigo, Roman Catholic Bishop of Southwark, the Bishop has decided to use the money instead for the support of poor missions in his diocese.

THE HON. MRS. LYNTHURST BRUCE, who was known to fame as Miss Camille Clifford, was in a motor-car mishap the other afternoon in Wellington Street, within a few minutes' walk of the offices of the M.C.J. The car in which she and her husband were travelling was run into by another vehicle, but both cars maintained their balance. Mr. and Mrs. Bruce received a violent shaking, but were otherwise unhurt. The back wheels of their car were slightly damaged, and the front of the other vehicle was twisted. Mr. Bruce telephoned for another car at his garage in York Road, Waterloo, and on its arrival he and his wife proceeded to their destination.

AMONG the chauffeurs lately "presented at court" have been those of the Premier, the Duke of Westminster, Baroness von Eckhardstein, Lady Milburn, Sir Frederick Johnstone, Sir Gilbert Greenall, Sir W. D. Pearson, M.P., and Deputy Inspector-General Biddulph. A chauffeur who drove Princess Louise de Bourbon to Goodwood has been fined at Guildford, where has also appeared a driver who drove some officers to a conference with General Smith-Dorrien in the recent manoeuvres.

Few towns are so well provided in the way of well-equipped garages as is the Bournemouth district—a centre which is one of the favourite week-end resorts of both London and Birmingham motorists. Most of the principal hotels have garages for those who stay at their establishments, and a few others have arranged so that their patrons can have reliable

accommodation for motor-cars as well as for themselves. Among the many other garage proprietors who place themselves at the service of motorists on all occasions are the following well-known firms:—Messrs. Edmunds and Co., Christchurch Road; Mr. C. Pooss, Commercial Road; Messrs. Walkinton Bros., Holdenhurst Road; Messrs. E. Mens and Co., Palmerston Road; Messrs. Edwards and Co., Old Christchurch Road; the Imperial Motor Works, Holdenhurst Road; Messrs. Huntingdon and Graham, and Mr. A. MacArdle.

A WEEK or two ago I referred to the probability of a Motor Carnival being organised in connection with the Worthing Regatta Week this year, and in connection with this Mr. F. C. Dee now kindly sends a copy of the entry form for the events of September 2nd—the day to be devoted to a decorated motor procession. Entries should be made to Mr. W. E. Tree, hon. sec., 177, Montague Street, Worthing, on Monday next at the latest.

THOSE engaged in the industry seem to be out of town almost entirely just now—judging by the appearance of the dining room of the Motor Club on recent days, but in a few weeks its wonted brightness and activity will be resumed.



The Meet of the Members of the North Berkshire Automobile Club at Hinton Manor, Faringdon, by invitation of Capt. and Mrs. Leder-Symonds.

A MEMBER of the R.A.C. has been wondering why children throughout the country stand by the roadside with a notebook writing down the numbers of passing cars. The problem has puzzled motorists since the days when automobiles were first lettered and numbered, and is one of those inscrutable mysteries not yet satisfactorily fathomed. Probably in a duller season some of the "dailies" may be able to settle the point.

ACCORDING to Sir Martin Conway over 4,000 motor-cars were garaged for the August Bank Holiday at Folkestone. He writes:—"Most of these cars came from outside Kent and brought money into Kent. It is not unlikely that they spent some £10 apiece in the county. At that rate Kent profited to the tune of some £40,000 in three days. The day when the cars were counted on the Folkestone road was a busy one, but not the busiest. As many as 1,000 cars have been counted in one day on the same road. Of course, the bulk of them were not Kentish cars. Thus, of the first hundred that passed, sixty-four were London cars, thirteen Kentish, twenty-three from other counties. Thus it is clear that good roads and reasonable police have the effect of bringing people into the county from outside, thus making a market in the county itself for its produce and industries."

LOLLIUS.

GOSSIP FROM PARIS.

M. ARCHDEACON is of opinion that the French press has gone a little far in proclaiming the "considerable superiority" of Wilbur Wright's flying machine over those of his fellow countrymen. He finds two great defects in it; the one is the absence of a tail, which gives automatic stability to the French aeroplanes, and the use of a sledge instead of wheels, necessitating a special apparatus for starting on a flight. While refraining from any sort of personal appreciation, I find it interesting and important to note that M. Archdeacon, who is an authority on aviation, says the tail or hind planes serve exactly the same purpose as the hind wheel of a bicycle, and that compared to the Farman-Delagrangé aeroplane the Wright machine is a monocycle. It requires an acrobat such as Wilbur Wright or his brother to manage it, as it is always pitching and tossing about. Great skill and long practice is required to steer it. "Never could such an aeroplane be put into the hands of the public any more than a monocycle between the legs of an ordinary cyclist." Farman and Delagrangé would, he thinks, never have learned to fly if they had been put on Wright's machine. It took the Wrights six years' practice with gliding apparatus to obtain their present dexterity. As for Wilbur Wright beating Farman's officially controlled record of twenty minutes in the air, M. Archdeacon considers it very



Mr. Wilbur Wright.

— From a Caricature Sketch

[in the "Auto."

likely he will, but he looks forward with pleasure to the struggle for superiority which must inevitably follow, and in which he believes his fellow countrymen will not figure badly. The French aviators, says M. Archdeacon, with perfect truth, are stopped at the present moment by the motor in their attempts to make long flights, and he is far from being convinced Wilbur Wright will not encounter the same difficulty in his two projected long flights of an hour's duration each. "I am sure his motor has numerous imperfections and that it is likely to get hot during a long flight." Consequently this authority declares that from "the point of view of a machine destined to be put into the hands of an ordinary person, I contend that the Wrights' aeroplane is behind ours, that the absence of a tail is a great mistake, and that the mounting of the apparatus on skis is another."

THERE are of course a good many motorists in Switzerland, and even motor manufactories in that beautiful country, but, with its mountains and traffic regulations it cannot be called a paradise for self-propelled vehicles or for those who drive them. I will admit that many of the speed regulations existing in certain districts which seem simply incomprehensible may be

justified by reasons a dweller in plains cannot appreciate. But most surely some of them are inspired by a perhaps natural aversion to anything which disturbs the equanimity of the quiet life of the inhabitants, especially if it does not bring with it an immediate pecuniary advantage. But the Swiss are carrying their love of peace a little too far. A gentleman who has just returned from a motoring tour tells me that, though he carefully observed what seemed to him the ridiculous regulations prohibiting motor-cars on certain roads and imposing unnecessarily slow speed limits on others, he was stopped by a gendarme, rural policeman, or some such official, because, wishing to avoid the possibility of a collision on a narrow road with endless turnings at the foot of a steep mountain, he sounded his syren. To his amazement the man in uniform told him he had violated the regulations and was liable to a fine, and even hinted that in the case of committing a second offence of that heinous character he might be put into prison. Feeling utterly bewildered, for he had not yet realised the fact that his syren was the culprit, the tourist asked the official what he had done to incur such terrible penalties. Thereupon the gentleman in the cocked hat pulled out of his pocket the little book containing the regulations for motor-car traffic, and read aloud Clause 6. It stipulates that every automobile must be provided with "a sonorous horn to the exclusion of every other signal." The Swiss do not, it appears, at all appreciate the shrill sound of the syren, though it can be heard at a much greater distance than their regulation "sonorous horn." Indeed, certain Swiss journals having taken up the matter, demand that every foreign motorist, on entering the country, should be obliged to leave his syren in the hands of the Custom House officers at the frontier till he returns, and that every syren found on a car on the territory of the Confederation should be simply confiscated.

OH those taxi-cabs! That is the cry of almost everybody in Paris, even of those who use them every day. The truth is that most of the drivers go at a speed which makes the fare quake in his shoes even if he is a man who has himself driven at 150 kilometres an hour in the Grand Prix race. These drivers are undeniably expert, otherwise the number of accidents would be much larger. The danger is, however, not only for the occupants of the vehicle but for the unfortunate pedestrians who must sometimes cross the roadway. The cab drivers appear to think they need never slacken speed, and that to blow their horn is quite enough; when twisting sharp round a corner they take an evident pleasure in sounding a formidable blast which sends everybody, and especially old ladies, elderly gentlemen and children, flying before them. Something must be done to put a stop to this sort of thing, otherwise discredit will be thrown on the new means of locomotion. It is difficult for the police to interfere except in the case of accident, so M. Japy de Beaucourt, a member of the French Automobile Club, has written to the papers to propose a remedy which he thinks will be successful. He would require every taxi-cab to be provided with a shrill whistle, which would be blown automatically immediately the speed limit was exceeded. A policeman would at once stop the car and take its number. Should no policeman hear the whistle the evidence of two persons would suffice to insure the condemnation of the offending driver to a fine. MARNEY.

MESSRS. DENEHEY AND CO., of Lower Baggot Street, Dublin, have had a good season in connection with their garage on the main Dublin road at Bray, as well as with their new showrooms in the Irish capital itself. Under the management of Mr. J. W. Favell they are undertaking motor body building and engineering repairs.

THE touring maps of the East, South, North and West of London published by Messrs. Gall and Inglis, of London and Edinburgh, are proving of great service to motorists, the scale of half an inch to the mile giving opportunity for clear indication of the bye-roads as well as the main highways of the country within sixty miles of the Capital.

THE MOTOR PROBLEM.

IT would seem as though the daily newspapers are singularly short of "copy" at the present time, seeing the kind of letters which are being admitted to their columns, apparently without any consideration of accuracy or reason. There was a time when such illuminating subjects as the decline of the Marriage Rate, the appearance of the Sea Serpent, the ripening of the Big Gooseberry, and other subjects filled the newspapers at this season of the year. Now, however, the alleged ravages of the motor-car, its spoliation of British scenery, its murderous career along quiet lanes and its general demeanour have come as "a boon and a blessing" to the sub-editorial room. The result is that the feelings of the Public are being aroused, and the Correspondence Columns having thus excited attention to the subject, the pictorial aid of "Punch" and other humorous persons has been invoked to add to the cloud of dust now being thrown at the newspaper reader.

A strange thing about all this is that so many motorists who, in the early days, encountered the ridicule that attached to the pioneers of the new movement and successfully withstood the prejudice that surrounded the advent of the motor-car are now apparently capitulating with regard to the present storm. For our own part, we would assert with considerable emphasis that the dangers of motor-car traffic are constantly decreasing, and this despite the growing number of vehicles now upon the road. The drivers are more capable than they were five or six years ago; experience of the road and of the car has given them more nerve and control; and the dangers of the earlier days are being forgotten in the confidence and ability which must do much to secure a sense of safety. Unfortunately the pedestrian, like the "Constant Reader," is not always very definite in his views or in his methods; and the hesitating old gentleman who, passing from the roadway to his club, halts in the centre of the thoroughfare and then runs towards the bonnet of a motor-car, narrowly averting self-invited disaster, gets in a flurried state by the time he reaches the library—and then follows the inevitable letter to the "Times."

In addition to this advance in the chauffeur—a fact which any Londoner can realise if he will only mentally compare the motor-bus driver of to-day with the novice of a year ago—there is a growing insistence on consideration to others on the part of owners with regard to their drivers, and Sir Frederick Milner, whose orders to his chauffeur we reproduce, is no exception to the general rule. Sir Frederick's strict orders are:—1. To keep within the speed limit as far as he can, even on the open roads. 2. To slow down to under ten miles at every danger signal, or at any turning where he cannot clearly see what is on the road. 3. Never to exceed ten miles in any village, whether the road is clear or not. 4. To give the widest possible berth to all traffic, whether wheeled, bicycles, or pedestrians. 5. To pull up at once if any animal shows sign of nervousness, or if the driver or rider holds up his hand. He has a 30-h.p. car, and when he has been riding therein has "often looked behind and been astonished at the little dust raised even when going a fair speed." "In the villages I do not raise so much dust as a carriage," adds Sir Frederick. "I have never met with incivility, nor have I even seen anyone show the least sign of annoyance."

We doubt whether it is wise to take the tirade against motorists so seriously as has been done by several of our contemporaries. When Parliament reassembles the newspapers will have no room for such fulminations as now scintillate through their columns; and we shall hear nothing of the Motor Horror, and similar creations of the Press. It is an interesting coincidence that when the newspapers had columns of automobile advertisements they received few letters against motor-cars; but now that such announcements have declined their kind readers have assisted them to fill their columns with motoring comments of another character.

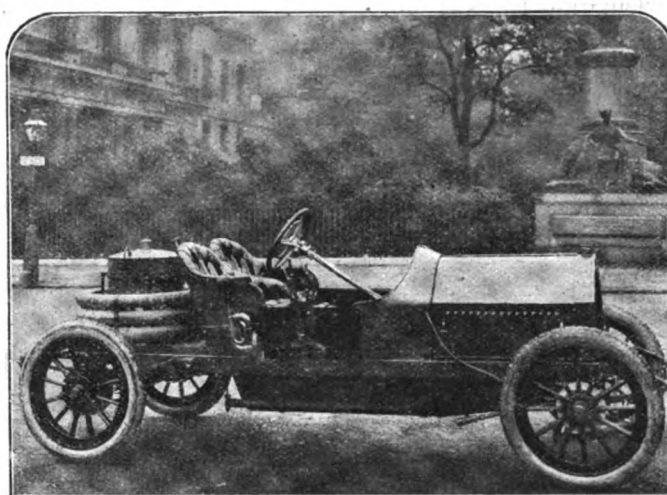
MESSRS. WARWICK WRIGHT, Moore-Brabazon, and Oscar Cupper will drive the three Metallurgique cars in the four-inch race in the Isle of Man.

THE ISLE OF MAN RACES.

LORD RAGLAN, Lieut.-Governor of the Island, has consented to present the trophy to the winner of the "Four-Inch" Race at the Palace Theatre, Douglas, on the evening of the race. He will also present on the same occasion the "Graphic," "Henry Edmunds," and the A.C.U. Trophies to their respective winners.

THE Secretary of the Highway Board of the Isle of Man has drawn our attention to the fact that the three weeks allowed by the Highway Board for practising should be taken as calendar weeks, and therefore practising will not commence until the morning of Thursday, September 3rd.

As is announced in the news of the Auto Cycle Club on another page, there are now thirteen entries for the international motor-cycle race on the 22nd prox. The allowance of petrol this year for the single-cylinder machines will be one gallon for 100 miles, and for multi-cylinder machines one gallon for 80 miles, as against one gallon for 90 miles and one gallon for 75



The first of the three Vinot Cars entered for the "Four-Inch" Race in the Isle of Man.

miles last year, when in the respective classes the winners covered 94½ miles and 87 miles. The lowest consumption, however, of any competitor in the single-cylinder class was R. M. Brice, 129 miles to the gallon, and in the twin-cylinder class, W. M. Heaton, 107 miles to the gallon. The last day for entries for this year will be Monday next.

MR. J. H. ATHERTON, of the Addison Motor Company, will patrol the course on his 8-h.p. Phoenix car during the preliminary preparations for the Four-Inch Race to see that the Akonia dressing on the roads has been "well and truly" laid.

THE Chief Constable of the Isle of Man will not only swear in special constables on the occasion of the forthcoming races, but will also thus ceremoniously recognise the officials of the R.A.C. on the Course, in order that their authority may be indisputable.

AT Ballacraigne a tyre depot will be established and a replacement and replenishment depot will be located at Ramsey. At both these places there will be timekeepers, lap scorers, and scoring boards, which will be of use chiefly for the information of the competitors when they draw up to change tyres or replenish in any way, and who may desire to know their position in the race.

WE understand that several of the firms connected with the automobile industry, who have in the past spent considerable money in advertising their specialities on the roads and elsewhere in Manxland during the week of the motor races, have wisely decided to refrain from such extravagance this year.

MOTORING NOTES FROM BRIGHTON.

DESPITE the vigorous protests of the motoring world against the over-zealous attentions of the police on the road between Brighton and London, it seems obvious, judging from the past month's experience, that the average motorist still cherishes a sneaking fondness for the Brighton road in general, and Brighton itself in particular. As far as I can hear, the Sussex police "trappists" have sensibly modified their attitude, and the really careful and considerate motorist has nothing to fear. Indeed, there would be a sudden end of the trouble if only the incorrigible "scorcher" could be obliterated as completely as he deserves. But a county magistrate staying at the Royal York Hotel here a few days ago told me he and his own car had two very narrow escapes from serious disaster on the way down, simply and solely through the reckless craze for speed that obsessed the occupants of two other cars on the road. That being so, it is merely human nature to anticipate that that gentleman will eagerly embrace the opportunity of making "awful examples" of the next offenders who may be brought before him!

LAST Sunday, however, usually the principal day of the seven for "netting" motorists, was absolutely unproductive. One might have raced to Brighton at Grand Prix speed without annoying or endangering anyone—had one cared to face the



The three 20-h.p. Single-Deck Buses which are now in service in the Town of Carlsbad, Austria.

(Allgemeine Automobil Zeitung.)

elements—for it was, without exception, the most wretched, dismal day of the whole summer. The drivers of the few cars that did turn out must have been glad to get the melancholy business over. Motoring temporarily ceased to be a pleasure, and was merely a more convenient means than the railway of getting from one point to another. Things were naturally very slack at the favourite haunts of the motoring fraternity—the Metropole, the historic Old Ship and the Royal York. But he would be a misanthropist indeed who could not be happy under any conditions at the former, for instance, probably the finest, and, socially speaking, the smartest hotel on the coast. Among those who had motored down to the Metropole for the week-end were Sir Edward W. Hamilton (Renault), Sir F. Robertson (Gladiator), Mr. Todd and Mr. Knox (Mercedes), Mr. Jones and Mr. Baker (Daimler), Mr. Boyd (Humber), Mr. Wood (Argyll), and Mr. F. J. Smith (Clement).

THE hopelessly stagnating effect of the weather was manifest at the garages in the town; actually, when I looked in about four p.m. at that of the Brighton and Sussex Motor Works, behind the Grand Hotel, they had not "stabled" a single car all day. I was interested in a vehicle that was *en garage* there belonging to a Mr. Stickley, a young American tourist, who arrived from France last Saturday after "doing Europe" by motor, and who is staying this week in Brighton. His car is a six-cylinder 30-h.p. "Franklin," the feature of which is that the cylinders are air-cooled. As the vehicle is the first of its kind seen in Brighton, it is naturally attracting considerable attention on the part of motoring experts.

SAXONIAN.

CONTINENTAL NOTES.

Racing in Italy.

Considerable interest is being taken in Italy in the two races which are to be held on the Bologna circuit on the 6th and 7th prox. The event on the first day, which is known as the Florio Cup contest, is for cars of the Grand Prix type having engines of a maximum bore of 155 mm. in the case of four-cylinder motors. The race is over a distance of 528 kilometres (330 miles), equal to ten laps of the 52.8 kilometre circuit, which takes in Borgo-Panigale, Castelfranco, Sant Agata, and San Giovanni in Persiceto. Seventeen entries have been received for the contest, the drivers of the vehicles and the order of starting being shown below:—

| Order of Starting. | Car. | Drivers. |
|--------------------|-------------|------------------------------|
| 1 7 13 | De Dietrich | Daray, Minoia, Trucco. |
| 2 8 | Motobloc | Pierron, Gauderman. |
| 3 9 14 | Mors | Demogeot, Garcet, Landon. |
| 4 10 15 | Fiat | Lancia, Nazzaro, Wagner. |
| 5 11 16 | Clement-B. | Gabriel, Hautvast, Shephard. |
| 6 12 17 | Itala | Cagno, Fournier, Piacenza. |

It was anticipated that both the Mercedes and Benz Companies would take part in the race, but no entries from them having been received, it has resulted in a contest between France

and Italy, the former being represented by eleven and the latter by six vehicles.

The Targa Bologna race, which will be held on the 7th prox., will be over eight laps of the same course, equal to 422½ kilometres (264 miles), and is open for four-cylinder cars having a bore between a minimum of 120 mm. and a maximum of 130 mm., and to six-cylinder vehicles with a bore between a minimum of 90 mm. and a maximum of 107 mm. When the list closed it contained the names of the twenty competitors appended:—

| Order of Starting. | Car. | Drivers. |
|--------------------|------------------|---------------------------|
| 1 | Diatto-Clement | Primavesi. |
| 2 13 | Franco | Buzio, Carliolati. |
| 3 14 | S.P.A. | Picoli, Sassoli. |
| 4 15 19 | Bianchi | Tommaselli, Bronbilla, X. |
| 5 16 | Zust | Maggioni, Zust. |
| 6 | Isotta-Fraschini | Sandini. |
| 7 17 20 | Junior | Tamagni, Radice, Galli. |
| 8 | De Dietrich | Parran. |
| 9 | Berliet | Porporato. |
| 10 | Fiat | Valentin. |
| 11 | Darracq | Airoldi. |
| 12 18 | Itala | Ravetti, Pizzigalli. |

The Coupe de Normandie.

The light car race organised by "L'Etoile Sportive Caennaise," which was run off on Saturday, the 15th inst., was over a distance of 155 miles and not 267½ miles, as stated in our last issue. In the class for cars of the Grand Prix de Voiturettes type, the best time, 2 hrs. 49 min., was made by Barriaux on an Alcyon. In the category for four-cylinder cars up to 85 mm. bore the winner

was Pellecat on an Aries, his time, 2 hrs. 47 min., being the fastest of the day.

A Proposed Racing Track in France.

A syndicate has been formed at Clermont-Ferrand with a capital of £2,000 and the title La Société d'Etudes du Circuit Permanent, to develop the scheme for the construction of a permanent motor racing track and aeroplane trial ground in the Puy-de-Dôme district of France.

British Motorists in France.

Recent British visitors to France include Mrs. Douglas and Mrs. Amos, of London (24-h.p. Vinot), Captain Jaffray (40-h.p. Daimler), Sir Constantine Phipps (20-h.p. C.G.V.), Colonel and Mrs. Pollack, of Horsham (40-h.p. Berliet), Sir Kenneth Muir Mackenzie, of London (40-h.p. Panhard), Mr. H. Packett, of London (25-h.p. Panhard), Lord Templemore (30-h.p. Delaunay-Belleville), and Mr. Charles S. Henry (28-h.p. Daimler.)

A new Circus "Turn."

At the Busch Circus, Hamburg, a "turn" which has recently attracted attention is that in which the Saxon brothers form the support of a bridge over which is driven a motor-lorry weighing, with its six passengers, nearly four tons.

Aeronautical News.

On the 19th inst. M. Legagneux accomplished a flight of 250 metres in 12 sec. with Captain Ferber's aeroplane at Issy-les-Moulineaux. A new aeroplane known as the Gastambide-Mengin made its appearance at Issy on the 20th inst. The apparatus, which is fitted with a 50-h.p. petrol motor, made several flights, including one of 300 ft., carrying two passengers. On Saturday, however, it met with an accident, when alighting on the ground, which practically wrecked it. Another new arrival at Issy is the combination aeroplane and steerable balloon devised by M. Malecot, and with which some successful trials have been made. The balloon part consists of a cigar-shaped gas-bag, 33 metres long, and of a capacity of 1,054 cubic metres. An aeroplane, 20 metres long, is suspended beneath the balloon by ropes. The planes are inclined at a sharper upward angle than usual. A 30-h.p. motor is fitted into a sort of cage, where there is also sufficient room for a pilot and a mechanic. Below the aeroplane there is a basket, which can carry a weight of 600 lb., and which helps both in giving the entire airship greater stability and in maintaining the aeroplane at a proper angle. To rise from the ground, the pilot causes the basket, with the weight, to move back by means of a pulley, which changes the centre of gravity in the aeroplane, and sends it gliding upward under the impulse of the propeller. The advantage of a mixed airship of this description is claimed to consist in the fact that less gas is needed to inflate the balloon, and that, in case an accident should occur, the aeroplane would be able to continue its flight alone for some distance, or, at any rate, would act as a parachute in coming down. Mr. Wilbur Wright renewed his aeroplane trials at the Auvours Camp, near Le Mans, on the 21st inst., when he executed two flights, lasting respectively 1 min. 49 1-5 sec. and 2 min. 14 sec. A banquet in honour of Mr. Wright was given by the Farmers' Union of Sarthe at La Fleche on Sunday last. Berlin was treated to a novel spectacle on Thursday last week when two airships—the Gross and the Parseval—manœuvred over the German capital for nearly two hours. The Gross was out again on Friday, the 21st inst., with the Crown Prince of Germany as passenger. Mr. Henry Farman, who arrived back in France from the United States on Monday, was interviewed at Cherbourg, and expressed confidence in his ability to accomplish a flight of an hour before very long.

A Motor-car Breakdown Stops a Theatrical Performance.

A somewhat amusing incident took place at Bagnieres de Bigorre, in the South of France, one day last week. A performance of "Sherlock Holmes" was to have taken place at the local theatre, but owing to the non-appearance of the principal actor the play could not be given. It appears that M. Gémier, the actor in question, had set out from Cauterets for Bagnieres in the morning, and that the car had broken down on the Col

du Tourmalet, nearly 7,000 ft. above sea level. The irony of the incident is found in the fact that the theatrical posters bear the notice, "Thanks to his remarkable motor-car M. Gémier always arrives in time."

A German Hill Climbing Competition.

The Mid-German Automobile Club of Eisenach is organising a hill-climbing competition on the road between Eisenach and Fortha for September 6th next. The competing machines will be divided into three classes (1) up to 6-h.p. (2) up to 10-h.p. and (3) over 10-h.p.

German Motor-car Imports and Exports.

An extremely quiet state of affairs continues to prevail as regards the imports of motor-cars into Germany. The arrivals of pleasure and industrial motor vehicles and chassis into the country during the six months ending June last only attained a value of £352,533, as compared with £534,241 in the corresponding half-year of 1907. During the same periods the



M. Pellecat at the Wheel of the Aries Four-Cylinder (84 mm. by 110 mm.) Car on which he made fastest time in the recent Coupe de Normandie Contest.

value of the similar exports from Germany increased from £339,700 to £346,370.

Motor Postal Services in France.

The French Post and Telegraph authorities in Paris are about to invite tenders for the carriage of the mails between Monsempron-Libos and Montagu-du-Quercy, and between Sainte-Foy-la-Grande and Marmande (Lot-et-Garonne) by motor vehicles.

Miscellaneous Items.

A company has been formed in Lyons to build motor-buses and lorries, the feature of which will be a rotary engine.—A motor-bus service by means of two German Daimler 30-h.p. single deck vehicles has just been started between Kirchberg and Ilshofen, Wurtemberg.—A number of Belgian road authorities are reported to be about to visit England to inquire into the steps that have been taken to alleviate the dust nuisance, and in particular to examine roads that have been treated with tar preparations.—The Autocycle Club de France has postponed its reliability run from Paris to Trouville and back, which was to have been held on the 25th, 26th and 27th inst., until the middle of next month.—The French military "service de santé" last week carried out some trials in the Paris district with a number of motor vehicles specially adapted for the transport of wounded soldiers in time of war.—The Automobile Club Vaclusien has postponed the Mont Ventoux hill-climbing competitions, which were to have been held this week end, until Sept. 10th and 13th.

SOME CURRENT TOPICS.

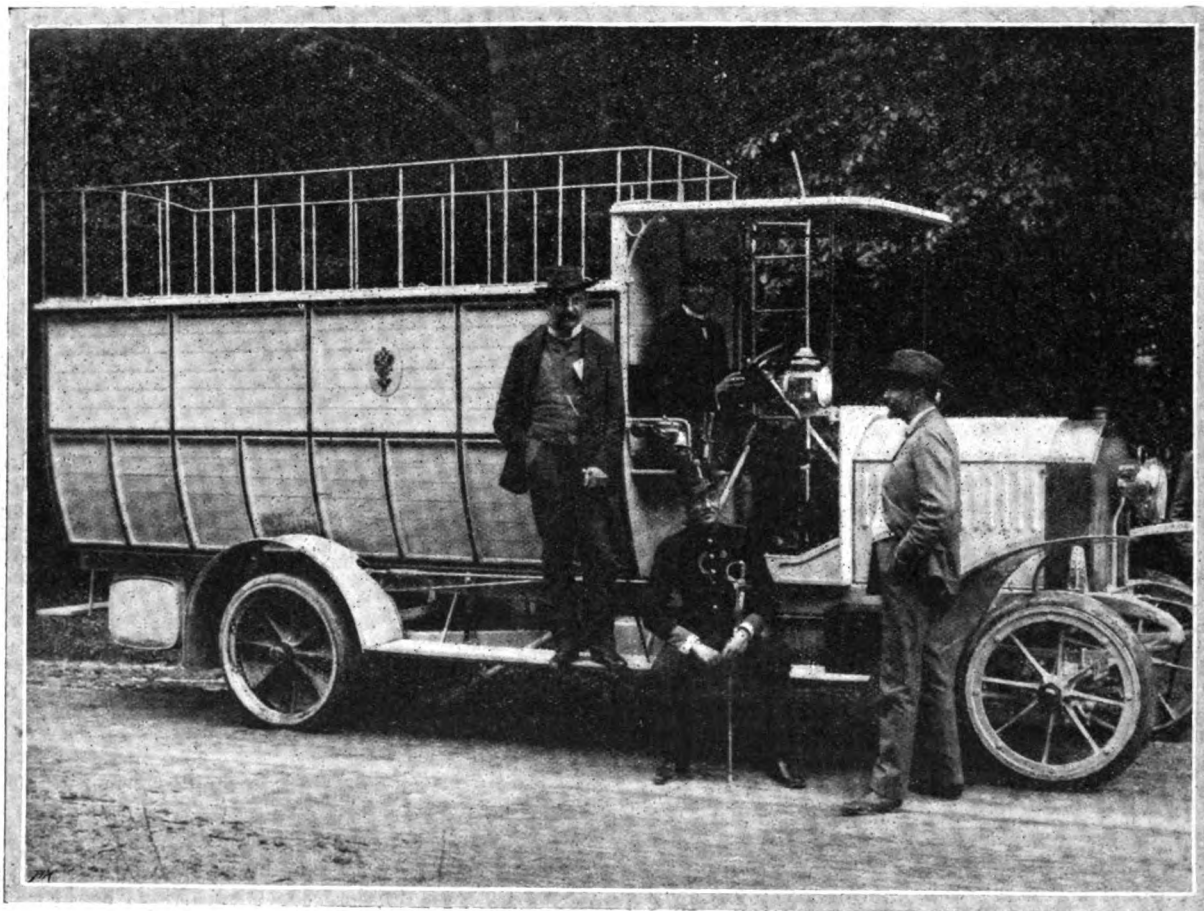
Taxes on Motor-Cars and the Horse Power Question.

The practice of giving the engine of a motor-car a double rating, which has prevailed during the past year or so, is likely to receive a setback in France. Hitherto in fixing the taxes on motor-cars—which are on a horse-power basis—the authorities have taken the lower figure, and thus, in the case of an 18-24-h.p. car, the tax has been at the 18-h.p. rate. By a circular just issued the French Minister of Finance announces that in future the maximum and not the minimum figure will be taken, so that the 18-24-h.p. vehicle will have to pay on the 24-h.p. scale. Unless the new arrangement results in manufacturers once again adopting a single horse-power rating, it is estimated that the new basis of taxation will result in an annual addition of at least £20,000 to the coffers of the State.

opening in the case. There must be many owners who, in the course of their motoring career, have come across similar little points in their cars which they consider might easily be improved, and, as the information would doubtless prove useful to manufacturers, who are now preparing their models for the 1909 season, I shall be glad to receive suggestions from any motorists who have experienced difficulties of the kind mentioned.

See the Ignition is Retarded.

It is an old saying that "familiarity breeds contempt," but familiarity with one's car should not cause a motorist ever to lose sight of the necessity of seeing that his ignition lever is retarded before starting up the engine, otherwise he may receive a nasty rap on the knuckles from the starting handle, even if nothing more serious results. In the early days of the movement it was



The Special 35-h.p. 2½-ton Baggage Car recently built by the Austrian Daimler Company for use in connection with the Public Service between Predazzo and Neumarkt, in the Southern Tyrol.

Some needed Improvements.

The letter on "Accessibility" which recently appeared in the correspondence columns of the *M.C.J.*, drawing the attention of designers of motor-cars to the need of greater accessibility of those parts requiring adjustment or lubrication from time to time, was well to the point, for it must be admitted that, although considerable progress has been made in recent years, many cars are still far from being perfect in this direction. It has been the experience of many motorists to find that, whilst in chassis form, every part of a car appears to be most accessible, when fitted with the body it is only with considerable trouble and difficulty that adjustments can be effected or the necessary replenishment of oil or grease given to the gear-box and differential case. Taking a couple of examples from my own car, it is quite a task to dismount the water-circulating pump when the same requires repacking, while it is almost impossible to pour oil into the gear-box without making a mess, owing to a fixed part of the car body extending right across the centre of the small

not unusual to meet an automobilist with his arm in a sling as a result of a back-fire, and, although accidents of the kind are perhaps not now so numerous, the fact remains that unless the precaution is taken of first retarding the ignition the operation of starting a petrol engine may be fraught with serious danger. At the same time I must confess I was surprised to read that at the recent convention in America of the International Association of Accident Underwriters the Chairman of the Automobile Hazard Committee presented a report in which it was stated that no less than 49·2 per cent. of all automobile accidents—in the United States, I presume—are caused by "back kicks." Only 14·8 per cent. of the accidents are caused by persons being thrown from motor-cars, and 13·1 per cent. by collisions. When one considers how frequently accidents of the two last mentioned kinds figure in the newspapers, it would appear that in the course of a year a great number of persons must be injured by the starting handle suddenly flying back in the reverse direction.

ARCANUM.

Forty motor-cars, lent by the owners, carried 200 crippled children of Preston and the district on a half-day's excursion to Lytham on Saturday.

THE Blackpool Watch Committee have decided to grant licences for electric buses to run on the roads not served by the electric tramways.

THE Automobile Club of Victoria is arranging a trip by motor-car for the officers of the United States fleet visiting Melbourne on the 4th prox.

THE Barry District Council is considering an application from the London Electro Bus Company for permission to allow motor-buses to run in that locality.

IN connection with the Automobile Club of America's race meeting in Savannah in November next, it is proposed to organise a 200-mile race for light cars.

AT the premises of Messrs. Frazer and Sons, at Pitlochry, Messrs. Burberry have been holding an exhibition of motoring and other clothing for sportsmen who are now holidaying in Perthshire.

THE French coachbuilders have invited the members of the Institute of British Carriage Manufacturers to hold their annual autumnal meeting in Paris in September next, and the invitation has been accepted.

A SUBWAY is to be constructed beneath the area in front of Blackfriars Bridge (London) on the City side, so that pedestrians will be able to avoid the dangers of the considerable vehicular traffic that passes that point.

AN engagement is announced between Mr. Robert Codrington, Administrator of North-Western Rhodesia, and Miss Dorothea Frances, elder daughter of Mr. and Mrs. Alfred Bird, of Solihull, Warwickshire. Mr. Bird's associations with the R.A.C. and his work in connection with the Isle of Man races is well known to our readers.

AT Monday's meeting of the Scottish A.C. a letter was read from the secretary of the Scottish Motor Traders' Association offering the members of the Club the privilege of admission to the Scottish Motor Show in Edinburgh in January next, and asking the renewal of the patronage of the Club. The latter was cordially granted.

DURING the twelve months ending with June last 1,045 motor-cars, valued at £500,027, and automobile parts estimated at £98,181 were imported into the United States, the total of £598,208 comparing with £968,455 in the preceding fiscal year. Of the complete cars imported 793 were French, 132 Italian, 65 British, and 32 German.

A TELEGRAM from Australia on Tuesday announced that Messrs. Dutton and Aunger had succeeded in making the journey from Adelaide to Port Darwin on a 25-h.p. Talbot car. On a previous attempt a 20-24-h.p. vehicle had to be abandoned at Tennant's Creek, in the Northern Territory, owing to the country being impassable by reason of the heavy tropical rains.

A MOTOR-CAR explosion was the cause of a fire at Slough on Sunday morning. A new type of engine was being tested when an explosion occurred, and the car was quickly enveloped in flames. Efforts to remove it from the shed proved unavailing, and the flames spread to a warehouse and corn stores, three lots of stabling, a carpenter's shop, and several outbuildings, which were all damaged.

A NEW sparking plug intended for use in connection with both accumulator and high tension magneto ignition is being put on the market by Mr. F. Krause, of 7, Larden Road, Acton Vale, W. A feature of the plug, which is made under the Hosch patents, is that the inner end of the central terminal is in the form of a four pointed star. For accumulator ignition only one of these points is used, the others being turned out of the way, while in the case of magnetos two of the points are employed, there being thus some held in reserve should those in use become fouled up. The parts of the plug are all made so that they are readily detachable, and due provision is made for the expansion of the insulating material.

HERE AND THERE.

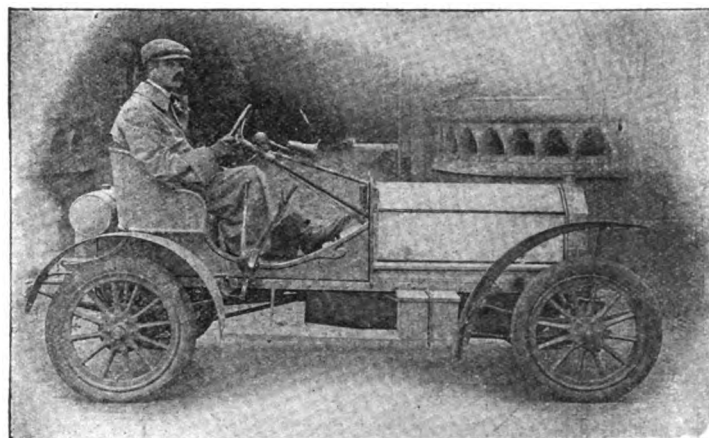
SEVERAL good motor tours have been arranged in and around Ilkley, giving pleasure to motorists, and, we trust, a profit to the promoters.

WHEN in Worthing a few days ago we noticed a car on which the owner had mounted on the luggage rail a cage for the transport of his dog. The animal seemed quite at home in its novel position.

Two separate applications have been made to the Secretary for Scotland for the repeal of Prohibition Motor-Car Orders formerly granted to county authorities. In both instances the request has been granted.

MESSRS. RICHARD PAPE, LTD., of Albion House, New Oxford Street, London, W.C., who are putting the "Fors" accumulator on the market, will be exhibiting their speciality at the Electrical Exhibition at Manchester during October. Motorists in the North of England will then be able to investigate the claims of this excellent accumulator, particulars of which are given in the firm's catalogue.

WE illustrate herewith the new two-seated car built on racing lines which has just been put on the market by the Star Cycle Company, Ltd., Wolverhampton. The vehicle is fitted with a two-cylinder engine, developing 10-h.p. The gear-box gives three forward speeds and a reverse, the final transmission being by a cardan shaft and bevel gear to a live axle. Hoffmann



ball bearings are fitted throughout except the engine. The wheels are shod with Dunlop 700 by 85 heavy tyres. The petrol tank capacity is six gallons. We understand that the firm have given the car a thorough test, and are highly satisfied with its capabilities, both from the point of view of speed and reliability.

INITIAL steps toward the formation of an American national society for the advancement of the science of aerial navigation have been taken in Washington. The new organisation is to be known as the National Aeronautical Society, and will be devoted to facilitating work of scientists engaged in research and experimentation in aerodynamics.

THE Antarctic expedition which left France on Monday last under the command of Dr. Charcot carries with it three motor-sleighs. Each machine accommodates four persons, and is provided with a 4½-h.p. motor. The centre driving wheel is fitted with cogs which grip the ice, and can be covered with wire or cord netting when going over soft snow. The idea is, that by using power-driven sleighs dogs can be dispensed with.

THE Engineers' Supply Stores, of 25, Sumner Street, Southwark, S.E., are supplying many things of interest to our readers, and have large stocks of india-rubber goods, aluminium castings, belting, and other productions of concern to the engineering side of the motor industry. They are now supplying the "Wescot" overall—one of the cheapest and most efficient overalls now available—to the special features of which we hope to refer in an early issue.

Correspondence.

(Letters to the Editor should be addressed to the office, 37-38, Charing Cross Road, London, W.C.)

THE TRIALS OF 1909.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—With regard to the questions you raise as to the 2,000 miles trial being held in 1909, I am not at all keen either one way or the other.

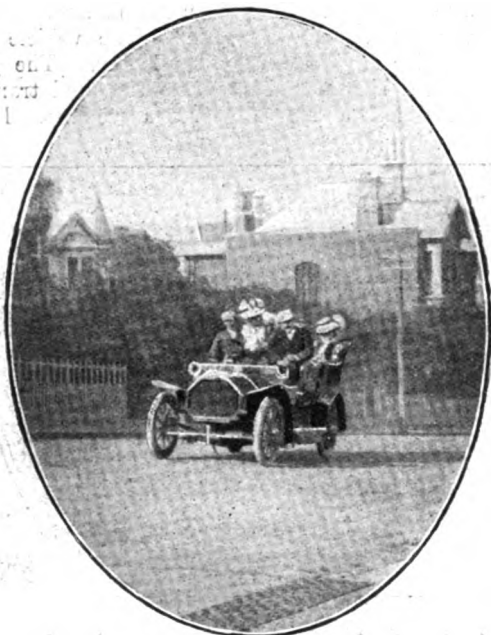
This year I entered a 26-h.p. Metallurgique car in the Scottish trials, but did not run in the 2,000 miles trial, as it seemed to me that the longer trial would be very costly and scarcely desirable.

Our object all the time has been to demonstrate the good qualities of the car in as cheap a manner as possible, because, obviously, the purchaser has to pay in the long run for all these trials that are carried out, and for which various firms feel compelled to enter.

I make a point of not entering costly trials unless our customers are likely to benefit to an adequate extent in learning something about our cars that they previously did not know.

The Scottish trial route has been held by many people this year to have been too severe. I do not agree with this. We did not find it at all too severe, but certainly any car that got through might be safely bought by any intending purchaser.

With regard to future trials, there is only one point that I am really keen upon, and that is that no allowance should be made for



The above illustration shows a 10-12-h.p. Coventry Humber car, with driver and five passengers, ascending London Street, Dunedin, New Zealand, which has a gradient of 1 in 7.

The owner writes that the car has covered 7,000 miles since last December without a mechanical stop of any description.

weight except weight carried, so that a really light car that is not only light but also strong, by being made in the right way of the right stuff, may have a chance of success. In other words, weight, such as passengers carried, should be the only kind of weight for which allowance should be made, and, if the Scottish Club will make this alteration in their rules, they will then have an ideal trial capable of eliminating all the weaklings, and quite long enough for prospective customers to judge the merits of the car.

I have entered three cars for the "Four Inch" race in the Isle of Man to support the club and for the good of the sport, but I fear it was rather the sporting side than the *f. s. d.* aspect of the venture that interested me.—Yours truly,

WARWICK J. WRIGHT.

RAISING THE BODY OF THE CAR.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—The letter of the Rev. T. H. Peate in your issue of the 22nd inst., on which you invite comment, raises a question of much interest to motorists. The raising of the body, crank case, &c., has much to recommend it from the point of view of saving life of pedestrians, for many accidents which now terminate fatally would, in my opinion, result in nothing worse than, say, a broken rib, if the body escaped impact with the lower heavy machinery of the car, which strikes and crushes it against the road. It is not the wheels, but the other portions of a car, which mutilate and mangle the unfortunate victim of an accident.

The other day I saw a dog badly injured; a car ran over his hind quarters, his head was struck by the front axle or crank case, then by the gear case, and lastly by the live axle, rolling him over and over and leaving him more dead than alive on the road. Last winter I was driving a heavy tandem dogcart with narrow iron tyres and ran over a similar-sized dog. I pulled up and looked round only to see the dog, much frightened, yelping and flying off at full speed. I am aware that a motor-car is much heavier than a dogcart, but I think that the width, resiliency, and softness of its indiarubber tyres would very considerably counteract the increased weight.

There are, however, other points to consider in raising the body and machinery two feet from the ground. In the first place, it would do little good raising the body unless the axles also were raised, and that would mean larger wheels. Now how would that affect speed? Then raising the centre of gravity would have a tendency to make the car top heavy and unwieldy and sway from side to side if anything like speed was indulged in on uneven roads. This would have the effect of producing an injurious lateral pressure on the tyres, if it did not rip them off the rims altogether, with disastrous effects to both the car and its occupants. Plausible as is the suggestion at first sight of the Rev. Mr. Peate, I think if carried out it would do more harm than good. It would increase the number of accidents to cars, and merely transfer to the occupants the risk of accident which other users of the road now run.

While on this subject, may I suggest a small, but useful at times, improvement in the shape of the front wings? As a rule they now terminate horizontally, and if they strike a person would cut into and seriously injure him. If they were made in a semi-circular form, the front portion bending down to the level, say, of the axle, and splayed outwards, they would then push away from the car anything they came into contact with.—Yours truly,

S. R. C.

MOTOR-CARS ON THE ROAD.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—A report of a discussion in the Cheshire County Council of the motor question mentions something of the discomfort I experienced from a passing motor-car, a matter of little importance; but I should like your permission to summarise the argument which it was used to illustrate, as it embodies a point which I think is too little insisted on. Briefly, it runs thus:—

1. The roads exist for the enjoyment of all.
2. Light motor traffic, chiefly owing to the dust it raises as at present conducted, has deprived the bulk of the users of these roads of their due enjoyment of them for the benefit of a relatively very small section of users.
3. The dust is especially caused by the smallness of the space between the bottom of the car and the surface of the road, so that even at a quite moderate pace excessive dust is raised.
4. If the power were given to stipulate for a proper minimum space between the bottom of the car and the surface of the road, a considerable part of the trouble would be over, as it would become dangerous to go very fast, especially in turning corners (owing to the higher centre of gravity), and both speed and dust would be automatically reduced, probably to a reasonable degree.

All this is, of course, irrespective of the necessity of going very slowly through inhabited parts where children are frequently forced to resort to the streets for lack of other place to go to.—Yours truly,

T. RAFFLES BULLEY.

THE MOTOR PROBLEM.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—The extremely moderate tone of the letters of Mr. Max Pemberton and other motorists almost disarms criticism, but practically all their suggestions amount to this; abolish the speed limit and trust to the honour and good sense of motorists to use the public roads with decency, and at the same time punish motorists in case of accident with Draconian severity.

It will be strange if a House of Commons, with an overwhelming Liberal majority, upsets the decision of the House of Commons of 1903, when the speed limit was not only insisted on, but further power given to local authorities to further limit and control the speed.

Laws are made to be obeyed or altered. No motorist in the House has ever attempted to bring forward a Bill or resolution to abolish the speed limit, but certain motorists in and out both Houses practically say: We do not like the law, we will not obey the law; we will throw every possible obloquy and contempt on the magistrates and police who endeavour to enforce the law. We will use our enormous wealth to employ scouts to enable us to break the law with impunity, and gratify our selfish expensive amusement at the public expense.

Moderate motorists will suffer badly by the abolition of the speed limit, and will be constantly exposed to the risk of being summoned for

driving to the common danger, and that must be purely a matter of opinion and not of fact.

With regard to punishment, surely all history teaches us that revengeful punishments invariably defeat their object. What satisfaction is it to anyone who loses a dearly-loved one to know the driver or owner is severely punished? What does the man in the street say when he sees that in the parks where the aristocracy and plutocracy disport themselves the speed is strictly limited and the law strictly enforced—no talk of police traps there—and where the millions are, motorists traverse the streets at the pace of a galloping horse?

Abolish the speed limit and we will revert to the evil days when "there was no king in Israel, and everyone did that which was right in his own eyes."

Offenders from the ages have protested against laws they did not like, but in the meantime those who have some voice in affairs, some consideration for the public, can do no better than insist on the public safety.—Yours truly,

J. CATHCART WASON.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—Among the many futile schemes for removing or modifying the motor craze, I think that of replacing the horn by the bell the most unwise. Low notes are more audible than high ones, and, being rather deaf, my experience is that, although I can perfectly hear the horn of a motor which is overtaking me, the bell of a bicycle is quite inaudible, and whilst cycling I have noticed that almost invariably the grey-headed

thing our querist can do is to tackle the question of improving the mixture-producing properties of his carburettor. The jet might, for instance, be tried with a shade larger hole, and the float needle and the balance weights may be inspected in order to see that they work perfectly. The quantity of air admitted by the main and auxiliary ports may require regulating, and it is possible that the throttle itself does not work perfectly. We are sure that an intelligent overhaul of the carburettor will prove the solution of the difficulty.]

A REGRETTABLE INCIDENT.

TO THE EDITOR OF *The Motor-Car Journal*.

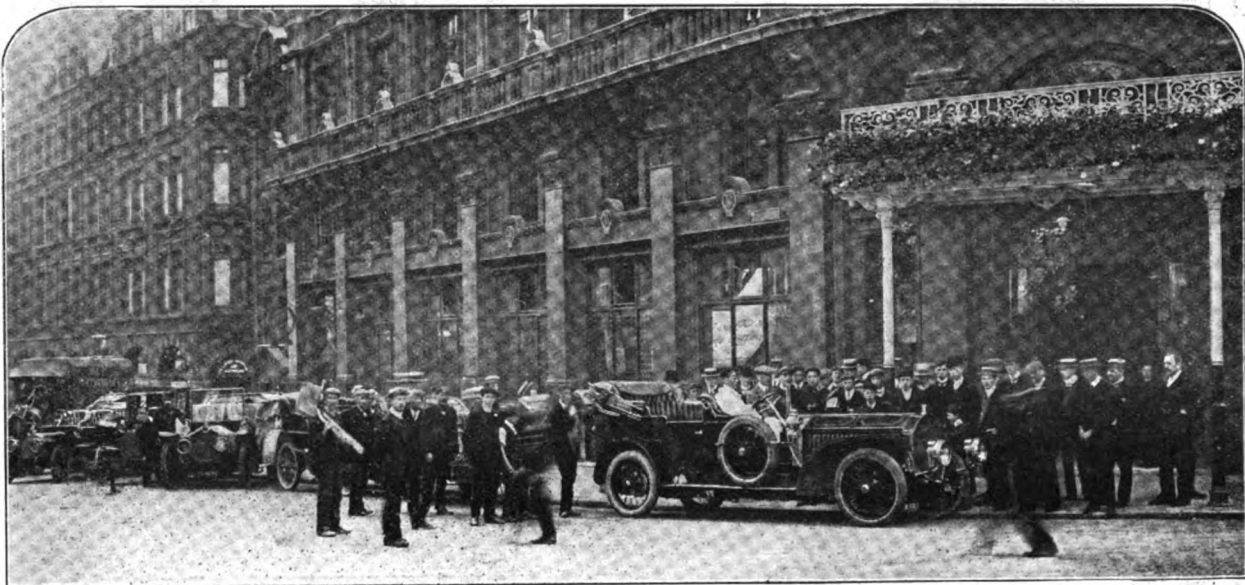
SIR,—A car with three gentlemen passengers ran over a dog a mile from Ingleton, on the main road from Settle, on Thursday, the 13th, about 1 p.m. Though they were called up and signalled and they looked back, seeing the owner and the dog in the road, they drove on, heedless of all. An eye-witness is my informer, and great indignation is naturally felt at such conduct. I send my card.—Yours truly,

B 56.

WORN VALVE STEMS.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—I have a car fitted with an Aster two-cylinder engine and find that the valve stems have worn down nearly a quarter of an inch. I conclude the tappets which operate them are similarly worn. Can you



A Group of Cars outside the Motor Club, Coventry Street, London, W.

[It is a common sight to observe a string of motor-cars assembled outside the Motor Club during luncheon time, the privilege of being thus able to leave their vehicles being highly appreciated by many members.]

driver of a cart pays no attention to my bell until I am close to him, whilst a child hears it at a great distance.—Yours truly,

R. F. WILLIAMS.

AN ENGINE DIFFICULTY.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—I have a 10-12-h.p. car of a well-known make which gives me a good deal of trouble at times by missing in the rear cylinder. My theory is that the front cylinder fires first, and that the second one does not draw in enough gas, and consequently the charge fails to ignite, as it fires perfectly when running alone with the front cylinder cut off. If you, or any of your readers, can suggest a remedy, I should be very glad to learn how to overcome the difficulty. The tendency to miss is lessened, I find, by advancing the spark abnormally and racing the engine, which, however, is not exactly what one likes to do.—Yours truly,

T. H. J.

[The difficulty described sounds very much like faulty carburation, in which case "T. H. J." is to a certain extent on the right track in assuming that one cylinder gets gas at the expense of the other. Without knowing the particulars of the carburettor and the shape of induction branch it is not easy to indicate precisely just where to say the fault lies. It being a two-cylinder engine, two charges are fired consecutively and then there is a pause. For this reason the first cylinder to receive the gas gets the best chance of obtaining the lion's share if there is any starvation of supply, as would appear to be the case here. The best

suggest any remedy for this, so that the valves may get their original lift.—Yours truly,

M. C.

[A good method to lengthen the valve stems when worn is to drill a piece of metal up a short distance to fit the end of the stem and allow a solid piece at the bottom to rest on the tappets; this need not be made fast, or it will not be possible to get valve stems through the guide; the spring of the valve will be quite sufficient to hold it in place.]

A NEW ROAD IN DEVON.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—I beg to say that the new road by Brendon Steep, between Lynton and Lynmouth, is now complete and open for traffic. If motorists are kind enough to help in paying the sum guaranteed by a few local inhabitants, the hotel keepers at Lynton and Lynmouth will kindly receive any subscriptions for that purpose. The gradient is one in ten and the width 20 feet, and it will be found to be quite a good road.—Yours truly,

EDWIN B. JEUNE.

A CORRESPONDENT is desirous of ascertaining the name and address of the makers of a carriage pump known as the Hydrometer No. 3 Robin's patent.

A COVER, size 880 by 120 mm., was found on the roadside between Ware and Buntingford on August 15th. Owner may have same on applying, giving description, to Mr. E. E. Darville, Buntingford, Herts.

IRISH AUTOMOBILE CLUB HILL-CLIMBING COMPETITION.

THE annual hill-climbing competition of the Irish Automobile Club was held at Ballinaslaught Hill, near Newtown Mount Kennedy, in co. Wicklow, on Friday last week.

The cars were divided into classes according to their chassis price, and there were two categories, an Open Section and an Amateur Section. The fastest car in each class was awarded a medal, and in addition there were two cups offered, in the Open and Amateur section respectively, to the car making fastest time after deduction of handicapping allowance. The handicaps were arranged by taking an average of the times accomplished in previous competitions, and although this method of arriving at the result may not be quite so satisfactory as the formula, it has the merit of enabling the competitors to know the winners at the end of the competition.

The cup in the Amateur Section was won by Mr. J. B. Dunlop's 16-20-h.p. Calthorpe, while in the Open Section the honour was secured by Mr. S. T. Robinson's 15-h.p. Clement-Talbot. The distinction of making the fastest time was secured by the six-cylinder Napier, fitted with Dunlop tyres, which in the hands of Mr. Cundy ascended the hill in much faster time than it had done in the Irish trial.

Class C (under £250 chassis price).—N. S. Drury's 12-18-h.p. Riley, 7 min. 24 1-5 sec.; Capt. R. G. O'Callaghan's 10-12-h.p. Swift, 8 min. 17 sec.

Class D (under £350 chassis price).—J. B. Dunlop's 16-20-h.p. Calthorpe, 4 min. 12 sec.

Class E (under £450 chassis price).—S. Pringle's 15-h.p. Clement-Talbot, 3 min. 33 sec.; J. E. Mills' 15-h.p. Clement-Talbot, 3 min. 53 2-5 sec.; T. T. Meeredy's 15-h.p. Clement-Talbot, 5 min. 6 3-5 sec.; Major R. A. F. Kingscote's 14-20-h.p. Germain, 5 min. 18 3-5 sec.

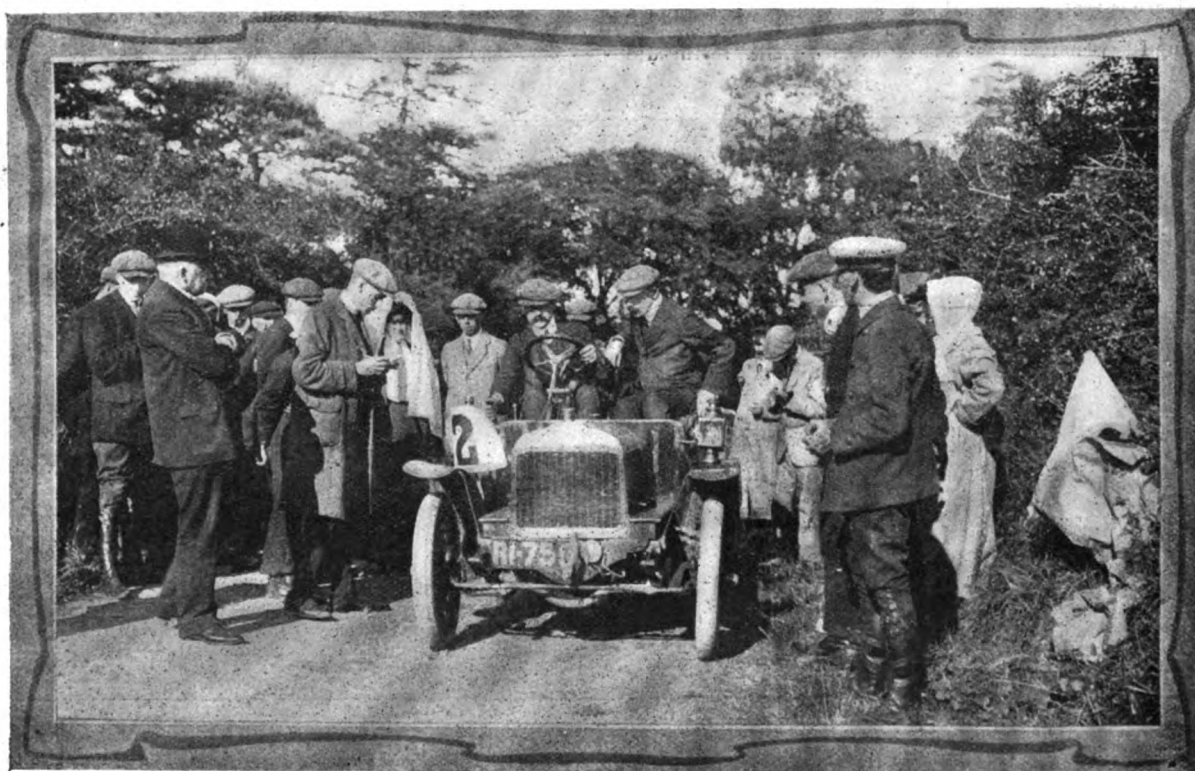
Class F (under £550 chassis price).—George Jacob's 24-h.p. Minerva, 4 min. 13 2-5 sec.

Class G (under £700 chassis price).—C. D. O'Callaghan's 48-h.p. Daimler, 2 min. 46 3-5 sec.; A. V. Fitzherbert's 30-40-h.p. Daimler, 2 min. 52 2-5 sec.

Henry Ford Challenge Cup. Open Section.—Won by (1) S. T. Robinson's 15-h.p. Clement-Talbot, 2 min. 53 2-5 sec., less 42 2-5 sec. handicap—2 min. 10 4-5 sec.; (2) T. Henshaw's 48-h.p. Daimler, scratch, 2 min. 24 sec.; (3) S. F. Edge's 60-h.p. Napier, 2 min. 7 2-5 sec., plus 23 4-5 sec. handicap, 2 min. 31 1-5 sec.

HENSHAW CHALLENGE CUP. (Amateur Section).

(1) J. B. Dunlop's 16-20-h.p. Calthorpe, 4 min. 12 sec., less 1 min. 40 3-5 sec. handicap—2 min. 31 2-5 sec.; (2) C. D. O'Callaghan's 48-h.p.



The Irish Club's Hill-Climbing Competition at Ballinaslaught.—Mr. H. S. Huet starting on his 10-h.p. Royal Starling Car.

SECTION I. (Open).

Class A (two seaters, chassis price under £150).—H. S. Huet's 10-h.p. Royal Starling, 7 min. 5 2-5 sec.; J. P. Phibb's 15-h.p. O.T.A.V., 8 min. 34 3-5 sec.

Class B (two seaters, chassis price under £200).—Chambers Motors' 10-12-h.p. Chambers, 4 min. 41 sec.; R. W. Archer's 15-h.p. Ford, 5 min. 15 4-5 sec.; Smeddie Kennedy's 8-10-h.p. S. and K. Simplex, 6 min. 19 4-5 sec.; Chenard and Walker's 8-9-h.p. C. and W., 7 min. 9 1-5 sec.

Class C (under £250, chassis price).—T. Wood's 14-15-h.p. Belsize, 5 min. 58 4-5 sec.; Capt. R. G. O'Callaghan's 10-12-h.p. Swift, 8 min. 17 sec.

Class D (under £350 chassis price).—J. B. Dunlop's 16-20-h.p. Calthorpe, 4 min. 12 sec.; J. Dallas Pratt's 14-h.p. Vulcan, 5 min. 25 2-5 sec.

Class E (under £450 chassis price).—S. T. Robinson's 15-h.p. Clement-Talbot, 2 min. 53 2-5 sec.

Class F (under £550 chassis price).—P. Robinson's 28-h.p. Minerva, 2 min. 36 sec.

Class G (under £700 chassis price).—T. Henshaw's 48-h.p. Daimler, 2 min. 24 sec.

Class H (over £700 chassis price).—S. F. Edge's 60-h.p. Napier, 2 min. 7 2-5 sec.

SECTION II. (Amateurs).

Class B (under £200 chassis price).—A. K. Moe's 16-h.p. Reo, 4 min. 57 4-5 sec.; J. G. Drury's 8-h.p. Rover, 8 min. 19 3-5 sec.

Daimler, 2 min. 46 3-5 sec., scratch, 2 min. 46 3-5 sec.; (3) S. Pringle's 15-h.p. Clement-Talbot, 3 min. 33 sec., less 42 2-5 sec. handicap, 2 min. 50 2-5 sec.

THE General Petroleum Company have started their own store and canning works in Bournemouth.

FROM Messrs. Leo Ripault and Co., 64A, Poland Street, Oxford Street, W., comes a sample of a new Oleo insulated terminal they have lately put on the market. The device, which is intended for quickly attaching or detaching ignition wires from sparking plugs, accumulators, &c., takes the form of a round vulcanite cap. The bared end of the wire is passed through an opening in the side of the cap and rests in a chamber, into which a brass plug with solid top is screwed to make a perfect contact. The lower end of the brass plug is open, so that it can be pressed on to the special adapter on the sparking plug.

THE ELECTRIC IGNITION COMPANY, LTD., of Sparkbrook, Birmingham, have just issued a large map or explanatory chart illustrating most clearly the proper method of wiring for one, two, three, four, or six cylinder cars, fitted with E.I.C. ignition of any type. This chart also explains the coupling of combined ignition and lighting sets, and a combination which automatically signalises the extinction of either side or tail lamps. We understand that a copy of the map will be sent to anybody applying for the same, and mentioning the M.C.J. We have also received a copy of this company's new catalogue, which gives illustrated descriptions and prices of all the E.I.C. electrical devices, including a number of novelties only just placed upon the market.

CLUBS AND ASSOCIATIONS.

THE MOTOR UNION.

MOTORISTS visiting New Zealand will be glad to learn that Mr. M. Arthur Jenny, of "Wyalla," Nile Street, E., Nelson, who has just become a life member of the Union, will be pleased to give them any information within his power as honorary correspondent of the Union. Mr. Jenny is the first motorist to introduce the car badge of the Union, —the badge of the considerate driver—to New Zealand.

Nearly £130 has been subscribed to the Legal and Legislative Defence Fund of the Motor Union, in response to the appeal recently mentioned in our columns.

An attractive programme has been arranged by the Oxford and District Automobile Club, which is to entertain the Motor Union at its twelfth provincial meeting and dinner to be held at Oxford, on Saturday, September 19th. During the afternoon the visitors will be conducted over the University and other places of interest, and the Oxford and District A.C. will provide tea.

AUTO-CYCLE UNION.

THE next council meeting of the Auto-cycle Union will be held at Leamington Spa on Saturday, October 10th, an invitation having been received from the Town Council to hold the meeting there.

Permission has been received from the highway authorities of the Isle of Man by the Auto-Cycle Union to hold the international tourist

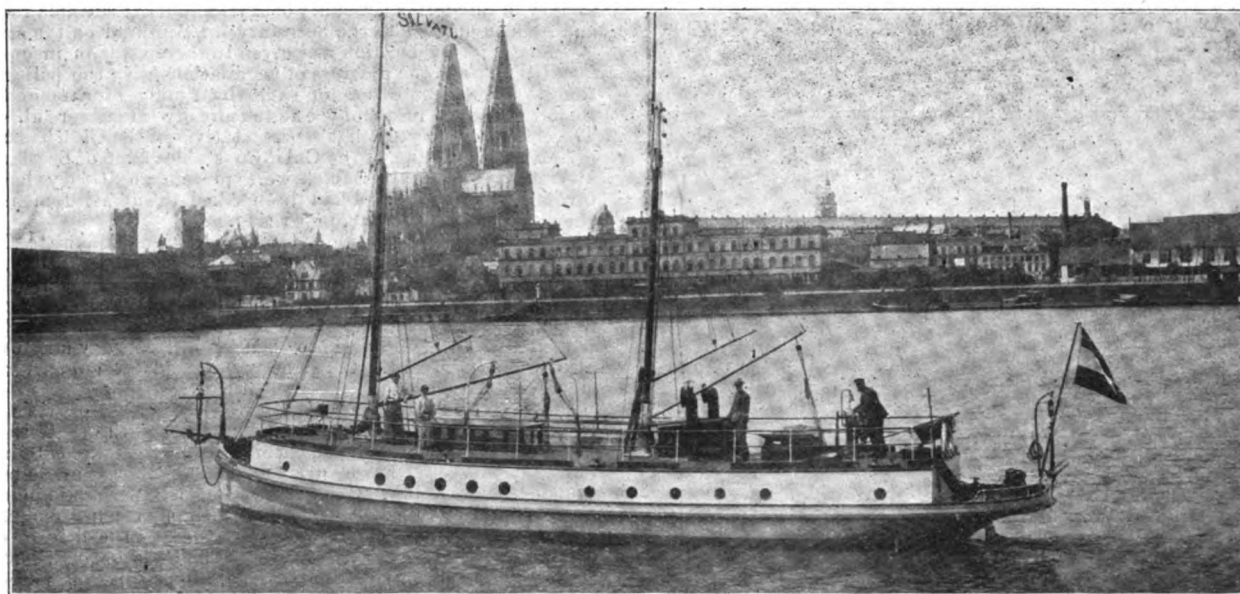
not exceeding ninety by ninety, or equivalent. Gear ratio not to exceed four to one, with twenty-six inch wheels. First prize, gold medal; second, silver medal; third, bronze medal. In the final, Gordon Gibson's 3½-h.p. Triumph was 1st, with W. W. Gunn's 2½-h.p. Eland 2nd, and G. L. Fletcher's 2-h.p. Moto-Reve third; won by over a quarter of a mile. Time, 7 min. 30 2-5 sec.

One Hour Scratch Race for the Motor Cycle Challenge Cup. (Record fifty-one miles 540 yards, by C. R. Collier, on July 13th, 1907.) First prize, £5; second, £2; third £1. Engines not exceeding 76 by 76:—H. V. Colver's (holder) 2½-h.p. Matchless (distance fifty-two miles 1,650 yards) 1; C. R. Collier's 2½-h.p. Matchless (fifty miles 380 yards) 2; R. G. Bell's 2½-h.p. N.S.U. (forty-four miles 1,100 yards) 3. There also ran G. H. Gerhard's 2½-h.p. Brooklands (forty miles 920 yards), F. Toman's 2½-h.p. Laurin and Klement (forty miles 260 yards).

Colver got away with the lead, and, going strongly, gradually overlapped his opponents. At the finish he had travelled two miles 1,270 yards more than Collier, who was second. This is a new world's record for seventy-six by seventy-six machines.

Five Miles Open Handicap, for machines with engines not exceeding seventy-six by seventy-six or equivalent. *M.C.J.* Challenge cup:—

Heat 1.—D. R. Clarke's 2½-h.p. New Century, 10 sec. start, 1; E. W. Caswell's 2½-h.p. Caswell, 50 sec. start, 2. Won by a mile. Time, 7 min. 36 4-5 sec.



A Petrol Motor Launch on the Rhine at Cologne.

trophy race for motor-cycles on Tuesday, September 22nd, over the same course as last year, namely, St. John's, Ballaoraine, Kirkmichael, Devil's Elbow, St. Germain's, Peel, and back to St. Johns. The following is a list of entries received:—C. R. Collier, Matchless, holder (single-cylinder class); H. Rem Fowler, Norton, holder (two-cylinder class); Triumph Cycle Company, 3½-h.p. Triumph; Triumph Cycle Company, 3½-h.p. Triumph; Triumph Cycle Company, 3½-h.p. Triumph; Bat Motor Company, 6-h.p. Bat; W. H. Wells, 5-h.p. Vindec-Special; R. W. Ellis, 3½-h.p. Rex; W. H. Bashall, 3½-h.p. Triumph; G. Gordon-Gibson, 3½-h.p. Triumph; Noel E. Drury, 5-h.p. J.A.P.; C. B. Franklyn, 3½-h.p. Chater-Lea J.A.P.; C. S. Perryman, 5-h.p. Norton.

On Saturday, at the Stadium of the Franco-British Exhibition, the annual race meeting of the Auto-Cycle Union was included in a programme of sports comprising swimming, running, walking, cycling, and other pastimes. The motoring events were a one mile time-trial for flying start, in which there was nine entrants; the five miles tourist handicap, with twenty-three competitors; one hour scratch match, which attracted seven entrants; and a five mile open bicycle handicap for the *M.C.J.* Challenge Cup, this bringing out a dozen competitors.

The results were as follows:—

One Mile Time Trial, for machines with cylinder capacity of seventy-six by seventy-six, or equivalent. First prize, £5; second, £2; third, £1. "Auto-motor Journal" Challenge Cup:—D. R. Clarke's 2½-h.p. New Century, 1 min. 53-5 sec., 1; C. E. Bennett's 2½-h.p. Mansfield, 1 min. 6 2-5 sec., 2; H. V. Colver's 2½-h.p. Matchless, 1 min. 11 3-5 sec., 3. There also ran C. R. Collier's (holder) 2½-h.p. Matchless, 1 min. 13 1-5 sec.; R. G. Bell's 2½-h.p. N.S.U., 1 min. 19 1-5 sec.; E. W. Standing's 2½-h.p. Ioner, 1 min. 28 1-5 sec. G. H. Gerhard's 2½-h.p. Brooklands did not finish.

Five Miles Tourist Handicap, for touring machines with engines

Heat 2.—H. V. Colver's 2½-h.p. Matchless, 5 sec. start, 1; C. E. Bennett's 2½-h.p. Mansfield, scratch, 2. Won easily. Time, 6 min. 24 sec.

Heat 3.—R. G. Bell's 2½-h.p. N.S.U., 40 sec. start, 1; C. R. Collier's 2½-h.p. Matchless, scratch, 2. Won by 300 yards. Time, 6 min. 18 1-5 sec.

FINAL.

| | | | | |
|------------------------------------|-----|-----|-----|---|
| D. R. Clarke's 2½-h.p. New Century | ... | ... | ... | 1 |
| R. G. Bell's 2½-h.p. N.S.U. | ... | ... | ... | 2 |
| C. R. Collier's 2½-h.p. Matchless | ... | ... | ... | 3 |
| Won easily in 6 min. 16 sec. | | | | |

THE INCORPORATED INSTITUTION OF AUTOMOBILE ENGINEERS.

THE programme for the session 1908-9 includes the following arrangements:—October 14th, presidential address, "Some problems of the motor-car," by Dugald Clerk, F.R.S., M.Inst.C.E., F.C.S.; November 11th, "A complete test of a modern petrol engine" (power, thermal and mechanical efficiency, exhaust products at various powers and speeds), by Bertram Hopkinson, M.A., M.Inst.C.E., Professor of Mechanism and Applied Mechanics, Cambridge University; December 9th, "How the weight of the motor-car is made up," by Mervyn O'Gorman, M.I.Mech.E., M.I.E.E.

The following papers and discussions have been arranged for the general meetings of the Institution in 1909:—Messrs. F. H. Royce, M.I.Mech.E., "Causes of wear in motor machinery"; G. H. Baillie, "Carburettor experiments"; Horatio Ballantyne, F.I.C., F.C.S., "On specifying the quality of petrol"; F. R. S. Bircham, "The use of small internal combustion engines for marine work"; L. A. Legros

M.I.Mech.E., "Transmission"; E. H. Cozens-Hardy, M.I.Mech.E., M.I.E.E., "Motor-cabs"; Mr. R. Lawrence, M.I.Mech.E., "Valve setting"; Dr. W. Watson, D.Sc., F.R.S., "Petrol engine experiments."

MOTOR CLUB.

Mr. WILBUR WRIGHT is amongst the recently-elected members of the Motor Club, and will shortly be visiting England.

LINCOLNSHIRE.

A MEETING of the committee of the Lincolnshire A.C. was held at Sleaford on Thursday of last week. The situation arising out of the increased police activity on the roads was considered, and a course of action, which will be communicated to members individually, was decided on.

Correspondence between the Manchester A.C. and the Motor Union on the question of affiliation was considered, and it was decided to support an endeavour which is being made by several clubs to induce the Royal A.C. to accept a joint scheme of affiliation together with the Motor Union. This would, it is hoped, avert the disastrous consequences which are likely to result at the end of this year if clubs are bound to affiliate with one or the other and are unable to affiliate with both.

It was decided to hold a meet of the club at Revesby early in September.

The following were elected members of the club:—Messrs. W. H. Watson, Temple Bruer; A. W. Dean, Dowsby Hall; A. E. Dixon, Bourne; and W. S. Royce, Donington.



The 30-cwt. Van recently built by Messrs. Dennis Bros., Ltd., for Messrs. Gurney, Family Grocers, Hereford.

NORTH BERKSHIRE.

ON Thursday of last week the North Berkshire A.C. held a successful gymkhana in the beautiful grounds of Hinton Manor, by invitation of Captain and Mrs. Loder-Symonds. The first event was a Driving Competition, between bowls and various obstacles. The premier prize of gold sleeve-links was awarded to Mr. H. Woodward, who drove a 9-h.p. De Dion, and the second prize to Mr. E. Bond, driving a 27-h.p. Ariel.

The second event was for ladies, Tilting at the Ring, in which the Hon. Ethel Dormer carried off the first prize of an antique clasp, while Miss May Loder-Symonds won the second prize of a gold bracelet; the third, a silver mounted bottle, falling to Miss Woodward.

The meeting was well attended, quite a hundred guests assembling for tea at the Manor, and afterwards inspecting the handsome prizes presented by Captain and Mrs. Loder-Symonds.

MANCHESTER MOTOR.

ON Saturday the Manchester Motor Club held a successful petrol consumption test. Seventeen cars and nine cycles competed, and the event was so successful that it is probable another competition will be held shortly. The positions of the first six cars were:—1, V. G. New (Siddeley); 2, H. Hollingdrake (La Buire); 3, J. H. Charlesworth (Darracq); 4, H. J. Meldrum (Riley); 5, A. B. Albert (Riley); 6, P. A. G. Bell (Bell). The first prize for motor-cycles was won by A. J. Morehouse (34-h.p. Triumph), who did 16½ miles at the rate of 148 miles per gallon. H. Reed (4-h.p. Dot) would have claimed the second prize, but he failed to wait for the official checker. Others making the same mis-

take, the prize went to C. Kettle (Triumph), who went off the course completely, but luckily waited to be checked. The petrol stewards were Messrs. A. J. Bell and F. C. Hunt.

MIDLAND.

THE hon. secretary of the Midland A.C. has issued the following notice to the members:—My Committee had under consideration the question of the dust nuisance, which is largely answerable for the great amount of prejudice now shown in many ways towards motorists in general. May I ask you, on behalf of my Committee, to have the greatest regard for all other users of the highway, both by driving carefully through towns and villages, and by slowing up when passing anyone on the road. I should like to ask you also to use your influence with any of your friends who are motorists.

SCOTTISH.

THE Scottish Automobile Club has intimated substantial objections to the application by the Ayrshire County Council for the fixing of a ten mile limit in the villages of High Fenwick and Minishant.

A meeting of the General Committee of the Club was held in Edinburgh on Monday. Mr. John Adam occupied the chair.

It was reported that application for speed limits had been lodged by the following authorities:—County of Midlothian, Burgh of Broughty Ferry, County of Berwick (Burgh of Coldstream), County of Inverness, County of Sunderland, County of Ayr, and that suitable representation had been submitted to the Secretary for Scotland on the subject.

Further consideration was given to the matter of inconsiderate and fast driving, and the progress of negotiations with the police for co-operation towards suppression of same by timing of cars and otherwise. Reports as to the result of the action already taken were all satisfactory. The chairman reported that representatives of the Club had attended, by invitation, a meeting of the Chief Constables Club of Scotland, at which about forty Chief Constables were present; that they had been very favourably received, and had been asked to submit a memorandum of the proposals of the Club, in writing.

On the recommendation of the Competitions Committee it was agreed to have a closed hill-climb on Cairn-o'-Mount on Saturday, September 19th, and it was agreed to offer prizes under a system of handicap or classification to be determined by the Competitions Committee. It was reported that the Scottish Motor Traders' Association has asked the Club to conduct a hill climb open to members of that body and to cars personally owned by them, on the same day and place, and this was cordially assented to.

A lengthy discussion took place on the subject of trials in 1909, and remits were made to the Trials Committee on the subject.

At the suggestion of the Commercial Vehicle and Industrial Committee it was agreed to hold a commercial vehicle parade in Glasgow on Monday, October 5th, and in connection therewith to inaugurate a prize scheme open to vehicles which have been in use since January 1st, 1908, under which money prizes will be awarded to the drivers who, in the opinion of the Judging Committee, on the basis of condition and appearance of their vehicles, and on other data to be supplied, merit the award. It was agreed to divide the entrants into four classes:—1. Vehicles driven by internal combustion engines, carrying 1 ton or under; 2. Vehicles driven by internal combustion engines, carrying over 1 ton and under 35 cwt.; 3. Vehicles driven by internal combustion engines, carrying over 35 cwt.; 4. Steam vehicles. Three prizes, contingent on a specified number of entries, of £4, £2 and £1 are to be given in each class.

VICTORIAN MOTOR CYCLE.

FROM our Australian correspondent comes a copy of the programme of the Victorian Motor Cycle Club, which has headquarters in the Amateur Sports Club in the Equitable Buildings, Collins Street, Melbourne. Among the most interesting fixtures are the following:—September 26th, hill climb at Heidelberg; October 17th, ten mile road race; November 7-9th, reliability tour; December 5th, track meeting; December 25-27th, Christmas tour.

MR. W. A. YEAMAN made the fastest time in the hill-climbing contest of the Dundee and District Motor Cycle Club at Lunley Den.

AN inter-club meet of motor-cycling organisations in the Midlands was held at Stratford-on-Avon on Saturday last. The clubs participating were the Birmingham, Burton-on-Trent, Coventry, Oxford Bocardo, Sutton Coldfield, and Worcester motor-cycle clubs.

MR. A. N. DEAKIN, of Messrs. Warwick Wright, Ltd., has just started a tour throughout England, Ireland and Scotland on a 1909 pattern 26-h.p. Metallurgique. Mr. Deakin is calling upon all the principal agents as he proceeds, and will be stationed in Dublin throughout next week. Motorists or agents who care to have demonstrated to them the many excellent qualities of these cars should write to Messrs. Warwick Wright, Ltd., at 110, High Street, Marylebone, London, W., making an appointment, when Mr. Deakin will be pleased to call and give facilities for trying the new model.

CASES AGAINST MOTORISTS.

UNLICENSED MOTOR-CAR.

William Bailey, of East Greenwich, was summoned at Greenwich for having kept a motor-car without a licence. It was stated that defendant had two automobiles, and a licence for one only. Mr. Benwell, for the defence, urged that the one car was used for business purposes only, and, after hearing the evidence, Mr. Gill stated that no doubt Mr. Bailey had a *bona fide* belief that a licence could be dispensed with. The car, however, was not constructed or adapted solely for the conveyance of goods, and the defendant must pay a fine of 20s. and 2s. costs.

HEAVY HAULS.

At the Godalming Borough Bench several motorists have been summoned for exceeding the legal limit, for driving without a red light in the rear, and for other offences. At Prescot (Liverpool) Petty Sessions some drivers have also been fined for exceeding the legal limit, as were three others at Worthing a day or two ago. At Rugby fifteen motorists have been fined on one day sums ranging from £1 to £3, the latter being inflicted on the Duke of Westminster and others caught in a trap during the recent Polo week there.

Twenty cases against motorists for exceeding the speed limit were heard at Worthing on the 19th inst. Fines ranged from £2 to £8, the aggregate being about £70.

Two motorists have been fined at Frodsham for exceeding the legal limit between Frodsham and Chester.

Six motorists were fined at Carlisle on Saturday for exceeding the legal limit. Several motorists were fined sums totalling £26 at Hereford for speedy motoring down Swainshill. A number of motorists were summoned at Midhurst Petty Sessions and at Wetherby on Friday of last week, a trio were fined as the result of a trap near Bickerton. Several motorists were fined at Basingstoke on the 19th, and on Saturday fines amounting to £111 were inflicted on drivers of cars at Kingston.

Motorists have also been before the Bench at Warwick (3), Arundel, Haywards Heath (4), Havant, Carlisle, Newcastle (4), Perth (3), Selby (fines, £49), Darlington (£2), Stonehaven (£2), Wokingham (seven cases involving fines of £19).

COMPANY NEWS.

In the case of new companies the file number is given at the end of the particulars.

DENT MOTORS.—£10,000. Private. (99,152).

SAFETY VEHICLE SYNDICATE.—£5,000. To acquire certain patents and an experimental motor-car, and to adopt an agreement between F. Lamplough and the Albany Manufacturing Company, Ltd., of the first part, the said F. Lamplough of the second part, G. J. Shave of the third part, the said Albany Manufacturing Company, Ltd., of the fourth part, R. P. Davis of the fifth part, J. Paterson of the sixth part, and this company of the seventh part. 37, Chancery Lane, W.C. (99,190).

MINERVA MOTORS.—£20,000. 40, Holborn Viaduct, E.C. (99,251).

SWAN, LTD., has been registered with a capital of £10,000 to acquire the business carried on at 212-216 and 228, Pentonville Road, London, N., by B. Swan and C. Swan as S. Swan and Co., and to carry on the business of motor-car dealers, &c. Registered office, 216, Pentonville Road, London, N.

ROAD REPORTS.

HARROW.—Applications are being sent to the Middlesex County Council for a speed limit of ten miles an hour over a number of roads in the Harrow district.

STAFFORD.—A ditch which runs down between the carriage way and the footpath on the steep Radford Bank, near Stafford, for about 150 yards, and has been a source of danger to motorists for some time, has been filled up.

WORTHING.—A direction post has been placed over the fountain in the Town Hall Square at Worthing by the Corporation indicating the Broadwater and Brighton main road. This will be a great convenience to motorists, who are frequently being puzzled owing to the fact that four roads open out from the Circus.

GRANTHAM (Lincs).—Care should be exercised when driving in Anwick, on the Sleaford and Tattershall road, owing to the bridge at Anwick being now under repair.

WEST SUSSEX.—The West Sussex County Council have issued a circular letter to the district authorities pointing out the wear and tear on the main roads by heavy motor traffic. It is understood that some of the local authorities will, as the result of this circular, discountenance such traffic use in official service. The Local Government Board has recently made a regulation at the instance of the County Council of West Sussex, to the effect that motor-cars shall not be driven at a speed exceeding ten miles per hour over so much of the main road from London to Brighton (including High Street) as extends from its junction with Black Dog Lane to the southern boundary of the parish of Ifield, and over so much of the main road from Crawley to Horsham as extends from

its junction with High Street to a point in the main road situate ten yards south of its junction with Springfield Road.

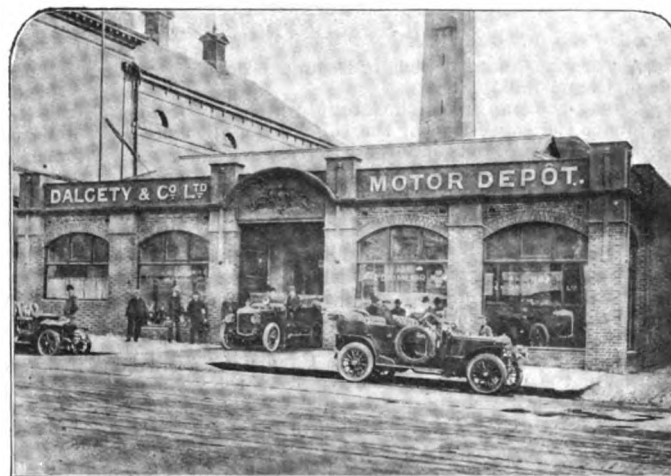
GLASGOW.—The Scottish Automobile Club have given five tons of chemical dust-laying substance to the District Committee of the Lower Ward of Lanarkshire, and this is being laid on two miles of the Glasgow-Stirling road.

THE TIRADE AGAINST MOTORISTS.

THE Coventry Rural District Council have decided to support a memorial to the Prime Minister which is being promoted by the Road Union with reference to securing effective control of motor traffic. The medical officer of health (Dr. C. W. Iliffe), who is also coroner for Coventry and North Warwickshire, said that thousands of unhealthy microbes were being disturbed every day by the pace of the motors and set free in the air; that it was known that people who were obliged to be constantly on the main roads suffered from a peculiar sore throat, and that there was a large increase of asthma. He urged the council to support the memorial on sanitary grounds.

ALLUDING to motor traffic at the Bowland Rural District Council's meeting at Clitheroe, the chairman, Mr. Garnett, said he would like to restrict the speed of automobiles through villages to ten miles per hour, and let motorists drive any speed they liked outside such areas.

THE Rural District Council of Kidderminster has passed a strongly-worded resolution with regard to the destruction caused to roads by motor-cars. Mr. M. Tompkinson, the chairman, speaking as a motorist, said it was time that the Legislature should make it impossible for



An Australian Motor Depot.—The Premises of Messrs. Dalgety and Co., Ltd., Melbourne.

motor-cars to pass through towns and villages at a pace of more than ten miles per hour.

ON the reading of a letter from the Association for Securing Effective Control of Motor Traffic at the Chester Board of Guardians, asking them to support a memorial to the Prime Minister on the subject of motor traffic, a chorus of members replied in the affirmative. One of the members, Mr. Rowe Morris, mentioned the case of a person wanting to sell some hay, who was asked whether the hay had been obtained from a field near the highway. On being informed that it was, the would-be purchaser refused to buy.

THE magistrates at Lancaster are said to be as determined as ever to inflict high fines on the unfortunate motorists brought before them. "We are not on our defence," one is reported to have said to a Press representative. "We are simply applying the law to the best of our ability. It is no use handling some of these gentry of the road with the gloves on. The punishment must fit the crime, and the fines we enforce are little enough when you consider that every time a motorist succumbs to the passion for excessive speed he is a source of great danger to the public. We are not going to allow these flighty gentlemen to run amok along the King's highway if we can stop it."

W. W., in the "Daily Telegraph," asks:—"Why not insist on a readable board, and instead of a dim lamp, which is utterly inadequate for its purpose, make it illegal at night to have other than an enclosed light, with the numbers cut in glass, so that the illumination is behind instead of at the side? I am sure this would enable many more of the offenders to be caught."

THE Rev. F. P. Bacon Phillips, of Crowhurst Rectory, Sussex, suggests that toll gates should be reconstructed to deal with motor-car traffic.

"No kid glove legislation," writes Mr. R. C. Clephan, of Tynemouth. "No car should be allowed to go quicker than the horse anywhere, and at a very much slower pace in the towns and through villages."

THE "Morning Leader" is distinguishing itself by the persistency with which it publishes compiled summaries of alleged motor accidents;

adding, however, that in compiling "this list we have given the circumstances as far as ascertainable under which the accident happened, realising that the blame should not in all cases rest on the motorist."

THE chairman of the Malling (Kent) Police Court has stated that the local Bench will deal severely with all cases of dangerous driving by motorists along the roads of that district.

AUTOMOBILE ACCIDENTS.

ON Sunday a collision occurred at Bromfield, near Ludlow, between a motor-car and a motor-cyclist. The latter was fatally injured.

AT Birmingham on Saturday night an old woman named Mary Taylor was knocked down by a motor-car, and received such injuries that she died in the hospital half an hour after admission. The woman, who is sixty-five years old, was crossing the road at Hockley Hill, when the motor ran into her and knocked her down, the wheels passing over her body. It is stated that the deceased woman came from behind a tramcar, hesitated, and then went forward.

ON Thursday of last week a motor-car ran into a herd of Shorthorn cattle at Shap, on the main north road through the Lake district, and two animals were so badly injured that they have had to be slaughtered.

ON Friday of last week the jury investigated the circumstances of the accident in which Mr. E. H. Timson, head of the firm of Timson Bros., of Birmingham, met his death. This occurred, as already reported, near Denbigh, and in the end the jury without hesitation returned a verdict of "Accidental death," they and the coroner expressing deep sympathy with Mrs. Timson and the family.

POLICE "CONTROLS."

A TRAP has recently been in frequent working order on the London side of Chelmsford.

THERE is a trap at North Gate, Morpeth, on the Great North Road. In reply to the suggestion of the solicitor for the defence of a motorist recently summoned to the Morpeth Sessions, the justices' clerk intimated that the Bench took a great interest in the control and were satisfied with it.

BOROUGHBRIDGE is being frequently made the scene of police trapping operations.

BETWEEN Knutsford and Helmes Chapel, which are eight miles apart, a police trap has been established.

THERE is a police trap in operation on the main road from Oxford to Banbury, about a mile on the Banbury side of the village of Adderbury and three miles from Banbury.

ON Thursday members of the County Constabulary took up a position on the road through the wood to the south of the Memorial Arch at Edzell, near Dundee, and held a watching brief for the law all day. As a result it is said that no less than seven cars were held up and their numbers "taken."

THERE is a ten-mile limit in the village of Bankfoot, near Crieff and Auchterarder, and several motorists exceeding that speed therein have been fined.

POLICE traps are working in the villages of Kingstown and Horrabay, near Carlisle, on the main road to Scotland.

THE police have a trap at Barton, near Preston, in which several motorists have lately been caught.

CONSTABLES, although they have not yet established a control, are very watchful of motorists on the north road from Gosforth.

THERE is a measured distance on the public highway between Dunkeld and Pitlochry, on which several motorists have lately been caught.

A MEASURED distance has been established at Swainshill, near Hereford.

THERE is a measured furlong on the York road, near Bickerton, about three miles from Wetherby.

DURING the recent visit of the Maharajah of Nepal to this country two six-cylinder Napier cars were used continuously by him and his suite for various State and other functions they attended. On his departure the Maharajah expressed himself as being greatly pleased in every way with the satisfaction the cars were giving him.

A 15-H.P. HUMBER car recently supplied to Sir Sydney Olivier, Governor of Jamaica, has met with an untimely fate, it having been destroyed by a fire, which involved a number of carriages and the building in which they were standing. The damage is estimated at £2,000. It is interesting to note that the car was running perfectly up to the date of the contretemps, and had given the utmost satisfaction to the owner.

MESSRS. HANS RENOLD, LTD., Progress Works, Manchester, have just issued a useful booklet dealing with motor chains, which has been specially prepared for the use of motorists. The pamphlet includes a table showing the various sizes (English and French) of the Renold motor chains, together with some instructions for ordering. Then follows a useful list of motor-cars and suitable chains for the same, particulars of chain joints and spare parts. The concluding pages are devoted to hints on the lengthening or shortening of chains, road repairs, the advantages and care of chains, and a lighting-up table. Copies of the booklet can be had on application to the firm.

FORTHCOMING EVENTS.

AUGUST.

29th (Sat.).—Meet of the Lincolnshire Motor Club at Lincoln. Berks A.C. closed hill climb at Wantage. Leicester A.C. gymkhana at Freeman's Meadow, Aylestone Road, Leicester.

Essex M.C. 200 miles Reliability Trial.

30th (Sun.).—Southend M.C. run to Great White Horse Hotel, Ipswich.

31st (M.).—Closing day for the entries for the Army Council Light Tractor Trials to be held in February, 1909.

Daily practice begins for the Isle of Man Trials, from daylight to 8 a.m.

SEPTEMBER.

4th and 5th.—Reliability Consumption Trial of the Essex C.A.C. at Norwich in connection with the R.A.C. provincial meet.

5th (Sat.).—Aston Hill climb of the Herts C.A.A.

Lancashire A.C. gymkhana.

Invitation of Sir D. Salomons to the Kent A.C. to visit Tunbridge Wells.

Provincial meet of the R.A.C. at Norwich.

Richmond M.C.C. week-end at Henley.

12th (Sat.).—Brooklands A.R.C. meet.

13th (Sun.).—Mont Ventoux hill climb of the A.C. Vaclusien.

14th-26th.—International Rubber and Allied Trades' Exhibition at Olympia, London.

17th (Th.).—Touring car competition of the A.C. of Holland through that country.

19th (Sat.).—Provincial meet of the Motor Union at Oxford.

North Middlesex A.C. 100 miles reliability run.

Manchester A.C. reliability run for small cars.

Meet of the Hull Auto Cycle Club and the Lincolnshire Motor Cycle Club at Brigg.

Annual Hill Climb of the Bristol and Gloucestershire A.C.

Lunch of the Kent A.C. at Dover.

Herts C.A.C.'s climb for cars at Aston Hill.

23rd (W.).—Graphic Trophy and Henry Edmunds Competitions in the Isle of Man.

24th (Th.).—The "Four Inch" Race in the Isle of Man.

25th (F.).—Welsh A.C. reliability trial for motor-cycles.

26th (Sat.).—N.W. London M.C.C. petrol quantity judging competition.

Invitation to the Kent A.C. by Mr. and Mrs. Schlenheim to Chislehurst.

27th (Sun.).—Southend M.C. run to White Hart Hotel, Braintree.

OCTOBER.

2nd (F.).—Gaillon Hill Climb.

3rd (Sat.).—Brooklands A.R.C. meeting.

11th (Sun.).—First International Road Congress and Exhibition at Paris.

International long distance balloon race.

11th-18th.—International Road Congress at Paris.

LIGHTING-UP TIMES—LONDON.

Aug. 29th—7.53 — Aug. 31st—7.49 — Sep. 2nd—7.45 — Sep. 4th—7.41
" 30th—7.51 — Sep. 1st—7.47 — " 3rd—7.43 — " 5th—7.39

To find the approximate lighting-up time in August for Birmingham 12 minutes should be added to the above times, 17 for York, 21 for Manchester, and 43 for Glasgow.

BUSINESS NEWS.

PALMER TYRE, LTD., announce that they have found it necessary to transfer their cycle and motor-cycle departments to more commodious premises at 103, St. John Street, Clerkenwell, London, E.C. The motor tyre business will be carried on, as hitherto, at 119, 121, 123, Shaftesbury Avenue, W.C.

THE Daimler Company have made arrangements with Messrs. Dalgety and Company, Ltd., Melbourne, for the sole selling rights of Daimler cars throughout Australia. During the past week six cars, all of the open touring type, were dispatched to them.

THE Secretary to the Admiralty has written to Messrs. Carless, Capel and Leonard conveying the appreciation of the Lords Commissioners of the prompt and obliging manner in which they carried out orders for the supply of petroleum spirit for H.M. submarines at ports on the East Coast during the recent naval exercises in the North Sea.

MESSRS. BROWN BROS., LTD., have put down a special plant for repairing motor lamps and motor horns, and undertake to renovate all makes of such accessories. This work is done in connection with their depot at 22-32, Great Eastern Street, London, E.C.

FROM Messrs. Boulton and Paul, Ltd., engineers, Norwich, comes a copy of their new catalogue of the "Novic" steel boats. Full particulars and illustrations are given of the different types of vessel turned out, as also of the Novic two and four-cylinder marine motors, reverse gears, &c.

APPROPOS of the forthcoming "Four Inch" race in the Isle of Man, we learn that no less than fifteen competitors are pinning their faith to Ilo lubricants.

THE Motor-Car Journal.

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COMMENTS.



TO our Correspondence columns this week Prince Francis of Teck, the chairman of the R.A.C., sends an important letter dealing with the dust problem and the allegations of inconsiderate driving against those who have control of motor vehicles on the roads. Two or three points of particular interest deserve some further consideration, and the suggestion that motorists should provide themselves with speedometers should have the advantage of giving them means of rebutting the police evidence in court. There are many reliable types now upon the market, and the selection of that particularly suited to any make of car is not a difficult matter. His Serene Highness deprecates the use of the siren, as does another correspondent in our columns this week, and the addition of mirrors on the car will add another fitment to the number of accessories required by motorists. The intimation that the club intends to make a study of the causes of, and remedies for, the complaints made against automobilists, and the suggestion that the "technical work of the club should occupy a secondary position at this stage," lead to the hope that the unanimous declaration against Trials of the character that have lately been held, recently noticed in our columns, has not been without its effect on those who direct the policy of the R.A.C. Whilst the central organisation is becoming alive to the exigencies of the situation, and, ignoring the reckless statements of the correspondents of general newspapers, is dealing practically with responsible critics, the provincial clubs are also doing what they can in the matter. The Manchester A.C., for instance, which has no fewer than 350 members, is asking them to report to the committee any case of reckless or careless driving which is considered worthy of censure. The offender is to be communicated with, and where the first caution is not sufficient to secure the desired results, proceedings may be instituted. We trust that the strongly outlined policy of the Manchester Club may have useful effect in silencing much of the opposition which is now heard throughout Lancashire.

The "Four Inch" Race.

A SPECIAL meeting of the committee of the R.A.C. was held at the Club House in Piccadilly, London, W., on Monday, to consider what action, if any, should be taken in regard to the running of the "Four Inch" Motor-car Race in the Isle of Man. Prince Francis of Teck, the chairman of the Club, presided, and, although the proceedings were private, official intimation was subsequently given that a decision had been unanimously come to to the effect that the contest should be held in accordance with the regulations which have already been issued. It was stated that every precaution would be taken to prevent the risk of accidents to competitors and spectators alike, and mention was also made of the fact that no accident had occurred on any previous occasion on which races had been run in the Isle of Man. This, however, ignores the injury to Mr. Clifford Earp

on the occasion of the speed trials at Douglas in connection with the Eliminating Race for the Gordon Bennett race, and also the many mishaps that have occurred while practicing for subsequent events.

The Patents Act.

THE important clause in the new Patents Act relating to foreign manufacturers holding British patents being required to establish factories in this country for the carrying out of their inventions has now come into force, and its application will be watched with interest by the British industry generally and the motor trade in particular. So many cars have special points and accessories which have been patented in this country by foreign firms that it will be interesting to see how quickly the trade is regarded as of sufficient value to warrant commencing the manufacture in Great Britain. Doubtless some firms will consider the advisability of starting works, and rumour is already rife as to the makers of accessories arranging with English firms to take up the manufacture of their patents. This will doubtless do much to further the demand for British made articles in connection with automobilism—a cry that has been fostered with assiduity by motorists in London. Certain it is that many American and German manufacturers in other industries have already arranged for the establishment of new works in England, and negotiations are pending in many towns now angling for more local industries. Every year a large number of patents owned by residents abroad are registered at the British Patent Office, and in 1907 no fewer than 2,901 of German origin were thus notified here, as well as 2,595 from the United States, 769 from France, 257 from Austria-Hungary, 178 from Switzerland, and 111 from Italy.

Milk Delivery by Motor Vehicle.

EVIDENCE of the value of the automobile in connection with the agricultural interests of the country is freely obtainable, and now the "Industrial Motor Review" has shown its service as a means of assisting the marketing of dairy produce. The difficulties of transit so far as concern milk and other perishable food supplies are well known. The ordinary methods of horse and rail delivery are not at all satisfactory, the frequent handling consequent in sending milk from farm to station and thence by rail to be transferred to another vehicle is not at all conducive to its proper condition. We are glad to learn that at least one enterprising firm in the Emerald Isle has seen its way to secure the prompt despatch of the milk direct from the farm to the consumer or the depot, not only with the minimum amount of handling the cans, but also in the shortest space of time. Messrs. Mooney and Sons, of Blackrock, County Dublin, have their dairy and produce farms at Baldonell, and for some months have had in use for milk delivery two motor vehicles, which have proved very serviceable, and have given them undoubted advantages over their rivals. The first car they had in service was an 8-h.p. Benz, the rear of which is fitted with a special platform for two large milk cans or barrels from which the firm's retail delivery can be made as well as the quantities brought direct from the farms. Their second motor vehicle is a 6-h.p.

Daimler fitted with a van body. This was originally used as a char-a-banc, and being very strongly built, has proved its suitability for comparatively heavy loads. In addition to milk, other produce of a perishable nature, such as butter, eggs, and vegetables, are carried.

Stones on the Highway.

A MOTORIST was recently charged at Cirencester for driving a motor-car on the Stratton footpath. It was said by the police constable that he had thus driven for a distance of 100 yards. When spoken to he called attention to the sharp stones on the road surface and later attempted to justify his action before the Bench owing to the roughness of the road. This, however, did not prevent him being fined for having committed the technical offence. So many cases of this kind have lately been brought to our notice that we would suggest to some of the motoring organisations that they should advise the county and police authorities to arrange some scheme of fair dealing to motorists under such circumstances. When the county surveyor has made it really unsafe for the motorist to journey on the roadway it seems scarcely equitable that the police should come along and secure a conviction because the motorist seeks the safety of himself without in any way inconveniencing the public.



Touring in Holland.—The Museum at the Hague.

Progress in Victoria.

In our Club Intelligence this week we give some interesting figures showing the success of the Automobile Club of Victoria, which is now entertaining the principal officers of the United States fleet, at whose disposal seventy-two motor-cars have been placed. We also learn for our correspondent that a Motor Bill will be before the Colonial Legislature in a few weeks based to a great extent on the Act that is in operation in this country, but without any legalised speed limit. An active Roads Committee of the Club has been formed, which is attending to the erection of white enamelled dangersigns with bright red lettering. These are 36 in. wide by 20 in. high, and are now being placed at the most dangerous parts of the roads.

Naming Villages.

THE suggestion of Mr. Cann, who is associated with the organisation of a passenger service on the South Coast, with regard to the names of English villages has been made to us on several occasions. As a matter of fact the postal authorities now require that the local Post Office shall bear the name of the village in which it is situated prominently painted for the convenience of passers by. Recently we have taken up this matter with the Postal authorities so as to secure that those locally responsible shall attend to the work. Mr. Cann goes even further than we have done, and would have the names of the

villages indicated in larger letters, much after the manner of railway stations. The suggestion, of course, is intended to be of particular service to motorists, who are not always able to consult their maps when touring in places which are unfamiliar to them. The work is also attracting the attention of the A.A. and the M.U., and already many such notices have been put up by the former organisation.

Two Charges for one Offence.

THE point which Mr. W. E. Rowcliffe elucidated at the Llanidloes County Sessions last week is one that motorists on tour should remember. They may at any time be called before the Bench on charges which require intricate knowledge to refute. In the case which is referred to on another page, a motorist was charged with reckless and negligent driving, and mention was also made as to speed. Mr. Rowcliffe thereupon referred the magistrates to the appeal case of *Rex v. Wells*, which was decided before Lord Alverstone on May 17th, 1904. That was a case in which the motorist was summoned for driving to the danger of the public and at too great a speed. Lord Alverstone held that the conviction was bad because of duplicity, there being two separate charges contained in the summons. On the finding of that case Mr. Rowcliffe asked the Llanidloes Bench to dismiss the summons, which they did.

A Ducal View.

No one will doubt the agricultural interest of the Duke of Rutland, and his declarations with regard to police traps made on the occasion of the Melton Horse Show should carry weight with those farmers who freely rail against motorists. He asserted, and everyone who drives a car will agree with him, that automobiles should be driven slowly through villages, by cross roads and when rounding corners. These are counsels of safety for the motorist as well as for the public. The driver of a car is fully aware of the danger of rushing along at a headlong pace, and that knowledge should restrain his speed more than any antics of police hiding behind hedges. But, said His Grace, if motorists were on a perfectly straight road he did not see why they should not be allowed to go at a fairly reasonable high speed without being trapped by a policeman who probably did not understand his stop watch.

In the Vet's Service.

THOSE engaged in the business of selling motor-cars should never ignore any likely opening when trying to reach a new circle of clients. We hear of a veterinary surgeon in the city of Salisbury who is now employing a motor-car instead of a horse when making his calls. He is continually visiting training stables, grazing grounds and farms, often as many as twenty or thirty miles apart. The railway service is practically impossible to him, and he finds that by the use of the automobile he can get through twice as much work as formerly in the minimum time. Possibly the idea of the veterinary surgeon calling upon his patients in an automobile may seem somewhat incongruous, but it is only a proof of the ubiquity of the motor-car.

A Defence.

THE chairman of the Midhurst Rural District Council has been arguing with members of that body with regard to the alleged dangers of motor traffic, and, although he did not succeed in converting them to his view, we would express thanks for the stand he made on behalf of the much-maligned motorist. He declared that the suggestion as to the damage to crops by motor-cars was absurd, and hoped that the dust nuisance would be dealt with in some other way than by attacking those who drove motor vehicles. There were many out-of-the-way places in the county which derived immense benefit from the

motor-car traffic, and to do anything to divert them to other districts was scarcely wise from the point of view of the local ratepayers.

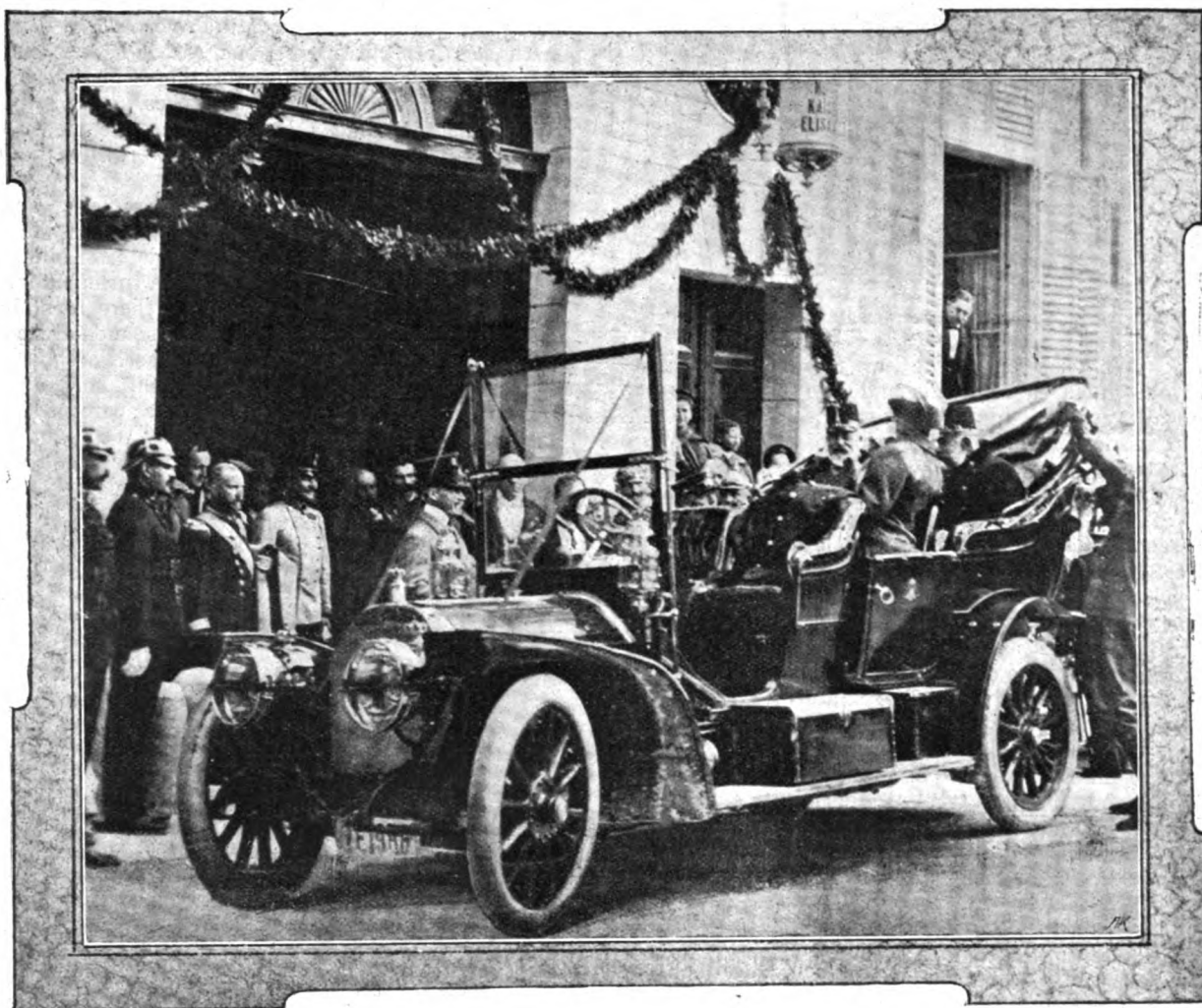
Canadian Caution.

◆ In the Colonies, as at home, the tirade against motorists seems to be one of the features of the newspapers in a dull season. It has become so pronounced in Canada that the Ottawa Valley Motor Car Association is sending out a circular urging its members to take care that they recognise the spirit as well as the letter of the law. Securing the number plate, keeping it free from dirt, the renewal of licences and similar minor matters are, it is suggested, points upon which motorists should be careful. If such were the case and automobilists observed these

get down in reasonable time without the incidental cost of cabs' "advance luggage," railway charges, and the many incidental expenses attached to the operation of leaving London. The fact that the journey is made with the minimum inconvenience is another good point in favour of the change.

Motor Meet in Wales.

◆ THE Welsh A.C. has invited the Motor Union to hold a provincial gathering in South Wales early next year. This will be the first Motor Union meet in that important district, and should do much to give a fillip to the whole movement in the Principality. We understand that the Welsh Club has ordered seventeen Motor Union signs and notices, viz., ten "school," two "concealed turning," and five "reduce speed



King Edward's Visit to Austria.—His Majesty accompanying the Emperor Francis on the latter's first run on an automobile. *(Allgemeine Automobil Zeitung.)*

points whenever they went out on their cars, the present severity of the public against them might be minimised.

Motor-'buses for Holiday Traffic.

◆ SOME owners of motor-'buses in London have had a good season this year in connection with the private hire of their vehicles for families going to the seaside—competition with the railway companies that will not be appreciated at the Clearing House, but yet it has done much to minimise the many harassing little worries associated with the annual vacation. Hardly a day has passed without several motor-'buses being seen on the way from London to fashionable resorts on the south coast, filled with the luggage of large families, all of whom are able to

through village." The villages to be dealt with are Parkmill, Sketty and Loughor.

The Trader's Mark.

◆ It is understood that the police, particularly in the London area, are instituting several proceedings under the Motor Car Act, 1903, in connection with the identification marks used by manufacturers and dealers. We would take this opportunity of advising the trade to be careful that they carry out the legal requirements, otherwise, in the present condition of things, they might find themselves in a difficult position in the police court. Whenever a car is sent out from the depot an entry should be made, and the record book should be kept thoroughly up to date.

MOTURING TO THE KILLARNEY OF MEXICO.

(Concluded from page 562.)

THE country around us is the wildest imaginable. We are on the side of a mountain in the midst of apparently endless gulches and ravines. Huge boulders bar the way on every side. We look in vain for some broad outlet and decide to skirt the mountain by means of a narrow trail which winds between two almost solid



Motoring in Mexico.—The Car and its Load.

alls of rock. We push on. The car creaks and strains. The floor of the gulch is rounded, and two of the wheels of the car are always inches higher than their companions. At times we stop in desperation, for the walls of the little canon are so close together that we cannot pass without removing some of the outcropping rocks. But there is no returning, and as long as the motor does not fail we must ever on. After what seems hours of this toil we hear the shout of Juan, who has gone ahead to reconnoitre; we leave the car and rush ahead. No wonder he shouted for joy, for the gully opened out on to a broad slope at whose foot runs a sparkling mountain stream. Across and beyond stretches a vast plain marked by burro trails. The crossing of the ravine took time, for the banks were steep and soft. Fortunately two vaqueros came along as we were about to make the ford, and their strong lariats and powerful ponies proved of the greatest assistance. Once across we follow blindly the winding burro trail until the sun sinks and the tropical night comes on with all its rush. We are just outside the town of Jalos, and, in view of its unsavoury reputation, we decide to sleep in the open, rather than entrust our lives to the mercies of its unscrupulous inhabitants. We park the car, make a frugal meal of hard bread and our tinned provisions, and stretch ourselves out on our blankets in the shelter of the towering cactus palms. It is only in the morning, when refreshed from our previous day's journey, that we have the nerve to look at our speedometer. From 11.30 a.m. to 6 p.m. on the previous day we had only covered 31 kilometres. We pass through Jalos, whose surly denizens view our "devil wagon" with amazement and even fear. No wonder, for we learn that ours is the first four-wheeled vehicle of any kind to reach their inhospitable place.

From Jalos our road winds up another mountain side, and for a full three-quarters of a mile we creep up a 12 per cent. grade covered with shifting rock. At the top, however, a surprise awaits us in the shape of a twenty miles' stretch of perfect road. We rush forward at the best speed our engine can drive us. It seems a motorist's Paradise. Good things cannot last for ever, however, and the perfect carretera came to an end far too soon. An endless succession of winding burro trails, arid fields flanked by barbed wire fences and stone barriers followed. We are in a land of total barrenness. No green trees or verdant, fertile vegetation greets our dust-filled eyes, naught but dull grey sage, mesquite and yellow cactus. Above and all

around tower bleak and desolate hills. The trails wind and twist like a tortured snake. Fortunately, the ground of the valley is hard and firm, and in spite of the twistings and turnings we are able to make good progress. Darkness finds us on a stretch of level country miles from any inhabited place. We light our gas lamps, wrap ourselves in our coats as a protection against the cool night air—for we are 6,000 feet above the level of the sea—and rush onwards until sheer fatigue causes us to camp for the night. This time we consult our speedometer before we turn in, and find to our satisfaction that it registers 192 kilometres for the day.

The next morning we advance over country which is by far the hardest we have yet experienced. The ground is fairly level, but covered with thousands of rocks, ranging in size from marbles to balloons. No matter how slowly and cautiously we proceed the car sways terrifyingly on the unevenness of the ground. The wheels catch between the stones and slip with hard jolts into the crevices of the rocks. The car squeaks and groans, as if protesting against the indignities it is made to endure. By degrees the face of the country changes, the long slopes give way to deep sandy stretches, and this tries our engine to the utmost. Like a human being, the motor staggers and shudders—the wheels shriek as they revolve uselessly in the treacherous element.

Repeatedly we have to fill the radiator and tanks—the heat of the midday combined with the heavy first gear work causes the radiator to steam and emit jets of boiling water. We get through the sand only to come to a turbulent stream running between deep clay banks. Of course there is no bridge and so we cut a path down the steep banks and advance cautiously. Half way across, just as the front wheels are about to grip the outer bank, the rear wheels begin to slip horribly. Water and mud is churned up on every side, the car careens slowly over and sinks helplessly into the glue-like soil. We alight and attach the block and tackle, open the throttle and push and strain with all our might. But it is no use—we are stuck tight.

We clamber to the bank above and survey the country about. As if to mock our efforts, a broad, level prairie covered with tall grass smiles at us. If we could only reach the crest of the



Motoring in Mexico.—Preparing to Camp Out for the Night.

fields it would be easy sailing for a while at least. At last we spy in the distant field a crowd of peon labourers tilling the ground with a primitive plough drawn by several powerful oxen. At first they refuse us assistance, and it is only by means of several silver pesos that we are finally able to enlist their help.

Our way now seems reasonably clear, and our only preoccupation is to clear the chain case from time to time of the weeds and bush that grow around us. The sun was high in the heavens

and we had passed several small streams without difficulty, when without warning we came to the edge of a half-dried arroyo. It was so narrow and so apparently shallow that we made no attempt to measure its depth. This was a decided mistake, as we afterwards learned to our cost. The Doctor and Juan descended, and I rushed forward with all speed. But, horror of horrors, it was like driving into a tank of lye. Half-way across the motor stalled completely, and the car sank gradually down until the wheels were nearly out of sight. At once we lightened the car of all its baggage, and called to our assistance some peon farmers on the bank. But with three oxen pulling and twenty natives hauling and pushing we were unable to even stir the car in its tracks. The clay held it like a chain. For hours we laboured and strained—all to no avail. Visions of our poor car rusting away in this muddy stream came to our minds. Then a bright thought struck the Doctor. Why not divert the stream and dig the car out? One Mexican can accomplish but little, but thirty can work wonders if given the time. Thirty feet above, the banks were low, and here they speedily built an improvised dam of rock, bush, and trees, that lowered the water around the wheels to a mere couple of inches. Another hour and we had dug a swamp of mud away from the frame, and by more laborious pushing and tugging we had climbed out of what once had promised to be the grave of our hopes.

It was impossible to advance without the aid of a guide, and after much parleying we finally secured from a hut in the little town of San Jose de Gracias a man who knew the country. The town is well named, and a prayer of thanksgiving arose when he climbed to the running board. I shall always hold in deep esteem the wonderful eyes of that swarthy Mexican. Verily they were like searchlights to us. In a vast wilderness that remained a mystery even when lighted up by our powerful lamps, he directed us truly from trail to trail, and by eleven that night had piloted us safely to the top of the mountain that overlooked the town of Atotomilco. Far below us glittered the lights of the city, but as the mountain side was dim in the darkness, we decided to wait until morning to make its descent.

And it was well that we did so, for morning brought us a sight that made us hesitate. No trail led down its rocky descent, whose grade was without exaggeration one in three. We made the most complete preparations for the descent. Juan and the Doctor went before with rocks ready to drop before the wheels at a moment's notice, and then with all brakes on, ignition retarded, and using low gear as a brake, we slid slowly down the slope. At the town we were told that ours was the first vehicle that had passed either up or down the hill in twenty-five years before our advent, and I do not doubt it, the drop being about 1,800 feet, and the distance about $1\frac{1}{2}$ miles.

To properly describe the glories of the country through which we passed from here to the lake would tax the powers of a Byron. On either side of the perfect road tall palms nodded and swayed in the warm breeze. As far as the eye could see extended luxuriant groves of orange, lemon, mango and banana. Gone were the trails of mud and rock, the bridgeless chasm and desolate huts of adobe, and in their place appeared as if by magic velvet macadam, gentle streams and the gay villas and quintas of the rich hacendados. The lake was fully up to expectations—a perfect sheet of azure water, whose tangled banks sheltered myriads of quail and duck.

The return trip was uneventful. Without mishap we passed through the flourishing villages of La Barca, Irapuato, La Piedad, Leon and Lagos, arriving in Aguas Calientes after forty-eight hours on the road. The scoffers were hard to find upon our return to the Club. Like the Arabs, they had silently folded their tents and stolen away. But we did not care to gloat over them; we had proved to our entire satisfaction the marvellous possibilities of the present-day motor. To be able to successfully negotiate a country where even horseback riders are hard put to impress one with the full meaning of what good roads are to a country. Truly there can be no more improving influence in the reorganisation of travel and traffic than the strong, sensibly constructed motor-car like the Reo.

THE SOCIAL WHIRL.

KING ALFONSO has been motoring in the grounds at Osborne, and playing golf. The King and Queen, Princess Henry of Battenberg, and the three princes of Battenberg have also been enjoying excursions to Chale, Blackgang, and Ventnor. On Monday His Majesty was in London. After a visit to the Franco-British Exhibition he motored to Euston, whence he went to Rugby for a game of polo, reaching the ground by motor-car from the railway station.

THE PRINCESS LOUISE (Duchess of Argyll) has been the guest of Countess Grosvenor and Mr. George Wyndham, M.P., at Saughton Grange. Her Royal Highness arrived on Saturday, and on Tuesday was driven to Chester in the Duke of Westminster's motor-car, the motoring party including Lady Victoria Manners. The Princess left the Grange on Wednesday.

EARL CARRINGTON, President of the Board of Agriculture, has made an inspection of the Crown small holdings at Moulton Seas-End, near Spalding, and also at Wingland, on the borders of Lincolnshire and Norfolk. His lordship, who travelled by motor-car, was accompanied by Viscount Wolverhampton, the Right Hon. Ailwyn Fellowes, Mr. F. W. Verney, M.P., Mr. Henry Broadhurst, and Mr. Rider Haggard. When he was M.P. for Leicester, Mr. Broadhurst was not always complimentary in his references to motorists. I trust he now recognises the errors of his earlier words.

LORD and Lady Haverham left South Hill Park, Bracknell, Berks., on Saturday for a motor tour in the east of France. This is one of the peerages created two years ago, Baron Haverham being previously known as Sir A. D. Hayter, M.P. for Walsall for many years.

UNFORTUNATELY the weather was unfriendly to the Motor Yacht Club management, and the regatta and Olympic races in Southampton Water were robbed of much of their pleasure by the pitiless wind and rain that hurled defiance at the motor boats. Despite all this, however, there was a large gathering on the official "Enchantress," including, at different times during the meeting, the Duke of Westminster, Lord Howard de Walden, Commander Mansfield Cumming, and other enthusiasts. The Duke of Westminster steered his Wolsley-Siddeley boat in some of the events, having Captain St. George Clowes and Mr. J. F. Laycock as his amateur crew.

WITH reference to the proposed presentation of a motor-car to the Bishop of St. Asaph some difficulty arose owing to his lordship's disinclination to accept the gift, for the same reason as was assigned by the Roman Catholic Bishop referred to last week. His scruples have, however, been overcome on condition that the vehicle is to be recognised as a diocesan car rather than as one belonging personally to the bishop himself. He is about to be visited by Mr. Lloyd George, who has returned from Germany quite enthusiastic as to the motor-car, and doubtless the Chancellor of the Exchequer will be able to arouse something of the same feeling in the mind of his friend the Bishop.

LORD OSBORNE BEAUCLERK has been staying with his mother, the Duchess of St. Albans, at Newtown Anner, Clonmel, and enjoying a series of motor trips into the surrounding country.

MOTOR-CARS are having official recognition at the meetings of the British Association at Dublin this week—not merely for the purpose of excursions, but for the conveyance of members from one section to another. Each morning the vehicles have assembled in the College Park, where they have been drawn up ready for the scientists and learned persons constituting this famous British society. Sir Horace Plunkett took a keen interest in securing the loan of cars from motorists resident in Dublin.

ACCORDING to an Aberdeenshire County Councillor no man, "from the Prime Minister downwards, can be trusted to drive a motor-car and retain his integrity." LOLLIVS.

THE "FOUR-INCH" RACE.

IN our last issue we gave an illustration of one of the Vinot cars which will take part in the "Four-Inch" race. We are now able to reproduce photographs of several more of the vehicles which have been built for the contest. The first

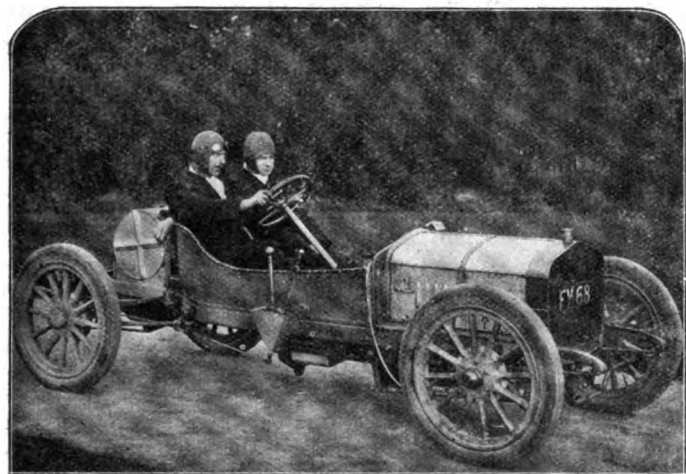


Fig. 1.—The Vulcan "Four-Inch" Car with its driver, Mr. Thomas Rimmer, at the wheel.

picture depicts the Vulcan with its driver, Mr. Thos. Rimmer, at the wheel. The vehicle, which is the production of the Vulcan Motor Co., Ltd., Southport, varies from the standard chassis only in that it is built specially low, and that the artillery wheels will be replaced by Rudge-Whitworth wire wheels in the race. The engine, which has four cylinders 4 in. bore by $4\frac{1}{2}$ in. stroke, is equipped with two separate ignitions, high tension magneto, and accumulator and coil, so that if one fails the other can be used. Three speeds and a reverse are furnished by a gate-controlled gear-box, the final transmission being by a cardan shaft and bevel gear to a live axle.

THE vehicle which the Calthorpe Motor Company, Ltd., have prepared for the race is depicted in Fig. 2, its driver, Mr. Harry Robinson, being shown at the wheel. Except that the chassis has been lightened, the steering put in a more inclined position,

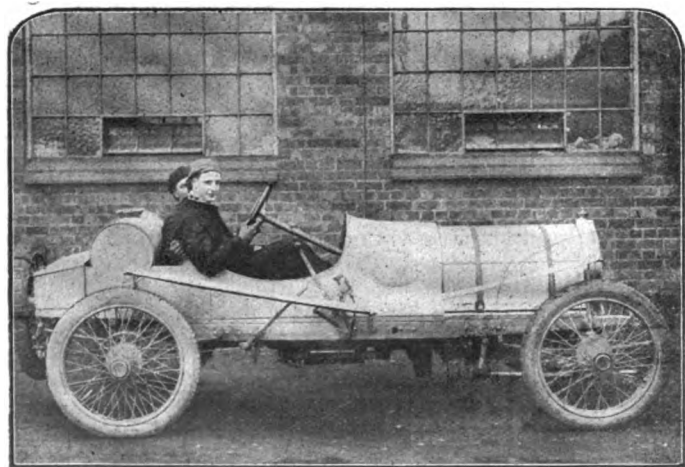


Fig. 2.—The Calthorpe "Four-Inch" Car, with Mr. Harry Robinson at the wheel.

and wire road wheels adopted, the vehicle follows the standard lines of the Calthorpe Company's 25·46-h p. car. The engine has four cylinders, 4 in. bore by $4\frac{1}{2}$ in. stroke. Other details comprising a Hele-Shaw disc clutch, a four-speed "gate" change gear-box giving direct drive on the third speed, and cardan shaft drive.

ONE of the Beeston Humber cars which have been specially

built for the race is shown in Fig. 3. The main frame, which is of pressed nickel-steel, is provided with a secondary one upon which the engine and gear-box are carried. The engine comprises four separately cast cylinders, the bore being 4 in. A noticeable feature of the design is that the whole of the valve tappet gear and cam shafts is carried in the top of the cylinders in a gunmetal case. The valves are set at an angle of 45 degrees and open directly into the domed portions of the cylinders. The ignition is by high-tension magneto, the sparking plugs being located in the centre of the cylinder heads. The carburettor is of the Beeston Humber standard automatic type. The petrol tank is fitted underneath, or near, the driver's seat, and has gravity feed, with auxiliary hand pressure pump. A notable feature of the car is that the radiator is not in the front part of the bonnet, as usual, but is located behind the engine, the water circulation being on the thermo siphon system. The transmission is through a leather-cone clutch, four speed gear-box and cardan shaft to a live axle of the usual Humber floating type, the shafts being carried throughout upon ball bearings. The wheel base of the car is 8 ft. 6 in. with a track of 4 ft. 2 in.; wire wheels of the Humber detachable pattern are fitted, and these will be shod with 815 mm. by 105 mm. tyres.

THE Coventry Humber vehicle, which has been specially designed for the event by Mr. G. W. A. Brown, who will drive it in the race, is shown on page 583. The car presents many

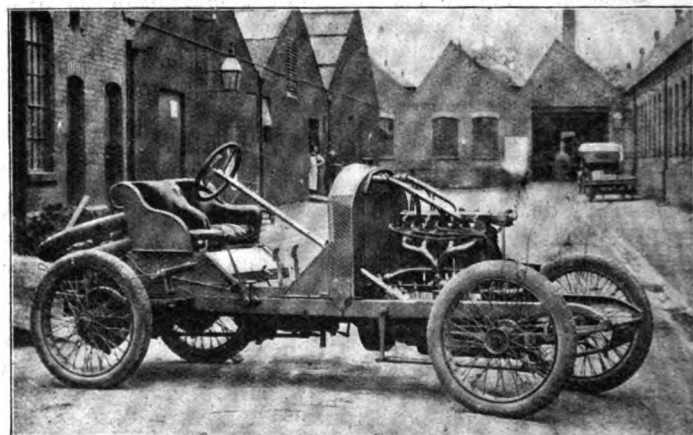


Fig. 3.—One of the Beeston Humber "Four-Inch" Cars.

novel features; the engine is of the four-cylinder type, 3·97 in. bore by 6 in. stroke, and develops nearly 70-h.p. at 2,400 revolutions per minute. Both high-tension magneto and accumulator and coil ignition are provided, and the petrol is fed by pressure to the carburettor. The vehicle is fitted with a four-speed gear-box, the ratio of the speeds being 8·8 to 1, 5·5 to 1, 2·8 to 1, and 1·99 to 1, the direct drive being on the third speed. The live axle is of a novel type, while the road wheels are of the Humber detachable pattern, with 815 by 105 mm. tyres. The wheel base of the car is 8 ft. and the track 4 ft. 3 in.

MOTOR fire appliances in the metropolis continue to increase. The London County Council has just decided to order two additional petrol motor escape vans from Messrs. Merryweather and Sons, of Greenwich. These will be similar to two such machines ordered last year, and when delivered Captain Hamilton, the chief officer, will have no fewer than fifteen motor appliances made by the Greenwich firm.

DURING the last few months the Panhard and Levassor Repair Works of Messrs. W. and G. Du Cros, Ltd., Acton Vale, W., have had many cars in their extensive premises for overhaul, adjustment or repair. At least a score of different types of vehicles have thus been handled by the staff under the direction of Mr. W. A. Turpin, while the Panhards which have been dealt with include some machines of the year 1902.

Another Horse-Power Formula.

The Horse Nuisance.

[illegible]

these animals might be taught to regulate their habits to proper opportunities; and that, failing this, some simple contrivance could be arranged, which, attached to the horse or its vehicle, would afford a receptacle for all objectionable matter during the animal's presence on the public roads. Curiously enough, the question has also been engaging the attention of Mr. E. F. Spurrell, the Borough Surveyor of Holborn. In his opinion

private individual, endeavouring to secure for universal use an appliance that can be attached to the shafts of vehicles to intercept the droppings of horses, and is now preparing the conditions of a competition of such devices. He intends to offer the total amount received as a prize to the competitor who may be selected by the managing directors of three or more firms employing large numbers of horses, who will act as judges.

Beware of Thieves !

A BUENOS-AYRES correspondent reports that the motor movement continues to make steady progress in the Argentine Republic. During the present month the Touring Club Argentino is holding a series of flying kilometre speed trials, while the Moto Club Argentino will in October organise a reliability run of cars offered for sale by private owners. The Automovil Club Argentino is making arrangements for an automobile exhibition to be held in the Pavillon Las Rosas, at Palermo, in November. Full particulars of the show can be obtained from M. Victor Laborde, 272, Suipacha, Buenos-Ayres.

GOSSIP FROM PARIS.

It is becoming more evident every day that French motorists do not appreciate too long journeys in their cars. I know from personal acquaintance with many of them who two or three years ago found infinite pleasure in a trip from Paris to the South of France, North Italy, or even Spain, that nowadays few of them would care to undertake such a journey, and even when a motorist would like to hold the steering-wheel during a few days' trip his wife or sister persuades him it would be much nicer to go by train and to use the motor-car for excursions after they have got comfortably installed in an hotel at their contemplated destination. This means of touring is now so frequently adopted that the railway companies, which, fearing their competition at the commencement of the touring movement, tried to put a spoke in the wheel of the motor-cars by refusing to carry them except at an almost prohibitively high rate, are now catering for their custom! They not only convey them on trucks attached to express trains at a reasonable tariff, but are offering other facilities in the way of special covered vans.

WHEN automobilism was in its infancy it was not, perhaps, astonishing there should have been a great many people incapable of appreciating its advantages and who had recourse to all sorts



A Snapshot at Sindal.

THE DANISH AUTOMOBILE CLUB'S RELIABILITY TOUR OF JUTLAND.

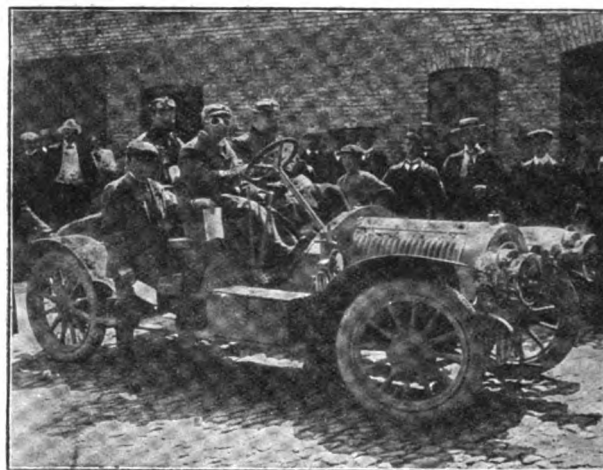
of "tricks," as they called them, to annoy motorists. Among those "innocent tricks" were the stretching of wires across the road, destined to cause an accident to the car if not to decapitate the driver. It might be imagined the time for such tricks had passed. It seems it is not. Even close to Paris, between Versailles and Vaucresson, there is an autophobe mayor who quite recently laid five "traps" for automobiles in the shape of deep trenches across the highway. The pretence was they were required to let off the water, but they were made in such a way as to render an accident inevitable to a car going at high speed. Several automobiles were more or less damaged, and it was not till the Automobile Club of Versailles had taken up the matter that the autophobe official consented to suppress the trenches.

THE worst of it is that in the present state of the law the motorist in France is entirely disarmed in presence of such outrages. He can neither obtain damages nor the punishment of anyone who may have dug a trench across the road on the pretence it is wanted to drain off water. I have been told by a deputy that as this "innocent trick" has been practised freely in many parts of France during the present summer, he will, when M. Barthou's Bill for the regulation of automobile traffic comes on for debate in the Chamber, propose that a clause be inserted into it making the setting of such "traps" for motor-cars a punishable offence.

THE catch rhyme at Le Mans has been for many days,

C'est difficile
De voir voler Orville,
C'est bien plus dur
De voir voler Wilbur.

Hundreds of people who went regularly every morning to the artillery range at Auvours to see Wilbur Wright fly sang it to the tune of the Matichiche while driving back and while loitering about the streets of Le Mans till the evening, when they made another useless visit to the American aviator. The weather was not always very propitious, but on several occasions the wind was almost still at dawn and at sunset, and the impatient public failed to comprehend why he did not fly. Most surely under the same circumstances a French aviator would have flown half-a-dozen times if for nothing else but to please the crowd. But Wilbur Wright is not that sort of man. He has come to do work by which he expects to earn £20,000, and he intends to go about it as he thinks best without troubling himself to satisfy the curiosity of people whom he did not invite. I do not say he is wrong, but the effect has been that a lot of journalists have taken offence and are trying to make their readers believe the machine of Wilbur Wright is such a bad one that even he is afraid to mount it. In a word, the American aviator had during the dark, dismal, blustery days at the end of August what is called *une mauvaise presse*. A French aeronaut who is now turning his attention



Mr. H. C. Christiansen at the wheel of the 22-h.p. Delaunay-Belleville which secured the first prize.

[Motor, Copenhagen.]

to aviation, and who stayed at Le Mans six days to see Wright fly, tells me that though his hope was deceived he does not regret his visit. In examining Wright's aeroplane in its shed he learned a lesson which will not be lost. Nevertheless he said, "But, after all, I do not understand why the Wrights made so much mystery about their aeroplane, while the French aviators were, so to say, building and experimenting their machines in public."

HENRY FARMAN'S tribulations at New York do not seem to have depressed his spirits or damped his ardour for aviation. Before the members of the financial syndicate who induced him by fallacious promises to go to America took to flight, not on an aeroplane, but in the express train for St. Louis, leaving a lot of debts behind them, Henry Farman had expected to earn a little fortune in the States. But the end of his golden dream has not modified the plans he made during the few short days it lasted. If he has not the money of his American cousins to pay for the new aeroplanes and the further expensive experiments he intends to make, he will, if necessary, dig a big hole in his own modest private means to defray the cost. When, back from America, he was asked on landing at Cherbourg what he intended to do, he replied, "I am going to fly during an hour if Wright does, and even if he does not." That depicts the man. He is quite convinced that a brilliant future is in store for aviation.

MARNEY.

SOME NOTES ON MAGNETOS.

IN view of the increasing popularity of magneto ignition on petrol motor-cars, the query raised in our Correspondence columns this week with regard to the testing of magnetos is of general interest. The current from a magneto machine is an alternating one, and as the magnets lose their strength the current through a fixed resistance will become reduced, owing to the fact that the magnetic field is weakened, which reduces the voltage at a given speed, and therefore reduces the current. The best method of measuring this would be to use an alternating current amperemeter such as Siemen's dynamometer. The plan is more suitable for a testing shop or laboratory, and is as follows:—When the magneto is new, run it at a fixed speed through a fixed resistance according to the relative voltage of the magneto. The machine will then register a definite current on the dynamometer, and as it loses strength in the course of time this amount of current will gradually grow less in proportion. A rough method of judging the strength of the magnets is by noting the amount of attraction they exert upon a steel key or other similar article, but this is of course a very crude method. It should be remembered that permanent magnets do not create any force or power; they only gradually give up the magnetism which is in them, which they impart to a surrounding body such as the armature coils, and as this gradually occurs, the field magnets will undoubtedly grow weaker in a similar manner to a discharging accumulator.

Weakened magnetos can be re-magnetised provided that the proper apparatus is available for the purpose. To remagnetise a steel magnet, it is necessary to saturate it with magnetism, and this can only be done by keeping it in a magnetic field for a suitable period of time. To do this, two bobbins containing windings of wire are necessary, made of sufficient dimensions to enable them to be easily slipped over the two poles of the magnet. A current has then to be passed through the windings, producing a magnetic field in the interior of the bobbins, which will gradually saturate the steel of the magnet and restore it to its original strength. As soon as the current is passing round the circuit, it will be found that the magnets are strongly magnetised, but this is only due to the presence of the magnetic field, and if the bobbins were withdrawn the strength of the magnets would disappear. It is, therefore, necessary to keep them in the magnetic field for a considerable time, varying from, perhaps, thirty to fifty hours, according to the strength of the field, which in turn depends upon the number of windings of wire on the bobbins and the strength of the current passing through the circuit. In arranging the latter, care must be taken to make the direction in which the current is flowing suitable to the poles of the magnet, so that the weakened north and south poles of the magnet are put into magnetic fields which will keep the same polarity on each pole. For various reasons it is better to have the work done by an electrician, to ensure satisfactory results.

"EVERYTHING but the motor" is the business maxim of Messrs. Alfred Dunhill, Ltd., whose price list now extends to 296 pages, being excellently sectionised, thus making it a practical work of reference for the motorist to keep on his bookshelves.

TOWARDS the end of last year we sent an old tyre cover (700 by 85), in which there were several nasty holes and gashes, to the Acme Rubber and Tyre Company, 343, St. Vincent Street, Glasgow, for repair and re-treading. The condition of the cover was so bad that even when we submitted it we had serious doubts as to whether it could be made serviceable, and were therefore not surprised when the Acme Company returned it with a remark that they had done their best with it, but that they did not think it good for more than three months' use. The repaired tyre was fitted to one of the front wheels of a small car, and in actual practice this period has long since passed; indeed, the tyre has been in use for the last six months without trouble of any kind, and bears every appearance of being able to run for a considerable time longer, a tribute to the workmanship of the Acme Company.

CONTINENTAL NOTES.

The 1909 Grand Prix Race.

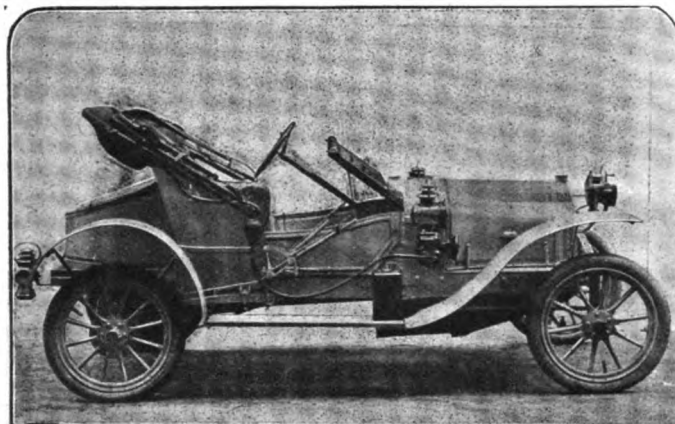
Although next year's A.C.F. Grand Prix automobile race is still a long way off, the question of a new circuit is already under consideration. The one at present most favoured is that known as the Anjou; it is about 74 kilometres long, and takes in Angers, part of the road to Nantes, Conde, Ingrandes and back to Angers.

Hill Climbing at Trouville.

No less than eighty entries were received for the hill-climbing competition which was held at Trouville, on Wednesday last week, under the auspices of "Les Sports." The contest was held on the Calvary Hill, which has a gradient of 13 per cent. or 1 in 7.7, and the competitors were divided into classes on a cylinder dimension basis. Some excellent performances were put up, particularly by the small vehicles. Thus, in the 100 mm. bore single-cylinder class, Perrot on an Aries won in 1 min. 22.45 sec. The best time of the day, 44 sec., was made by Mr. Rawlinson on a two-seated Darracq in the 91-106 mm. bore four-cylinder class. Miss Dorothy Levitt was the only competitor in the over 110 mm. six-cylinder category, her time being 55 sec.

A Motor Meeting at Spa.

The Automobile Club de Spa is organising a motor meet at Spa for the 14th, 15th and 16th inst. The first day's event is the Course aux Cartons, for which £40 in prizes is being



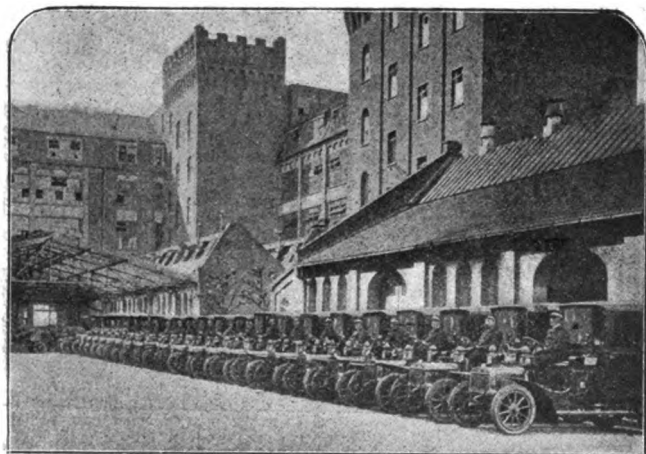
The above illustration depicts the 12-h.p. Saisre-Naudin Car which Messrs. Jarrott and Letts have just delivered to a client. The vehicle is fitted with a standard body, the addition of a folding Cape hood, glass screen and side doors giving it a very smart appearance.

offered. A large number of cards—each competitor being allotted a different shape—are to be distributed over a 22 kilometre course. The prize will be awarded to the driver who collects the largest number of cards. A hill-climbing contest is to be held on the 15th inst. over a 25-kilometre course, which is so mapped out that the hill between Spa and Malchamps will have to be ascended five times without stopping the engine. A somewhat novel event has been fixed for the last day of the meeting; it is known as the Course aux Sites. Seven photographs will be handed to each competitor, with a rough indication as to the roads in which the views were taken. A prize will be awarded to the competitor who, after discovering the exact spot where the pictures were snapped, is the first to return to the starting point with full particulars of the locality marked on the photo.

Aeronautical News.

A group of members of the French Aero Club has drawn up a project for the foundation of an Aeronautic League for the encouragement of aviation in France. Amongst the leaders are M. Archdeacon and M. Deutsch de la Meurthe. The French military authorities and the Prefect of Police have just issued new regulations with regard to the use of the parade ground at Issy-les-Moulineaux by aviators. Whereas the ground had only been open to experiments between the hours of four and six in the

morning, an order has been issued which permits experiments with aeroplanes at all hours when the ground is not occupied by troops. Early on Wednesday last week M. Bleriot began experiments with his aeroplane at Issy, and, notwithstanding the strong wind, made two successful flights of 200 and 250 metres respectively. In the course of the third flight the machine was caught by an eddy, and, turning a complete somersault, fell to the ground. M. Bleriot was not hurt, but the machine was so damaged that it will be at least a week before the repairs can be completed. M. Lazare Weiller gave a dinner to a few aeronautical enthusiasts at Le Mans, last week, in honour of Mr. Wilbur Wright. There were about thirty guests, including M. d'Estournelles de Constant (the General Commanding the Fourth Army Corps), Mr. Henry Farman, Comte Lambert, M. Henri Kapferer, and M. Léon Bollée. M. Lazare Weiller, in his toast to aviators, said that he hoped that from this meeting at Le Mans great results would follow towards the solution of the problem of flight. M. Delagrangé has received an invitation from the Sociedad Sportiva Argentina to take his aeroplane out to Buenos Ayres with the view of giving demonstrations in the Argentine Republic. It is reported that the French War Office is having two aeroplanes built at the Aerostatic Park at Chalais-Meudon, and that the machines will be ready for trial within a few weeks. They have been designed by officers who have been deputed to make a special study of the different aeroplanes that have been successfully tried at Issy. Wilbur Wright renewed his trials on Monday, when he made a flight which lasted fifty-two



The Fleet of Adler Motor-Cabs in service in Frankfort-am-Main, Germany.

seconds, during which he covered 800 yards. In alighting the aeroplane struck the ground violently and one of the "runners" beneath it was broken. Henry Farman is having a new aeroplane built on a very different model from his previous ones. The chassis will be in the form of an elongated fish, the central frame consisting of four longitudinal wooden bars joined by an aluminium plate in front, where the propeller will be placed. The motor and the pilot's seat will be in the centre. In front of each side of this frame three supporting superimposed planes or wings will spread out, while at the rear two more planes will project in the form of wings. The last of these planes will be movable, and will be used for steering up or down, or maintaining the equilibrium.

Roads in France.

The French Ministry of Public Works has drawn up a plan whereby seven of the fourteen national roads radiating from Paris are to be repaved for a considerable distance at a cost of nearly £160,000. The work is to be completed by the end of next year. Complaints are now being made that tarring the roads, while it is of benefit in allaying the dust nuisance, is having a deleterious effect on trees and plants, and that in a period of four months several fine trees in the Avenue du Bois de Boulogne, Paris, have been destroyed and had to be cut down.

British Motorists in France.

Recent British motoring visitors to France include Mr. and Mrs. J. Conrad, London (35-h.p. Gobron-Brillie); Major Renton (60-h.p. Daimler); Mr. and Mrs. Woodburne, London (30-h.p. Renault); Major Higga, London (35-h.p. Panhard); Mr. and Mrs. Shearer, London (18-h.p. Argyll); Mr. and Mrs. Stephens, London (20-30-h.p. Renault); Mr. and Mrs. Buch, London (60-h.p. Napier); Mr. and Mrs. Kemble, London (50-h.p. Daimler); Mr. John Kelly (28-h.p. Mercedes); Major and Mrs. Waldegrave (24-h.p. Fiat); Mr. and Mrs. Stanley (50-h.p. Maudslay); Sir Edward Duncombe (60-h.p. Daimler); Mr. J. E. Mosenthal (40-h.p. Delaunay-Belleville); Lady Armstrong (40-h.p. Renault); and Mr. Leonard Best, of Brighton (24-h.p. Fiat). Dr. and Mrs. Robert Bruce had a narrow escape in a motor-car accident on Saturday last at Marolles, a village in the Department of the Eure-et-Loire. They were taking a dangerous turning when their automobile collided with another car. The vehicle had one of the rear wheels torn off and was overturned. The occupants of both machines were thrown out, but none of them were seriously hurt.

Belgian Motor-Car Imports and Exports.

Returns just issued show that the value of the foreign motor-cars and parts imported into Belgium during the seven months ending with July last amounted to only £93,944, as compared with £113,020 in the corresponding period of last year. On the other hand, there has been an increase in the exports of Belgian motor-cars and parts—from £260,188 in the first seven months of 1907 to £298,116 in the similar period of the current year.

Encouraging the Home Industry.

The Austrian Minister of the Interior has circularised the authorities of the different provinces of the country requesting them to see that whenever contracts for automobiles for official use are let the specifications call for cars of Austrian construction, and to only give concessions for public motor service lines if the petitioners agree to use native-built cars. This action was taken in consequence of a petition addressed by the Austrian Manufacturers' Association to the Minister, in which the assertion was made that the native industry could only hold its own if given every encouragement.

Miscellaneous Items.

A motor-car run from Reggio di Calabria, in the extreme south of Italy, to Haparanda, on the northern end of the Gulf of Bothnia, Sweden, has recently been completed in 13½ days by Herr F. Beschke, of Magdeburg, Germany, on a Durkopp car.—The P.L.M. Railway Co. has just introduced a special type of truck for the conveyance of motor-cars by fast trains. The trucks are covered and have doors at the ends which permit of easy loading and unloading.—As a result of the several accidents due to motor-cabs that have lately taken place in Munich, the Bavarian Automobile Club has issued a notice to all the owners of such vehicles in the city asking them to issue a warning to their drivers against furious and negligent driving.—The revenue from the taxes on motor-cars in Germany during the fiscal year ending with March last only amounted to £79,340, as against an estimate of £175,000.—La Société des Transports Automobiles Industriels et Commerciaux is the name of a new company which has just been formed in Paris with a capital of £40,000.—A petrol motor fire engine is being acquired by the fire brigade of Karlsruhe, Germany.—So far about twenty entries have been received for the Austrian Automobile Club's annual hill-climbing competition up the Semmering which is to be held on the 20th inst.—A public motor-car service is about to be started between Chateaufort and Saint Remy by the Société des Auto Transports du Midi, of Avignon, France.—The Mont Ventoux hill-climbing competition to be held next week promises to prove a very interesting meeting, as over forty entries have so far been received.—The Coupe des Voiturettes contest, for which thirty-two entries have been received by the "Auto," has been postponed until the 27th inst.

WE hear that Mr. Percy Richardson is at present in the Highlands testing the 1909 model of the Sheffield-Simplex cars.

MESSRS. FEEST AND SON, of Cyrus Street, Goswell Road, London, E.C., are making a speciality of fitting Cape cart hoods, performing the work in three days.

THE local authorities in the Omore, Garw and Llyn Valleys of Wales are petitioning the G.W.R. for a motor service to link up the small villages in that district.

SIR PETER WALKER, BART., of Osmaston Manor, Derby, is amongst the latest purchasers of Daimler cars, he having acquired a 42-h.p. landaulet car of the "Aston" type.

THE London Electrobuses Company are having some of their vehicles fitted with covers on top like the L.C.C. electric tram cars, so as to protect the passengers riding outside in rainy weather.

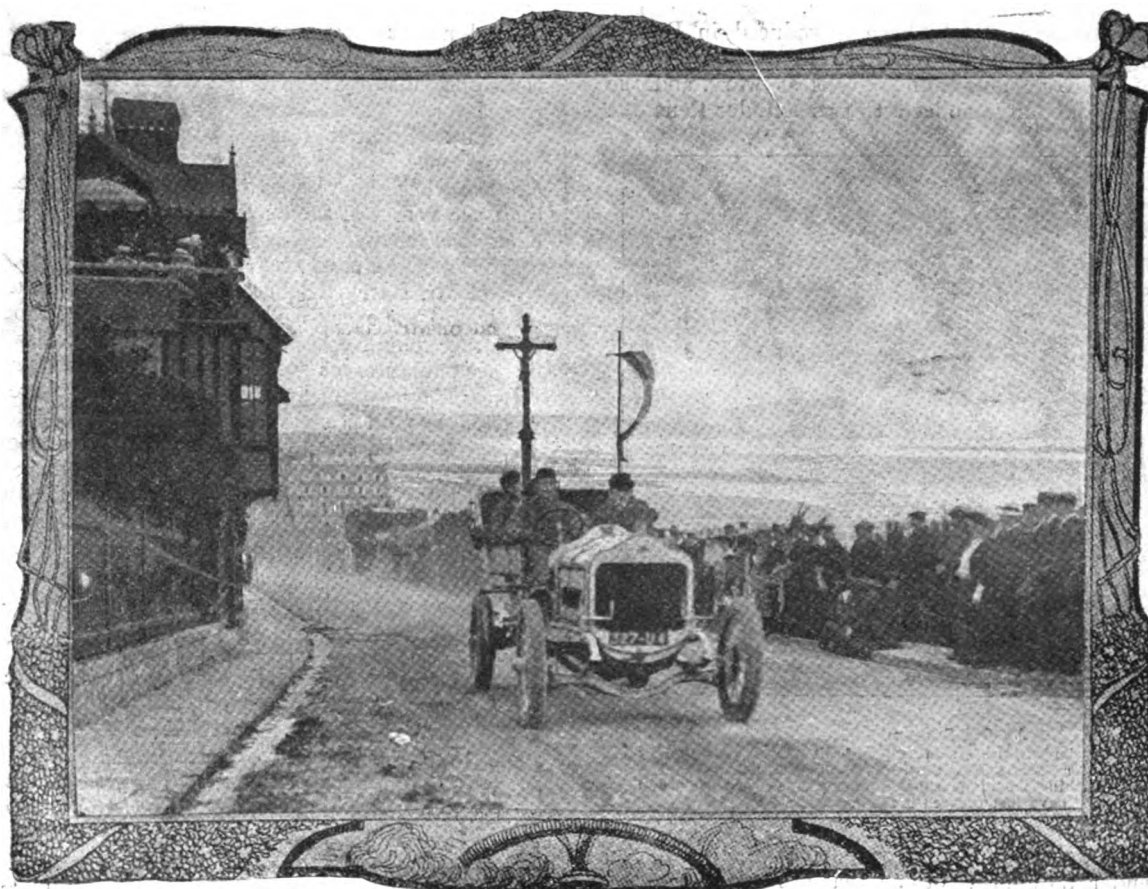
HERE AND THERE.

MESSRS. JOHN H. FULLER AND COMPANY, LTD., of Minster Street, Reading, are specialising in connection with motor oils and greases.

ATTEMPTS are being made to organise a motor service between an important military station on the plains and a popular hill station in India.

THE magistrate at Greenwich, having a groom from Yorkshire before him the other day for begging, asked "What was the good of a man coming from Yorkshire, a land of horses, to London, a land of motor-cars?"

NEW regulations with regard to motor-cabs have been issued by the authorities at Scotland Yard, authorising the collection of 6d. per head for adults for each passenger over two, in a cab licenced to carry four passengers, in addition to the amount recorded by the taximeter.



A Hill-Climbing Competition at Trouville.—On the Steep Part of the Calvary Hill.

IN the Irish A.C.'s hill-climbing competition, the Otav car entered by Mr. Phibb in Class A and Section 1 was only 5½-h.p.—a fact of special importance when it is remembered that the time taken in the hill-climb was but 8 min. 34 3-5 sec.

MESSRS. GAMAGE have introduced a new clock, in which, instead of the stereotyped cuckoo, a motor-car appears at the hour and half-hour, driven out of one "shed" into another, during which process the tooting of the horn adds realism to the scene.

THE "Wessex of Romance" is a new work by Mr. Wilkinson Sherren published by Mr. Francis Griffiths. To those who are familiar with the Wessex novels of Thomas Hardy this volume of nearly 200 pages will have particular attraction, the Wessex people being dealt with so far as they formed the enviroing influence on the novelist. The work is freely illustrated, and a chapter on the Dorset dialect, together with the Glossary, bear evidence of careful research as well as the interesting style of the author.

FROM the Entertainments Committee of the Portsmouth Corporation comes an ingeniously arranged and well illustrated guide to Southsea and Portsmouth. Its object is to attract visitors, and it can scarcely fail in that design, both photographs and letterpress being of a picturesque kind. Much information of an historical character is well interwoven with that which is required by a modern tourist.

THREE White steam vans are now being used by the public library authorities at Boston, U.S.A., for the delivery and collection of books. The Boston public library is one of the largest in the world, and it has a great many branches where readers are able to obtain books as readily as at the main building. To distribute and collect the volumes is a big task, involving a trip of about sixty miles a day for each of the three vehicles, which do the work of five horses and vans formerly employed. Not only that, but the service is better, for the motor vehicles do every day what was done but three times a week under the former conditions.

A MOTOR-BOAT has been found by the coastguard drifting off Cowes.

THE "Ke-pa-go-in" is the name given to a new motor tyre that has lately been brought out in America.

A NEW edition of the pamphlet on the "Motor Roads of the Future" has just been published by Mr. A. Pimm, 76, Stoke Road, Guildford.

THE Malden police on Saturday took charge of a motor-car which had been abandoned outside an inn. It is a green-bodied car with hood, and is numbered P734 XI. A gentleman's coat and hat were in it.

THE first automobile race in Brazil was held at San Paulo on the 26th ult. The event was held over a hilly course measuring 75 kilometres, the best time of the day being made by a Lorraine-Dietrich car.

FROM Mr. T. Fisher Unwin comes the Ordnance Survey map of Ipswich and the district round about. By means of various colourings the nature of the various roads, together with their altitudes, are indicated in a clear fashion.

MOTOR taxi-cabs have lately been introduced in Buenos Ayres, Argentine Republic, and already La Compagnie Franco-Argentina has 150 Unic four-cylinder cabs at work, and the Compagnie General des Automobiles fifty two-cylinder Renaults.



An Old Stager.

The above illustration depicts the steam wagon built eleven years ago by Leyland Motors, Ltd., for Messrs. Fox Bros., of Wellington, Somerset. The firm had a second machine from the same company a few years ago, and have just ordered a third.

THE Oldham Corporation Fire Brigade has acquired a 40-h.p. Argyll motor tender, a duplicate of one that has now been used for over a year by the Sheffield Fire Brigade. The vehicle is capable of attaining a speed of over thirty miles an hour with a full complement of men.

A FARMER, speaking at a meeting of the Garrioch District Committee at Inverurie on Saturday, advocated a limit of fifteen miles per hour, the graduation of motor-car licences according to the weight of the vehicle, and the substitution of a bell for the present means of acquainting the public of the approach of a car.

WE learn from Montreal that the experience of the Canadian Army Service Corps with automobile transportation at the recent tercentenary celebration in Quebec will probably result in the establishment of a motor volunteer corps. Colonel Biggar, the chief of the Service Corps, is coming to England on special leave to study the system in force in this country.

MESSRS. GEORGE ROUTLEDGE AND SONS, LTD., are now including in the "Oval" series of books on sport a little volume on "Motoring," written by Mr. R. P. Hearne, in which he deals with many mechanical and legal matters that the motorist should know. Several illustrations accompany the text and many useful hints are scattered about its pages.

THE motor postal services in the Commonwealth of Australia are proving a success.

MR. R. M. LAWSON has an excellent garage and repair plant in Dalrymple Street, Girvan.

LA Compagnie de Transports Automobiles de la Vendée has been organised at Pouzanges to establish a public motor-car service in the Vendée district of France.

MESSRS. BROOKS AND WOOLLAN have a well-appointed motor works and garage in the Caversham Road, Reading, near to both the railway station and the river.

MESSRS. THOMPSON'S MOTOR-CAR COMPANY, LTD., of 19 and 20, Brunswick Street, Dublin, have motor-cars for hire, and their establishment is open for the convenience of motorists day and night.

THERE are now over a thousand motor-cars in Bombay. The registration number 1,000 was allotted to a 28-35-h.p. Fiat belonging to Mr. Arthur Hoare, who was the owner and driver of the first motor-car in that city—a 4-h.p. Peugeot.

AT the Rother Ironworks, Cinque Port Street, Rye, Mr. P. S. Jones has a garage with inspection pit and other conveniences for overhauling cars. Accommodation for motors in the town is also provided by the George Hotel, of which Mr. Weale is the proprietor.

THE Midhurst Rural District Council has agreed to co-operate with the West Sussex County Council in getting its haulage work done by light engines and tackle. The idea is to limit the weight of the engine, some of those at present employed being very heavy.

ONE of the most accessible of the garages in Nottingham is that of Mr. Harry Belcher, in Parliament Street. It is near the hotels and has every facility for the visiting motorist, including a waiting room for ladies and excellent facilities for the charging of accumulators as well as the storing of cars. Originally a refrigerating establishment, the premises have now a strictly modern use and are well patronised.

MR. A. R. MILLS has opened a well-arranged garage for a score of cars at 13, Little James Street, John Street, W.C.—off Guilford Street or Theobalds Road. Here he stocks accessories of all kinds and supplies petrol, making a feature, however, of the storage of cars during the day for City men, who come to town on their vehicles. The garage is open night and day. Mr. Mills also teaches driving, giving pupils the advantage of his personal tuition.

AT Brooklands, on Thursday of last week, Mr. Dario Resta, driving Mr. F. R. Fry's Mercedes, broke the 60-h.p. half-mile flying start record by doing the distance in 17.85 seconds. The car, which was fitted with Dunlop detachable rims and tyres, attained a speed of 100.84 miles per hour, three and a half miles per hour faster than the existing record. The weight of the car was over 2,700 lbs.; the bore of the engine was 155 mm. and the R.A.C. rating gave 59.6-h.p.

IT is claimed by Canadians that no country has more charms for motoring tourists than the Province of Ontario, comprising as it does a great variety of interesting scenery, from the peach and vine gardens of Niagara Peninsula, and the tobacco and bean district of Essex, to the magnificent summer outing ground of the Muskoka lakes, the splendid roads around Lake Simcoe and the well-known highways through Eastern Ontario. The roads in some places are not all that could be desired, but in Western Ontario particularly good roads are abundant, and the Niagara Peninsula, from Hamilton to Niagara Falls, has become a motorists' paradise.

IN view of the varying opinions as to the pressure which a pneumatic tyre will bear before bursting, an experiment recently conducted by the testing department of the Pennsylvania Rubber Company is of interest to motorists. A tyre was mounted on an ordinary rim and subjected to a constantly rising pressure until the gauge showed 600 lbs. to the square inch. At this pressure a slight expansion of the tyre was noticed, while at a slightly higher point the bead of the cover was blown out of the rim for about six inches. The walls of the cover were found to be slightly stretched after this severe experiment, but the fabric and rubber were in no place broken.

MOTORING ACCESSORIES.

"Electary" Specialities.

Among those who brought their motoring specialities to the front at the Cordingley Motor Show of 1908 were Messrs. W. and R. Jacobs, 39C, King William Street, London, E.C., whose "Electary" motor requisites gave evidence of sound construction as well as of well thought out designs. Their acetylene lens mirror projector is a lamp well suited for small cars, giving some advantages not always found in devices which are placed upon the market at such a cheap rate as this particular speciality. The front glass is firmly held in an ingenious way, and the adjustable focus is an excellent feature whereby the burner can be brought nearer to or further from the lens, giving different lighting results to suit individual requirements. It is impossible for the door to shake open owing

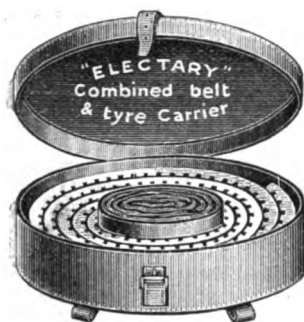


Fig. 1.

to the design of the lock with which the same is fitted, and a special lock-nut attachment to the bracket secures the strength of that feature of the lamp. A trembler coil in which the platinum points are always in full view and are instantly adjustable is another of their specialities, as well as the "Electary" motor mirrors for cars, portable head lamp, an excellent accumulator and an entirely new type of leather case for use on motor-cycles. This latter is illustrated in Fig. 1. The outside division takes a full length of spare belting, whilst the inner compartment will accommodate a spare inner tube. In this combined case there is no metal work to injure the tube, and it is sold at a price which should make it popular among motor-cyclists generally. We understand that the price of the well-known Electary electric side lamp which was described in our report of the show at the Agricultural Hall has recently been reduced.

The Dunlop Tyre.

The all-rubber grooved non-skidding Dunlop tyre has sold in such enormous numbers since its introduction that quite a goodly number of this type of tyre are received for retreading in the course of a year. Occasionally a cover is accompanied by a letter plaintively deprecating the downward tendency in quality, bemoaning the fact that "this cover has given out after a few thousand miles"—a state of things explained when the receiving clerks discover that the offending cover bears neither name, number, nor trade-mark! There are hundreds of grooved non-skidding covers in use which are simply imitations of the Dunlop tyre, and when—as is frequently the case—one hears that "tyres are not what they used to be," it will generally be found that the buyer has not looked for the familiar name, the number, and the trade-mark—a warning that will be opportune in these autumn days.

"Polkey" Lamps.

We illustrate two of the types of lamps which Messrs. Polkey, of the Hockley Lamp Works, Birmingham, are introducing for service with

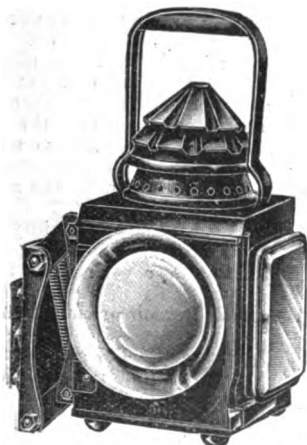


Fig. 2.

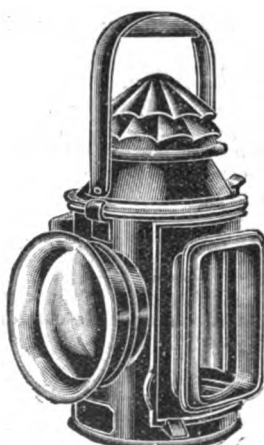


Fig. 3.

heavy vehicles or automobiles used in trade work. The firm have had more than forty years' experience in the manufacture of railway lamps, and have devoted much attention to the construction of lamps for motor-

vans. These illustrated are strongly made and riveted all through. They are fitted with an anti-vibration spring back, and can be adapted for paraffin or colza, as required. When ordering either of these lamps the name of the vehicle upon which it is to serve should be given, to ensure the correct size of the brackets.

Car-cleaning Specialities.

Those motorists and professional drivers who take an interest in maintaining the smart appearance of their cars will be interested in the two specialities that have lately been put on the market by Messrs. Lane Brothers, of the Electric Polish Works, South Lambeth, S.W. One of these is the Electra liquid metal polish, for which it is claimed, among other advantages, that it quickly produces a mirror-like polish on brass, copper, or other metal parts, and that it does not injure the finger nails of the user, or leave white splashes on anything it touches. It is put up in tins of varying sizes. For the woodwork and upholstery of automobiles the firm are supplying their "Magic" motor-car panel polish. This takes the form of a paste which has been specially prepared for cleaning the highly polished wood panels and patent leather splash wings of car bodies as well as the enamelled parts of motor-cycles &c. It can also be used for reviving patent morocco leather upholstery. The paste, which is supplied in any colour and shade required, in addition to producing a bright, firm polish, also affords a waterproof protection against stains from sticky mud.

The Summers Wind Screen.

In Fig. 4 we illustrate the Summers Wind Screen, which we described in our report of the November Show as possessing many points

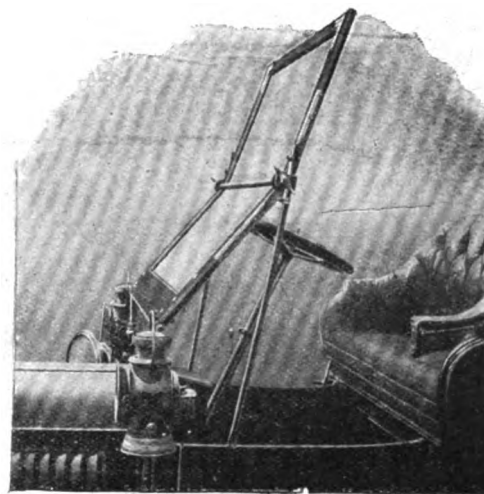


Fig. 4.

giving it pre-eminence among such specialities. It can be seen at the Acton Vale Works of Messrs. W. and G. Du'Cros, Ltd.

The "Perfecto" Non-skid.

Among the non-skids which have lately been placed before motorists is the "Perfecto," made by the London Motor Tyre Company, of 9A, Newman Street, Oxford Street, London, W. This tread is composed of compressed rubber with hardened steel rivets, and is made in all sizes. The London Motor Tyre Company have lately issued a price list showing their tariff for tyre repairs, and as their vulcanising plant has been considerably extended, they are now enabled to cope with repairs of all descriptions. They keep a large stock of covers and inner tubes and are well equipped to deal with everything required in connection with motor-car tyres, particularly the repair of the same.

Rugs, &c.

At the Motor House, 314-318 and 366-368, Euston Road, N.W., a large selection of waterproof rugs is now on view, the specialities including the well-known "Defiance" waterproof knee rug in real rubber-lined Melton cloth. Another good addition to the equipment of the car is the V rug, which is designed to give freedom to the feet and legs when actuating the pedals. This is made in the same good quality material as the "Defiance" rug, and has a remarkably smart appearance—considering the low price at which it is offered by the Motor House. A supply of dust coats in white crash and with detachable buttons is another excellent line now being placed before motorists. The Motor House have arranged to send these and other motoring garments and accessories on seven days' approbation on receipt of cash.

Correspondence.

(Letters to the Editor should be addressed to the offices, 27-28, Charing Cross Road, London, W.C.)

THE DUST PROBLEM AND THE INCONSIDERATE DRIVING OF MOTOR VEHICLES.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—You have been kind enough in the past to publish appeals from the Royal Automobile Club, addressed to those who use motor vehicles, on the subjects of dust-raising, inconsiderate driving, the use of sirens, and kindred matters, and I hope you will be kind enough to give a full publicity to this letter, which I address to all users of motor vehicles, whether they be members of the Club or not. Owing to the great length of time we have been without rain (until the last few days) the dust trouble has become more acute than usual. I therefore appeal to all to exercise special care and to take exceptional pains to reduce to a minimum the inconvenience caused by the raising of dust. That dust exists on our roads in an unnecessary quantity is perhaps a truism, but the scientific trials carried out by the R.A.C. have proved that some cars offend in the raising of this dust to a greater extent than others. The result of the trials, however, broadly speaking, points to the necessity of attacking the problem from the point of view of road construction more than from the point of view of motor-car con-

Among other matters in regard to which the greatest consideration should be given by the driver are the following:—

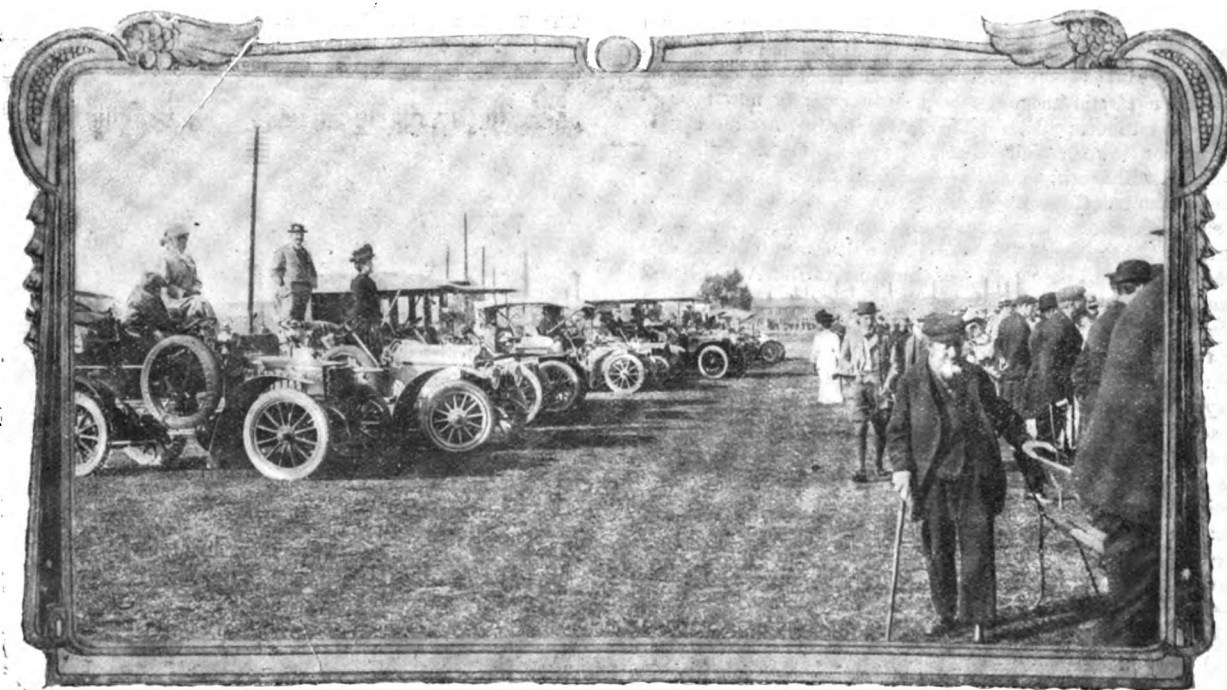
(a) Overtaking or passing other vehicles, cyclists, or pedestrians at such an immoderate speed as to cause nervousness, unnecessary inconvenience or vexation by dust or mud.

(b) Passing tram-cars or other public service vehicles when passengers are entering or alighting.

(c) Overtaking and passing of another motor vehicle when the latter is proceeding cautiously down hill, or is approaching a corner or proceeding through traffic.

(d) The non-observance of the rule of the road when turning a corner or a bend to the right; for instance, it is unnecessary and dangerous to take right-hand corners as though they were left-hand corners, thereby courting disaster or causing grave inconvenience to others.

It is my intention to lay propositions before the Committee of the Club, when it reassembles in the course of the present month, to the effect that the Club shall devote its almost exclusive attention during the autumn and winter months to the careful study of the dust question, and the causes of and remedies for the complaints made against motors



Some of the Cars at the Leicester Club's Gymkhana.

struction, and therefore, until this problem can be efficiently taken in hand and solved, from the first point of view, I would again enjoin all motor drivers and motor-car owners to consider the conditions of our roads as we find them, and to drive accordingly. Few people, and least of all those whose cars are of the limousine or landaulet type, or whose cars are furnished with a glass screen in front of the driver, can estimate—unless the vehicle be fitted with a reliable speedometer—the speed at which they travel.

I would, as a first effort to diminish the outcry against motors on account of dust, earnestly request all owners to provide their cars with a speedometer, of which there are a number of reliable patterns, as I am confident that this would have the immediate effect of greatly reducing the speed at which some vehicles now—unconsciously, I am convinced—approach corners and travel through villages and towns. The nuisance caused by dust would be much reduced if drivers and occupants of cars would ascertain if their cars are raising dust or not. This can be easily done by looking back occasionally or by the use of mirrors on the car.

A further cause of irritation to the public is undoubtedly the use of the siren, the exhaust whistle and the exhaust cut-out, the use of which is unnecessary and tends only to arouse, not unreasonably, the hostility of the public.

It would be highly regrettable if the motor industry in this country, an industry which has assumed such large proportions, and which gives employment to a great number of people, should suffer through the thoughtlessness of a small percentage of those owning motor vehicles.

and motorists generally, with the object of giving immediate effect to the results of its deliberations and investigations in this direction.

I go further and say that during the year 1909 I hope to make the work I have outlined above the primary work of the Club, on account of its paramount importance. The technical work of the Club should, I consider, occupy a secondary position at this stage, until the dust question has been in some degree settled, and until some effective means has been found for checking inconsiderate driving on the part of those who by their conduct have raised a spirit of opposition to the motor vehicle.

It is well known that the R.A.C. exercises its powers rigidly and impartially over all persons subject to its authority. There are, however, many who are not so subject, and I therefore venture to make this general appeal to all motorists to do everything in their power to secure the safety, the comfort, and the good opinion of the public.—Yours truly,

FRANCIS OF TECK.
Chairman of the R.A.C.

THE TRIALS OF 1909.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—I do not think that there is the least necessity for holding another 2,000 miles trial next year. After all, apart from the Brooklands run, the only part of the whole 2,000 miles which formed any sort of a test was that part known as the Scottish trials, and I think that any

car which will run through the Scottish trials would not experience any difficulty in doing well over the comparatively easy other part of the route.

There were forty-six starters in the 2,000 miles trials, thirty-six of which arrived at Brooklands, so that a total of ten fell out. Now of these ten no less than nine fell out during the Scottish trials. I for one do not think it was nearly so hard to win a gold medal in the 2,000 miles trials as to get one in the Scottish. For instance, out of the seven 2,000 miles gold medal winners who also competed in the Scottish trials, only two of them took gold medals in Scotland, and only one of them managed to get a non-stop certificate. The other six lost reliability marks in Scotland as follows:—88, 42, 2, 2, 205, 196. A total of 515 marks for reliability lost in the Scottish trials by the actual gold medal winners in the 2,000 miles!

In my opinion the Scottish trials provide the fullest test of a car that any buyer could possibly want, and I look upon the other part of the 2,000 miles route as just a pleasant way of spending valuable time which the Swift Company, at any rate, could not afford to lose.—Yours truly,

ROBERT BURNS.

BALL-BEARING CRANK SHAFTS.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—As it has recently been mentioned to us by several of our friends that rumours are being circulated that we are experiencing trouble with the ball-bearing crank shaft in the engine of the Sheffield-Simplex cars, we wish to take the opportunity of flatly contradicting this. As we have not experienced a single trouble with the ball-bearings in the engines of our cars, we can only presume that the rumour has originated owing to other makers, who have endeavoured to apply ball-bearings to their engines, having in some cases been unsuccessful and given up the practice.

We know full well that some other makers have given up the use of ball-bearings in their engines, and also, having studied the question very thoroughly, are just as fully aware why they have not been able to apply them successfully. In applying ball-bearings to a motor, it is just as essential, in order to make them successful, to have a knowledge of "how to do it" as it is to surmount all the other problems associated with the designing and building of a successful car. As to the advantages of ball-bearings over plain bearings there can be no two opinions, as in our opinion they are as much an improvement over plain bearings in the engine as ball-bearings have proved themselves to be over plain bearings in the gear-boxes and road wheels of cars.

When the departure was first made from plain to ball bearings in the transmission gear and road wheels of cars, difficulties were experienced, but these have been overcome and made successful, and in the same way we have overcome the difficulties of applying ball bearings to the engine of our car. As regards the advantages of ball bearings in an engine, two of those most prominent are as follows:—(1) Their greater efficiency in comparison with plain bearings, especially when starting under a load; (2) if ball bearings are properly applied, their wear is practically nil in comparison with plain bearings, reducing cost of overhauling and consequently maintenance, besides preventing the engine from getting loose in the bearings, creating the usual rattling associated with a motor that requires overhauling.

In support of these statements we may say that our first demonstrating car has now covered approximately 8,000 miles, and another car, in the hands of our Scotch agents, about 6,000 miles, and in both these cases the engines are running as sweetly and quietly as when first turned out, and neither of them have had a single adjustment or repair made to them. We mention these two cars as, though we have others in the hands of private users, we have no authentic record of the work they have done, but we do know they are giving exceptionally good satisfaction and that we have not received any complaints of the ball bearings in the engines. In conclusion, all we can say is that from the results we have obtained by the use of ball bearings in the Sheffield-Simplex engine, we think it will not be many years before the majority of high-class engines are similarly fitted.—Yours truly,

PERCY RICHARDSON.

THE HORSE NUISANCE.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—I wish to call attention to the nuisance caused on the public highways by the excrement of horses. In the past there were few or no "dustless" roads, and therefore dust was attributed, without any special thought of this excrement, solely to the attrition of the road surface, but now on roads paved with granite setts, asphalt, granolithic, tarred preparations, &c., there is still, in dry weather, dust, and in wet weather, mud, which do not come except to the extent of one or two per cent. from the road-making material, the remainder being, as I have found from frequent analyses, equestrian faeces and urine, which have been macerated by rain and ground by traffic into a more or less fine state, and this material is raised and scattered by every breeze, electric tram, and motor vehicle.

This "dustless road" dust is certainly more painful in the eye than ordinary country road dust, and surely it must be an agent of serious harm to the public health. Thus the "dustless" road draws attention to the horse as detrimental to health, but also it must be remembered that financially he is directly an offender in that he renders more or less unserviceable the money spent in creating such "dustless" roads.

The disgusting habit of spitting by man has been to some extent prohibited, and why should this more disgusting and more harmful habit of the horse be allowed to go unchecked? What would we think of a man who allowed his car to leave several pounds of objectionable matter on our drive, and yet the man with a horse permits this without apology. Personally I have largely cured my cars of this failing, but sometimes, if stopping a considerable time, I place a newspaper on the ground as a safeguard.

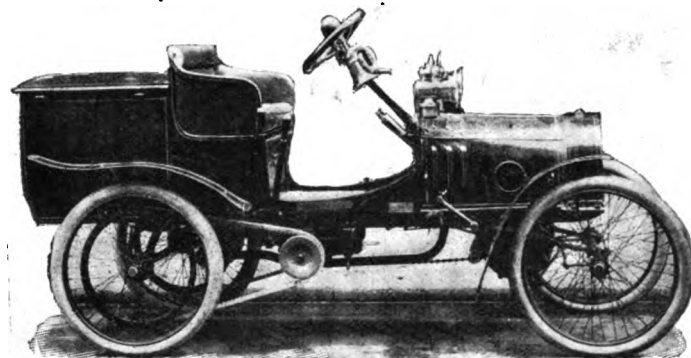
It has often occurred to me that the horse, like other domestic animals, might be taught to regulate its habits to proper opportunities, but failing this surely some simple contrivance could be arranged which, attached to the horse or its vehicle, would afford a receptacle for all objectionable matter during the animal's presence on the roads. I find that a medical gentleman, appreciating the evil, has patented an improved dung trap for carriage horses and the like, the specification for which is No. 28710 of 1902. Another medical man once informed me that he thought that in this insidious fashion the horse caused far more deaths than did the motor in accidents. Incidentally the absence of dung and its products from our streets would remove the skidding danger, stop mud-splashing, and reduce the cost of scavenging.—Yours truly,

A. DUCKHAM.

THE USE OF THE SIREN.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—It is claimed by motorists and motor journals generally, that they are full of consideration for the feelings of other users of the highways. How is this exemplified by the use of the siren? Dust, no doubt, is a difficulty; but there can be no difficulty in dispensing with the miserable, irritating, nerve-shaking, blood-curdling howl of the siren, which should never be found on the car of anybody who has the smallest regard for the feelings of others, and which adds an unnecessary terror to the lives of roadside dwellers, and particularly invalids,



The O.T.A.V. Sample and Parcel Carrier lately put on the market by the Junior and Otav Cars Co., Ltd.

The little vehicle is driven by a 5½-h.p. single-cylinder air-cooled engine.

especially at night. Surely the horn or whistle is all-sufficient. Please raise your voice against the most unnecessary nuisance.—Yours truly,

CHARLES LETHBRIDGE.

RE-MAGNETISING A WEAKENED MAGNETO.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—I shall be greatly obliged if you or any reader of the *M.C.J.* can kindly tell me if the permanent horseshoe magnets of an ordinary low tension magneto can be successfully re-magnetised, and if so, the method to be adopted. I should also be glad if you could give me some hints as to testing a magneto.—Yours truly,

R. J. S.

[A reply to the query raised by our correspondent will be found elsewhere in the present issue under the heading of "Some Notes on Magnetos."]

A HINT *Re* PLATINUM CONTACTS.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—The usual recommended method of trimming up the contact points of the tremblers of induction coils is that of filing and sand-papering them. I venture to suggest that an improvement on this treatment, with its consequent loss of platinum, is the riveting, as it were, of the points into shape. Immediately the contacts of my coil show signs of pitting I submit them to a very light tapping with a one ounce hammer; thus by a process of riveting I overcome the pitting, and by careful manipulation maintain the original size of the platinum points. This is a very easy matter once the knack has been obtained, and is done as quickly as filing. It is particularly applicable with the screw points, as the platinum can be readily riveted into a flattened, conical shape, which gives most excellent results.—Yours truly,

ELECTRICIAN.

CLUBS AND ASSOCIATIONS.

ROYAL.

SEVERAL important matters will be brought forward for consideration at the meeting of the R. A. C. to take place to-day (Saturday) in the Blackfriars Hall, Norwich. The names of 250 new candidates for individual associateship, whose applications have been received since the last meeting of the committee, will be brought before the above meeting for election. The meeting will be preceded by an official reception of the Club in the hall by the Mayor of Norwich (Mr. E. G. Buxton), and at the conclusion a visit will be made before lunch to the Cathedral.

At the dinner the principal speeches of the evening will be made by H.S.H. Prince Francis of Teck, K.C.V.O., D.S.O., the Hon. A. Stanley, M.V.O., M.P., the High Sheriff (Mr. E. H. Evans-Lombe), the Sheriff of the City (Capt. F. Chamberlin), Col. E. R. A. Kerrison, president of the Norfolk Club, and the Dean of Norwich.

Fine weather alone remains to ensure success for the other principal events—the gymkhana and Sunday's motor-boat trip to Horning. The Norfolk Club has spared no efforts in organising these two items in an ambitious programme.

The Club premises at 119, Piccadilly, W., were re-opened on Monday.

ESSEX MOTOR.

THE 5½-h.p. O.T.A.V. voiturette entered in the Essex Motor Club's twenty-four hours York run has passed through the ordeal with flying colours. Leaving Woodford at 6.7 on Saturday night, it booked in at Cambridge, forty-six miles away, in 2 h. 18 min. Fifteen minutes were spent there for replenishments, &c., and a resumption of the journey was then made to Grantham, sixty-three and three-quarter miles. This



A White Steam Ambulance built for the U.S. Navy Department. The White Company recently delivered two ambulances of the type shown above to the U.S. Navy Department. One of them is for use at the Naval Hospital at New Fort Lyon, Col., and the other at the Naval Hospital at Philadelphia.

control was successfully negotiated non-stop in 3 h. 11 min., despite the delays caused by the darkness and checking. An hour was spent at Grantham for a meal, and the concluding eighty-four miles to York were entered into at 1.50, and should have been accomplished in 4 h. 13 min., but, owing to extreme bad luck with the level crossings between Doncaster and York, this time was exceeded by a few minutes.

The return journey, commenced at 7.28 a.m. from York, was absolutely without incident, and was run through to the twenty-mile schedule, finishing on Sunday night at Woodford at 6.28 p.m. This little car, which complete weighs slightly under 5 cwt., thus ran 388 miles in under 19½ hours on 10½ gallons of petrol, carrying two passengers weighing, with wraps and necessities, 24 st. 9 lb. During the concluding forty-six miles of the run from Cambridge a very heavy thunderstorm was passed through, but this did not in any way affect the belt transmission, and the same pair of V-shaped leather belts were used throughout the journey. Standard Continental tyres were also fitted, the size being 650/55 mm., and these were found to be scarcely scratched on finishing the journey.

LEICESTERSHIRE.

THE members of the Leicestershire Automobile Club gave practical proof of their solicitude for the welfare of the crippled folks of Leicester by holding on the Freeman's Meadow, Leicester, on Saturday afternoon, a gymkhana, the object being to assist the funds generally of the Cripples' Guild. There was a large muster of spectators and eighteen cars were entered for the various events. During the afternoon selections were rendered by the band of the 4th Leicestershire Regiment, and at the

conclusion the prizes were presented by Mrs. E. G. Mawbey, who, on the motion of Mr. Clifford, seconded by Mr. Baker, was heartily thanked for her services. The most successful competitor was Mr. J. A. Doran, who, besides winning several events, carried off a medal presented by the Motor Union for the best performance of the day. A cup was presented by a member of the L.A.C. for the best performance by one of the members, and this trophy Mr. Doran was also successful in securing.

The following were the results of the various events:—

Tilting at Rings.—1, Mr. S. Wright (Humber) (47 1-5 sec.); 2, Mr. J. Doran (18-h.p. Minerva) (52 3-5 sec.).

Ball Race.—1, Mr. S. M. Pearce and lady (10-12-h.p. Humber) (49 3-5 sec.); 2, Mr. E. Allen and lady (18-h.p. Siddeley) (52 2-5 sec.).

V.C. Race.—1 Mr. J. A. Doran; 2, Mr. G. A. Phillips (10-12-h.p. Coventry Humber). Winner's time, 1 min. 43 3-5 sec.

Turk's Head Race.—1, Mr. R. S. Clifford, jun. (12-h.p. Richard-Brasier) (40 4-5 sec.); 2, Mr. E. Allen (41 sec.).

Adam and Eve Race.—1, Mr. G. A. Phillips (41 sec.); 2, Mr. J. A. Doran (44 sec.).

Ladies Lightning Change Race.—1, Mr. J. A. Doran and lady (1 min. 24 1-5 sec.); 2, Mr. H. J. Marsden and lady (20-22-h.p. Darracq) (1 min. 24 2-5 sec.).

Musical Chairs.—1, Mr. S. M. Pearce's lady; 2, Mr. Baker's lady.

The officials were:—Judges: Mr. E. G. Mawbey, Mr. Orson Wright, J.P., and Lieutenant-Colonel Pemberton Peake. Starters: Captain Byron, Mr. J. A. Hartopp, and Mr. R. Sutton Clifford, jun. Time-keeper: Mr. S. C. Winks, A.A.A. and N.C.U. Clerks of course: Dr. Boreham, Messrs. C. R. Robson, W. Watts, J. McAlpin, A. C. Staggs, T. C. King, O. Kaye, and J. Harris. Marshals: Messrs. P. L. Baker, C. Ewart, J. Bennett, and E. W. Tacey. Gate stewards: Messrs. J. Prentice and H. Prentice. Enclosure steward: Mr. R. A. Loseby. Secretary of meeting: Mr. A. McAlpin.

VICTORIA.

DURING the last three months the membership of the Automobile Club of Victoria has increased by 150, the total now standing at 346.

The election of new blood to the committee and the appointment of Mr. E. L. Holmes as secretary have been mainly responsible for the great increase in members, which is being naturally followed by increase in advantages. One of these is the removal to large and commodious rooms at the Equitable Buildings, Melbourne.

Amongst the many fixtures that have been made are:—Official run to the Black's Spur on September 4th, with 150 principal officers of the United States fleet. No less than seventy-two cars have been offered to the committee, and as the run will be about 100 miles through the most beautiful portion of the Victorian scenery, it should prove a delightful experience for the naval visitors. Other events ahead include an opening run, hill climb, and reliability trial.

NORTH-EASTERN A.A.

FROM the North-Eastern Automobile Association comes their 1908 year book, containing a variety of information likely to be of service to members travelling in the counties of Durham and Northumberland. Several interesting pictorial records of recent events in the history of the Association are given, as well as particulars of membership of the R.A.C. and the M.U. and other motoring organisations. A list of hotels at which members are given a discount of 1d. in the shilling on all ordinary bills of garages with a charge of 1s. per night and 2s. for washing the car is also published.

Maps showing the entrances into the towns of Newcastle, Sunderland, Durham, West Hartlepool, Stockton and Darlington are another excellent feature, together with the rules of the following clubs:—Newcastle Motor, South Shields A.C., Sunderland and District A.C., Sunderland and District M.C., Hartlepool and Stockton A.C's. A list of individual members in the two northern counties emphasizes the influence of the association, and the list of identification marks is brought up to date by the inclusion of that for Merthyr Tydvil.

MOTOR CYCLING.

THE annual petrol consumption trial of the Motor Cycling Club will take place on the 12th inst., starting from Gerrard's Cross roads, on the London and Oxford road, at 3 p.m. The course will be five miles in extent, the winner in each class being he who drives furthest on the allowance of Shell motor spirit. Entries close on Monday next, and should be sent to the trials hon. secretary, Mr. F. J. Jenkins, 35, Loveday Road, Ealing, W.

THE small car reliability trial of the Manchester A.C., announced for the 19th inst., will not be held.

THE Closed Hill-climb that was to have been held on Saturday last at Red House Hill, Wantage, was postponed indefinitely.

AN instrument has been installed at Brooklands enabling a permanent record to be obtained, on the Brooklands automatic electric chronograph, of the acceleration of cars from a standing start up to 220 yards for every yard or foot traversed. This acceleration record has been designed by Colonel Holden. Applications for acceleration tests should be addressed to the clerk of the course, Carlton House, Regent Street, S.W.

CASES AGAINST MOTORISTS.

TWO CHARGES FOR ONE OFFENCE.

At the Llanidloes County Sessions, on Thursday of last week, there was a sequel to a motor-car fatality which happened on the Llangurig road, early in July, when Richard Bellamy, of Manchester, was summoned for reckless and negligent driving on July 5th last. Mr. W. E. Rowcliffe, of Manchester, conducted the case for the defence. Deputy Chief Constable Williams prosecuted. In opening the case he stated that the defendant was summoned for reckless and negligent driving. After hearing witnesses Mr. Rowcliffe addressed the Bench, and said that before the decision was given he wished to ask their ruling upon certain points. One was "Does the summons charge the defendant with recklessness or speed?" The Chairman: "Yes, both." The second point asked by Mr. Rowcliffe was "Under the circumstances and in view of the case *Rex v. Wells*, decided before Lord Alverstone in May, 1904, is the defendant entitled to a dismissal of the summons?" The Chairman: Yes, the magistrates sustain your objections.

ALLEGED ROAD RACING.

The Woking county magistrates sat for eight hours on Saturday to hear a case of alleged road racing by motorists at Ripley. Gustave Alson, Burpham Lodge, Guildford, proprietor of the Cobham Motor Works, and John Millett, an employee, were summoned for driving to the common danger and pleaded "Not guilty." They were defended by Mr. Staples Firth. The case against Millett was first gone into. P.-c. Holdaway said he was in his house opposite the Talbot Hotel at 8.5 p.m. on Saturday, July 11th, when he saw two cars standing abreast in the road. The landlord was there, watch in hand, and shouted "Go." Millett went off at a fast pace, but Alson could not start his car. Millett returned about 8.35, and the cars were again brought abreast. The landlord was asked to give Millett thirty seconds start, which he did. Both cars went off at a very fast rate. The village was crowded at the time with people shopping. John Newton, landlord of the Talbot Hotel, said Alson asked him to start the cars in this way as they wished to have a test. He did not understand the test was to take the form of a race. Sergeant Arney said he was sitting writing at the police station at 8.40 when he saw Millett drive past at a speed of between thirty-five and forty miles an hour. As he was leaving the house another car tore by. Evidence being called for the defence, Millett went into the box and said the large car was being tested for reliability and ignition. He drove it on the first occasion and took half an hour to do eight miles. Its behaviour was most unsatisfactory, and that was why Mr. Alson exchanged cars for the second journey. Mr. Firth.—Is there a word of truth in the suggestion that you were racing? The Witness.—I do not think so. The magistrate's clerk.—You must know. The Witness.—Well, we were not racing. Mr. Firth.—What was the reason for one car starting before the other? The Witness.—For the convenience of the public in the village and so as not to get each other's dust. The Justices were unanimously of opinion that the defendant was guilty, and a fine of £10 and costs was imposed. The case against Alson was then heard. The magistrates imposed the same penalty as in the first case. Mr. Firth said he was instructed to appeal in both cases against what his clients considered a gross miscarriage of justice.

HEAVY PENALTY.

At Christchurch on Monday, Percy F. Dawe, of Hampstead, who did not appear, was fined £20 and costs for driving a motor-car at an excessive speed. A second charge against him of driving a car at Christchurch at sixty miles an hour was then heard. The defendant on this charge was fined £50 and 3s. costs, and the magistrates also cancelled his licence and disqualified him for holding another for twelve months.

BRIEF RECORD.

Several cases against motorists have been heard since our last issue as follows:—Richmond (for exceeding ten mile limit in the Park), Aberdeen (3), Epsom (4), Devizes (5), Sheffield (2), Dumfries (3), Feltham (3), Warwick (3), Lichfield, Shrewsbury, Thetford, St. Neots (6), Wokingham, Mortlake (3), Chelmsford, Epsom (3), Colwyn, Aberdeen (5), Kingston (3), St. Ives, Grantham (6), Horsham, Newcastle-on-Tyne (12 cases, 9 convictions, with fines aggregating £29).

THE Daimler Company have added another to their series of picture postcards; this is an illuminated design showing the three Royal Appointments which the company now hold, and is a perfect specimen of colour printing. Copies will be sent to any address upon application to Coventry. Mr. Albert Farnell's Daimler car made fastest time of the day at the Yorkshire Automobile Club (Harrogate Branch) hill-climb on Saturday.

On Saturday last the office and works staff of Messrs. Hans Renold, Ltd., were invited by Mr. and Mrs. Renold to Priestnall Hay to meet their recently married daughter and her husband—Mr. and Mrs. Jackson. Sports were held during the afternoon, after which over 500 sat down for tea, which was served in the new branch works of the company adjoining the sports field.

THE Union Motor Car Company, 21, Denbigh Street, Victoria, S.W., have sent us a copy of the illustrated catalogue they have lately issued of the Troubetzkoy acetylene lamp and generators for which they are British agents. There are a number of special points in the system, among them being a means of interrupting the generation of gas when the light is not required.

INTERNATIONAL ROAD CONGRESS.

MR. BOULNOIS, of the Local Government Board, will be the official representative of the Government at the International Roads Congress to be held in Paris from October 11th to the 18th, in addition to the following from organisations in which motorists are specially interested:—

Roads Improvement Association:—Lord Montagu of Beaulieu, the Hon. Arthur Stanley, the Hon. C. S. Rolls, Colonel R. E. Crompton, and the hon. secretary.

The Motor Union:—Earl Russell, Mr. H. P. Maybury, Mr. W. Ballin Hinde, Mr. A. Moresby White, and the secretary.

POLICE "CONTROLS."

THE half-mile trap at Kingstown, near Carlisle, is in frequent operation.

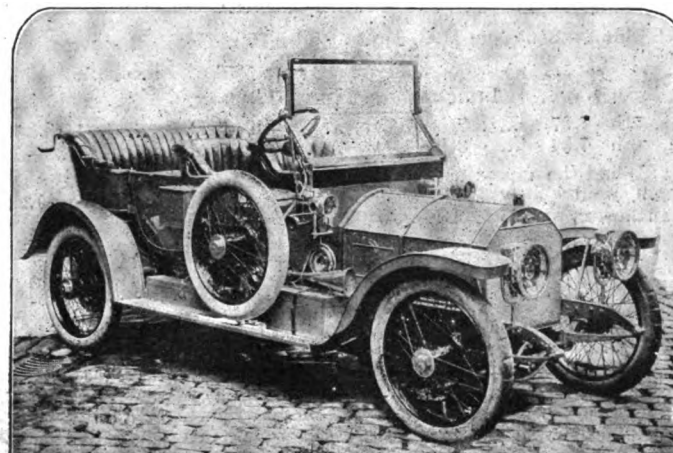
A MOTOR-TRAP at the Bramham cross-roads, near Tadcaster, has been the cause of three motorists being taken to the local sessions.

POLICE traps are reported as having been in operation during the last few days in the Harrogate road at Alwoodley (Leeds).

OTHERS are reported between Bolney and Newtimber, at Ferring Crossroads, Arundel, and at the London Road, Cheam; High Street, Sutton; Ewell Road, Ewell; Thames Ditton; Hurst Road, East Molesey; Ealing.

BATH ROAD, Devizes, and Easthampstead Road, Binfield, are other danger districts.

THE police are timing motorists along the Fitzjohn Avenue, Hampstead.



The Ariel 40-50-h.p. Car just completed for Mr. D. J. Wernher, of Luton.

The vehicle has a small four-seater touring body painted light grey and upholstered in red. Rudge-Whitworth detachable wheels are fitted, and it will be noticed the spare wheel is mounted on a R.W. dummy hub. The car is equipped with gradometer, speedometer, ordinary horn, electric horn and exhaust whistle, luggage grid at rear, special tool box at side and novel folding glass screen; in fact, Mr. Wernher has had almost everything fitted, the vehicle being quite a record car for completeness of accessories.

COMPANY NEWS.

(In the case of New Companies the file number is given at the end of the particulars.)

RELIANCE TAXI-CAB COMPANY.—£200,000. To carry on the business of motor-cab manufacturers, &c., and to adopt an agreement with the Romer Amalgamation Syndicate, Ltd. The Romer Amalgamation Syndicate, Ltd., and La Societe Generale des Automobiles Porthos may each nominate a director. A. Farkas is first nominee of said Société. 39, Lombard Street, E.C. (99,282).

MCCURDS.—£8,500. To acquire business of W. A. McCurd, motor-car dealer, of 81, Euston Road, and that of W. A. McCurd, Limited, of same address. Private. 81, Euston Road, N.W. (99,319).

BELGRAVIA MOTOR CAR COMPANY, LTD.—Capital £1,000. Objects: To carry on the business of manufacturers and proprietors of motor-cabs, automobiles, carriages, vans, wagons and other vehicles, jobmasters, carriers of passengers and goods, &c. Private company. Registered office, 5-6, Eccleston Place, Belgravia, S.W.

LEEDS MOTOR CABS AND DELIVERY COMPANY, LTD.—£2,000, in £1 shares. 72, Albion Street, Leeds.

THE DAIMLER MOTOREN GESELLSCHAFT, UNTERTURKHEIM, GERMANY.—This company, which manufactures the Mercedes cars, reports a net profit of only £23,871 for the last financial year, as compared with £45,292 in the preceding twelve months.

A NEAT and effective metal sign in black and white now intimates to motorists passing most garages, &c., that the llo lubricants of Messrs. Easton and Melville, Ltd., can be obtained within.

FORTHCOMING EVENTS.

SEPTEMBER.

- 4th and 5th.—Reliability Consumption Trial of the Essex C.A.C. at Norwich in connection with the R.A.C. provincial meet.
- 5th (Sat.).—Aston Hill climb of the Herts C.A.A.
Lancashire A.C. gymkhana.
Invitation of Sir D. Salomons to the Kent A.C. to visit Tunbridge Wells.
Provincial meet of the R.A.C. at Norwich.
Richmond M.C.C. week-end at Henley.
- 12th (Sat.).—Brooklands A.R.C. meet.
- 13th (Sun.).—Mont Ventoux hill climb of the A.C. Vaclusien.
- 14th-26th.—International Rubber and Allied Trades' Exhibition at Olympia, London.
- 17th (Th.).—Touring car competition of the A.C. of Holland through that country.
- 19th (Sat.).—Provincial meet of the Motor Union at Oxford.
North Middlesex A.C. 100 miles reliability run.
Meet of the Hull Auto Cycle Club and the Lincolnshire Motor Cycle Club at Brigg.
Annual Hill Climb of the Bristol and Gloucestershire A.C.
Lunch of the Kent A.C. at Dover.
Herts C.A.C.'s climb for cars at Aston Hill.
- 23rd (W.).—Graphic Trophy and Henry Edmunds Competitions in the Isle of Man.
- 24th (Th.).—The "Four Inch" Race in the Isle of Man.
- 25th (F.).—Welsh A.C. reliability trial for motor-cycles.
- 26th (Sat.).—N.W. London M.C.C. petrol quantity judging competition.
Invitation to the Kent A.C. by Mr. and Mrs. Schlentheim to Chislehurst.
- 27th (Sun.).—Southend M.C. run to White Hart Hotel, Braintree.

LIGHTING-UP TIMES—LONDON.

| | | | | | | |
|---------------|----|----------|----|-----------|----|-----------|
| Sep. 5th—7.37 | .. | 7th—7.32 | .. | 9th—7.28 | .. | 11th—7.24 |
| " 6th—7.34 | .. | 8th—7.30 | .. | 10th—7.26 | .. | 12th—7.21 |

To find the approximate lighting-up time in September for Birmingham 9 minutes should be added to the above times, 8 for York, 13 for Manchester, and 25 for Glasgow.

AUTOMOBILE ACCIDENTS.

A FATAL motor-car accident occurred on Saturday near Chester, on the Manchester main road. A boy named Pritchard was riding a tricycle near his home, and on moving from behind a waggon he was knocked down by a motor-car belonging to Mr. Kilvert. The boy was taken by the motorists to Chester Infirmary, where he died soon after admission.

PETER GRANT, of Elgin, met with his death in a remarkable manner on Saturday. He was driving along a country road in his car, when he noticed a hare running in front of him. Jumping hurriedly down into the road, he struck at the animal, but just as he did so a motor-car close behind ran into him, knocking him down, and inflicting such injuries that he died shortly afterwards.

AT the inquest in connection with the Hockley Hill motor-car fatality, recently reported in our columns, the jury returned a verdict of "Accidental death." One of the witnesses, a tramcar driver, who witnessed the accident, said deceased was crossing the road in front of him as the motor-car approached. She rushed towards the pavement. Before reaching it, however, she stopped and turned back, and then made a second attempt to cross the road. The motor-car caught her and knocked her down. Witness thought that if the woman had gone straight on, instead of hesitating, she would have got clear.

A SERIOUS motor-car accident happened at Whithead, County Antrim, on Saturday. The party in the car were starting on a honeymoon tour. The car swerved and ran into a stone wall, the front wheels being smashed to pieces, and the car, rebounding, turned a somersault. The chauffeur was pinned by the upturned car, and sustained serious internal injuries, and a gentleman sitting beside him was hurled through the glass screen, and his face was injured. The bridal party were fortunate enough to escape unhurt.

VISITORS to the Isle of Man, both those engaged in the 4 in. test and others, will be interested to know that "Castle" accumulators, coils, "L.M." plugs, and all goods likely to be wanted in this line, will be obtainable from stock at Mr. W. J. Lewin's motor garage, Athol Street, Douglas.

TO a certain extent Mr. S. T. Robinson, the well-known Dublin motorist has avenged his ill-luck in the recent Irish Trials by coming out on top in the Irish Club Ballinaslaugh Hill Climb. On his 15-h.p. Talbot he not only won in his class, but also carried off the silver cup presented for the best performance on formula in the open section.

WE learn that the Anglo-American Oil Company, Ltd., have been the recipients of a letter from the Admiralty expressing appreciation of the prompt and obliging manner in which they have executed orders for spirit supplied for use in submarines during the recent manœuvres on the east coast.

ROAD REPORTS.

ROTHWELL.—The Rothwell Urban Council has decided to apply to the County Council for the erection of sixteen danger signals at points where there is a great deal of motor traffic.

BRIGHTON.—A Local Government Board inquiry is to be held at Brighton in reference to the application of the Town Council for sanction to borrow over £8,000 for the purpose of laying a tar macadam surface on the road between the aquarium and the western boundary of the borough.

BIRKDALE.—Birkdale Urban Council has adopted a new street signal for motorists. It is triangular in shape, made of transparent red glass, and is exhibited inside the street lamps. The motorist is thus warned of danger by night as well as by day.

BUSINESS NEWS.

SEVERAL important motor-cycling events have lately been won on Pratt's motor spirit, including three events at the Auto Cycle Club's annual meeting and the Coventry Club's hill climb at Newnham. Mr. J. B. Colver's world's hour record at the Stadium was also made on Pratt's spirit.

MESSRS. C. A. VANDERVELL AND CO., of Warple Way, Acton Vale, W., have been appointed sole agents for the "Ruthardt" magneto which was illustrated and described in the *M.C.J.* of April 4th last.

MR. ALFRED HARRIS, of Shoot-up Hill, N.W., who has had an Ariel car for about six months, has written to the Ariel Motor Company, Ltd., stating that he considers the car is as near perfection as to reliability and smoothness of running as one could wish for.

THE United Motor Industries, Ltd., have just issued a circular illustrating and describing a series of small dynamos and motors, the "No-loss" transforming rectifiers and other accessories for use into connection with the charging of ignition accumulators they have lately placed on the market.

THE British Petroleum Company, Ltd., of 22, Fenchurch Street, London, E.C., have now their own store and canning works in Bournemouth.

THE Stepney Wheel Company have now completed arrangements by which they will open works for the manufacture of Stepney spare wheels in Toronto towards the end of the present year, so as to be in good time for the 1909 touring season. Meantime the Stanley Garage, Ltd., of 90-96, Stanley Street, Montreal, hold a large assorted stock of Stepneys.

THE Daimler Motor Company, Ltd., has sent us a photograph of the large new showrooms they have recently opened in London; the premises are situated on the ground floor of the new Piccadilly Hotel, Piccadilly, W., and are in addition to the present ones in Shaftesbury Avenue, W.C., so that it is obvious that the Daimler Company do not intend to lose business through lack of suitable accommodation in the leading thoroughfares.

ACCORDING to the *Daily Chronicle*, pawnbrokers in the vicinity of the metropolitan police courts drive a thriving business with people who need to make up in a hurry the amount of a fine. One pawnbroker has mentioned a case when he took a motor-car in pledge. The car was offered by a lady who was in extremity because the court officers refused to accept a cheque.

TO CORRESPONDENTS.

All communications intended for insertion in this Journal or relating to Editorial matters should be addressed to THE EDITORIAL DEPARTMENT, MOTOR-CAR JOURNAL, 27-33, Charing Cross Road, London, W.C., and must be written on one side of the paper only. Letters must in all cases be accompanied by the name and address of the writer, as no notice will be taken of anonymous communications.

To insure insertion communications and contributions must be in the Editor's hands by Tuesday forenoon of the week in which the same are intended to appear. Disappointment may be caused by non-compliance with this rule, and to avoid this earlier receipt, if possible, is necessary.

Photographers, both professional and amateur, are invited to send photographs of current events or of motoring scenes and incidents. The fee, if any, required for reproduction should be stated in each case, otherwise no liability will be accepted.

The Editors cannot undertake to return MSS. or drawings, although every effort will be made to do so in the case of rejected communications. Where such are regarded as of value, correspondents are requested to retain copies.

The Editors do not hold themselves responsible for the opinions expressed by their correspondents, or for statements and facts which do not appear in the editorial columns.

The Editors and Publishers beg also to state that they will accept no responsibility for unsolicited contributions, even if used, unless payment for same is directly specified in forwarding, and the terms arranged before publication.

THE Motor-Car Journal.

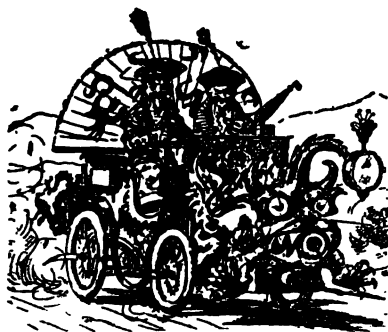
VOL. X.]

LONDON, SATURDAY, SEPTEMBER 12, 1908.

[No. 497.]

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COMMENTS.



TAKING as the text the declaration of the President of the Local Government Board in the House of Commons on July 29th, the R.A.C. is now preaching a sermon to its members with regard to their conduct on the road. Mr. John Burns said motorists would be well advised "if they realised that public opinion was hardening considerably against the man who owned a motor-car and drove it under conditions and at a speed which were not in

accordance with the neighbourly and kindly amenities that ought to exist among all drivers on the roads. They would be well advised if they recognised how public opinion was moving, and did not provoke the Department to go to the extreme length anti-motorists had advised them to go, which he would be very reluctant to do." The result was seen on Saturday in the adoption by the R.A.C. General Committee of a "Scheme for the establishment of Machinery for dealing with Inconsiderate Driving." The opinion has been formed by the committee that the best method of dealing with the question is by the active co-operation of the motoring organisations; first, with the police who have the enforcement of the law which is framed to deal with offences of this nature; and, secondly, with the public which asks for additional protection. Strong and effective machinery exists on the motorist's side in the R.A.C. and its allied clubs, and it is felt that the desired result will be best attained by the careful operation of the policy of decentralisation in this connection, in order to secure the sympathetic assistance of the police authorities. The provincial clubs should therefore seek to become the recognised motoring authorities in their districts, in order to secure influence with the "powers that be."

Co-operation with the Police.

It is essential for the smooth working of the scheme for every club immediately to establish an Inconsiderate Driving Committee to deal with its own cases. This committee should consist of not more than five members. It should meet frequently, and be vested with executive powers in order that it may take the necessary action in cases brought under its consideration. The local clubs will seek to establish friendly relations with the police, both county and local, within their sphere of operations, in order to enlist their co-operation. The object of co-operation with the police will be to receive through them a report of every case of inconsiderate driving which comes to their knowledge, in order that action may be taken by the club in regard to it. Regular correspondence should be established between the two bodies—the police and the club—and it is necessary that both should collaborate so far as practicable—the former reporting cases, the latter investigating them and advising the police what action has been taken together with the result obtained, the intention being that the provincial clubs should exercise disciplinary jurisdiction over their members.

Repressive Measures.

So far, so good. The repressive measures suggested are also satisfactory, these being as follows:—1. Where, in the opinion of the local club, the circumstances demand it, to suggest prosecution. 2. To expel from membership of his Automobile Club. 3. If a professional driver, or one otherwise entered on the Competitors' Register, to recommend removal of his name for a certain period. 4. If a driver holding R.A.C. certificate or registered for employment, to recommend withdrawal of certificate or removal from register. The suggestion that "the public should be invited by advertisement and other means to report to the local club all cases coming under their notice" is a point upon which some difference of opinion will be expressed. Complaint by a responsible person is not objected to; but there is no reason why the common informer and the tramp on the roadside should be invited to harass and worry other users of the road. Such a policy need not be keenly developed.

Motor-car Imports and Exports.

THERE was again a falling off in the imports of foreign motor-cars and parts into this country during August, but the decline was not so great as the recent reports as to dull business would have led us to expect. Of complete cars 306 were imported during the month, of the value of £112,432. The number of chassis imported was 331, valued at £102,393, while parts were responsible for £175,695, giving a combined total for August of £390,520, as against £398,747 in the corresponding month of last year. The gross imports of cars (3,030 in number), chassis (2,213), and parts during the first eight months of the current year amounted to only £2,988,596, as contrasted with £3,333,435 in the corresponding period a year ago. Turning now to the section relating to the exports of British automobile productions, these again show a slight decrease—from, in the aggregate, £106,734 in August, 1907, to £96,041 last month. Altogether 148 complete cars (£53,885) and 18 chassis (£6,016) were despatched from this country in August, as well as parts to the extent of £36,140. The gross shipments during the eight months ending with August are returned at £773,180, which contrasts with £799,276 in the similar period of last year.

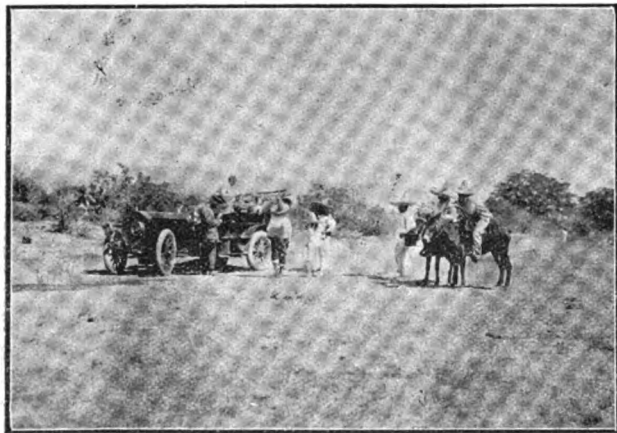
Automobile Instruction.

AT the end of the present month many of the leading polytechnics and technical schools throughout the country will be commencing their courses of instruction in automobile engineering for the coming winter. Only a few have been unable to arrange for the institution of such lessons, and some of these, like the Municipal School of Technology of Manchester, hope to include the subject in the session 1909-10. In London the Polytechnic, of Regent Street, W., will be holding day and evening classes in motor-car work under the direction of Mr. H. J. Spooner, M.I.M.E., the course including workshop instruction and driving lessons. Similarly, at the Battersea Polytechnic there will be special classes for those interested in automobile work, and the prospectus just issued shows how thoroughly this is undertaken under the general direction of Mr. W. Curnick. The Northampton Insti-

tute at Clerkenwell is also arranging a practical series of instructions under Mr. C. E. Larard, so that those in and near London who wish for instruction in both theory and practice have no complaint to make of the facilities provided. In our next issue reference will be made to the syllabuses provided for typical courses of instruction.

Police and Public.

OFTEN have we notified our readers of the finding of motor accessories and other articles by the police on the roadside, several Chief Constables having taken advantage of our Correspondence columns to intimate when their officers have picked up anything which might have fallen from a car. We now understand that the idea has been developed and is being taken up officially between the Chief Constables of Scotland and the Scottish Automobile Club. An arrangement has been made whereby at intervals the police are to be supplied with a list of accessories and furnishing of motor-cars lost on the road, with a view to the recovery of the same by the owners. The system will be worked in a simple way, those members of the club who lose articles from their cars while travelling advising the secretary of the organisation from time to time so that he may make comparisons of the lists of the things lost with those of articles found by the police. The rest will be easy.



Motoring in Mexico—A Halt near Ahuacatlan.

[El Automobil en Mexico.]

Speedometers.

ELSEWHERE we refer to some of the speedometers now available for British motorists, who, incited thereto by the magisterial warnings and presidential suggestions, are giving more serious attention than heretofore to the provision of such instruments. Several sheriffs in Scotland have been giving similar advice to the owners and drivers of cars brought before them, and at Aberdeen the other day it was said that it was unfair to drivers of automobiles that they should be sent out with cars which were not provided with a proper outfit. In assisting readers in that direction the series of notes upon speedometers which commences this week will have real value. We shall be glad to hear from readers who have found their speedometer of service in rebutting police evidence at the courts.

In Manxland.

PRACTICE for the "four-inch" race will be allowed until 8 a.m. on the 22nd, and club inspectors are watching the competitors to prevent careless driving. In addition to the warning flags which will be placed across the road (blue) on the day of the race at the uniform distance of 300 yards from the corner or point where caution is needed, warnings with the name of

the spot in large letters (white on blue) are being placed across the road for the practice as well as for the day of the race. There are ten of these—namely, Willaston Corner, Quarter Bridge, Braddan Bridge, Greeba Corner, Ballacrairie, Ballameanagh, Kirk Michael, Ballaugh Bridge, Sulby Bridge, Ramsey Depot. For Sulby Bridge there are, in addition, two flags, one at 200 and one at 100 yards from the bridge, and the road is tarred for a distance of 100 yards from the bridge. To facilitate passing competitors are advised to furnish their cars with exhaust whistles and to wear caps with ear rolls (such as are now commonly used in motor racing) to enable them to hear an approaching car. Mechanics must keep a frequent look-out behind in order to facilitate passing and to avoid obstruction. All drivers will be examined by a doctor on the day of weighing, and any found unfit to drive will not be allowed to start.

The Motor-car as an Aid to Business.

AN amusing incident in the correspondence which has been appearing in "The Times" has just occurred, in which Sir Martin Conway has scored rather neatly against an anti-motoring correspondent. Sir Martin had written against the attempt to fan into violence the prejudice which may exist in some quarters against motorists, when "R 7339" wrote suggesting that he should visit the nursery gardens of Mr. Bunyard, at Maidstone, near his own house, with a view to obtaining that gentleman's opinion as to the viciousness of the motor. The famous nursery garden is flanked by the main London road for a long distance, and when Sir Martin Conway called as suggested he was informed that no injury or inconvenience was suffered from the dust, notwithstanding the great motor traffic on the highway from London to Paris. Mr. Buss, the manager of the gardens, is apparently no enemy of the motor-car; in fact, he called attention to the utility of the automobile in the development of their business, nine out of ten of the customers going to Maidstone by motor-car coming from Hampshire and the counties north of London. In fact, he says that whereas customers previously sent their gardeners to him by rail, now they go themselves, and the automobile, so far from damaging, has really helped his particular industry.

High Hedges.

APPARENTLY the members of the Horsham Rural District Council are disinclined to agree to the suggestion that the hedges in the locality should be lowered in order to add to the safety of the public. On several occasions during recent years those who direct the automobile policy have urged the clipping of the high hedges that obscure the view on open roads in order to prevent the terrible risks that now occur at many of the sharp turns on the road. But some members of the Horsham Council opine that any reform in that direction would serve to encourage motorists to more speedy travel, and we understand it is probable that they will disagree with the recommendation of their Surveyor, who has given expression to his opinion that, owing to the frequency of motor accidents at these dangerous places, Rural District Councils should be given the power to cut the hedges so low that the view should always be open, and thus the danger of collision reduced to a minimum.

The Dean's Problem.

NOT often do motorists have such a witty speaker at their grave assemblies as the Dean of Norwich. Last Saturday, at the dinner of the R.A.C., he submitted a simple piece of arithmetic. "Let them estimate, if they could, the mileage covered by motorists in England, Scotland, and even in Ireland—he would leave out the Isle of Man, with its four-inch gauge—and contrast with that extent of mileage the number of accidents caused to cocks, hens, and rabbits, as well as to human beings, by motor-cars. He thought they would find that the disparity between the one and the other would cast a flood of ridicule

upon the antipathy that was now being ventilated in the Press against the motor-car. The Press was largely responsible for deepening this antipathy. The Press was a wonderful power—he sometimes felt its influence. But he was case-hardened to that sort of thing. So long as motorists were considerate and careful in driving, they need not care a straw for what was said against them.

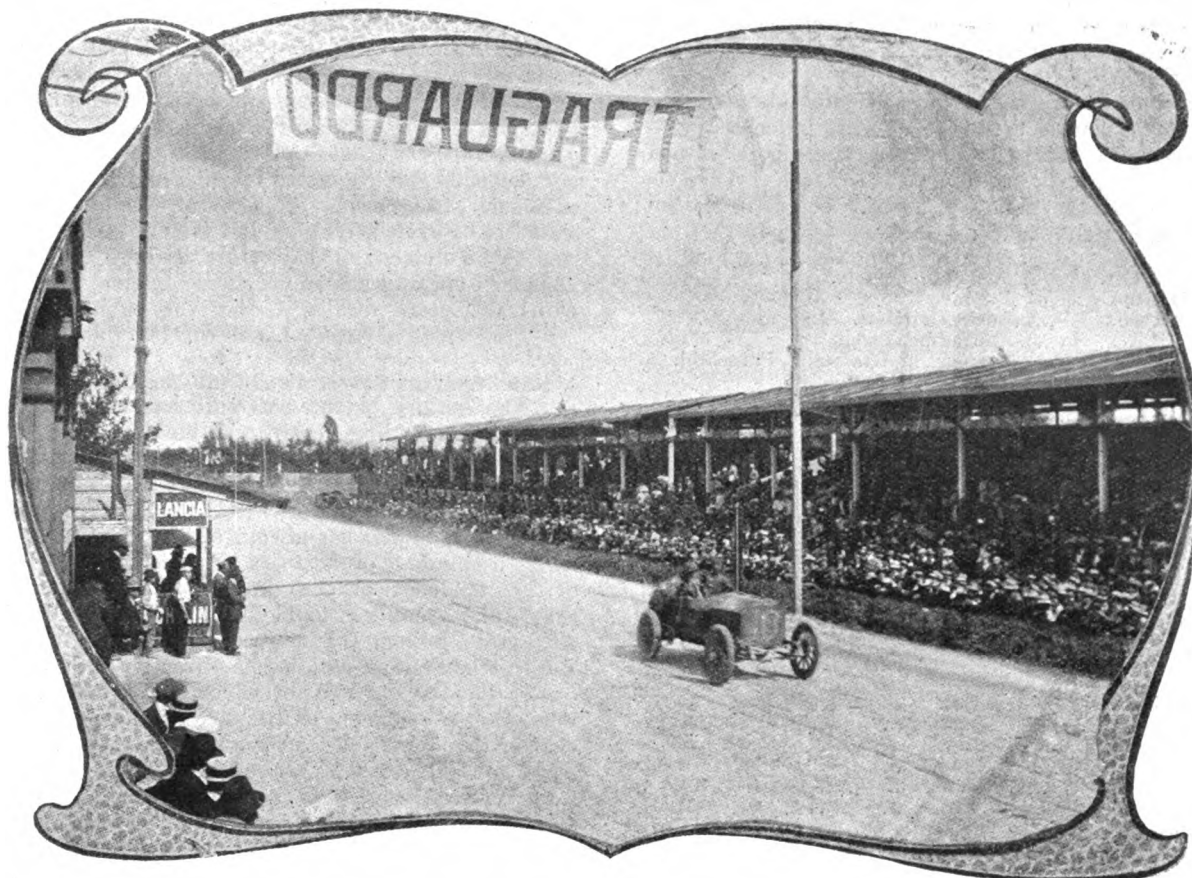
Hill Climbs Abandoned.

LAST week we announced that the hill climb which was to have been held on the previous Saturday at Wantage had been postponed indefinitely, and that the Manchester A.C. had decided not to go further with the Small Car Reliability Trial which they had announced for the 19th inst. Shortly after going to press we learned that the hill climb of the Hertfordshire County A.C. had been cancelled owing to the scarcity of entries received. This probably was accounted for by the fact that a very large percentage of the members of that enterprising

RACING IN ITALY.

THE two races which were held on the Bologna circuit, in Italy, on Sunday and Monday last attracted a considerable amount of interest. The event on the first day, which was known as the Florio Cup contest, was for cars of the Grand Prix type having engines of a maximum bore of 155 mm. in the case of four-cylinder motors. The race was over a distance of 528 kilometres (330 miles), equal to ten laps of the 52·8 kilometre circuit, which takes in Borgo-Panigale, Castelfranco, Sant Agata, and San Giovanni in Persiceto. The course comprises some splendid stretches of road, where high speed can be attained; but, on the other hand, there are places so narrow that it is impossible for one car to pass another. Seventeen entries had been received for the contest, the drivers of the vehicles and the order of starting being shown below:—

| Order of Starting. | Car. | Drivers. |
|--------------------|-------------|------------------------|
| 1, 7, 13 | De Dietrich | Duray, Minoia, Trucco. |
| 2, 8 | Motobloc | Faroux, Gauderman. |



The Florio Cup Race.—Nazzaro, the winner, finishing on his Fiat Car.

organisation were still away from home on holidays, but the feeling that has grown against such trials must also be regarded as partly responsible. The social side of these events is of considerable interest and largely justifies the existence of the local organisations; but the speeds attained in hill climbs on ordinary roads have apparently frightened a good many of the members of the public, and alarmed some magistrates into the belief that the man who has a motor-car must necessarily have a taste for abnormal speed. This being so, there is something for the suggestion that has been made recently that the clubs might well abandon for a term anything in the way of competitions in which speed is a determining factor, confining themselves to moderate driving on the road and the practice of patience when reading the correspondence columns of some of our daily contemporaries.

| | | |
|-----------|------------|-----------------------------|
| 3, 9, 14 | Mors | Damogeo, Garret, Landon. |
| 4, 10, 15 | Fiat | Lancia, Nazzaro, Wagner. |
| 5, 11, 16 | Clement-B. | Gabriel, Hautvast, Shepard. |
| 6, 12, 17 | Itala | Cagno, Fournier, Piacenza. |

The start took place at 6 a.m., the competitors being sent off at minute intervals. Minoia made the fastest initial circuit, which proved disastrous to Faroux and Hautvast, the latter overturning at one of the turns. Lancia was the first to complete two rounds, his time for the second one, 23 min. 24 sec., being equal to over eighty-two miles per hour, the fastest of the day. Three of the competitors fell out in this lap, viz., Duray, Gauderman and Piacenza, while Fournier, who overturned at a bad corner, and Wagner disappeared in the fourth circuit. At the half distance Nazzaro ran into first place, a position he never lost, Trucco being second, Lancia third, and Garret fourth. The sixth, seventh, and eighth rounds saw no change in the two leaders, but Cagno was now third with Minoia close behind. Gabriel had now retired, leaving only seven in the field, which

A SERVICE of White steam taxi-cabs has lately been started in Boston, U.S.A.

was reduced in the final lap to six, owing to Minoia giving up. The order at the finish was as follows:—

| Order. | Driver. | Car. | Time. |
|--------|--------------|-----------------------|----------|
| | | | h. m. s. |
| 1. | Nazzaro ... | Fiat ... | 4 25 21 |
| 2. | Trucco ... | Lorraine-Dietrich ... | 4 34 7 |
| 3. | Cagno ... | Itala ... | 4 56 12 |
| 4. | Demogeot ... | Mors ... | 4 57 11 |
| 5. | Lancia ... | Fiat ... | 5 8 51 |
| 6. | Garret ... | Mors ... | 5 22 7 |

Nazzaro, whose average speed works out at 74.8 miles per hour, thus adds another victory to his already long list of successes on Fiat cars. Indeed, the speed is the highest that has been attained in a big road race, Lautenschlager's average in the Grand Prix in July last being only 69 miles per hour. As will be seen, the race was a struggle between France and Italy, victory resting with the latter, for out of six Italian cars which started three finished, as against only a similar number out of eleven French vehicles. Among the latter, the performance of the Mors cars is worthy of note, in view of the fact that the company has for some years not taken part in international speed contests. The course was well guarded, but after the arrival of the winner the spectators invaded the track, to the danger of themselves and the competitors.

The Targa Bologna race, which was held on Monday, was over eight laps of the same course, equal to 422½ kilometres (264 miles), and was open for four-cylinder cars having a bore between a minimum of 120 mm. and a maximum of 130 mm. When the list closed it contained the names of twenty competitors, but only the following sixteen started:—

| Order of Starting. | Car. | Drivers. |
|--------------------|----------------|-----------------------------------|
| 1 | Diatto-Clement | Primavesi. |
| 2, 11 | Franco... | Buzio, Cariolati. |
| 3, 12 | S.P.A.... | Appendino, Picoli. |
| 4, 13, 15 | Bianchi | Tommaselli, Brambilla, Franchini. |
| 5, | Zust | Maggioni. |
| 6, 14, 16 | Junior... | Tamagni, Tangazzi, Manganotti. |
| 7 | De Dietrich | Parran. |
| 8 | Berliet... | Porporato. |
| 9 | Fiat | Vaccari. |
| 10 | Darracq | Ravetto. |

The cars were again sent off at minute intervals from 6 a.m. The struggle at first was between Maggioni on a Zust, Porporato on the Berliet, and one of the Bianchis; at the half distance, however, Porporato held a good lead, with Buzio on a Franco second. Porporato continued to drive in brilliant style, and finally won in a shade over four hours. The result was as follows:—

| Order. | Driver. | Car. | H. | M. | S. |
|--------|-----------|---------|----|----|----|
| 1 | Porporato | Berliet | 4 | 0 | 56 |
| 2 | Appendino | S.P.A. | 4 | 14 | 5 |
| 3 | Buzio | Franco | 4 | 40 | 57 |
| 4 | Tangazzi | Junior | 4 | 43 | 49 |
| 5 | Maggioni | Zust | 5 | 7 | 57 |
| 6 | Picoli | S.P.A. | 5 | 15 | 41 |

The other competitors abandoned the race.

The winning Berliet was equipped with Dunlop tyres, and throughout the race Porporato had occasion to change only one tyre, notwithstanding that his speed averaged just over sixty-five miles an hour.

MR. W. AUGUSTUS FARNHAM, Asso. M. Inst. M. E., the engineer and surveyor of the Foots Cray Urban District Council, has recently designed a small and inexpensive road-tarring machine for use in his district. The machine has no intricate working parts, and is drawn by one man. It is capable of tarring a width of 5 ft. at one stroke, and will do half-a-mile in length of a 24 ft. road in one day at a cost for labour of about £1. The principle is as follows:—A V-shaped trough mounted on two wheels is provided with slots 1-16 in. wide, which allows the tar (which is poured in from buckets), to percolate to the road, and is followed by a rubber squeegee, which spreads it. The quantity of tar on the road is regulated by raising or depressing the handles of the machine, thereby increasing or decreasing the pressure on the squeegee.

SOME CURRENT TOPICS.

Development in Motor Design—a Daimler Departure.

Marked as has been the progress made with the construction of petrol motors in recent years, as the power developed by the "four-inch" motors taking part in the forthcoming race in the Isle of Man fully testifies, it has long been felt by many engineers that the existing type is only passing through a stage of development, and that nothing like finality will be achieved until the enormous heat losses through the water jacket and through the high-pressure exhaust are in some measure prevented; until something more simple than the present ignition system is evolved; and until the mechanism employed to regulate the aspiration and expulsion of the gases—in other words, the valve-operating mechanism—is simplified to the last degree. If reports be true, an important development in the last-named connection is about to take place, as it is announced that the Daimler Company has decided to adopt an entirely new type of engine on some of its next year's cars. The new design, which is the invention of Mr. Knight, an American engineer, who has been experimenting with it for some years past, does away entirely with the ordinary type of inlet and exhaust valves and their necessary cam shafts, tappets, springs, &c., ports in the cylinder walls being opened and closed by means of reciprocating cylinders moving between the piston and the cylinder proper. In other words, the inlet and exhaust ports are controlled by a circular slide valve actuated by an eccentric motion in the base chamber. There are other points of note in the motor, which is stated to be extremely quiet and smooth running when in operation. We understand that before deciding on its adoption the Daimler Company has subjected the engine to exhaustive trials with satisfactory results, so that the public appearance of the new design will be awaited with considerable interest.

A New Medium Power Four-Cylinder Car.

The feature of the past year has been the production by many of the leading continental builders, who had previously confined their attention to high-power vehicles, of four-cylinder cars of medium power and at a price which renders them available to a much larger clientele than was previously possible. This type of vehicle has of course been turned out for some time from a number of factories in this country, and, in view of the tendency of the times, it was perhaps only natural that this example should be followed by foreign makers. As a case in point, I may refer to the N.A.G. Company, of Berlin, who are now building an attractive little 12-14-h.p. model, one of the first examples of which I have had an opportunity of inspecting at the depot of the sole British concessionaires, the Connaught Motor and Carriage Company, Ltd., 28 and 29, Long Acre, W.C. The new car, while following the standard lines of live axle vehicles, has several points of interest. For instance, the engine, which is 75 mm. bore by 85 mm. stroke, has all the four cylinders cast in one piece. High-tension magneto ignition is fitted as standard, while the water circulation is on the thermosiphon system. The clutch is of the leather-faced cone variety, and the three-speed gear-box is adapted to give a direct drive on the top speed. Although put on the market at a relatively low price, every attention has apparently been paid to the details, ball bearings being fitted throughout excepting the engine. The new car is adapted to receive any type of body, and as a five-seated side-entrance phaeton has a very smart appearance. Turning the scale at but approximately 14 cwt., it should be not only speedy and a good hill-climber, but very light on tyres.

ARCANUM.

A CABLE has been received from the Australian motorists, Messrs. Dutton and Aunger, stating that they have picked up the old 20-24-h.p. Talbot car which it will be remembered they had to abandon on their first attempt to cross the continent, owing to the torrential rains encountered. The cable goes on to say that they have found the vehicle in good order, notwithstanding that it had been standing out in the open bush of central Australia for nine months.

THE "FOUR-INCH" RACE.

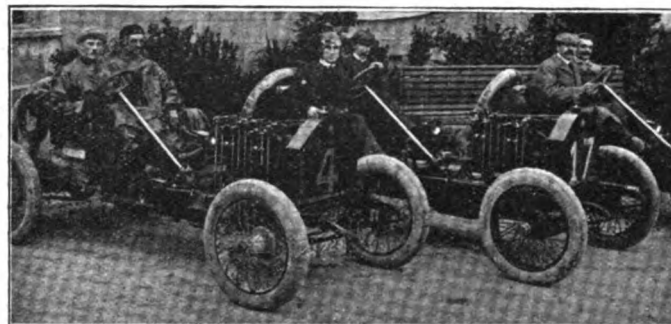
(BY OUR OWN CORRESPONDENT.)

DOUGLAS, Tuesday.

PRACTISING commenced on Thursday morning under the best possible climatic conditions. Ward, on a S.C.A.T., was first out, followed by the three Darracqs and Reade on a Beeston Humber. Guinness drove one of the Darracqs, and all three cars of that make, along with the Humber and the Calthorpe, did two circuits of the course, but being the first morning it was not given to endeavours to attain a high speed, and drivers were content to attend to the necessary adjustment of their cars. Dunlops have again stationed men at each of the dangerous corners, and this action is much appreciated by the drivers, especially those new to the course. Friday morning was very wet, and more than one driver experienced bad skids on the slippery roads. Moss, on an Arrol-Johnston, was perhaps the worst sufferer, and had a slight mishap at the top of Bray Hill. Ignorant of the bad nature of the turn he skidded and struck the hedge, his car completely overturning. Moss and his mechanic quickly extricated themselves, little the worse for the accident, and with the assistance of some spectators righted the car, drove off and completed a second circuit in creditable time. Robinson, on a Calthorpe, accomplished two rounds of the course, as did also Porter on another car of the same make and Stirling on a Hutton, but it being the latter's first practice he took matters very easily. Robinson had the misfortune to break a crank shaft while coming along the mountains on his second venture, but as the course from this point is all down hill he was able to complete the circuit without the aid of his engines. George, who so sensationally lost his ballast, seats and floor boards while driving an Argyll in the T.T. race of 1906, is driving the third Darracq, and is doing well. A S.C.A.T. car had the bad luck to collide badly with the hedge while negotiating Sulby Bridge, but no injury was done. The drivers complained about the tar which has been placed on the road at this point of the course and gravel has since been laid over it, making skidding less probable. After practising on Friday Mr. Gregory, one of the officials, measured the cylinders of several of the cars, and one was found to be 1,000th part of an inch too large, and several others have to undergo the trouble and expense of re-casting their cylinders before they come to the Island.

Some good running took place on Saturday morning, George on a Darracq perhaps accomplishing the quickest time, viz., forty-

being recorded. Several mishaps were reported. Roberts on an Arrol-Johnston dashed at a high speed into a herd of cattle which were being driven along the road near Cronk-y-Voddy. Two of the beasts were killed, and although Roberts and his mechanic stuck in the car they were uninjured, while the vehicle only received minor damage—a bent radiator and axle and a broken brake. A Coventry Humber struck a tree near Sulby without sustaining much damage, while several other mishaps occurred unworthy of mention. All the drivers speak of the bad condition of the course, but they anticipate a good race.



The Darracq "Four-Inch" Racers with their Drivers—Messrs. A. Lee Guinness, A. E. George, and A. Rawlinson—at the wheels.

The following is a list of the cars that have arrived in the island:—Rover, Mr. H. B. Browning; Arrol-Johnston, Mr. E. J. Cyril Roberts; Darracq, Mr. A. Rawlinson; Coventry-Humber, Mr. G. W. Brown; S.C.A.T., Mr. R. O. Harper; Arrol-Johnston, Mr. D. Resta; Darracq, Mr. A. Lee Guinness; Beeston Humber, Mr. James Reid; Calthorpe, Mr. Robinson; S.C.A.T., Mr. F. Ward; Hutton, Mr. P. D. Stirling; Arrol-Johnston, Mr. Geoffrey Moss; Darracq, Mr. A. E. George; Beeston Humber, Mr. T. C. Pullinger; Thornycroft, Mr. Tom Thornycroft; S.C.A.T., Mr. Harold S. Buckley.

With regard to the transport of cars to the Isle of Man, these are conveyed on cargo boats from Liverpool to Douglas by the Isle of Man Steam Packet Co. for 40s. per car, at owner's risk. Vehicles must be delivered at Salisbury Dock, Liverpool, between 8 a.m. and 6 p.m., on any week day, for shipment on the first cargo boat available. The cost for the transport of a car from London (Euston per L. and N.W.Rly.) to Douglas amounts to 152s. at owner's risk.

BY TELEGRAPH.

DOUGLAS, Wednesday.

Practising continued this morning in fine weather, but the rain of the past days rendered course slippery, and several cars had very near things at corners. Harper on S.C.A.T., travelling seventy miles an hour, had a hairbreadth escape at Hillberry Steps.

An unfortunate accident occurred to Gorden Usmar on a Vinot. From the tracks it appeared he took the corner at Creg Na Baa Hotel somewhat wide. The car skidded sideways, striking the wall, and turned over with Usmar underneath. He was extricated, and it was found that, excepting receiving a shock, he was uninjured. The car was slightly damaged, the near front wheel and the steering wheel being broken.

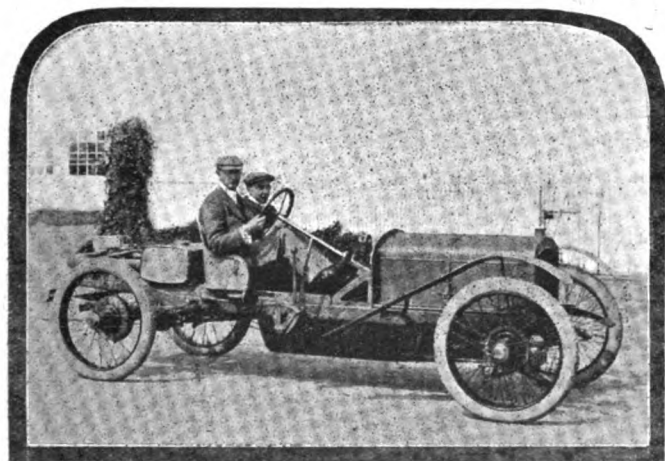
Lee Guinness took the driver and his mechanic, who was also uninjured, to Douglas.

The quickest time accomplished was fifty minutes for the circuit.

Several fresh competitors came out, including two Hillman-Coatalen cars and a Thornycroft, the latter driven by Baxendale.

The Huttons and Berliets are due to arrive to-day, and by the end of the week all the competitors will be here.

THE medical men attached to the Weald of Kent Hop-Pickers' Mission, which has twenty-eight evangelists and eleven medical workers among the hop-pickers, are making their visits on a car lent by a local motorist.



Mr. D. S. Hodge at the wheel of the Thornycroft Car he will drive in the "Four-Inch" Race in the Isle of Man.

The car is, generally speaking, similar to the Thornycroft Co.'s standard 18-h.p. four-cylinder type, and is fitted with high-tension magneto ignition, multiple disc clutch, gate change gear-box, with propeller shaft transmission and live axle. The petrol tank is behind the driver's seat, and has a capacity of about eighteen gallons.

six minutes a circuit, or a speed of fifty miles an hour; in fact, all the cars of this make went very creditably.

On Monday all the cars at present in the Island turned out for practice, but the mist on the mountains prevented good times

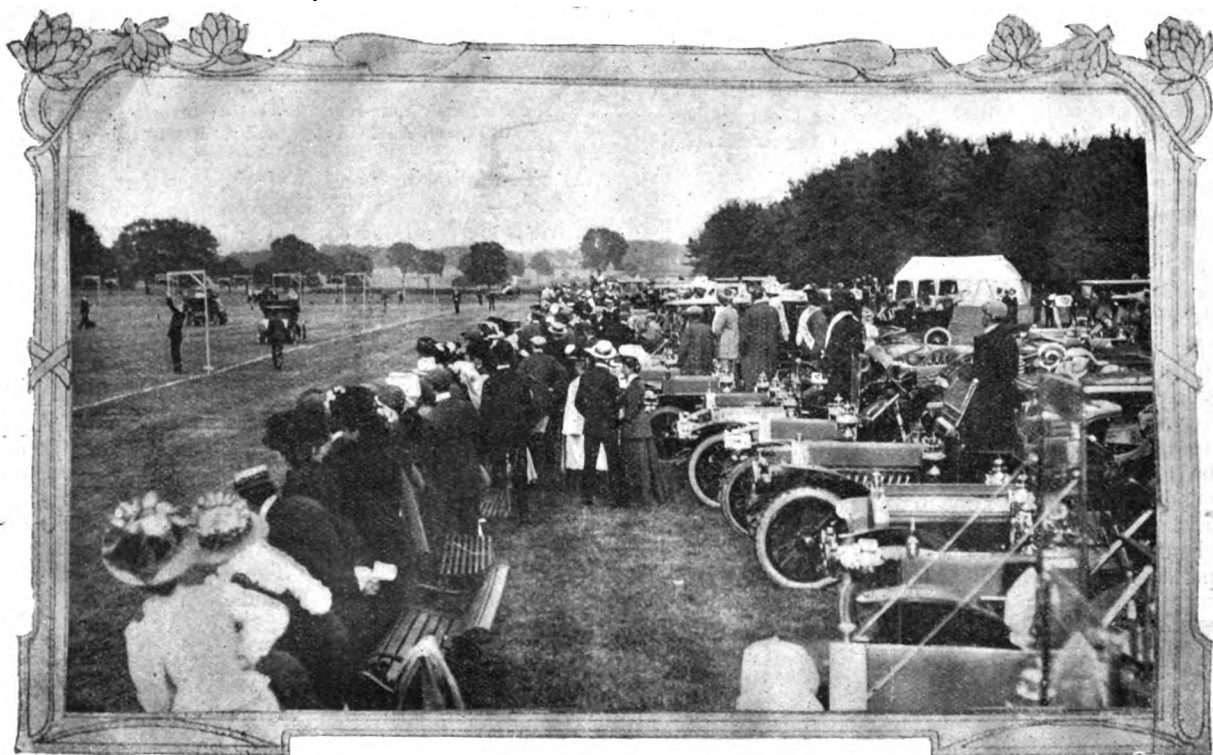
THE R.A.C. AT NORWICH.

ON Saturday the R.A.C. held its third provincial meeting at Norwich by invitation of the Norfolk Automobile and Launch Club, the proceedings including an official reception, when Prince Francis of Teck was received by the Sheriff (Capt. Fred Chamberlain) in the absence of the Mayor, among the welcoming company being the Lord-Lieutenant of Norfolk (Lord Coke), the High Sheriff of Norfolk (Mr. E. H. Evans Lombe), Colonel Kerrison (president of the Norfolk Automobile and Launch Club), Mr. Russell J. Colman, Mr. G. M. Chamberlin, and the Town Clerk (Mr. Arnold Miller).

After the meeting of the Committee, reported in our Club News on another page, the visitors were conducted round the Cathedral by the Dean, and in the afternoon a gymkhana was held at Crown Point. It could scarcely have been held in more happy circumstances. For one thing the weather was unexpectedly fine. A dreary procession of wet days ended with a cool, dull, but pleasant Saturday. The polo ground at Crown Point provided a delightful spot for the occasion, a wide level expanse of grass-covered ground encircled with trees being

with his 7-h.p. Singer were also in the final. At Tilting the Ring Mr. J. N. C. Day with a 16-h.p. Minerva proved the most expert; Mr. F. W. Fitt was second again; and Mr. John Hargreaves with a 22-28-h.p. Daimler, and Mr. J. Fison also won their heats. The "Musical Chairs," with the frequent spectacle of the ladies leaving the cars with desperate haste and frantically making for the vacant chairs round the bandsmen, excited great interest. The three cars that were left to fight it out were Mr. R. J. Colman's 10-h.p. De Dion, Mr. F. Lindus Forge's 14-16-h.p. Vauxhall, and Mr. A. R. M. Wood's 12-14-h.p. De Dion. With the two ladies in the first and last named falling, the lady in Mr. Forge's motor was the victor. Mr. Harold Collins won the Motor-cycle Potato Race. With the musical chairs a most successful gymkhana ended and the prizes were distributed by Mrs. Colman, the medal awarded by the club for the best performance being given to Miss Beryl Colman.

The Essex County Automobile Club held a reliability consumption run from Witham to Norwich on Friday. The distance was seventy-seven miles, and Mrs. Colman presented the cup to the winner, Mr. F. Lindus Forge, 14-16-h.p. Vauxhall. Subsequently Mrs. Colman was "At Home." Prince Francis of Teck



The R.A.C. Meet at Norwich.—The scene at the Gymkhana in the grounds of Mr. R. J. Colman.

approached by a fine drive. Some 150 cars assembled and ranged in a semicircle just prior to the commencement, which was made in the presence of a large fashionable gathering. The grass in the centre of the ground had been mown and flag staffs picked out about eight courses, each permitting a comfortable run for one car.

There were twenty entries for the Bending Race, Sir Percy Bates, Bart., in his 22-h.p. Berliet, Mr. H. W. Colliver with his 14-16-h.p. Fiat, and the 15-20-h.p. Renault owned by Mr. J. Fison contesting the final, which saw Mr. J. Fison emerge the victor, with Sir Percy Bates second. The Academy Race, with the humorous business at the blackboard and easel, provided much amusement. Mr. F. W. Fitt in his 20-32-h.p. Darracq was the successful competitor in the final, the winners of the other heats being Mr. A. R. M. Wood, 12-14-h.p. De Dion; Mr. W. P. Cubitt, 15-h.p. Humber; Mr. R. S. Clifford, 12-h.p. Richard-Brasier. The entries for the Bomb Race were numerous. Mr. R. S. Clifford succeeded in bursting the bladders in the quickest time; Mr. F. W. Fitt came second. Mr. J. Fison and Dr. H. G. K. Young

was present during the afternoon. The gymkhana was admirably organised, the officials being:—Judge, Mr. Edward H. Cozens-Hardy; starter, Mr. Alfred Finch; timekeeper, Mr. Mawdsley Brooke; assistant starters, Major Fowler, Captain W. H. B. Long, Captain Duff, and Messrs. F. E. V. Currey and F. Bullard; umpires, Messrs. W. R. Spelman, E. Mornement, F. A. Jackson, S. Howes, and G. Bullard; clerk of the course, Mr. A. C. Shepherd; marshals, Messrs. F. W. Doggett and L. W. Bennett; hon. secretary, Mr. G. N. C. Mann.

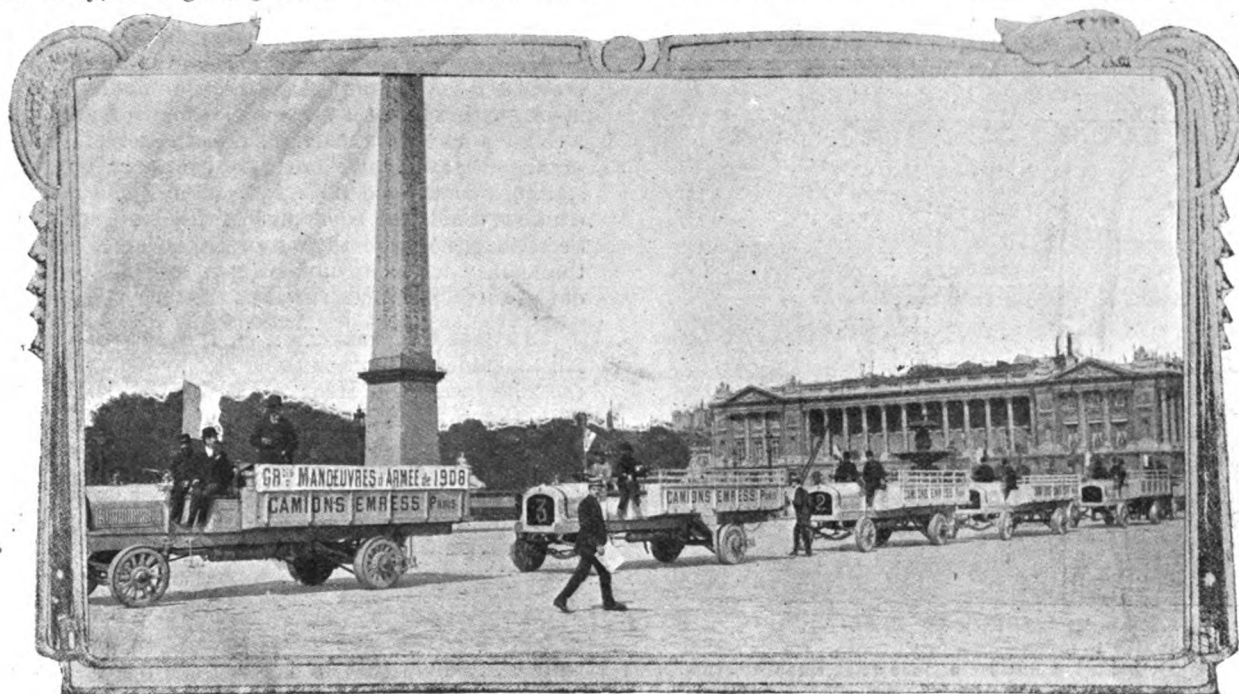
On Sunday the visitors had a very pleasant time. Starting from Norwich between 10 a.m. and 11 a.m. the cars made for Wroxham, the centre of the Broadland district. Quite a hundred must have made the journey and were delighted with what they saw. Several members of the Club had their launches in readiness, and both the big and little Broads were visited before lunch was partaken of at Horning. Later in the day Mr. and Mrs. H. L. Clark provided tea in their charming grounds by the riverside. On all sides the guests expressed themselves as delighted with the hospitality with which they had been received.

GOSSIP FROM PARIS.

POOR Wilbur Wright is not in luck just now. After breaking one wing of his aeroplane the weather was so bad during the week that he had to disappoint M. Lazare Weiler and all the members of his committee, to say nothing of a veritable flock of journalists and aviators who had gone to Le Mans to see him fly. After waiting several days all those distinguished persons had returned to Paris, when one morning there was a lull in the storm. At once Wright brought out his machine, but one of his assistants stumbled over a wire commanding the rudder. The aviator did not notice the damage which had been done till he was in the air. The rudder would not work, and Wright was fortunate in being able to return to *terra firma* without completely wrecking his machine. As it was only one ski was broken and a few wires snapped. Then the publication of his article in the "Century Magazine" and the long interviews he perhaps imprudently granted several French journalists did not improve his position. A good many people, seeing that after all Wright does not even pretend to have done much more than some of the French aviators, and that he has, like Farman, Delagrange, &c., to wait for calm weather to fly, are beginning to doubt whether his machine

believes he will be able to obtain the necessary authorisation, and which, in fact, offers considerably greater advantages for aviation, as it is something like nine miles long by six and a half broad. But it takes two hours by train to get to it.

M. RENE QUINTON is determined that the French aeronauts and aviators shall have the same support and encouragement as those of other nations. The Germans have their national subscription for Count Zeppelin, in Russia the Government has offered £6,500 in prizes for aviation, to be competed for at St. Petersburg next summer, and in Italy the King has instituted an aviation prize of £2,000, to say nothing of the minor or less approachable prizes, such as that for a flight from London to Manchester. Taking for model the Touring Club of France, M. Quinton has just constituted the Aviation League of France, with an annual subscription of five francs. He estimates that, as membership will give facilities for witnessing experiments, he will obtain at least 50,000 subscriptions in the first year, which will enable the League to offer handsome prizes. The influence of the association, which it is hoped will be of a really national character, will, says M. Quinton, be invaluable for the aeronauts and aviators. Let us hope it will; and if only it follows in the



Some of the Motor Wagons Leaving Paris for the French Military Manoeuvres.

is really so wonderful as it was said, and also whether he is much more skilful than his European competitors. Wilbur Wright must make haste to remain in the air an hour, otherwise he will risk losing much of the prestige he earned for himself by his first flights in France.

SEVERAL of the most prominent aviators, finding the Issy les Moulineaux parade ground too small for their future flights, are looking for a vaster field. Not very long ago one of them applied to the Government for permission to use the military manoeuvring-ground of Satory, near Versailles. When I met him soon after he was disconsolate. He had met with a refusal on the plea that the Satory camp contained so many military secrets that to permit aeroplane experiments on it, attracting crowds of people, was out of the question. I met him again this week, and he told me he had fathomed the mysterious reason for which the military authorities would not have him and his machine at Satory. It was because the aeronautic corps of the army have made an aeroplane of their own and mean to make experiments with it at Satory, where a shed has already been built for it. Most likely my friend will have to go to the camp of Chalons, for which he

steps of the T.C.F., and is as well managed, there can be no doubt of it. But there are not so many aviators as cyclists, and one may ask, What about the Aero Club, which is also supposed to use its influence in favour of the aeronauts and aviators?

MARNEY.

A MOTOR schooner belonging to Bergen, which brought a cargo of 350 tons of granite setts, arrived at Yarmouth on Monday. The vessel, which is the first of its kind to enter Yarmouth, is equipped with a paraffin engine which drives her at about five knots when loaded.

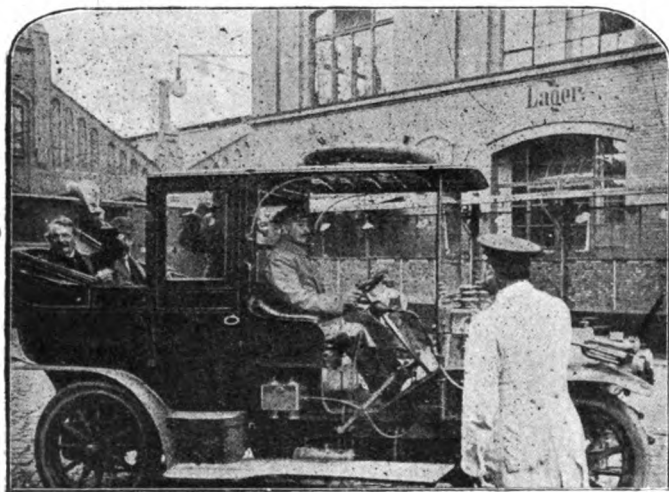
MESSRS. A. DAVEY AND SONS, who conduct an important motor agency at 116, Sidwell Street, Exeter, have opened an extensive garage on the Bath road. This has a wide entrance from the main Bristol-London road, and is fitted with modern machinery, the equipment including suitable offices, waiting rooms, cloak rooms, &c. Under the personal supervision of Mr. F. Davey a large staff of engineers is undertaking the repair of motor-vehicles of all types. The firm have two establishments at Exeter and another in Torquay, and intend to be of real service to motorists travelling between the two places.

THE SOCIAL WHIRL.

His Majesty will open the new Queen Victoria Memorial School at Dunblane on the 28th inst. We learn that King Edward will go by motor-car from Balmoral to Blairgowrie via the Spittal of Glenshee, familiar to all who have participated in the Scottish Reliability Trials in the past four years.

In the unavoidable absence of Countess Fitzwilliam, the Earl Fitzwilliam has just opened a bazaar at Barnsley in aid of the Yorkshire Society for Promoting Kindness to Pit Ponies. His lordship, who is interested in the motor industry, appealed to everybody who loved horses to support the society, stating that few people realised the drudgery which pit ponies had to undergo. When everyone on *terra firma* has a motor-car or can occasionally take trips by airship, inventors will probably turn their attention to motoring underground; and then will come the heyday of happiness for the little animals now down in the mines.

POLITICIANS seem to have been enjoying themselves on their cars during the last few days. Before they went for their holidays both the Premier and Mr. Haldane, the Secretary for War, had their cars fitted with speedometers, and Mr. A. J. Balfour has been travelling carefully around his estate at Whittingehame. He is now at North Berwick, where he



During his recent stay in Germany Mr. Lloyd George, the Chancellor of the Exchequer, visited a number of industrial establishments. The above illustration depicts him at the Factory at Oberschone-weide, where the N.A.G. Cars are built.

motored with Lady Frances Balfour on the Napier car illustrated in a recent issue. Mr. Lloyd George and Mr. Winston Churchill, too, who have been the guests of the Bishop of St. Asaph, have been motoring around Snowdon, and one day the Chancellor of the Exchequer, accompanied by Mr. Winston Churchill and Sir Hudson Kearley, motored to Criccieth to visit the historic castle of Criccieth and Gart Celyn.

THE Earl of Leven and Melville had a narrow escape from a serious automobile accident in the Pass of Killiecrankie one night last week. His lordship was proceeding from Blair Castle to Faskally House, when the car almost brushed a merchant's van standing at the top of the Pass. In endeavouring to steer clear the vehicle swerved, and the front wheels jumped a five-wire fence. It then rebounded on to the road, with the result that the axle was so badly damaged that the car was unable to proceed. The occupants of the car happily escaped unhurt, and were conveyed part of the way to Faskally House in the van, the automobile being later taken into Pitlochry for repair.

THE intersectional motor-car system adopted at the meeting of the British Association at Dublin was hardly

restricted to its legitimate purpose of assisting members to attend sections, as they were freely taken advantage of for a drive through the town.

IN consequence of a large number of Swedish gentlemen having joined the Motor Club in Coventry Street, W., it is proposed to secure the services of two Swedish cooks, the arrangement for their selection being left in the hands of a member in Gothenburg.

It was an unfortunate mishap at the four cross roads at Chailey, a village between Haywards Heath and Lewes, by which Julia, Marchioness of Tweeddale, the wife of Major Sir William Evans-Gordon, met with an accident last week. She had been staying with her sister at Lydhurst, Warringlid, near Haywards Heath, and was travelling to Crowborough on a car. Despite the warning signals at the cross roads, a collision with another vehicle occurred, and all the passengers were thrown out and severely bruised. The Marchioness sustained the greatest shock and was taken to the King's Head Hotel at Chailey, whither Sir William Evans-Gordon motored without delay. We learn that her ladyship is progressing as favourably as can be expected under the circumstances.

THE delights of the Highlands have been considerably increased by the advent of the motor-car, or, rather, some of their previous inconveniences have been minimised by the universal favour with which the automobile is now regarded. A visit to a country house in the Highland counties of Ross, Sutherland, or Argyll may involve a drive of twenty or thirty miles from the station. In the old days it was no joke if a wagonette or omnibus could not be obtained for a few hours, but now most Scottish hosts have their own motor-cars to send, and, seeing that police traps are unknown in some of the sporting districts of the north, speed soon swallows distance.

INTEREST is awakening in the International Rubber and Allied Trades Exhibition to be held at Olympia from the 14th to the 26th inst. Sir Henry A. Blake, G.C.M.C., is the president, with Col. W. J. Bosworth, of the A.A., as chairman. Mr. A. Staines Manders, the organising manager, informs me that twenty-five Governments will be taking part in the exhibition, and that a special Club room will be fitted up for the use of exhibitors, the *M.C.J.* being among the journals supplied for their intellectual entertainment. Messrs. Lyons will be responsible for the other fare.

It will interest Prince Francis of Teck, and those who are endeavouring to secure the fitting of speedometers on automobiles, to know that all the cars owned by Mr. Andrew Carnegie are thus provided. In the garage attached to Skibo Castle he has the following rules prominently placed, and his drivers are enjoined to carry them out to the minutest detail:—

RULES FOR MOTORMEN.

1. Every motor shall be equipped with a loud horn and speedometer.
2. The maximum speed is never to exceed twenty miles per hour, even on straight and excellent roads. Speed is to be greatly reduced in villages and over bad roads, and whenever a clear road cannot be seen far ahead.
3. In approaching every curve the speed is to be greatly reduced and the horn loudly sounded, curves to be taken slowly, and with great care, the horn to be sounded at intervals.
4. In taking curves the motor is always to be kept well to the left, the proper side of the road. Motors often take the inside of the curve regardless of the rule of the road. This must never be done by Skibo motors.
5. Careful, slow running, involving no risk is desired. Fast running is not enjoyed. Whether a few minutes more be consumed matters not. Our motors are pleasure vehicles, not racers.
6. The minimum time to be consumed between Skibo and Bonar Bridge Station (ten miles) is forty minutes; between Skibo and Dornoch (four miles) sixteen minutes. Even if guests miss trains, the time named must never be lessened.

All of our motormen are notably careful when meeting or passing cyclists, horses, sheep, cattle, &c., and for saving chickens, dogs, &c., and are favourites with the crofters and other people of the district who use the same public roads. We are very pleased at this, and ask them to oblige us still further by keeping the above rules to the letter, and thus avoid serious risk of danger.

LOLLIUS.

CONTINENTAL NOTES.

An Automobile Meeting at Royan.

A three days' motor meet was held at Royan, near Bordeaux, last week. The first day was devoted to a fuel consumption test over a 132 kilometre circuit, the honours falling to a car fitted with an Aster 8-h.p. single-cylinder engine, which consumed only 7 litres of spirit. The proceedings on the second and third days consisted of a series of standing mile speed trials for different classes of vehicles ranging from 100 mm. bore single-cylinder machines up to powerful racing cars. A Sizaire-Naudin covered one mile in 1 min. 54 sec., while Pierron on a Motobloc Grand Prix vehicle set up a new local record by covering the distance in 46 sec.

British Motorists in France.

Recent British motoring visitors to France include:—Mr. Wertheimer (60-h.p. Napier), Mrs. Chadwick (30-h.p. Renault), Mr. Welton, London (70-h.p. Fiat), Mr. Ruffer (40-h.p. Dietrich), Mr. Walter Kingsland (24-h.p. Panhard), Mr. A. Pyke and Mr. A. Shandon (20-h.p. Clement-Bayard), Lord Loreburn (45-h.p. Berliet), and Mr. J. Newton, Manchester.

Aeronautical Notes.

The past week has been a busy one in aeronautical circles in France. On Thursday, the 3rd inst., Wilbur Wright made a flight at a height of about 90 ft. and at a speed of 37 miles an hour, which lasted 10 min. 40 sec. A second flight was less successful, but is said to have been interesting on account of the ease with which the machine repeatedly rose into the air after touching ground. His best effort to date was made on Saturday, when he covered a distance of 16½ miles, at an average height 65 ft., in 19 min. 50 sec. Attempting a second flight, his machine was taken by a gust of wind as it made a very sharp turn and had one of the planes damaged. The honours of the week, however, rest with Delagrange, who, on Sunday, made an ascent with his aeroplane on the parade ground at Issy les Moulineaux, and established a new record by remaining in the air for 29 m. 53 sec., covering a distance of over 24 kilometres. Santos Dumont, of whom little has been heard lately, is, it is announced, having a new aeroplane built in Paris. Steps are being taken in Geneva to found a Swiss National League for aerial navigation. The French military airship République made a voyage of 125 miles in 6½ hours on Saturday.

Motor Racing in Russia.

A motor-car race from Tsarskoie-Selo to Strelina and back, a distance of twenty-five miles, was held a few days ago. In the over 40-h.p. category the winner was M. Tansky, who covered the distance on his Bianchi car in 37 min. 47 sec. The light car section was won by M. Efron on a four-cylinder Werner in 55 min. 42 sec.

American Motoring Tourists in France.

It is not only by British motorists that the attractions of France from a touring point of view have been recognised; the number of Americans who have this year come over with their cars has shown a remarkable advance, and in view of the endeavours of the various French, British, and American associations to facilitate the entry of visitors' cars in the country, the popularity of France is more likely to increase than diminish with foreign motorists. In order to meet the requirements of their clients in this direction two American motor-car manufacturers—the Pierce and Packard companies—have recently established depots in Paris, where a stock of spare parts for their respective vehicles are kept on hand, and where a large amount of useful work is also done in planning tours, advising on methods of shipment, and in giving information as to the means of passing from one continental country to another. In addition to the American Automobile Association being now represented in Paris, visitors from the United States largely profit by the excellent foreign touring branches of the various English organisations, the R.A.C., the Motor Union and the Automobile Association. By the aid of these various bodies all the

formalities, such as registration of car, payment of custom duties, &c., can be settled before leaving England. On arrival at the foreign port practically all that remains to be done is to attach the licence plates, have the triptyque signed by the customs officer, and drive away.

A Danish Volunteer Motor-cycle Corps.

A volunteer motor-cycle corps has recently been formed in Denmark. Each of the fifty members is equipped with a motor-bicycle and a Madsen automatic rifle, a revolver and a spade, as well as the necessary rounds of ammunition for both arms. The corps is to be accompanied by four motor-wagons carrying reserve supplies.

Public Services in France.

Negotiations are in hand for the formation of a company to establish a motor-'bus service to link up the towns in what is known as the *grande banlieue* of Paris—the villages and towns in a circle of twenty-five miles from the capital. The scheme under consideration is to form a huge belt line of motor-buses around the city, connecting such towns as Rambouillet, Mantes, Dourdan, Meaux, Senlis, Melun, Coulommiers, and Etampes. The type of vehicle it is proposed to adopt is a 24-h.p. petrol



Touring in Germany.—A View of Munich.

'bus, with inside passenger accommodation and considerable baggage capacity on the outside.

Miscellaneous Items.

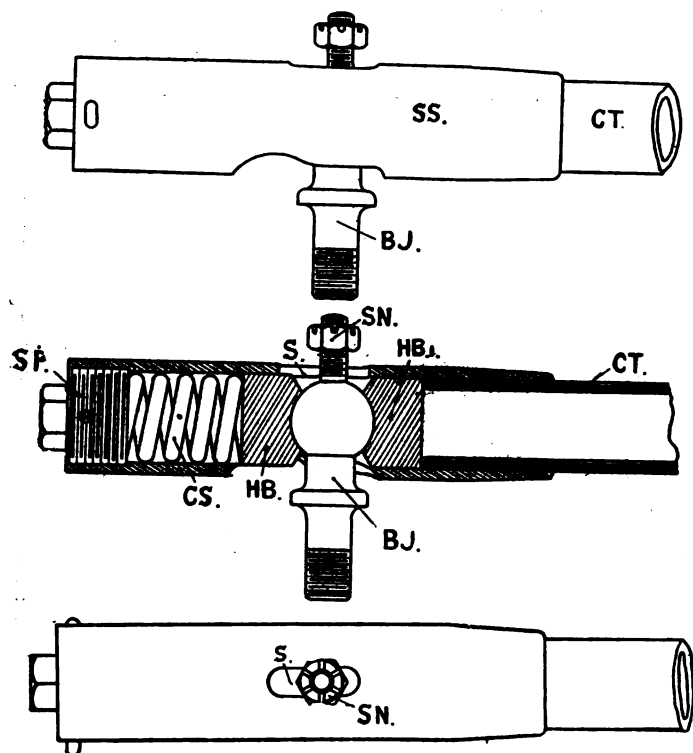
Some trials are being made at Marseilles with the Mercedes-Electricque-Stoll system of electric motor-buses, which are operated on the overhead trolley system.—The Italian Züst car, a competitor in the New York to Paris race, arrived in Berlin on Sunday last, several weeks behind the winning German and American cars.—The death is announced of General Raaby, president of the Danish Automobile Club. The deceased was actively interested in the question of using motor vehicles for military purposes.—A party of Russian motorists, including Herr A. Nagel, Herr W. Lebedieff and Herr A. Efron, left St. Petersburg on the 24th ult. on a 30-h.p. Brasier car for a 10,000 kilometre tour to Riga, Berlin, Brussels, Paris, Nice, and back, *via* Genoa and Vienna.—A 50-h.p. Florentia car, fitted with solid tyres and a special system of suspension known as the Granieri, has just completed a run from Milan to Paris.

ACID can be prevented from leaking out of the vents of accumulators by various forms of valve vents and by care in properly fixing the accumulator in the car. The acid can also be made unspillable by making it into a jelly with silicate of soda, but this reduces the capacity in time.

THE TALBOT STEERING JOINT.

THE accompanying illustrations show some interesting details of the ball-jointed steering socket as fitted on the London-built Talbot cars. It is generally known that the steering socket is an extremely vital part of a car's mechanism, and one that calls for the utmost care in its construction. The Talbot steering socket, however, has had more than ordinary consideration bestowed upon it by its designers with the result that accidents through failure of the steering socket are unknown on the vehicles of the Clement-Talbot Company.

In Fig. 1, which shows the actual position on the car, SS. is the steering socket formed on the end of the coupling tube CT., and is connected to the steering levers by means of the ball joint BJ. The construction and method of application of this coupling is more clearly shown in the sectional view Fig. 2, where BJ is the ball joint resting in the half bearings HB and HB¹. The countershock spring CS retains the half bearing HB in position, and absorbs all thrusts transmitted from the front



Figs. 1, 2, and 3.

road wheels, due to inequalities in the road surfaces. The ball joint is allowed lateral play by means of the slot S formed in the top of the steering socket. A screwed plug SP holds the countershock spring in compression, and is prevented from working loose by means of the split pin shown.

Some idea of the complete immunity from mishaps afforded by this type of connection may be gathered from the fact that even were the countershock spring CS to become completely crushed or jammed up it would be impossible for the half bearing HB to slide far enough back to permit of the ball joint working out of the socket, whilst timely warning would be given through the steering wheel that something was wrong. Again, supposing the split pin holding the screwed plug SP were to be lost and the plug worked itself loose, allowing the countershock spring and half bearing to slide towards the end of the socket, it would again be an impossibility for the ball joint to come adrift from the socket, as the safety nut SN, which is screwed and pinned on to the threaded stem formed on the top of the ball joint, and which fits into the slot S, would hold the steering socket in place, rendering it possible to drive the car until convenient to pull up. The plan view, Fig. 3, shows the safety nut SN in position over the slot S, and demonstrates how impossible it would be for the steering socket to part from the ball joint.

MOTORING IN QUEBEC.

AS the recent tercentenary celebrations in Quebec have brought that district of Canada into prominence even from a motoring point of view, the following brief account of a run from Montreal through "the French country," as it is called, to Magog, Que., by a party of three British automobilists, which we take from our Canadian contemporary "Motoring," will doubtless prove of interest.

"Having crossed the St. Lawrence by the Victoria Bridge," writes the scribe of the party, "we followed the road along the south shore to Longueuil, and branched off there on the twelve-mile road leading directly inland to Chambly. The Richelieu River was reached at this point, and so far without mishap. As the ferry there, owing to the water having been lowered five feet in the dam, there was some difficulty to overcome in getting the car on board the scow that is used to transport vehicles across the river, but the ample clearance of the vehicle enabled us to manœuvre it with safety.

The villages of Richelieu, Marieville and Rougemont, which consist of little white cabins, with an occasional house of larger pretensions, clustered around a church that is easily the most dominating feature in the landscape, were the next points of interest. The people one passes on the road, the way the land is divided into long narrow farms, the appearance of the buildings, and the inevitable parish church, generally built of solid stone, in a style of architecture that is surely peculiar to this province—all are typically French-Canadian, and one does not expect to hear English spoken, so complete is the change that has come over the country in the last few miles. The road, unfortunately, is no exception to the general crudeness of the surroundings, and a particularly unlovely stretch just entering St. Césaire cost us one of our headlights, which was literally shaken off the bracket, and the car passing over it reduced the polished brass lamp to a twisted and almost an unrecognizable mass.

From there on to the end of the journey the mountainous nature of the country added greatly to its beauty, and the last two of the six hours that it took us to cover the 100 miles we had travelled were the most enjoyable of the trip. With the knowledge gained of the road, the return to Montreal was even more easily made the next day. After leaving the river on the outward trip, and between Longueuil and Rougemont, we found both horses and drivers very shy of the car, though the drivers were often more timid than the animals. The farmers were very friendly as a rule, and at our stopping places many of them took the opportunity of schooling their horses to the car. Stray horses on the road were far too numerous in the district, though the greatest danger is to the animals themselves. Such drawbacks as these, and the others that we encountered, will soon disappear, and it does not seem too much to prophesy that the route will one day be what it deserves, one of the most beautiful and popular in Canada."

As a result of many complaints of furious driving, the commissioner of the department of motor vehicles of the State of New Jersey, U.S.A., has decided to cease issuing licences for cars of more than 65-h.p.

ARRANGEMENTS are in hand for the holding of a series of dust, smoke, and brake contests in Central Park, New York, on the 23rd and 24th inst., under the auspices of the New York Automobile Association. For the dust trials a 200 yards course will be covered with fine crushed limestone and dried leaves, and the cars will proceed over it at a pace set by a flag attached to an endless belt arrangement the length of the course, which will be operated in accordance with the readings of a speed indicator fastened to its controlling mechanism. Not only the effects of the body and transmission gear in dust raising will be considered, but also the effects of different types of tyres. It is proposed in the braking tests to have not only motor vehicles, but trotting horses hitched to sulkies and business vehicles to demonstrate the superiority of the former in making abrupt stops when necessary.

FIAT MOTORS, LTD.

REFERRING to the full page advertisement which appeared in our issue of the 5th inst. with reference to the cars of the above company, we beg to state that such copy of advertisement was inserted inadvertently, and we are informed the Brooklands record therein stated as having been made by a Fiat car is not, and has not been claimed by them since July last.

HERE AND THERE

THE Porto Bello Hotel at Walton-on-the-Naze has good accommodation for motor-cars.

ENTRIES for the Brooklands Grand Prix, to be run on the 3rd prox., close on the 25th inst.

LIEUT. EDWARD NOEL recently made the journey from Jaffa to Jerusalem on his motor-bicycle.

A RENARD road train is being supplied for transport service in the forthcoming Aldershot Command Manœuvres.

THE drivers of the Arrol-Johnston cars in the four-inch race will be Messrs. E. J. Cyril Roberts, D. Resta, and G. C. G. Moss.

RECENT purchasers of Lorraine-Dietrich cars include Baron de Forest, Sir Nathaniel Dunlop, Mr. G. Bernard Shaw, and Major Barry.

MR. STANLEY BROTHERHOOD is amongst the latest purchasers of a Sheffield-Simplex six-cylinder car. The vehicle will be fitted with a limousine type of body by Hamshaw, of Leicester.

THE latest member of the motor trade to join the army of benedicts is Mr. E. Herington, the general manager of Ariel Motors, Ltd., who was married a few days ago to Miss Southan. Congratulations.

THE Barton Board of Guardians have passed a resolution asking the Government to place higher taxes upon automobiles of every description, and to make grants from the Imperial Exchequer in aid of the expenditure on main roads.

SOME kindly motor-car owners of Hull who were unable to send their cars on the Saturday of the recent cripples' outing sent their cars on Wednesday of last week, these including Messrs. Ernest Parker (Darracq); Nicholson (Singer); Annison (Darracq), driver M. Walker; Watkinson (Vulcan); and Frickey (Argyll).

AN instrument, designed by Colonel Holden, has been installed at Brooklands enabling a permanent record to be obtained on the Brooklands automatic electric chonograph of the acceleration of cars from a standing start up to 200 yards for every yard or foot traversed. Applications for acceleration tests should be addressed to the clerk of the course, Carlton House, Regent Street, S.W.

As an instance of the value of a small, fast, light car, we may mention the 18-h.p. Germain which Messrs. H. E. Hall and Co., of Tonbridge, have placed at the disposal of the police in connection with the Sevenoaks murder. The vehicle, which is being driven by Mr. H. O. Hall, has during the days and nights since the committal of the crime enabled the authorities to cover ground which with any other form of conveyance would have taken them weeks.

THE W. F. K. switch terminal is the name given to a useful little device which has lately been introduced by Mr. W. F. Kelley, care of Messrs. Wayte Bros., Motor Works, Lemon Street, Dublin. It consists of a combination terminal and short-circuiting switch for use on sparking plugs. The high-tension wire is first securely placed in position, and the switch terminal is then attached to the plug by means of the screwed nut in the usual way. Pivoted to the terminal is a brass finger which by means of a small insulated handle can be turned through a quarter of a circle, bringing it in contact with the metal portion of the plug, and so short circuiting the latter. The switch terminals form a handy and quick method of testing the ignition in petrol motors, particularly with multi-cylinders, as by the simple turning of the handle it can readily be seen whether the spark is properly passing in each cylinder without danger to the coil or magneto.

THE Newmarket Gas Company is setting an example to other gasworks in the country by undertaking the tar painting of roads and footpaths in the Newmarket district with the view of alleviating the dust nuisance.

MR. CHAS. E. WHITTAKER informs us that he has severed his connection with Weigel Motors, Ltd., and that he is starting in business on his own account. He has secured the agency for Great Britain and the Colonies for a comparatively new make of car known as the "Imperia," manufactured by Messrs. Piedbout and Co., of Liège. Mr. Whittaker has taken premises at 66, Great Russell Street, London, W.C., where in a fortnight's time he will have a range of the new cars, comprising 12-15-h.p., 16-20-h.p. and 22-28-h.p. models, on view.

ONE of the most important events of the week in the motor industry has been the announcement of the resignation by Mr. T. H. Woollen of his position as general manager of Clement-Talbot, Ltd. Mr. Woollen, who decided on the step some little time ago, and who, during his term of office, has done much to enhance the reputation of Talbot cars, leaves with the regrets and good wishes of the Earl of Shrewsbury and Talbot, the chairman of the company, who has asked him to select a few of the cups and medals won on Talbots as a memento of his con-



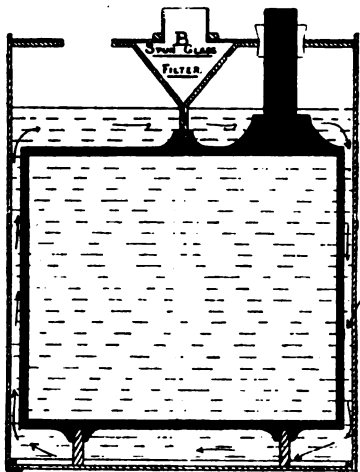
nection with the company. Mr. Woollen's successor is Mr. Frank W. Shorland, who for the last ten or a dozen years has been the London manager of the Raleigh Cycle Company, Ltd. Although, of course, Mr. Shorland's business has caused his name to be more closely connected with the cycle trade, he has kept up a close personal association with the automobile movement, his experience with motor vehicles dating back to the Emancipation run in 1896. There is probably not a British or Colonial motor agent who does not know Mr. Shorland personally, and as Clement-Talbot, Ltd., has since its inception made a strong feature of the agency system, we may be sure that under his management this will be still further developed and extended.

THE problem of the dustless and durable road is claimed to have been solved by the Teign Valley Granite Company, of Hennock, near Bovey Tracey, Devon, who, after long experiments, have placed on the market under the name "Targranix," a tarred matrix which is prepared by a special process, and which is composed of a proportion of 1½ in. and ¾ in., together with smaller granite chippings, blended with a special tar mixture, so as to form an adhesive conglomerate. The tarred mixture is laid on the granite metalling before the roller is applied, and in the proportion of one of tarred material to three of ordinary road stone. The pressure of the roller, while consolidating the metalling, presses the tarred chippings into all the interstices between the stones to a depth of 1½ in. to 2 in. The surplus Targranix forms a coating over the larger granite, giving the appearance of a tar-macadamised road. The total cost of metalling a road by this process is said to be only 1s. 3d. per ton more than if only raw granite is employed.

MESSRS. JOHNSTON BROS. have a motor garage at 86, Spring Gardens, Aberdeen.

A UNIC 12-14-h.p. car was last week successfully driven up Great Ormes Head, Llandudno.

MESSRS. VAN RADEN AND COMPANY, LTD., Coventry, have lately brought out a greatly improved celluloid type of ignition accumulator. While still retaining all the important features of their patent spun glass batteries in the new pattern, as will be seen from the accompanying sectional view, the plates are strongly carried by top and bottom supports and do not anywhere come in contact with the sides or ends of the celluloid



box, which, in addition to allowing the complete circulation of the electrolyte all round the plates, materially reduces the possibility of internal "shorts." The arrangement of the trough B below the vent hole in the top of the cell with the inserted glass wool, renders the battery absolutely unspillable, without in any way whatever interfering with the free escape of the generated gases to the open air, and ensures perfect filtration of the acid before it actually enters the accumulator.

WITH reference to our notes on speedometers on another page we would remark that the instruments described, as well as others to be reviewed in our next issue, are to be seen at the establishment of Messrs. A. W. Gamage, Ltd., in Holborn, E.C. That firm has a full range of such instruments, and their catalogue will be of considerable utility to motorists now acting on the advice of the chairman of the R.A.C.

WE are nearing the season of frosty weather—according to the calendar—and motorists who are troubled with cracked cylinders will be interested in a process of cast-iron brazing which is being successfully developed by the holders of the licences of the Tichon process in England and Wales. This we have seen in actual operation at the establishment of the Cast Iron Brazing Company in their Station Street works, High Street, Stratford, E., where many excellent specimens of repaired castings, &c., were seen in course of cleaning preparatory to delivery. The company are able to deal with broken castings, whether new or old, effecting the work expeditiously, efficiently and economically. Not only is the part restored to its original strength and serviceability, but it is made 50 per cent. stronger at the point of fracture, as is demonstrated both by the scientific and the anvil test. A great point in favour of the Tichon process is the saving of time that is ensured, for whereas it may take days to obtain a new casting only hours are required to save the "scrapping" of the old one. Any machinery in which cast iron is used can be repaired, such as gear teeth, eccentrics, motor-car and motor-bus engine cylinders, general engine parts—in fact anything that is in cast iron. Should a breakage with loss of the part have occurred it can be made complete in the minimum of time. The company is equipped for the prompt execution of work, and owners of garages and motor-car repair works will find the Cast Iron Brazing Company well able to assist them in undertaking automobile renovations that would otherwise be difficult, if not impossible.

THE R.A.C. is about to undertake the publication of Mr. Gerald Rose's Records of Motor Racing.

A NEW motor road service has been established in the St. Austell district by the G.W.R. Company.

MR. L. CROMPTON, of 19 and 21, Brook Street, Hull, is making a special feature of motor accessories.

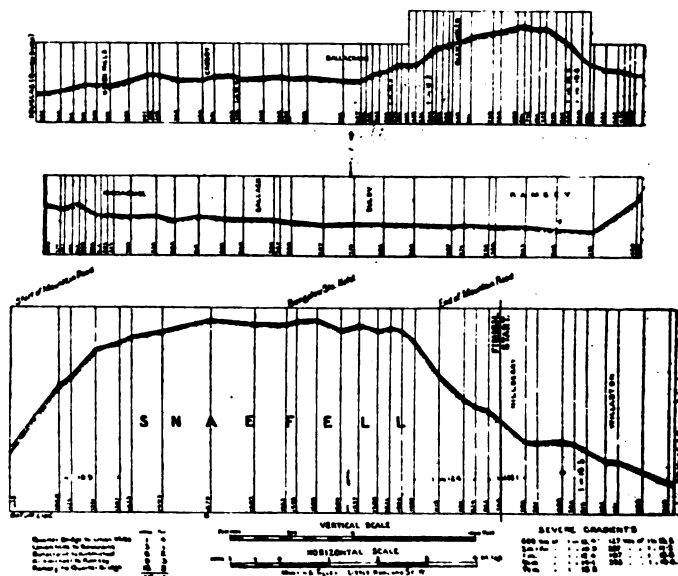
THE Haslemere Parish Council, on the suggestion of the chairman, the Rev. G. H. Aitken, is writing to the A.A., asking what is the object of employing a scout on the roads of the town.

KIRKCUDBRIGHT's motor agents include Messrs. J. A. Macdonald and Company, in the High Street; Mr. George Williamson, in Bridge Street; and Mr. W. H. Penman, in Castle Street.

IN connection with the Manchester Electrical Exhibition a motor garage will be provided, and the Manchester Taxicab Company have arranged to keep some of their vehicles on a special rank immediately outside the display.

FREE accommodation for motor-cars was accorded members of the R.A.C. at Norwich last week-end at the following motor-houses:—Messrs. Howes and Son, Chapel Field; Messrs. Mann, Egerton and Co., Ltd., 5, Prince of Wales Road; Mr. A. Spaul, Castle Hill; Messrs. Thorn, St. Giles; the Victoria Garage Company, St. Stephen's Road.

MESSRS. S. F. EDGE, LTD., have sent us a couple of photographs depicting an interesting test, which was recently made to demonstrate the absence of vibration of the Napier 40-h.p. six-cylinder car. The test in question was that of standing a penny on end on the flat surface of the radiator filler cap while the engine was running. It was of course necessary to first get the car and the radiator on the level, but after this was done the penny balanced itself on its edge for a period of 56 sec. It is not an easy matter to balance a pennypiece at any time, and the fact that it was done on a motor-car with the engine in operation is a splendid testimony to the smooth running of the motor.



Profile of the Isle of Man Course for the "Four-Inch" Race.
(Automobile Club Journal.)

WE have received a sample tin of a new motor grease known as "Ridgoleum," which has lately been put on the market by the Kidgill Manufacturing Company, of Dronfield, Sheffield, and which we hope to try and report upon in a later issue. In the meantime we may mention that the new grease is recommended for use in gear-boxes, and that several advantages are claimed for it. It is stated, for instance, that it not only prevents any annoying leakage of oil at the bearings, but that it does not, as is often the case with ordinary grease, merely adhere to the sides of the gear-box, but spreads itself over the pinions to such an extent that there is always a film of lubricant on the teeth.

SUCCESSFUL SPEEDOMETERS.

FOLLOWING the advice of Prince Francis of Teck with regard to the use of speedometers, we commence the publication of a series of notes on the various types on the market.

The O.S. Speedometer.

In Fig. 1 we illustrate the O.S. speedometer which was introduced to British motorists by Messrs. W. Searle and Co., 33, Glasshouse Street, Regent Street, London, W., a few years ago. It promptly rose into



Fig. 1.

favour, attracting attention by reason of the magnetic principle, which is its distinctive feature, and the transmission from the cardan or the sprocket shaft. With regard to the first point, a horseshoe magnet is revolved in a lateral direction. This sets up Foucault or eddy currents which, acting through the "keeper," exert attractive force on a copper disc to which the indicator needle is fixed, tending to revolve it in the direction of the magnet's rotation. An antagonist hair spring, attached at one end to the "keeper," which is stationary, and at the other end to the spindle carrying the copper disc, prevents the complete revolution of the copper disc, but allows it to deviate in proportion to the speed of rotation of the magnet. The needle moves round with it and thus indicates the speed on the dial. The advantages claimed for this system are its simplicity, directness, and length of useful life, the magnet being guaranteed almost indefinitely against demagnetism. Now, concerning the drive and transmission, a split pulley fixed on the shaft is connected by a spring belt to one end of the flexible transmission. There is no slip, no loss of power, by its allowing a certain give in extreme stress. The drive being away from wheels is not spattered with mud nor is it likely to become wet, whilst its life is considerably increased. The device is particularly neat, as only the speedometer and a small length of transmission, which comes up through the footboard, is shown on the dashboard. Messrs. Searle and Co. have a testing room where every instrument is run and tested against a standard speedometer. In the event of any owner desiring it, the firm will test from time to time any instrument obtained from them.

The "Jones" Speedometer.

The fact that the "Jones" speedometer secured the gold medal of the R.A.C. in the only speedometer trials held in this country has given it a distinction which has materially assisted its progress in the auto-

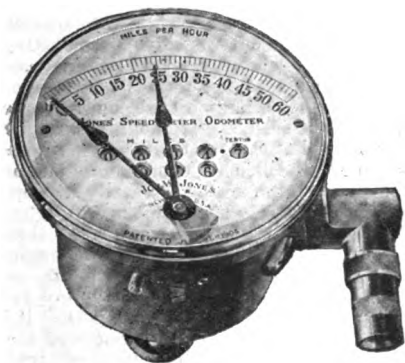


Fig. 2.

mobile world under the tutelage of Messrs. Markt and Co., 6, City Road, London, E.C. We illustrate (Fig. 2) Model 15, fitted with a maximum speed hand, which is carried forward by the regular hand, and always remains at the highest point of speed attained—a maximum reading that should prove useful in the refutation of prejudiced police evidence. When released by a touch on the resetting stem this hand drops automatically and instantly to the speed at which the car is at that moment travelling, remaining there even after the car is subsequently stopped. By a single turn of the resetting stem the maximum hand may be dispensed with by both hands being made to act as one, showing the variable speed only. Another important point is concerned with the disclosure of any unauthorised use of the car, as the resetting stem can be sealed against use without knowledge on the part of the owner. So much for the maximum hand. The principle of construction of the Jones instrument is based upon

centrifugal force—a principle which secures accuracy of speed and mileage in the device. Messrs. Markt and Co. claim that the only satisfactory form of drive is by gears rather than friction. The drive also should be taken from the front or steering wheels in place of the rear wheels or engine shaft, as there can scarcely be any slipping in the former case, whereas there is always the likelihood of slip in the drive from engine shaft or from the rear wheels of the car. If desired, however, they are prepared to supply the "Jones" with drive direct from the cardan shaft or live axle. A complete technical description of the apparatus has been prepared, and this will be sent to readers on application; meanwhile suffice it to say that experience has given this type popularity on account of accuracy, durability, steadiness of reading, simplicity of construction and attachment, rapidity of response to variations of speed, as well as price. Several models of the speedometer are made, and mention should also be made of the "Jones" odometer or mileage recorder.

The Simplex Speedometer.

Another speedometer which has distinct merits and is supplied at a reasonable price is the "Simplex" speedometer of the United Motor Industries, 45 and 46, Poland Street, London, W. The essential feature of this device consists in the applica-



Fig. 3.

tion of balls for the transmission of centrifugal force developed by the axis of rotation. By means of rotating discs, with balls running freely in compartments, the action of centrifugal force tends to press them to an extremity which is held in check by levers acting upon an outer ring. This forms the axis of the indicating hand, and by a mathematical calculation governed by the diameter of the turning wheel the correct rate of speed per hour is ascertained. There is no loss of energy by this means, as the action is instantaneous. We illustrate Model 2 of the Simplex speedometer fitted with a trip recorder up to 10,000 miles and mileage for each run. On behalf of their speciality the United Motor Industries point out that it begins to register accurately even at a very low speed; that it gives the speed at the instant that the speed is being accomplished; that the speeds from five miles an hour upwards are absolutely correct; that the needle or hand points steadily, and its movement along the dial is steady; that there is nothing to get out of order, and that the dial is clear enough to be easily read from the seat on all occasions. A lubricant is advised by the makers in the transmission shaft, this taking the form of their well-known "Non Fluid" oil, a speciality which the United Motor Industries, Ltd., have been handling for some time, and a substance something after the consistency of vaseline. The bracket axle on which the aluminium wheel is mounted of course is run in ball bearings and is fed by the lubricant in the flexible shaft casing. Another interesting feature of this speedometer is the guarantee which it carries, namely, if the lead seal which every instrument is sealed with is not broken, the guarantee has no limit of time.

The Stewart Speedometer.

In Fig. 4 is seen the Stewart speedometer introduced to this country by the Stewart and Clark Manufacturing Company, 11, Denmark Street, Charing Cross Road, London, W.C. This is a neat instrument of tried repute operated by a positive drive. The firm give an extended guarantee with their instruments, and give their prospective customers a thirty days' trial, where desired, which, as the company suggests, "is the best we can do next to giving them away."



Fig. 4.

Smith's Speed Indicators.

Next week we shall publish illustrations of other notable speedometers upon the market, including the Speed Indicator of Messrs. S. Smith and Son, 9, Strand, London, W.C., which has recently secured acquittals at Christchurch, Horsham, Reigate, and Chertsey.

Correspondence.

(Letters to the Editor should be addressed to the offices, 27-33, Charing Cross Road, London, W.C.)

THE USE OF EXHAUST WHISTLES.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—Prince Francis of Teck has published a letter in your columns in which he touches on many of the questions with regard to the use of motors on the public roads which are now greatly agitating the minds of both motorists and the public generally.

With many of Prince Francis's recommendations I, as one who uses motors regularly, cordially agree. But there is one to which I take considerable exception. It is that in which he suggests that the use of exhaust whistles and other similar warning instruments should be dispensed with for the future.

I gather that he does not object to the use of the ordinary bulb; but I would point out that in a vast number of instances—especially when driving in the country—the bulb is not in the least attended to by those in charge of carts or carriages, or, indeed, by foot passengers.

Under these circumstances it is absolutely essential that some other method of calling the wandering attention of those persons should be adopted; and while I deprecate as much as any one the undue use of noisy sirens or whistles, I feel certain that every motor should have attached to it some such thing, especially if they—the cars—are much used in country districts.

Personally, I greatly prefer an exhaust whistle to a siren, which makes an unnecessary and dismal sound. But to the value of a whistle



The O.T.A.V. 54-h.p. Car which successfully competed in the Essex Motor Club's recent 24-hour run from Woodford to York and back.

on the exhaust I can confidently testify. In most counties it is largely the custom of those in charge of carts and similar vehicles to drive either exactly in the middle of the road or on the wrong side of it—why this should be I cannot say, but so it is—while pedestrians constantly use the road in preference to the footpath at its side. Now, no particular objection need be taken to these customs so long as those who adopt them conform to the usual rules of the road when other users of it wish to meet or pass them. But to the warning of the bulb but scant notice is given, whereas a couple of blasts on the whistle invariably attracts the necessary attention.

Again, anyone who motors much in the neighbourhood of London or any large town, especially on a Saturday or other local holiday, is constantly coming across members of bicycling clubs indulging in one of their "runs." They usually travel in a kind of loose skirmishing order, covering the entire breadth of the road. Unless their attention is called by an exhaust whistle or something of a similar nature it is often almost impossible to avoid being run into by some of the riders; for many of them are crouched over their handle-bars in such a way as to render them apparently ignorant of the presence on the road of any other conveyances, and it has constantly happened to me that no notice whatever of the bulb warning has been taken by cyclists out on such "runs," but that the whistle was at once effective.

Moreover, I have found on many occasions that pedestrians on the road are far more influenced by the whistle than they are by the bulb. For these reasons I trust that the R.A.C. will not, without grave consideration, try to influence motorists in the direction of using only the bulb, especially as whenever an accident occurs great stress is always laid on the point as to whether the driver of the car has given every possible warning by his bulb, whistle or siren.

To limit chauffeurs to the bulb only would be to inflict an undue hardship on the motoring community, and would certainly not add to the convenient user of the public roads.—Yours truly,

RUTLAND.

WHY LONG-STROKE MOTORS?

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—In view of the present great interest that is being taken in the very incomplete R.A.C. formula for rating motors, it seems to me it is worth consideration why competitors in racing events have started developing the long-stroke engine. Ordinary commercial engines have got down to a reasonable proportion between stroke and bore; in fact, I think every up-to-date motor-car maker was considering quietness, smoothness of running, and economy in tyres and mechanism almost before everything. Then the Royal Automobile Club and the Automobile Club of France both suddenly started rating engines for competitive purposes by the size of the cylinders only. The result of this was that the far-seeing manufacturers, who understood their business, at once realised that these two clubs had brought out a formula which placed no restriction on stroke. Experiments were at once carried out, and it was then found that increasing the length of the stroke was almost as good as increasing the bore.

In developing the formula, diameter of cylinders squared multiplied by number of cylinders, divided by 2.5, the compilers of the same no doubt assumed that long-stroke motors would be run at slow speed, or, in other words, the speed would be inversely proportional to the length of stroke, and that the limit to speed and stroke (that is to say, piston speed) would be the strength of the moving parts. This, however, is not the limiting factor, for it is possible to make these parts of material of such excellent quality, which, correctly disposed within the parts, ensures that their actual strength is much greater than the stress which they are called upon to withstand, with the motor running at maximum speed.

There are two chief factors which limit the engine speed:—(1) The actual rubbing velocity of the pistons within the cylinders. (2) The rapidity of actuation of the valves, and the speed with which the gases can be taken in and expelled from the cylinders. With the piston speeds at present in vogue, even in races where they are maintained at the highest limit, it is possible to get over the piston lubrication difficulty by judicious lubrication at the expense of a smoky exhaust. The second factor, therefore, is the chief limitation so far as the engine speed of racing motors is concerned. There are other factors which limit the speed, such as the rate of ignition, inflammation and combustion of the gases, the speed of the ignition apparatus, &c., but the effect of those things is not so great as those above mentioned. The rapidity of actuation of the valves does not depend upon the length of stroke of the motor, but since the speeds of motors of different strokes but of the same bore have been found to be practically the same, it follows that the powers are approximately proportional to the length of the strokes. Racing motors which have a limited piston area, and from which it is desirable to obtain the maximum power, have, therefore, to be fitted with excessively long strokes.

The formula rates a motor with a short stroke the same as one with a long stroke, provided the piston area is the same in both, and although the performance of the long stroke motor, so far as actual horse-power is concerned, is undoubtedly better than the one with the short stroke, yet by rating their performances should be similar. Actual experience teaches that the formula does not give a true rating, and if the rating is to be a measure of the horse-power developed, the length of stroke must be introduced into the formula. It seems so very simple to have a formula which takes into account stroke, and I do think that, whatever formula is selected, it should be reasonably near the actual brake horse-power that the particular engine being calculated should give, if it was a modern, efficient, commercial engine.

The calculation of the power of an engine must necessarily be based upon the force behind the piston and the speed at which it moves, whatever means are taken to express this; that is to say, we have three factors which it is necessary to ascertain before the power of an engine can be calculated, namely, the area of the piston, the pressure per square inch to which this area is subjected, and the number of feet through which the piston moves in one minute. It is obvious that it is only on the first of these three that definite limits can be put, and that any limits selected for the other two figures must be purely arbitrary and liable to require revision from time to time, the only alternative being to measure them on each individual engine. It seems to me that this would be too big a task to be undertaken for general purposes, and that the simplest way is to select what is known to be a fairly high average in each case. This would mean that designers would be stimulated to raise those figures to the greatest possible extent.

If we start with the usual horse power formula $\frac{P \times A \times S}{33,000}$ where $\frac{D^2}{4}$
 P = mean effective pressure in lbs. per square inch, A = 11 times $\frac{D^2}{4}$
 S = $L \times N \times 2$ = piston speed in feet per minute, where L = length of stroke in feet, and N = number of

revolutions per minute; the simplest way is to boil it down by obtaining a constant from all the known or arbitrarily selected figures by which the variables can be multiplied or divided. To illustrate this, I assume a mean effective pressure of say 80 lb. per square inch, and a piston speed of say 1,400 feet per minute, we then get the following formula from the above:—

$$P \times L \times N \times 2 \times 11 \times D^2 \\ 4 \times 4 \times 33,000.$$

Assuming a square engine, say 5 in. by 5 in., a piston speed of 1,400 feet per minute would involve a speed of 1,680 revolutions per minute, the formula therefore becomes:—

$$80 \times L \times 1,680 \times 11 \times D^2 \\ 2 \times 4 \times 33,000 = L \times D^2 \times 1.6,$$

the result being the horse-power of one cylinder. Assuming a 5 in. x 5 in. engine, this formula gives 16.5-h.p. per cylinder, a figure quite easy to obtain, but assuming the stroke increased to 7 in. the formula gives 23-h.p. On the other hand, for a 4 in. stroke 13.3-h.p. is obtained. The difference in horse-power between the extremes in this formula seems to me rather great, and possibly would tend to too much restrict the permissible variation in stroke. The way to correct this would be to use the square root of the stroke as a multiplier and suitably reduce the constant; this gives us the following formula:—

$$L \times D^2 \times 1 = H.P.$$

This gives us for a 4 in. stroke cylinder 14.25-h.p.; for a 5 in., 16-h.p.; for a 6 in., 17.5-h.p.; and for a 7 in., 18.9-h.p. These proportions are in accordance with practice. At the same time, the variation between the extremes should be sufficient to restrain designers from adopting extremely long or extremely short strokes. The reasons for wishing to handicap the long-stroke motors lie in the engines themselves. They present many difficulties, and are not so well adapted for driving motor-cars as are engines with shorter strokes.

The chief objections to excessively long strokes are:—(1) size of engine, (2) vibration, (3) weight of engine, (4) noise from engine, (5) lack of flexibility, (6) difficulty of starting, (7) danger from pre-ignition, (8) necessity for stronger shafts, &c., in transmission gear, (9) increased wear and tear on tyres.

(1) *Size of engine.*—Long stroke engines must have proportionately long connecting rods, and on this account the distance from the centre of the crank to the top of the cylinders is considerable, and the oil base must also be very deep to allow for the swing of the crank. In order to get sufficient clearance between the oil base and the road it is necessary to carry the crank shaft higher in the frame, which necessitates raising the gear-box, clutch, and most of the other parts. This raises the centre of gravity of the car considerably, and thus it is more easily overturned, and skids more readily. The engine being built very high necessitates a higher dashboard and bonnet, and the seats must therefore be raised to give a clear view, which also raises the centre of gravity of the car. The increased space required for the crank to swing in necessitates the use of a larger crankcase, which occupies space usually taken up by the magneto, water pump, &c., and these have to be placed in more restricted positions where they are less accessible.

(2) *Vibration.*—However well balanced an engine may be, there is always a slight amount of vibration. This need not be very much with short stroke motors, but with excessively long strokes it becomes very serious. It is due to the inertia forces of the reciprocating parts causing the crankcases and crankshafts to distort and "whip," and, in addition to the discomfort of riding in the car, there is the grave danger of the crankshaft breaking through fatigue due to the vibration.

(3) *Weight of engine.*—Excessively long-stroke motors are exceedingly heavy. They are very high, the crankcases are very large to accommodate the swing of the crank, the valves must be large so as to allow the large quantity of gas easy ingress and egress, and the valve ports, pipes, cylinder heads, &c., must be in proportion. The reciprocating parts must be made heavier than those for equal bore short-stroke motors. It is also necessary to employ a heavier design of crank case and oil base in order to make these strong enough to withstand the stresses due to high speeds combined with long strokes, and in order to withstand the vibration the crank-shafts must be made considerably larger in diameter. These conditions result in an engine which is considerably heavier than an engine of equal power with a shorter stroke and greater bore.

4. *Noise from engine.*—This is due to vibration and valve actuation, and is so well known that nothing more need be said about it.

5. *Lack of flexibility.*—The long-stroke motor is not flexible. The compressions require so much effort to overcome them that the necessary weight of flywheel is prohibitive.

6. *Difficulty of starting.*—In order to turn the long-stroke engine by hand it is necessary to have a half-compression gear even for engines of comparatively small bore.

7. *Danger from pre-ignition.*—This is considerable, for although the pressure in the cylinder due to the pre-ignition may be no higher than that in a short-stroke motor under the same conditions, yet, the crank arm being longer and the connecting rod being in a more oblique direction, the actual stresses induced in all parts are considerably higher.

8. *Necessity for stronger shafts, &c., in the transmission.*—Owing to the uneven torque due to the long stroke and the wide variation between maximum, average, and minimum torque, it becomes necessary to design the shafts to suit the maximum stress to which it is considered

they will be subjected. Increasing the size of these shafts also adds to the weight of the chassis.

9. *Increased wear and tear on tyres.*—This is due to the uneven torque of the long stroke motors, the increased weight of the motor and chassis, and the greater amount of skidding between the tyres and the road.

I think you will agree with me that the above is a good case against the abnormally long stroke motor, and that it has no reason for existence except for the purpose of getting the better of a formula which is inadequate for present day conditions of motor-car engine manufacturing. The ordinary purchaser can always reckon that his tyre bill will go up in accordance with the increased length of stroke.—Yours truly,

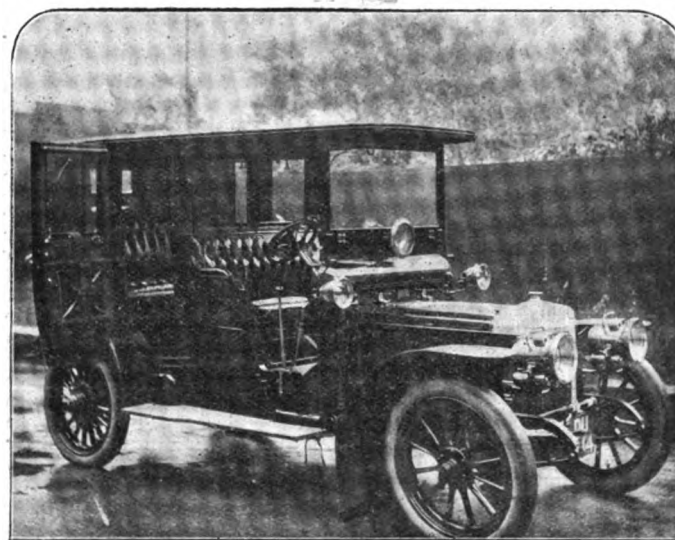
S. F. EDGE.

MOTOR-CARS AND DUST.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—I think it must be generally admitted that the amount of correspondence going on now in almost every class of paper against motorists is anything but pleasant reading. I have been very much struck in noticing that amongst the various charges brought against motorists, if carefully analysed, the dust nuisance is by far the greatest. Unfortunately there is a lot of reckless driving, and there are some people who seem to be void of all common sense and good feeling, but even with such driving I am quite certain there would be much less complaint were it not for the dust caused.

My object in writing this letter is to see if the motor Press, which is a very influential body, cannot by means of discussion get something



The Blackdown Landulet just supplied by the Daimler Co. to His Highness the Maharajah of Nepal.

done in the way of having the clearance of cars increased, because this is undoubtedly one of the worst causes of dust, and I am very glad to notice that Col. Crompton some few weeks ago was equally emphatic on this point. Take, for instance, the Stanley steam car; its dustiness is not because it is a steam car but because the car is about 3 in. higher than the average petrol car, and generally has good clearance. As Col. Crompton put it it seems to have been accepted as an absolute necessity that petrol cars had to be built with a very low centre of gravity, whilst, in his opinion, there is no need for such a thing except in racing machines, and the less this type of machine is on the road the better. No doubt the average motorist will at once imagine that his car is going to look very ugly because it is made 3 in. or more higher from the ground, but I would only repeat that it is purely a question of fashion. Let all cars be built the same, and we shall be quite accustomed to accept them as all that cars should be. Even if it were not so, it is surely better to sacrifice something in the way of beauty if it will do anything towards lessening the obstacles which are already in the way, and likely to increase by further legislation.

So far as the low centre of gravity is concerned there has not been the slightest tendency to overturn on any corners with a car so built, and this on a bending road, at a speed which worked out at 30 m.p.h. average, which I think should satisfy most people.

The authorities are doing as much as they can towards improving the roads to make them as dustless as possible, but the cost is very heavy indeed, and motorists cannot reasonably expect the country at large to pay for what is merely made necessary owing to the way the roads are being used by what is, after all, quite a small section of the public.

I was particularly interested to read a letter in the *M.C.J.* of

August 29th, from Mr. T. R. Bulley, in which he gives a report of a discussion of the Cheshire County Council, and would particularly call attention to their proposal, "If the power were given to stipulate for a proper minimum space between the bottom of the car and the surface of the road, a considerable part of the trouble would be over, as it would become dangerous to go very fast, especially in turning corners (owing to the higher centre of gravity), and both speed and dust would be automatically reduced, probably to a reasonable degree."

This exactly summarises what the writer has had in mind for some considerable time, and he trusts that motor manufacturers will take up this point with the seriousness that it deserves.—Yours truly,

L. T. R. RIDLEY.

SOME NEEDED IMPROVEMENTS.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—I was glad to read the note on the subject in a recent issue of the *M.C.J.*, and, responding to the invitation, I venture to suggest that all makers of chain-driven cars should follow the example of one or two makers and fit chain cases to their cars. It has always been generally recognised and freely admitted that driving chains would be more satisfactory if protected from the mud and dust, and run, if not in an oil bath, at least in a dust-proof can. There appears to be no reason why a good chain-case cannot be made, although the matter is manifestly one which requires some experiment. Much of the popularity of the live axle car is undoubtedly due to its quietness and the small amount of care it requires, and I am sure that the general adoption of oil-tight chain-cases would result in an increased use of chain-driven cars.—Yours truly,

R. SIMPSON.

KNOCKING IN THE ENGINE.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—The engine of my double-cylinder car has recently developed a knock which I cannot locate. It sounds just as if the crank shaft bearings were loose, and is not the click or knock that is heard from advancing the ignition too far. The noise comes from both cylinders. I have had the engine to pieces, and found the piston rings and crank shaft bearings in excellent condition. The motor runs with perfect regularity, has full power, and never misses an explosion. The valves have been carefully ground, and new springs put on the stems, of the same strength, as nearly as could be determined. Both cylinders register a compression pressure of 65 lb. per sq. in., and hold it. By careful adjustment of the ignition and mixture the engine can be made to run so you can scarcely hear it, and this with full load and with any of the speeds. When, however, the accelerator is opened, or a slight rise in the road is met, the bumping commences alarmingly. Even when the knock occurs the engine works with regularity, and there is no difference in the sound of the exhaust. Everything sounds perfectly normal with this extra noise added, and sometimes I am inclined to think it must be outside the engine. The car has three speeds forward, sliding gear transmission, and bevel gear drive, and the noise is not only heard, but the knock felt in the machine.—Yours truly,

PUZZLED.

[It is not quite clear what our querist means by saying that the engine will run perfectly silent "with full load" by careful adjustment of the mixture and ignition, and yet that when the accelerator is opened on a rise it makes a noise, because it is only under the latter circumstances that the engine can really be working under full load. The accelerator we presume controls the opening of the throttle, and unless this is opened and the ignition advanced to a reasonable extent, the motor cannot be considered to be working under full load. Perhaps the flywheel is loose on the crankshaft; this would account for the sort of knock complained of. Or, if this is not the case, there may be a slight amount of slack in the gudgeon pin bushes, which also would be the cause of a knock that would be more pronounced (or perhaps only perceptible) on climbing a hill if the play is very slight. We do not think the knock is outside the engine, but this can be tested by running it with the gears in neutral, and then applying a brake by means of a short plank fulcrumed so that a pressure can be brought to bear in such a way as to let it rub hard under the flywheel. A piece of cork fastened to the plank will enable a good rubbing friction to be obtained without undue pressure. By putting a "load" on the engine in this manner it will be possible to make sure whether the trouble is external to the motor or not. The aid of a friend to control the throttle and ignition is advisable.]

IN connection with the letter on magnetos in our last issue Mr. T. Lang writes that he has a 1905 9-11-h.p. Clement-Talbot car with a low tension magneto which is still running without an atom of trouble.

WILL the driver of a motor-car (two-seater) who apparently ran over a very small black dog, the dog running away, on Monday morning, August 17th, at 10.45 a.m., in Highbury Quadrant, North London, communicate with Mr. C. H. Crole-Rees, 21, Highbury Quadrant, N.?

A TAIL LAMP has been found on the road near Beverley Bridge. If the owner will communicate with the secretary of the Automobile Association, Princes Buildings, Coventry Street, W., with a description of the lamp, every assistance will be afforded him to recover the same.

THE R.A.C. AT NORWICH.

ON Saturday, in the Thatched Assembly Rooms, Norwich, the third provincial dinner of the R.A.C. was held. The chair was occupied by H.S.H. Prince Francis of Teck, who had the support of the High Sheriff of Norfolk, the Sheriff of Norwich, the Dean of Norwich, Colonel E. R. A. Kerrison, Sir Percy Bates, Mr. Colman, Dr. Young, Sir C. B. Locock, Mr. G. C. Davies, Mr. G. M. Chamberlin, Mr. J. Cator, Mr. E. H. Cozens-Hardy, Captain Skeffington-Smyth, D.S.O., Mr. W. C. Crawshaw, Captain Athill, Mr. W. W. R. Spelman, Mr. Lindus Forge, Mr. H. L. Clark, Mr. E. Reeve, Mr. H. W. Williams, Mr. J. Hargreaves, Mr. G. Colman, Mr. A. E. Collins (City Engineer), Mr. T. H. B. Heslop (County Surveyor), Mr. E. F. Winch (Chief Constable of Norwich), Mr. G. M. Lason, Major and Mrs. Fowler, and Mr. J. W. Orde.

After the loyal toasts had been honoured, Capt. Skeffington-Smyth, D.S.O., proposed "The Health of the County and City Authorities," the High Sheriff (Mr. E. H. Evans-Lombe) making the first response. There was a feature upon which they congratulated themselves in Norfolk, and that was the very sensible and practical view that their Standing Joint Committee and the police took of the question of motor-ing. A man who drove carefully and with due consideration of other users of the road had nothing to fear from police traps in Norfolk. The only traps he knew of were those set in the narrow entrances to some of the small towns and villages, where it was very dangerous to drive at anything but a very slow speed, and any man who was caught in any of these traps would only get what he deserved. The Sheriff of the City also replied.

H.R.H. Prince Francis of Teck replied to the toast of "The Club," proposed by Col. E. R. Kerrison, C.M.S. The Prince said it was his very pleasing duty to announce that the Club's medal had been, by the advice of the judges, accorded to Miss Beryl Colman. It was a great delight to him to preside on that occasion, because the numbers present showed that the work begun at the beginning of this year in regard to the association scheme had been thoroughly appreciated. One of the principal points of that scheme was decentralisation. In other words, the R.A.C. was desirous of strengthening the provincial clubs and assisting them to acquire greater influence in their respective spheres of operation. When the committee of the Royal Automobile Club next met it was his intention to bring forward a proposal for tackling the dust question and the still more important question of inconsiderate driving. He could only hope that the Norfolk Club would do its share towards the suppression of what were undoubtedly nuisances. Further legislation for motorists was coming soon. In view of that prospect he was glad to think that Mr. John Burns, whose duty it was, as a Minister of the Crown, to bring forward that legislation, was a friend of the automobilist; but he, with all his goodwill, could not assist them unless they assisted themselves.

Mr. G. M. Chamberlin proposed "The Visitors," on whose behalf the Dean of Norwich made response in a facetious speech.

At the meeting of the General Committee of the R.A.C. at Norwich on Saturday there was a good attendance and fourteen provincial clubs were represented. The scheme for the establishment of machinery for dealing with Inconsiderate Driving was considered and adopted. Reference to this is made in our Comments on another page.

Mr. C. T. Cutler, on behalf of the North Middlesex A.C., moved that the R.A.C. should consider the advisability of devising some means whereby local clubs could become affiliated to the R.A.C. and the M.U. at a reduced affiliation fee. This was seconded by Sir Percy Bates, of the Cheshire A.C., and after some discussion it was agreed to.

The meeting of the Organising Committee of the Club was held on the 4th inst. at Norwich, when it was agreed to ask the Legal Committee to take into consideration the question of the appointment of local solicitors.

THE WORTHING CARNIVAL.

IN connection with the Worthing carnival a procession of decorated cars was held on the 3rd inst., but unfortunately the weather seemed opposed to any great display being made. Despite this, however, several motorists ventured forth and some very good decorations were made, the judges' awards being as follows:

Decorated Motor-cars.—1, D. H. Langhorn (London); 2, Mrs. Chapman (Broadwater); 3, E. M. Rodocanachi.

Decorated Motor-cars (confined to two-seated cars, or motor-cycle and trailer, or similar machine).—1, Otto Brown; 2, Stafford Baxter; 3, W. F. Rowland.

EYQUEM'S PATENTS, a new concern with offices at 31, Duke Street, St. Mary Axe, E.C., have lately introduced a pink powder known as "Softene," which is claimed to be an improvement over the ordinary French chalk used inside motor tyre covers.

DURING the last three months Messrs. Jarrott and Letts have successfully overhauled, at their repair works at Willesden Junction, in addition to the Crossley, De Dietrich, Mors and Sizaire-et-Naudin cars, the following makes:—Panhard, Daimler, Alldays and Onions, Junior, Gnome, Clement-Talbot, Singer, De Dion, Durkopp, and Napier. The premises are specially equipped for this particular class of work, and the fact that they are in a position to give immediate attention to orders, in addition to being able to execute all repairs at short notice, is being greatly appreciated.

CLUBS AND ASSOCIATIONS.

THE MOTOR UNION.

OVER 800 hotels and repairers have received the recommendation and appointment of the Motor Union. The Touring Committee has issued 320 hotel signs and 220 repairers' signs embodying the badge of the M.U.

The Cheshire Automobile Club has contributed ten guineas and the South Wales and Monmouth Club two guineas to the Legal and Legislative Defence Fund of the Motor Union.

The twelfth provincial meeting of the Motor Union of Great Britain and Ireland will be held on Saturday, September 19th, at Oxford. At the meeting of the General Committee in the morning at the Municipal Buildings, the Union will be welcomed by the Mayor; and other events will be as follows:—2.30 to 3.0, meet of members, cars parked in St. Giles; 3.0 to 4.0, afternoon tea by the kind invitation of the Oxford and District A.C. in the Hall of Lincoln College; 3.30 to 6.0, members of the University will conduct members of the Union over the colleges and places of interest in Oxford; 7.0 for 7.15, twelfth provincial dinner at the Clarendon Hotel, Mr. W. Joynton-Hicks, M.P., in the chair. Application for tickets and hotel accommodation should be made to the hon. secretary, Oxford and District A.C., Clarendon Hotel, Oxford. Arrangements have been made to enable members and their friends to journey from Reading to Oxford by a launch, provided by Thursday, the 17th inst., a sufficient number inform the secretary, at 1, Albemarle Street, London, W., of their intention to journey by water. The launch will start from East's Boatyard, near Caversham Lock, Reading, at 11 a.m. on Friday, the 18th, reaching Oxford at 6 p.m.

On August 31st the total number of individual members of the Motor Union stood at 5,587, as against 4,273 on the same date last year, an increase of 1,314, or over 30 per cent. Including the affiliated clubs, the Union has a total membership of 15,000.

ESSEX MOTOR.

SUPPLEMENTING the reference to the Woodford-York-Woodford run of the Essex Motor Club in last week's *M.C.J.*, we would add that there were seventeen starters, of which three were on cars, the others being on motor-cycles. Messrs. Reynolds, Smith, Silverlock, W. H. Applebee, E. Leverett, Smith, Pratt, Dougal, Sproston, Howard, Brown, and J. Everett qualified for gold medals for completing the course within the twenty-four hours.

BROOKLANDS.

As the events set down to be run off at the Brooklands track to-day (Saturday) have not filled sufficiently to allow good races to be expected, the meeting has been abandoned, and all entries received for the same are cancelled.

The holiday season and the forthcoming Isle of Man race are the reasons assigned by Mr. Kenneth L. Skinner, the secretary, on behalf of the committee, for the deficiency in entries.

LANCASHIRE.

ON Saturday the members of the Lancashire A.C. held a gymkhana in a field near Stanley Grange, Hoghton. The results of the various competitions were as follows:—

Motor-house.—1, J. Robinson (51 sec.), 6-h.p. Siddeley; 2, Dr. Stephenson (1 min. 1 sec.), Midland car.

See-saw.—1, J. Walmsley (11 sec.), 12-h.p. Gladiator; 2, J. Hodson (12 sec.), 16-h.p. Bell.

Musical Chairs.—1, E. S. Berry (Daimler) and Miss Almond; 2, A. Murray (Coventry Humber) and Mrs. Murray.

Academy Stakes.—1, A. Birtwistle (Daimler) and Mrs. Walker; 2, J. Hodson (Bell) and Miss Kitty Crook.

Bending Race.—1, A. Birtwistle (Daimler); 2, A. Murray (Humber).

Doll-dressing Competition.—1, G. E. Baxter; 2, J. Dootson.

Blindfold Driving.—1, Dr. Stephenson; 2, A. Birtwistle.

Obstacle Race.—1, J. Robinson; 2, G. E. Baxter.

Royal Automobile Club's medal for best performance of the afternoon.—A. Birtwistle.

The club will hold a run to Windermere on Saturday, the 19th inst., and Mr. W. Birtwistle, J.P., has placed his two steam launches at the disposal of the members on that occasion.

NEWCASTLE.

THE Newcastle and District Motor Cycle Club held a non-stop run on August 30th to Jedburgh and back, a total distance of 108 miles. The result was: First prize—trophy given by Mr. G. W. Parkinson—Mr. Robson Crosier, 3½-h.p. N.S.U.; second prize—club silver medal—Mr. Thos. Smith, 3½-h.p. Triumph; 3rd prize—club enamelled medal—Mr. L. Rosenvinge, 3½-h.p. N.S.U. Bronze medals were awarded to the following riders who did non-stops:—Capt. Sir R. K. Arbuthnot, Bart., R.N., 3½-h.p. Triumph; S. W. Carty, 3½-h.p. N.S.U.; H. W. C. Bell, 4-h.p. N.S.U.; F. Mallett, 6-h.p. N.S.U.; F. Holzapfel, 4-h.p. C.I.E.; D. Mallett, 4-h.p. N.S.U.; A. Fenwick, 5-h.p. Vindeco Special; R. L. Atkinson, 3½-h.p. N.S.U.; G. S. Walker, 3-h.p. F.D.W.; W. H. Outwin, 3½-h.p. Triumph; W. F. Garbutt, 3½-h.p. Fafnir.

NORTHAMPTONSHIRE.

A MEETING of the committee of the Northamptonshire A.C. was held at Northampton on Wednesday of last week. Present: Mr. F. H. Thornton (chairman), Mr. A. F. Mulliner, Mr. Charles W. Phipps, Mr. S. Yarde, Dr. Lewis, Mr. Alfred Webb, and the hon. secretary (Mr. Sidney F. Harris). A letter from the County Surveyor respecting the repair of main roads was read and accepted. A letter from the Motor Union, enclosing correspondence between the Manchester A.C. and the M.U. in regard to the affiliation of the provincial clubs, was read. The committee, after very careful consideration, decided they were not in favour of any joint affiliation scheme, unless it was strongly supported by the R.A.C.—A letter from the Oxendon Rural District Council, in answer to one sent by the committee drawing attention to the want of direction posts in the village of Sibbertoft, was read, and it was resolved that a copy of the correspondence be sent to the clerk to the County Council, asking him to bring the matter before the proper committee, with a view to getting the necessary direction posts erected. The committee considered and approved the design for the combined badge of the R.A.C. Associates and the County Club, and gave instructions to the hon. secretary to order six. The committee expressed a wish that all members would have a badge when ready. Mr. Yarde laid a complaint about an official repairer, and Mr. C. W. Phipps made a suggestion about future legislation. Both matters were considered.

The following were elected members: Mrs. Campbell, Messrs. Abraham Allebone, Lewis Bradshaw, Geoff. Wood, W. Ryland D. Adkins, and William E. Wren.



The Motor Delivery Van recently built by the Canada Cycle and Motor Company, of Toronto, for the New Zealand Post Office Authorities.

KENT.

ON Saturday the members of the Kent A.C. were invited by the President, Sir David Salomons, Bart., to his residence, "Broomhill," Tunbridge Wells, an invitation which is always looked forward to with much pleasure. Among those present were the chairman, Mr. W. Willis, Mr. Alver, Capt. Page, the Rev. C. E. L. Wright and Mrs. Wright, Mr. and Mrs. T. L. Boyd, Mr. R. W. A. Brewer, Mr. and Mrs. Bradshaw, Mr. and Mrs. Brewerton, Col. Latter, Mr. G. Sutton, Mr. R. Wallace, Mr. and Mrs. Waddington, Mr. and Mrs. Wyllie, Mr. de Marney, Capt. Blunt, the Rev. A. B. Cotton, Mr. and Mrs. Spencer, Mr. and Mrs. Batchelor, Mr. Martingell, Mr. and Mrs. Woodward, Mr. and Mrs. Harvey, Mr. and Mrs. Stevens, and Mr. Booth Hearn.

SCOTTISH.

ON the 19th inst. the Scottish A.C. will hold a closed hill-climbing competition at Cairn o' Mount Hill, the entries for which close on Wednesday next 10 a.m. The hill is 3½ miles from Fettercairn, 1¼ from Brechin, 27¼ from Stonehaven, 43 from Blairgowrie, and 56¼ from Perth. It is 2 miles 35 yards in length, the gradients varying from 1 in 54 to 1 in 20. Competitors are advised to carry lunch on their car, and arrangements are being made with the Panmure Arms Hotel, Edzell, eight miles away, for tea being available at the close of the competition. Hotel accommodation for the evening prior to the hill-climb can be had at the Bay Hotel, Stonehaven, Commercial Hotel, Brechin, Queen's Hotel, Blairgowrie, and the Station Hotel, Perth.

A MEET of the Lincolnshire A.C. will be held at Revesby, by permission of the Hon. R. Stanhope, on the 17th inst.

MR. E. K. DAVIES (5-h.p. Peugeot) won the second mixed hill climb of the Southern Motor Club last week-end. Mr. S. Goodley was second on his 3½-h.p. Triumph.

THE CAUSE AND PREVENTION OF WEAR IN MOTOR-DRIVEN VEHICLES.*

By F. H. ROYCE.

THOSE who live in or visit London must have remarked the excessive noise of some motor vehicles now running on the streets of the Metropolis. This noise, it is evident, is largely caused by wear which should be as unnecessary as it is disastrous to the owner and to the motor movement. The personal experience of the writer has been rather of the private passenger motor-car than of public and commercial vehicles, and it is hoped that the cause of, and remedies for, wear in the luxury motor carriage may be regarded, at least, as interesting. The subject may be dealt with under three headings:—1. Design. 2. Material and Workmanship. 3. Lubrication and Attention. To obtain the best results, the conditions must be favourable under all three headings.

It is extremely difficult to deal with questions of design without showing a large number of illustrations, but the following are a few examples of practices in motor design which are worthy of special attention. One observes that in such important features as connecting rods, shafts in change gear-boxes, road wheels, wheels running on studs, the bearings are so disposed that the load or pressure, 1, does not fall in the centre of the length or bearing; 2, or in the case of two rows of ball bearings, does not fall between the two bearings; 3, or worse still, falls beyond and quite outside the bearing.

Absence of regard for the mechanical canon that pressure should either be centralised on or equally distributed along the whole length of a bearing is undoubtedly the cause of wear in many motor-cars.

Road and other stresses cause twistings and deflections which may throw out of alignment various parts. Take, for instance, a comparatively rigid crank chamber fixed to the frame. The frame, owing to road irregularities, twists, and its side members thus act as powerful levers tending either to break the attachments or twist the whole crank chamber. In the latter case, the bearings of the crankshaft become deflected from true axial alignment, causing excessive load to fall on small areas. Rapid wear, if nothing worse, must result. At various points throughout the chassis similar departures from true alignment caused by various stresses must be anticipated, and should be provided for as far as possible. Again, there are crankshafts which have evidently insufficient support, such as double cranks with no bearing between them. In these cases, again, we have the distressing knowledge of crank pins bent out of true alignment. Excess of pressure on local spots, and the crushing out of lubricants at such spots, must be attendant under these conditions, and more or less rapid wear must result. Another instance of improper deflection is found in cars in which the torque rod, used to control the back axle, is so fixed that no provision is made to allow of the movement which must take place when one back wheel rises higher than the other owing to its surmounting an obstruction on the road, or owing to an uneven road surface. In such a case some slack must exist in the joints or the part must bend.

Another point that may be mentioned in connection with design is the importance of arranging that parts which are subject to much friction (such as gears, road wheel bearings and universal joints), should not only be fitted with oil-retaining devices, but also thoroughly protected against mud and water. One sees universal joints on quite a number of expensive chassis which are not provided with any case at all, or perhaps provided with cases which cannot retain oil against the high centrifugal

force engendered. It is hard to imagine the lubrication staying on a joint revolving at from 300 to 1,500 revs. per minute, if it has the slightest chance to escape.

The choice of materials used in the construction of a motor vehicle are chiefly important for two reasons:—1, To avoid breakage. 2, To resist wear. If the film of lubrication could be perfectly maintained, the material used for the wearing surface would be quite unimportant. In almost every main part of a car the wear is taken on ball bearings, or the parts are capable of being case-hardened. Ball bearings carefully arranged and well made are wonderful things, carrying enormous weights and bearing considerable ill-treatment, but the materials for these deserve careful selecting. It is worth while to state that these ball-bearings should, in all cases, be in oil-retaining boxes and be thoroughly protected from water, their most deadly enemy.

The system of automatic lubrication is a matter of design, but automatic and hand lubrication are herein dealt with under the one common heading of "lubrication."

Engine Lubrication.—"Splash" lubrication of the engine, which formerly was the common practice, had two main objections—Firstly, it was difficult to maintain exactly the correct level of oil in the crank-chamber; and secondly, the extent to which the oil arrived between the surfaces of the bearings and remained there was uncertain and imperfect.

It has been found better, therefore, to adopt the forced system of engine lubrication which is used in high-speed steam engine practice, for the following reasons:—1. More perfect lubrication.—So perfect and consistent is the film of oil maintained by this system that there have been cases in which the connecting rod bearings have, apparently, never touched the crank pins, since the latter have shown throughout their surface a bronze colour undisturbed by sign of wear or polish. 2. It is better that the oiling shall be constant and out of the control of the driver. Under this system the engine is always sufficiently lubricated, and never over-lubricated. The lubrication is not dependent, as in the case of splash oiling, on whether the last 5 per cent. of oil is or is not put into the crank chamber.

The lubrication of parts of the car other than the engine is, as a rule, dreadfully neglected. To oil the joints, &c., situated under a car is a dirty job which does not appear to recommend itself to most chauffeurs. Those who have been coachmen dread lubrication lest the car should look greasy or oily; but if these men could only realise the havoc which is played with their master's property by want of lubrication, they would—for they are, as a class, excellent, honest and painstaking—make it a rule to get into a suit of overalls, lubricate every part, and end up by cleaning off surplus oil, thus satisfying their cleanly instincts. Next, let a warning note be sounded as to what kind of oil to use. This can be roughly outlined as follows:—(1) Do not use thin oil. (2) Do not use stiff grease. (3) Use oil of ample viscosity (body), and of good lubricating properties. And lastly (4) Use the very thickest oil, that will always be liquid, for all parts except the engine. In summing up, it seems to be of the utmost importance that the designer should provide—1st. Satisfactory (and, as far as possible, automatic) means of lubrication. 2nd. Ample or thoroughly case-hardened surfaces. 3rd. Protection against mud and water.

* Abstract of paper read before the Dublin meeting of the British Association.

ROAD REPORTS.

LICHFIELD.—The clerk submitted letters from Mr. Moncur, the Chief County Surveyor of Main Roads, with reference to the proposal to erect signposts for motorists. Three of the 'signposts' would be on the county main roads, and two on roads over which the Lichfield Rural District Council had jurisdiction.

EAST GRINSTEAD.—Several improvements to the approaches to the town of East Grinstead are now being carried out, among which is the making of a new road leading from Cranston Road to the bottom of Blackwell Hollow. Widening is also being carried out at West Street and Danning's Mill Road, which are the outlets to Turner's Hill and West Hoathly, respectively.

GLAMORGAN.—The Aberavon Town Council is asking the Glamorgan County Council to secure the limitation of the speed of automobiles within a certain distance of any town; application is also being made to the same body by the Briton Ferry District Council for the imposition of the ten mile per hour limit on cars passing through Briton Ferry.

NEWHAVEN.—At the meeting of the Newhaven Rural District Council the surveyor submitted a special report on the substitution of rag stone for flints on roads subject to motor traffic, and asked for an additional 135 tons of Kentish rag. He added that it was now found that Kent rag was a good binding material, and where a section of flints had been covered with rag the road had not broken up so much in the dry weather. The rag did not, however, wear well in the winter and in wet places.

CHESHIRE.—At the meeting of the Chester Rural District Council at Chester on Saturday the Clerk read, amid laughter, a letter from the Cheshire County Council offering to undertake dust laying on the main

roads if the Rural Council contributed two-thirds of the cost. It was decided to take no action with regard to the County Council's letters.

SHOREHAM.—Warning notices to motorists are to be placed on the lamp-posts at Shoreham.

WATFORD.—An order has been made by the Local Government Board approving certain regulations made by the Hertfordshire County Council under the Motor Car Act. Their effect is to establish a speed limit of ten miles an hour within certain specified portions of the urban district of Watford, to come into force on the 21st inst.

COMPANY NEWS.

(In the case of New Companies the file number is given at the end of the particulars.)

VICTORIA GARAGE AND ELECTRICAL COMPANY.—£1,500. To acquire the business carried on at St. John Street and Parkside, Coventry, as Victoria Garage and Electrical Company, and business carried on at 27, Fleet Street, Coventry, as Stour Cycle and Motor Depot. Private. 68, John Street, Coventry. (99,389.)

MOTOR SALES, LTD., has been registered with a capital of £100 and offices at 334-6, Euston Road, London, N.W.

THE Pychley Autocar Company, of Market Harborough, have adopted the H.F. jointless joiner in connection with the vulcanising of motor tyres, as have also Messrs. H. C. Reading and Co., Ltd., High Street, Burton-on-Trent, and Mr. T. Alger, Widmore Gardens, Chislehurst Road, Bromley, Kent.

CASES AGAINST MOTORISTS.

"HOLDING UP" A MOTOR-CAR.

At Wigton (Cumberland) Edward Thompson, of Thursby, has been summoned for obstructing the free passage of the highway by placing himself in front of a motor-car and refusing to move. Mr. Westmorland, for the defence, pleaded that motor-cars were a nuisance to anyone who was not riding in them, and as a great many passed this particular place at great speed and created much dust, the defendant became greatly irritated, and cried, "I'll stop the next car," and did so. The magistrates' clerk said he understood that the defendant sat by the roadside a good deal—a foolish place to sit nowadays. The defendant had already paid £1 19s. damages to the car caused by his breaking the glass screen, and he was now fined 10s. and costs.

ON THE TOWPATH.

At the instance of the Thames Conservancy fifteen persons have been summoned on one day at Kingston-on-Thames, for either motoring or driving horsed vehicles along the towpath between Hampton Ferry and Molesey Lock. Fines of 5s. and 8s. 6d. costs were imposed on each of the defendants, the magistrate remarking that these were the first cases under the recent Thames bye-laws prohibiting vehicular traffic from the towpath in question.

TEN PREVIOUS CONVICTIONS.

At the Petty Sessions at Windsor on Saturday, Thomas Sopwith was summoned for driving his motor-car beyond the legal speed limit at Old Windsor on August 12th, and on a second summons for failing to produce his licence at the request of the police officer. He should have appeared before the Bench a fortnight previously, when he sent a letter of excuse, which the magistrates declined to accept, and ordered his attendance. The evidence of a police-sergeant was to the effect that he drove over a measured quarter of a mile in 34 sec., equivalent to 26½ miles an hour. When stopped he did not deny it, and when asked for his licence said he had not got one. Defendant said that what he told the officer was that he did not know his licence had expired, and when he returned to London he took out a new one. Asked by the magistrates' clerk to produce it, he said he had not got it, and there was no law to compel him to bring it to a police court. A list of ten previous convictions in different parts of the country for offences under the Motor Car Act was produced to the Bench. The Chairman, in giving the decision of the Bench, said they fined him £25 and costs, ordering him to appear before them at the next court with his licence to be endorsed.

BRIEFLY RECORDED.

On Tuesday a motorist was fined £2 at Hove for dangerous driving; six were convicted at the Steyning Petty Sessions, the aggregate fines being £39; and three fines at Arundel totalled £17.

Harrogate (10, each fined £1 and costs), Rollesby, Truro, (2), Chelmsford (9), Havant (9), Barwick (3), Forfar (4), Rugby (3), Leeds (2), Carnarvon, Abergale, Horsham (4), Chelmsford, Kirkham (4), Wetherby (12), Christchurch (20), Lincoln, Kesteven Petty Sessions (3), St. Neots (6), Carlisle, Woking (4), Guildford (9 cases, the aggregate fines being £81), Shepton Mallet (3), Dover (2), Basingstoke (5), Ormskirk, Petworth (5), Bridlington (2), York and Newcastle-on-Tyne (2).

EXCEEDING 10 M.P.H.

At the Spelthorne Sessions on Monday, R. S. Elliott, chauffeur to Sir Philip Watts, Director of Naval Construction, was fined £3 and costs for having exceeded the ten miles an hour speed limit at Chesnut Avenue, Bushey Park. Two parkkeepers, who timed the car with stop-watches, alleged that the defendant's pace was over twenty-one miles an hour. For the defence, it was alleged that the car was incapable of a speed of twenty miles an hour, and Lady Watts, who was in the car at the time, offered to hand the car over to any of the justices if they could get a speed of twenty-one miles an hour out of it, saying that the parkkeepers' watches showed a difference of a minute and a half in the timing.

ALLEGED ROAD RACING.

At the Kingston County Police Court, Mr. E. B. Toms, aged 22, gentleman, of North Haven Point, Parkstone, Dorset, was charged by the police with wantonly and furiously driving a motor-car in the Portsmouth road, Long Ditton, and knocking down Alfred Berry, of Surbiton, thereby causing him grievous bodily harm, on Thursday of last week. Evidence was given by five witnesses, whose testimony was to the effect that two motor-cars, one of which was driven by the accused, were travelling along the Portsmouth road in the direction of Ditton, at the rate of between thirty and forty miles an hour. The man Berry had charge of a horse and cart which was going in the same direction, and had crossed the road to pick up his coat, which had dropped from the cart. As he was returning to the cart, he was caught by the accused's motor-car, dragged for some distance, and finally run over. Mr. Patrick Shaw, solicitor for the defence, reserved his cross-examination of witnesses, but stated that the accused had been an owner and driver of motor-cars for six years, and had never had a summons, an endorsement of his licence, or an accident until now. The magistrates remanded the accused for a week, but accepted bail, the accused in £100, and one surety for a like amount.

INLAND REVENUE.

E. E. James, a motor engineer, of High Road, Leytonstone, was summoned at East Ham on Tuesday for keeping a motor-car without a licence. Mr. Finch, an Inland Revenue officer, said that on June 6th he

saw the defendant in Plashet Grove, East Ham, driving a motor-car numbered "H 545." No licence had been taken out, and the defendant, when spoken to, said that he only used the car for business purposes. The defendant did not appear, and a fine of £4 4s. and costs was imposed by Mr. Grubbe, who suggested that when the money was paid the Revenue should send a licence to the defendant.

POLICE "CONTROLS."

It is rumoured in the locality that the police of East Sussex have suspended their long-distance timing operations.

The police are frequently timing motorists over several five mile stretches in Aberdeenshire.

SEVERAL motorists have lately been charged for exceeding the speed limit between Braemar and Crathie, in Aberdeenshire, and one who pleaded guilty added that he did not know he was exceeding the limit; all that he was aware of was that "he got tired of racing the traction engines."

At the Buck Barn cross-roads, near Horsham, the police are showing great activity against motorists.

The New London Road, Chelmsford, has its police trap worked by constables armed with stop watches.

AMONG the Scotch traps in frequent operation are those between Forfar and Brechin—the timing being between the milestones, principally the fourth and fifth from the former place.

IN Lincolnshire the Long Bennington and Great Gonerby traps have been working frequently of late as well as the three miles stretch between Great Poulton and Colsterworth.

THE Chapel-en-le-Frith District Council is complaining to the police of the excessive speed at which motor-cars pass through the district.

POLICE traps are frequently worked at Rugby, on the road leading to the Polo Ground, and in the parish of Stretton-on-Dunsmore.



The Argyll Three-Ton Motor Lorry recently supplied to the Dominion Bridge Company, Lachine, Que., by the Dominion Motor-Car Company, Ltd., Montreal.

YORKSHIRE now has several "controls," including one on the Menston road near Otley, the Harrogate road at Moortown, near Leeds, on Prospect Hill and Parliament Street, Harrogate—where the police look for those who exceed the ten mile limit.

KENTISH traps include those on the Dover-Canterbury road, between Bishopsbourne and Barham.

SEVERAL motorists have lately been trapped at Greenbottom, near Truro.

MOTOR CYCLING.

THREE motor-cycle matches and a record attempt were held at the Stadium at the Franco-British Exhibition on Saturday. In the attempt on record, C. R. Collier, on a Matchless machine, covered a mile in 1 min. 2 4-5 sec., which was one-fifth second faster than the previous best for the track. The first of the matches was over one mile with a flying start, and Collier beat H. Martin, on another Matchless machine, by 30 lengths in 1 min. 10 sec. The second encounter, over three miles from a standing start, went to Martin in 3 min. 55 sec., and a deciding contest of five miles from a flying start resulted in favour of Collier by 10 yards after a good race, in 6 min. 59 3-5 sec.

HUMBER, LTD., have just given delivery of a 10-12-h.p. Coventry Humber car to the special order of a medical man. The body presents many interesting features, as it can be used as a two or four seater at option. The rear seating accommodation can be slipped off expeditiously by means of two snap locks, and a neat box 42 in. long, 34 in. wide and 6 in. deep, for spares, &c., can be substituted. A victoria hood can be fitted over front and rear seats as desired. Legs are provided for the detachable portion of the body to facilitate handling when off the car. This type of body should be eminently suited for those who wish to use their cars for both pleasure and business purposes.

FORTHCOMING EVENTS.

SEPTEMBER.

- 12th (Sat.).—Bristol and Gloucestershire A.C. gymkhana at Badminton Park.
Motor Cycling Club's petrol consumption test, starting from Gerrard's Cross.
Yorkshire A.C. closed hill climb at Pateley Bridge.
- 13th (Sun.).—Mont Ventoux hill climb of the A.C. Vaulxaisien.
- 14th-26th.—International Rubber and Allied Trades' Exhibition at Olympia, London.
- 16th (W.).—Entries close at noon for the "Graphic" and "Henry Edmunds" Trophies.
- 17th (Th.).—Touring car competition of the A.C. of Holland through that country.
Nottinghamshire A.C.'s cripples' outing to Costock.
- 19th (Sat.).—Provincial meet of the Motor Union at Oxford.
Sheffield and District A.C. hill climb at Padley Wood, Grindleford.
North Middlesex A.C. 100 miles reliability run.
Meet of the Hull Auto Cycle Club and the Lincolnshire Motor Cycle Club at Brigg.
Lunch of the Kent A.C. at Dover.
L.G.B. inquiry into application of the Bangor Town Council for a restriction of motor-car speed.
Lancashire A.C. closed speed trials.
- 22nd (Tues.).—A.C.U. International Auto-cycle Tourist Trophy Race, Isle of Man.
Last Practice Day for Isle of Man Race; weighing of competing cars, 10.30 a.m.
- 23rd (W.).—"Graphic" Trophy (10 a.m.) and "Henry Edmunds" Competitions (2.30 p.m.) in the Isle of Man.
- 24th (Th.).—The "Four Inch" Race in the Isle of Man.
- 25th (F.).—Welsh A.C. reliability trial for motor-cycles.
- 26th (Sat.).—N.W. London M.C.C. petrol quantity judging competition.
Invitation to the Kent A.C. by Mr. and Mrs. Schlentheim to Chislehurst.
Examination for R.A.C.'s driving certificates at the Adelphi Hotel, Liverpool.
- 27th (Sun.).—Southend M.C. run to White Hart Hotel, Braintree.

LIGHTING-UP TIMES—LONDON.

| | | | | | | |
|----------------|----|-----------|----|-----------|----|----------|
| Sep. 12th—7.21 | .. | 14th—7.17 | .. | 16th—7.12 | .. | 18th—7.7 |
| " 13th—7.19 | .. | 15th—7.14 | .. | 17th—7.9 | .. | 19th—7.5 |

To find the approximate lighting-up time in September for Birmingham 9 minutes should be added to the above times, 8 for York, 13 for Manchester, and 25 for Glasgow.

AUTOMOBILE ACCIDENTS.

A SERIOUS automobile accident occurred on Thursday week near Allendale, Newcastle-on-Tyne. Mr. F. Stewart, of Newcastle, was driving a party from the latter place to Allendale when the car skidded in taking a corner. It crashed through the hedge and rolled down the embankment on the other side, finally overturning into the stream, fifteen yards below. The party was precipitated into the water, and several received serious injuries.

A MOTORIST named C. W. Ripley, Coundon Street, Coventry, died on Saturday from injuries received the previous night in a collision. He was driving from Rugby to Coventry, and on reaching Binley Bridge his car collided with a stray horse. Later he was found by a farmer, and removed to his home.

To avoid running into a pack of fox-hounds at Caxton, Cambridgeshire, Mr. A. C. MacLaren, the cricketer, brought his motor-car into collision with a roadside bank. The car was overturned, and one of Mr. MacLaren's legs was pinned underneath, but the injury is not serious.

MR. AND MRS. WALTER TIMSON, of Barnes, were on Sunday night returning with their family in two motor-cars from their holidays at Bognor, when, on reaching Slindon Woods, the steering gear of the second car went wrong, with the result that the vehicle dashed into a stone wall surrounding the Duke of Norfolk's park. The occupants were thrown out, and Mrs. Timson was severely injured, while a boy had his arm broken in two places.

THE coroner for South Northumberland on Wednesday investigated the circumstances attending the death of Mr. John T. Coxon, contractor, residing at Holywell village, who on Tuesday succumbed to injuries received in a collision between the motor-cycle which he was riding and a motor-car on Monday.

ARTHUR LAMB, aged seven, was playing in the road at Ombersley, near Worcester, on Tuesday, when he ran in front of a motor-car. Despite the efforts of the driver and the warning shouts of his school-mates, he was knocked down and killed.

THE "Challenge" oils and greases of Messrs. Mosbuis and Son, of the Howard Works, Stoke Newington, are recommended by many motorists.

PUBLIC SERVICE.

SHOREHAM.—The Shoreham Urban District Council have granted licences to five motor vehicles and ten drivers to ply for hire in the district.

BUSINESS NEWS.

THE Shrewsbury and Challiner Tyre Co., Ltd., of Ardwick Green, Manchester, have sent us a copy of the new catalogue they have just issued, giving full particulars and illustrations of Challiner's patent detachable rim, which is steadily increasing in popularity, as may be judged from the fact that the output during the first half of the current year showed an increase of over 400 per cent. on the corresponding period of 1907. The rim can be used with wheels of either the artillery or wire-spoked type. Included in the list are particulars of a handy tool to hold the rims when changing the tyres in the garage.

In order to avoid any misunderstanding amongst their agents, Ariel Motors, Ltd., are desirous of arranging terms and districts for 1909 during September and October. It is the intention of their representative, Mr. P. R. Lamb, to call and discuss their next year's programme with all interested agents with a view to fixing matters up before the Olympia Show.

MOTORISTS will be interested in the new "Jaeger" price list of raiment especially useful in the colder days that are coming upon us. The company's headquarters are at 95, Milton Street, London, E.C.

MESSRS. JOSEPH OWEN AND SONS, LTD., of Liverpool and London, will this season have regular shipments of ash logs, their first cargo being due next month. This special ash of straight grain, tough and fine texture, is well known to many of the leading motor-car body builders, and intending purchasers would do well to communicate early with the importers, as, on account of the great scarcity, the ash will come to a good market.

We learn that Mr. C. F. Bertelli has resigned his position as managing director of the Junior and O.T.A.V. Cars Co., Ltd., and that from this time onwards Mr. E. E. Leverett will be responsible for the direction of the business.

THE Daimler Company have recently sent quite a large number of cars to customers abroad. On one day last week nine cars left the works, six for Messrs. Dalgety and Co., their Australian agents, one each for their agents in New Zealand and Portugal respectively, and the other to India for His Highness the Maharajah of Nepal. The latter is a very handsome car of the Blackdown landaulet type, and is painted red with black mouldings and lined gold. The upholstery is in red leather to match. The Daimler Company have also just supplied a 48-h.p. rugby phaeton to the India Office, and have received an order through the Bombay Motor-car Company for a Stoneleigh limousine for the Rajah of Padma.

THE Birmingham Small Arms Company, Ltd., Birmingham, have sent us a copy of the catalogue of the B.S.A. motor-cars they have just issued. This gives full particulars of the two models—18-23-h.p. and 25-33-h.p.—on which attention is being centred, the description being amplified by illustrations of the principal parts of the chassis. The name B.S.A. is a household one in the cycle world, and, judging from the list before us, no efforts are being spared to produce vehicles which shall earn for themselves an equally high reputation in motoring circles.

TO CORRESPONDENTS.

All communications intended for insertion in this Journal or relating to Editorial matters should be addressed to THE EDITORIAL DEPARTMENT, MOTOR-CAR JOURNAL, 27-33, Charing Cross Road, London, W.C., and must be written on one side of the paper only. Letters must in all cases be accompanied by the name and address of the writer, as no notice will be taken of anonymous communications.

To insure insertion communications and contributions must be in the Editor's hands by Tuesday forenoon of the week in which the same are intended to appear. Disappointment may be caused by non-compliance with this rule, and to avoid this earlier receipt, if possible, is necessary.

Photographers, both professional and amateur, are invited to send photographs of current events or of motoring scenes and incidents. The fee, if any, required for reproduction should be stated in each case, otherwise no liability will be accepted.

The Editors cannot undertake to return MSS. or drawings, although every effort will be made to do so in the case of rejected communications. Where such are regarded as of value, correspondents are requested to retain copies.

The Editors do not hold themselves responsible for the opinions expressed by their correspondents, or for statements and facts which do not appear in the editorial columns.

The Editors and Publishers beg also to state that they will accept no responsibility for unsolicited contributions, even if used, unless payment for same is directly specified in forwarding, and the terms arranged before publication.

THE Motor-Car Journal.

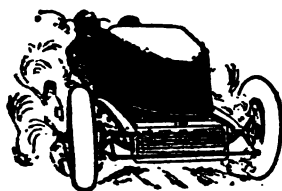
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COMMENTS.



AFTER an exhaustive examination of the photographs in conjunction with the notes taken on the occasion of their trials on the Brooklands track, the Dust Committee of the R.A.C. has now made its awards in connection with the trials held in July last. For the Inter-club Competition for teams of two cars each, the West Surrey A.C. was placed first, with the Kent Club in the second place. The competition for petrol cars entered by manufacturers as standard vehicles has resulted in the first position being awarded to the 22.5-h.p. Buick entered by Mr. Frank Eason. The second award was obtained by the 18-h.p. two-cylinder Reo of Mr. H. Gordon Sharp. The next three cars to be placed were the 35-h.p. Dennis, the 18-h.p. Alldays, and the 10-h.p. Cadillac. Steam cars were, this year, not run for competition, but a Stanley vehicle was located between the second and third of the petrol competitors at twenty miles per hour and classed as equal to second place at thirty miles per hour. The awards in connection with the experimental class are still under consideration, and we must await the full report of the committee for their detailed criticisms of the various classes in the competition.

London and its Cabs.

THAT the police of the metropolis are watching with some degree of sympathy the rapid development of the motor-cab in London is evident from the promptness with which they have recognised its growing popularity. Hitherto it has been found difficult to prevent three persons from attempting to sit in the space licensed to carry two, and many times have the police vainly attempted to prevent such overloading. Realising its effect they have issued amended rules and regulations with a new table of fares authorising the collection of 6d. per head for adults for each passenger over two in a cab licensed to carry four persons—in addition to the amount of that recorded by the taximeter. The General Motor Cab Company has, by making an addition of less than half a cwt. to the weight of the car, been able to provide a motor-cab to carry four persons, giving them the dimensions required by the police regulations. These new cabs will be of the present landaulet pattern. Whilst it is likely a good many of the quartette-party cabs will be placed on the streets, we do not anticipate that the two-seated vehicles will entirely disappear. After all, two persons are probably the average number of passengers carried by the London cab, and the two-seated vehicle is not without points in its favour.

Lull in the Newspaper Tirade.

LAST week we were able to refer to the action proposed to be taken by the Royal A.C. with regard to the establishment of machinery for dealing with inconsiderate driving. The proposals then outlined have been communicated to the general Press, and apparently have met with considerable endorsement from those who have given any thought to the subject. We are glad to notice something of a lull in the outpourings of the

ordinary newspaper correspondents, and doubtless, now that the busier season of the year is coming upon them, they will find less to write in relation to motorists and those who make good use of the public highways of the country.

Rubber.

MOTORISTS are so greatly interested in rubber that the Exhibition now open at Olympia, London, is likely to be visited by many of their number ere its close. In fact, we noticed several well-known "knights of the wheel" critically inspecting the exhibits one day this week. Col. W. J. Bosworth is chairman of the Exhibition, and several familiar names occur among the Advisory Committee. Although india-rubber was observed in the island of Haiti during the second voyage of Columbus, it was not really introduced into France until 1735, its advent to our English shores being of later date. Eighty years ago less than twenty-four tons were imported into this country; last year, we are reminded by Sir Henry A. Blake, G.C.M.G., the import had reached 33,364 tons, and so many new avenues for its employment are being opened that there is no restricted limit to the business to be done.

Vulcanization.

IN this connection we may call attention to an article by Mr. William Frost on the Universal Value of Vulcanization, which forms one of the series of useful chapters with which the catalogue of the Exhibition is prefaced. Mr. Frost boldly claims that vulcanization is responsible for the development of the industry, and compares it with the tempering process in connection with metals. Perhaps the most conspicuous example of the commerce-creating character of vulcanization is seen in the business in motor tyre repairs which has been built up in this country. Already this has attained large proportions; and the end is not yet.

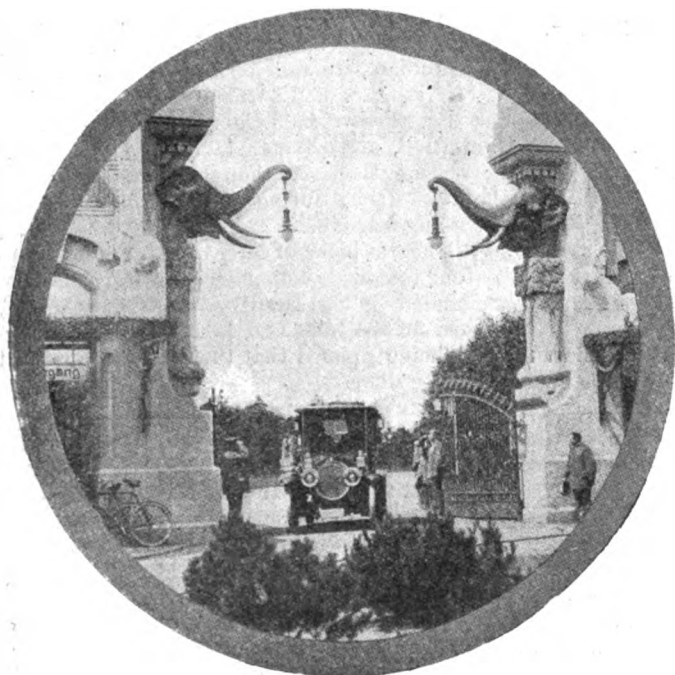
Restriction to 15 m.p.h.

AT one of the last sittings of the Trade Union Congress at Nottingham, a representative of the London Carmen's Union proposed the following resolution, which was adopted:—"That this Congress views with great alarm the ever-increasing number of accidents and deaths among the general public caused through the excessive speed and callous driving of motorists, and instructs its Parliamentary Committee to use every means in its power to get legislation so amended as to restrict the speed gear of motors to a maximum of fifteen miles per hour, and in instances of heavier vehicles the speed gear be fixed at a less degree in proportion to the weight of the vehicles." On the same day that such motion was adopted at Nottingham, the unemployed at Glasgow were being urged to agitate for a national system of roads, in order to find work for their number. The two incidents do not count for much even when added together. But they are typical of the way in which many people idly talk of motor-car matters and are prone to denounce the automobile without consideration of the circumstances of the position. To restrict the speed to fifteen miles per hour is suggestive of the old-time antipathy of the workmen to machinery

of any kind—a view that we had hoped had been outlived by the generation of to-day. Fortunately the resolution of the London Carmen is not likely to find favour with Mr. John Burns, who has already declared against the principle involved in such a suggestion.

Development in Motor Design.

It is probably safe to say that not since the advent of the modern motor-car has such a notable innovation been made in any feature of its construction as that which is chronicled elsewhere in the present issue. We refer to the new engine which is being adopted by the Daimler Motor Company, Ltd., the striking feature of which, while it works on the ordinary four-cycle system, is its absolute freedom from valves, springs and cams, and small parts. For a concern of the standing of the Daimler Company to make such a startling departure, with the full knowledge of the effect of an error of judgment in this direction, is sufficient evidence that the new motor must possess great merit.



Touring in Germany.—The Entrance to the Hagenbeck Zoological Garden, Hamburg.

Haslemere and the A.A.

THE Haslemere Parish Council having asked the A.A. as to the reasons for placing a motor scout at the cross roads in the village on Sundays, have received a reply from the organisation in Princes' Street, London, W., wherein it is stated that the duties of the patrol are "to restrain the speed of all motor-cars entering Haslemere." Mr. Cooke points out that in many places his Association is working in conjunction with the police "to such an extent that the control of the motor traffic is left almost entirely in our hands," so that the only thing now to be done is for the Parish Council of Haslemere to thank the Association for the good work it is doing.

Speedometers.

THE advice that the President of the R.A.C. recently gave with regard to the use of speedometers by motorists has received magisterial endorsement in the North London Police Court. Two drivers of motor-buses were summoned to that Bench for driving at a greater speed than twelve miles an hour. In defence, each urged that the difference between the legal limit for such vehicles and the fourteen miles per hour

which the police alleged they had driven was such a narrow margin that it was impossible to gauge with exactitude without the use of speedometers. Thereupon the magistrate directed the police authorities to communicate with the owners of the vehicles suggesting the provision of speed indicators. The subject has certainly become one of great importance to motorists, who will doubtless be interested in the further notes on the merits of various devices which we publish on another page.

Commercial Vehicles in Glasgow.

A PARADE of commercial motor vehicles is to be held at Glasgow on the 5th prox. under the auspices of the Commercial Vehicles Department of the Scottish A.C. Manufacturers and dealers as well as owners of motor vehicles who have acquired the same since January 1st, 1903, are invited to send vehicles, but these will not be eligible for competition in the prize scheme. Vehicles which had been in use prior to that date will be divided into four competition classes, the prizes being awarded on the basis of condition and appearance. The categories will be (1) vehicles constructed for carrying loads of one ton and under; (2) those between one ton but not more than 35 cwt.; (3) vehicles driven by internal combustion engines constructed to carry loads greater than 35 cwt.; and (4) steam vehicles. The number of firms north of the Tweed that have adopted mechanical traction in their delivery work is so large that a great display should be seen in the city of St. Mungo on the occasion of the parade.

Police Evidence.

AT Marlborough Street (London) Court, the other day, Mr. Meade, the magistrate, dismissed a case in which he was dissatisfied with the manner in which the notes of the policemen were made. The solicitor representing the Commissioner of Police said that it was obvious the notes were made in collaboration, although there was a regulation that police officers should make their reports independently of each other. The point is one of special importance to motorists, who have always protested against such collaboration, which has conducted to much bad feeling in many districts of the South of England. Surely the authorities should insist that the records of police officers should be made quite independently of each other, to avoid all suspicion of collusion.

The Canine Race.

RECOGNISING the fact that dogs are a frequent source of danger to motorists, our readers will be interested to learn that last year 1,640,017 dog licences were taken out in England alone. This is an increase over the previous twelve months of 30,586, and nearly 400,000 as compared with the last decennial period. It would appear that the suggestion made in the early years of the automobile, that it would lead to the destruction of the canine race, has been falsified. Instead, it may be stated that during the last ten years in which the motor-car has flourished the number of dogs in the country has multiplied to a great extent.

A Scottish Census.

DURING the first fifteen days and nights of August the Surveyor to the Elgin County Council, in conjunction with the Badenoch District Committee, carried out a count of the motor traffic at Fochabers Bridge, Findhorn Bridge, and Dulnain Bridge. Over the first there passed 455 automobiles, eighty-one of which were Elgin cars, 143 were registered in other counties in Scotland and England, eighty-three in burghs in Scotland, twenty-eight in burghs in England and Wales, and 118 in London. Similarly over the other two points there passed 127 and ninety-three of London registered cars respectively. Speaking generally of the automobile traffic in the district 15 per

cent. was of cars registered in Elgin, 20 per cent. of cars belonging to the northern counties of Scotland, 41 per cent. English cars, half of which came from London, and the remainder from other Scottish districts. Since the beginning of the current year to the end of August 3,147 cars passed over the Findhorn Bridge, proof of the growth of the automobile movement.

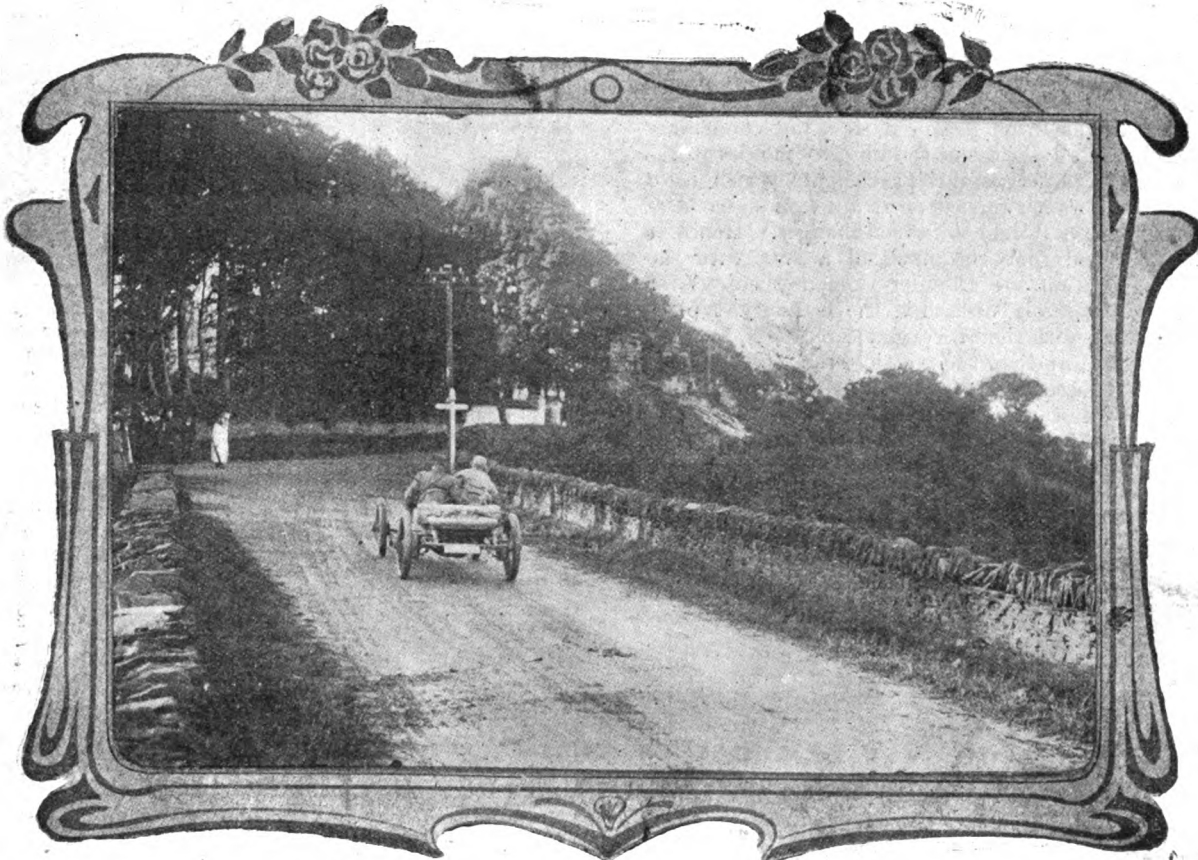
**Stands Scotland
where it did?
Yes.**

◆ ◆ ◆
In our issue of the 15th ult., under the questioning heading "Stands Scotland where it did?" we referred to the way in which the members of the Scottish Motor Trade Association were asserting their rights in connection with the exhibition at Edinburgh, which has long formed a part of their annual programme. We then wrote that their position was "perfectly consistent and they can be trusted not to be overawed by the menaces of a southern body." That we were well justified in such belief is now being proved by the decision of the Society

Mr. Eggar to make his remarks in peace, for we do not hear of any comments made thereon. All that happened was that it was resolved to ask the Local Government Board to grant no order in regard to the speed of motor-cars whilst passing through Farnham without holding a local inquiry to enable the Council to express their views.

**New Petrol Motor
Fire Engine.**

◆ ◆ ◆
ON Wednesday last Messrs. Dennis Bros., Ltd., invited a number of members of the Press to a demonstration at Weybridge of their new petrol motor fire-engine. The machine is fitted with a 40-h.p. four-cylinder engine, which is utilised both for propelling the vehicle and for driving the pump. The latter is of the Gwynne-Sargeant turbine type, running at a normal speed of 1,700 revolutions per min. A 5 in. suction hose is employed, the water being admitted to the vane chamber on both sides. The power of the engine is more than ample for a



Practising for the "Four-Inch" Race in the Isle of Man.—One of the Cars at Hillberry Corner.

◆ ◆ ◆
of Motor Manufacturers and Traders not only to withdraw their previous prohibition of the event, but to approve of the Show, which it is proposed to hold at Edinburgh at the beginning of next year on the same lines as formerly.

**The Turnpike
again.**

◆ ◆ ◆
THE persistency with which some of the members of the rural district councils continue to advocate the imposition of tolls in connection with motorists is really amusing. The other day, at the meeting of the Farnham Council, Mr. J. A. Eggar urged that they should return to the use of the old turnpike gates, restricting the payment of tolls, however, to motorists. He suggested that the gates should be placed at the extremities of the town, and that telephonic communication should be established between them, so that those vehicles which travelled too fast could be detained. Fortunately, however, the other members of the Council seem to have allowed

delivery of 450 gallons per minute from two deliveries of $\frac{3}{4}$ in. to $\frac{7}{8}$ in. with 120 ft. jets, or a single 2 in. jet of 210 ft. A small pump tank is carried, which supplies the pump with water until the suction is at work. As soon as the pump is thrown into gear with the engine, water is sprayed at high pressure from the tank past the ejector nozzle leading from the suction pipe. The air is extracted almost immediately from the suction lift, with the result that as soon as the suction strainer and basket are inserted in a dam or stream the deliveries commence. Muddy water or sand do not interfere with the delivery as there are no valves to clog. The transmission system from the engine to the pump is exceedingly simple; over and geared to the clutch shaft driving the change-speed gear is another shaft which has no connection whatever with the gear-box. Normally the pump shaft is not in mesh with the clutch shaft; as soon as the vehicle stops at a fire a small lever is pulled over and the pump shaft is put into mesh with the clutch shaft, still being driven from the engine.

The New Daimler Engine.



A STRIKING DEPARTURE.

WIDESPREAD interest has been aroused by the announcement by the Daimler Company of its sweeping motor innovation for 1909, a brief reference to which was made in the last issue of the *M.C.J.* For the first time since the noted engineer from whom this company derives its title gave to the world the present type of high-speed engine which has made the success of the motor-car possible, has there been a noteworthy change from the original design. In fact, the original Daimler type of motor has been copied and adopted throughout the motor world to an extent which has caused it to be looked upon as almost the last word in internal combustion motor construction. The original poppet valves with their springs have almost come to be accepted as a necessary evil, and efforts to eradicate them from the high-speed four-stroke model have hitherto met with little success. The impracticability of the original Otto slide valve has been accepted as a just condemnation of the application of all devices of the kind to motors working under extreme temperatures, and improvements which have been effected in petrol engines for use on motor-cars have been directed more to refinements than to radical changes. Hence it may readily be imagined that the news of a firm with the high standing and reputation the Daimler Company enjoys for conservatism having absolutely discarded the ordinary type of inlet and exhaust valves, with their accessory cam shafts, tappets, springs, &c., and, after more than two years of the most exhaustive investigation and severe tests, deciding to stake their reputation upon an entirely new design of engine, is of more than passing interest.

The motor in question which works on the ordinary four-cycle system is of American origin, its designer having

Company working in conjunction with its engineering and mechanical departments to the end of perfecting the design and adapting it to the requirements on this side. The result of all this work is seen in a motor which the Daimler Company believe

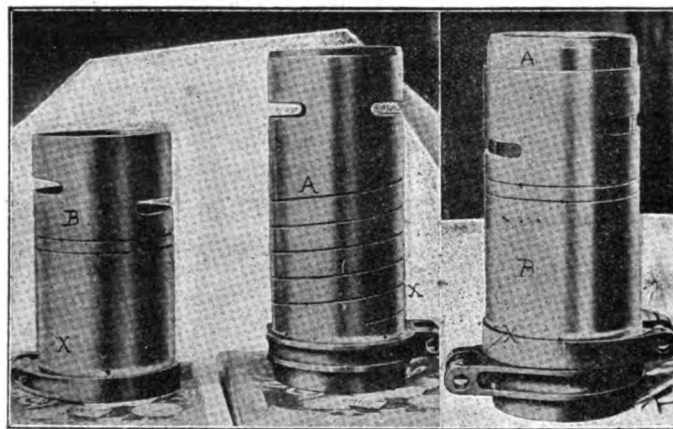


Fig. 2.—The Sliding Sleeves shown detached and mounted one over the other as they are fixed in the cylinder.

to be the nearest to perfection of any power-producing mechanism so far produced. The engine is described as being incredibly smooth and noiseless, plain and simple in construction, economical in operation, and so designed as to almost eradicate the element of mechanical troubles. Briefly summarised, the main feature of the new motor is the substitution of the ordinary poppet or mushroom valves and their adjuncts by cast iron tubes or sleeves (Fig. 2) used as a lining of the cylinder, containing ports which register with one another at desired intervals, being actuated by eccentrics coupled up with miniature connecting rods. The result is a remarkable combination tending toward theoretical perfection in the matter of positive valve opening, spherical combustion chamber, direct ingress and discharge of gases, and efficient cooling propensities, as well as comparatively light weight and accessibility of parts.

Following the few particulars given in the last issue of the *M.C.J.*, we are able this week to publish a drawing and a number of photographs, from which, in conjunction with the accompanying description, a good idea of the radical departure of the new design from what has come to be regarded as the standard type will be gathered. In general appearance the new motor is puzzling: it resembles neither the familiar four stroke type nor the two stroke pattern, there being no external evidences of mechanism for opening and closing valves. But for the fact that the inlet and exhaust pipes are attached to opposite sides of the cylinder near the top, one might mistake it for a two-stroke engine, as there are no projections from the cylinder castings. Not only so, but there are no externally projecting moving parts excepting the crank-shaft ends and the cross-shaft which drives the pump and magneto, the motor thus bearing every evidence of plainness and extreme simplicity. In fact, outside the spirals which drive the magneto, water pump and commutator off the eccentric shaft, there are no gears, and so simple is the design and construction that not a single oil hole requires attention anywhere about its mechanism, the lubrication being wholly effected from the motor base.

As will be observed by the accompanying illustrations, this novel combination affords an almost perfect theoretical construc-

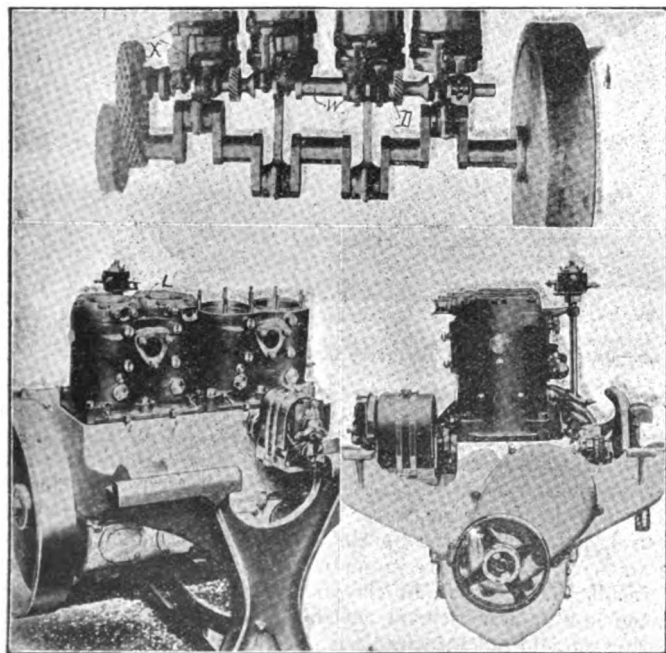


Fig. 1.—The new Daimler Engine.

The upper view shows the crank shaft and the secondary eccentric shaft for operating the sleeves; below are seen two general views of the motor.

spent more than five years in experimental work, during three of which time it was marketed to a limited extent in a high-grade American car. For more than a year Mr. Knight, its inventor and designer, has been at the works of the Daimler

tion. Probably the first evident advantage is the possibility of an almost perfectly spherical explosion chamber, with no pockets or irregularities, and every inch of the surface of which is machined, affording absolute uniformity of volume, contributing to perfectly even explosive pressures throughout the various cylinders of the motor, and contributing to perfect combustion, smallest possible heat losses to water jacket and consequent high fuel efficiency. Furthermore the absence of sharp unmachined corners, projecting points in the casting, and any uncooled surfaces such as valve heads or plugs, makes high compressions possible without danger of pre-ignition, and also contributes to smooth running. Aside from the advantages afforded by the regular-shaped spherical explosion chamber, the design of the motor is such as to provide the most direct and unobstructed passages for the swiftly moving gases. The fresh charge rushes directly into the cylinder without encountering any sort of obstruction which would cause it to become heated and lose weight, while the burnt gases are permitted an absolutely unimpeded path to the exhaust pipes, which are of liberal dimensions, resulting in remarkably small heat absorption to the cooling water. This direct discharge and carrying away of the exhaust gases, together with the extremely small wall area of the combustion chamber, render the matter of cooling the engine one of extreme ease, while the possible intake port area permits the filling of the cylinder with fresh gases at any engine speed desirable, there being practically no limit to the size of the openings which can be secured with this construction.

Referring to the sectional drawing Fig. 3, it will be seen that instead of poppet valves, two thin moving cast iron sleeves, A and B, are made to work together in an outer water-jacketed cylinder. These sleeves, or cylinders, are actuated by separate eccentrics on a secondary shaft, W, through the connecting rods C and D, attached by gudgeon pins to the lugs X. The eccentric shaft is driven by a silent chain off one end of the crank shaft. L is the water-jacketed cylinder head, resembling an inverted piston, carrying the sparking plugs and a wide packing ring, J, in two sections, held out against the inner walls of the sleeve A by the inner ring K, which is split in one place, the same as an ordinary piston ring. The piston travels in the cylinder A 130 millimetres (the stroke), while this cylinder, as well as the outer sleeve, B, travel 25 millimetres, the eccentric which actuates cylinder A being set 70 degrees on the circle head of the eccentric, which pulls the outer sleeve B. In operation, beginning with the exhaust, the process is as follows:—The piston travels downward on explosion stroke until it reaches a point where it is desired to exhaust. At this stage of the operation the sleeves A and B have moved downward until the lower lips of the exhaust port, F, pass behind the compression ring K. The continued downward movement of the sleeve A and B completely uncovers the exhaust port F. The latter remains open until the piston reaches the top of the scavenging stroke, when it is closed by the upper lips of the port F, in the sleeve B, telescoping with the lower lips of the exhaust port G in the water-jacketed cylinder. As the piston starts downward on the suction stroke, the ports F, through the eccentrically-actuated sleeves, move away from each other, and the opening in A is closed by the wall of B. This same movement brings ports H into register, thereby opening up the intake port and allowing the explosive mixture from the carburettor to be drawn into the combustion chamber.

When the piston starts on the suction stroke the sleeves having reached the bottom of their outward travel begin their upward stroke. The movement of the sleeve A is so timed as to carry the inner port H upward behind the ring J, just after the piston has reached the lower end of the suction stroke. This closes and tightly seals the cylinder while the piston returns on the compression stroke, the pressure of the gases aiding in keeping the ring J tightly over the ports F and H until the explosion occurs, which, if timed for the dead top centre, would find these upper ports over the centre of the ring J.

The use of a cast iron sleeve or tube as that portion of the combustion chamber in which the piston travels affords numerous

advantages which contribute to the high efficiency of the motor; principal among these are a perfectly round cylinder machined inside and out to uniform thickness, having no tendency to warp or go out of shape under heat. Probably the most marked advantage of this even-walled non-distorting cylinder is its absolute non-interference with the travel of the piston, its unvarying roundness affording a constant wall contact with the piston ring surfaces, preserving their true circular form and at all times maintaining perfect compression. Another feature which will appeal to the user generally is the detachable head which forms the dome of the explosion chamber and carries the sparking plugs and compression rings. The removal of this head is only a matter of a few minutes, which permits easy cleaning out of any carbon deposits from the piston or combustion chamber walls, or the piston and connecting-rods may be drawn upwards and out without removing the cylinders from the base.

Lubrication is effected entirely by splash, oil being fed into the base-chamber and distributed to the sleeves, pistons, and all internal mechanism by the dipping of the connecting rod big ends. The motor was originally designed for lubrication higher up in the cylinders, but this was found unnecessary and undesirable. As will be seen from Fig. 1, four large inspection covers are provided in the base chamber. The new motor does not

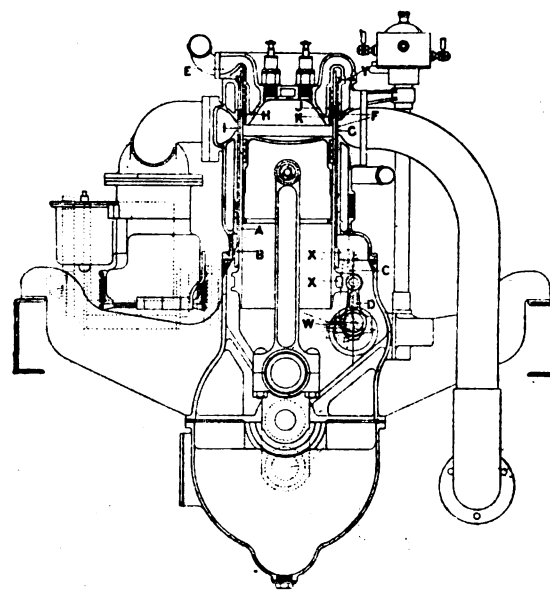


Fig. 3.—Sectional view of new Daimler Engine.

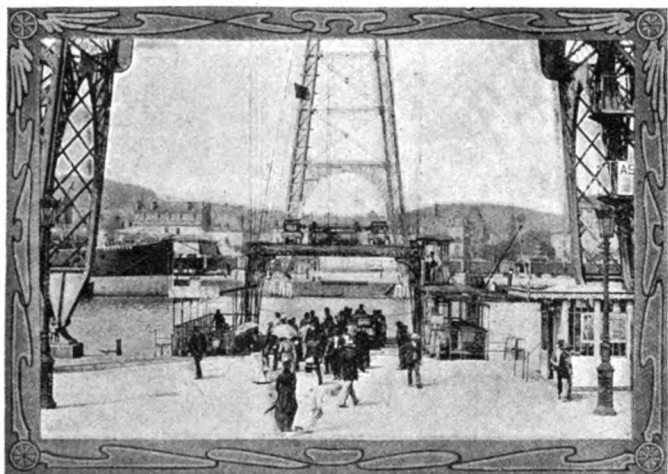
require any additional training on the part of the operator. In fact, its control is identical with that of the poppet valve type. The same carburettor, coils, commutator, sparking plugs, and magneto used upon the standard valve motor answer perfectly for this type. The sleeve mechanism peculiar to this construction is stated to require practically no attention whatever, so that the operator, instead of having new problems to solve in connection with the new design, may safely forget a great deal he has been compelled to learn about the grinding of valves.

The Daimler Company state that after a full year of constant test, the new motor has proved superior to the old type from every point of view, and it is only after the most exhaustive and drastic trials and investigation that the management have concluded to deliberately cut loose from the standard pattern and launch out upon the manufacture of the new and novel design. Three sizes are now in course of construction at Coventry, viz.: engines with a bore and stroke 96 by 130 mm., 124 by 130 mm., and 140 by 150 mm. The small motor is designed for a light touring car, the 124 by 130 mm. is calculated to answer all ordinary requirements for power and speed of a medium weight vehicle, while the 140 by 150 mm. type is for the heavier work. The water circulation of the small model will be accomplished on the thermo-siphon system, and in the two larger sizes by centrifugal pumps.

GOSSIP FROM PARIS.

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"DON'T talk of it!" said one of the leading intermediaries for the sale of big touring cars in Paris, when I asked him whether he had done much business this summer. Never had he sold so many comparatively small cars, and never had he disposed of so few big ones. Of course, the profit on each vehicle was not what it used to be, but the number to some extent made up the deficiency. As for what would happen next year he did not care to predict, but he was certain a lot of even wealthy clients were being attracted by the taxi-cabs for town use and by the touring cars which can now be hired. My friend explained, "You see people are no longer so enthusiastic about driving their own cars. They do not find that the pleasure of holding the steering wheel compensates for the bother it entails. Then if they own the car and have a 'chauffeur' in their employ they are responsible for everything; and how can they get good honest 'chauffeurs'?" "Ils ne courent pas les rues," as the saying goes. There is no doubt a great many people nowadays hire cars of all descriptions. There are already in France over sixty companies offering motor-cabs and bigger cars for hire. Very few of them are making fortunes, and many will, in all probability, have to go through the bankruptcy court before long. It is not that the cars do not let well, but because the



The Floating Bridge across the Seine at Rouen.

risks are too heavy for the comparatively modest hire paid by the client. As my friend said, "All depends on getting good reliable chauffeurs, and that is very difficult." "If people are taking to hiring cars, how is it you have sold so many?" I inquired. The answer came pat and prompt, "Well, the horses are being driven off the road much quicker than even we expected."

THERE is no longer any question as to whether aviation is practical or not. Orville Wright has flown during more than an hour, and Wilbur Wright, Delagrange, Henry Farman, Bleriot, Captain Ferber, Esnault Pelterie, and others have maintained themselves in the air on their flying machines a shorter space of time; they were brought to the ground by nothing but the failure of their motor. Man can fly! There is no doubt of that. A certain number of very scientific gentlemen have, however, been writing to various newspapers and other periodicals to say in substance "What if he can? His flights will never serve any practical purpose." For my part I have great respect for science, but in the present case I am inclined to agree with Wilbur Wright, the former bicycle maker, who says "When an invention is made, use is always found for it." I showed Professor Simon Newcomb's article on aerial flight, published in the "Nineteenth Century," to several aviators. His assertion that an aerial vessel, whether it be a steerable balloon or an aeroplane, will never be able to replace the Scotch express or compete with the ocean steamer rather amused them

Their ambition is not so great, or at least they all contended that though railway and steam navigation companies are not in danger of being ruined by the steerable balloons and aeroplanes, companies for aerial trips need not despair of paying a dividend. Delagrange is so sure of it that he has not hesitated to place himself at the head of a company destined to be a sort of school of aviation. Kapferer, who constructed the steerable balloon "Ville de Paris" before he made the aeroplane with which he is now practising flight, will not for a moment admit that aerial vessels are to be nothing but toys for grown-up people. As for Henry Farman, his ambition is to build a good practical aeroplane, with which he hopes to show the world that long excursions can be made safely and agreeably.

M. RENE QUINTON'S National League for the conquest of the ethereal realm will work in harmony with the French Aero Club. The two associations are to remain independent from a financial and administrative point of view, but they will collaborate together, the unity of their action being secured by a committee of twelve men chosen among the leaders of the two societies. If it only keeps its promises, much may be expected from the National League, especially as it announces it has no sort of intention of seeking to usurp the rights of the Aero Club, which will remain the only French sporting authority officially recognised by the International Aeronautic Federation. Moreover, no member of the league is to receive payment for the services he may render. Everyone interested in aerostation and aviation wishes success to the new society, which has at its head such celebrities as René Quinton, Deutsch, Archdeacon, Armengaud, Michelin, and many pioneers in the campaign for the conquest of the air, including Captain Ferber, Delagrange, Esnault-Pelterie, Henry Farman, Kapferer, Julliot, Gastambide, &c.

A GENTLEMAN friend of mine who has a motor-car and drives it himself even in the streets of Paris shouted the other day, while he was passing me, "Keep to the right." I was in an ordinary horse-drawn cab, which had, it seems, blocked the way for a minute or more by keeping in the middle of the road. When I met him at a café later on he was still furious. "Why on earth cannot the cabs and omnibuses keep to the right? You should see how things are managed in London." My friend, who crossed the Channel for the first time last month, and who is enchanted with all he saw in London, especially with the way in which the police manage the traffic, is not alone to complain. The outcry is becoming general among those who use motor-cars. They cannot see why omnibuses, wagons and loading cabs, often with no fare in them, should be allowed to occupy the middle of the road, leaving no room for a faster vehicle to pass. Their grievance is not imaginary, as in fact there is in Paris only one thoroughfare, the Avenue des Champs Elysees, where the traffic is properly regulated. There the horse-drawn vehicles keep to the two sides while the centre is reserved for motor-cars. Squads of Parisian policemen have from time to time been sent to London to study the way in which the traffic is regulated there, but some of them have failed to profit by the lesson.

MARNEY.

MOTORISTS in South Wales should beware of the railway crossings, which are not always provided with gates. There is such an one between Morriston and Skewen.

THE Cast Iron Brazing Co., of Station Street, Stratford, E., to whose excellent work we made reference in our last issue, have opened an establishment at 10, Ellbroad Street, Bristol, for the convenience of motorists and others in that district.

A FIRM in the South of Ireland, Messrs. Pohlmann's, of 9, Marlborough Street, Cork, are displaying considerable enterprise in the adoption of the automobile in connection with their business. They deal in pianos, and are inviting any likely purchasers within thirty miles of the town on the Lee to send word of their intention, when they will despatch a motor-car to bring them to Cork, and take them back to their residence.

THE "FOUR-INCH" RACE.

(BY OUR OWN CORRESPONDENT.)

DOUGLAS, Monday.

ALTHOUGH practising for the "Four-inch" Race since last Thursday has not been immune from accidents, nothing of a serious nature has occurred. The weather on the whole has been of a very inclement nature, and the muddy condition of the roads has prevented the drivers from using goggles, consequent upon which most of them are suffering from bad eyes. The early hours of Thursday last week were fine, and many of the drivers completed one circuit in comfort, but about half-past six, when most of the competitors were accomplishing their second round, the conditions changed, and rain fell heavily, accompanied by a strong wind, with the result that many were storm-bound at different parts of the course. Notwithstanding the conditions, however, Coatalen went well, and his second circuit only took fifty-three minutes. Perhaps the fastest time attained was by Watson on a Hutton car.

Friday morning was fine and warm and there was a large concourse of people at Hillberry to witness the performances. The roads, however, were still very much affected by the rain of the previous day, but those cars fitted with non-skids experienced little difficulty in negotiating the corners. Most of the vehicles were out and good times were recorded. Some sensation was occasioned by the excellent performance attained by Watson on his Hutton. He completed the circuit in 43 min., which, considering the tortuous and undulating nature of the course, is remarkably fast time. Good as this performance is, however, the fact must not be lost sight of that it just equals that accomplished by George on a Darracq a few mornings ago. Resta on an Arrol-Johnston was slow on his first round, but his second attempt was much more satisfactory. Roberts, who had a narrow escape a few mornings ago by running into a herd of cattle, with disastrous results to the beasts, was out for the first time since his mishap, and traversed several circuits without incident. The two Deasy cars which arrived on the 9th inst., and which have been named "Scarlet Pimpernel" and "Long Span," excited much favourable comment, and their red coats rendered them very conspicuous. A S.C.A.T. car was the only one to experience any trouble, a wheel coming off when ascending the mountain road near Ramsey. Fortunately no one was injured and the driver was brought back to Douglas by Rawlinson on a Darracq.

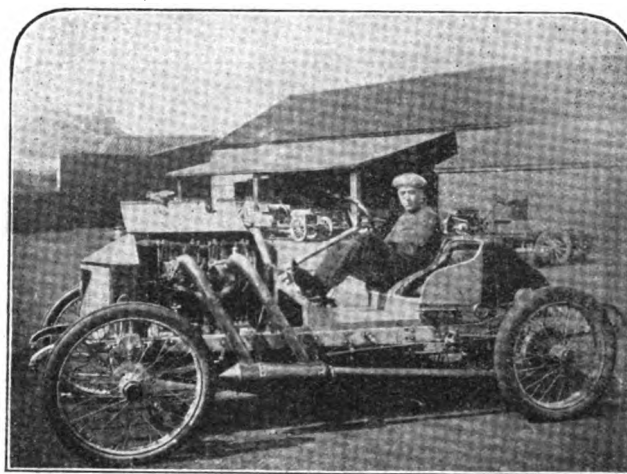
Saturday was the finest morning that has yet been encountered for practice, and a large number of competitors had very satisfactory spins. The roads were hard and dry in most places, and all the drivers reported satisfactory runs which were negotiated without incident. Several of the speedometers registered 80 miles an hour. One of the Westinghouse cars was out for the first time. Its number, according to the Club, is thirteen, but the driver, no doubt from superstitious motives, has numbered it 12A. The car was, however, in trouble, and had to be towed home. The vehicle which came in for the most attention was the Calthorpe driven by Porter. Every morning since practising commenced Porter has been one of the first out, and his performances have been marked with the wonderful consistency with which they have been accomplished. On Saturday morning he traversed the course no less than three times at a very fast rate. His driving is exciting deserved admiration, and at no time is he more at home than when taking the difficult corner at Hillberry at about fifty miles per hour.

Monday was again a beastly morning and the drivers had a very hard time. Hutton, who arrived during the week-end, went over the course, but he did not push matters. Another accident happened this morning to a S.C.A.T. car driven by Buckley. While turning the Waterworks corner near Ramsey a wheel came off. Buckley and the mechanic escaped injury, but the car sustained damage, the front axle being broken and the rear axle damaged.

A meeting of the Highway Board was held on Wednesday, at which the various orders for the closing of the roads were signed. After the meeting the members were taken round the course by Mr. Orde on his Daimler car and Mr. Egan on his Panhard, and among various other matters in connection with the race that were considered was the proper barricading of the corners so that the spectators would be kept at an absolutely safe distance should any car get out of control. In fact, there was not one important point of the course which was not thoroughly considered by the members of the Board and Mr. Orde, and every possible precaution was taken for the safety of the competitors and public alike. Every part of the course will be connected by telephone with the different stations, which in turn will be in telephonic connection with the enclosure. The Isle of Man Railway Company have consented to stop the northern train service on the day of the race so as not to interfere with its progress.

DOUGLAS, Tuesday.

The practising this morning was marred by an unfortunate accident. G. W. Brown on a Coventry Humber was out for the first time since his mishap at Kerrowmoar, and appeared to be going well until he reached Willaston—a point approaching Bray Hill—where he skidded into the gutter. He quickly pulled the car into the middle of the road, but before he could recover him-



Mr. Oscar Copper at the wheel of the Metallurgique Car he will drive in the "Four-Inch" Race.

self he dashed into the hedge at a speed of about sixty-five miles an hour. The impact was so great that the car was thrown across the road into the opposite hedge, a distance of about forty feet. Brown was thrown out at the back, and was uninjured, but his mechanic, named Howarth, from Coventry, was not so fortunate. He was thrown out, and fell heavily on his stomach, and was rendered unconscious for a few minutes. A Beeston Humber driven by Read, which was following, took Brown, and Mr. Egan, of Dunlop's, conveyed the injured mechanic to Kirk Michael. The car was badly damaged, the front axle being broken, the frame twisted, and it is thought improbable that the car can be repaired in time to compete in the race. Usmar, the driver of the Vinot which met with a mishap at Creg-na-baa a few days ago, was reported this morning to be progressing favourably, but it is understood that he will not be sufficiently convalescent to drive in the race. Hutton with his special "Hutton" was out this morning. The car, which has an unknown stroke, was recognised to be capable of very great speed, and is attracting considerable notice. It is reported that some large stones had been placed on the course near Creg-na-baa Hotel in the early hours of this morning, and the Vulcan car had a narrow escape. The matter has been reported to the motoring officials, who intend taking every possible step to discover the perpetrator and deal with him in a way that the offence merits.

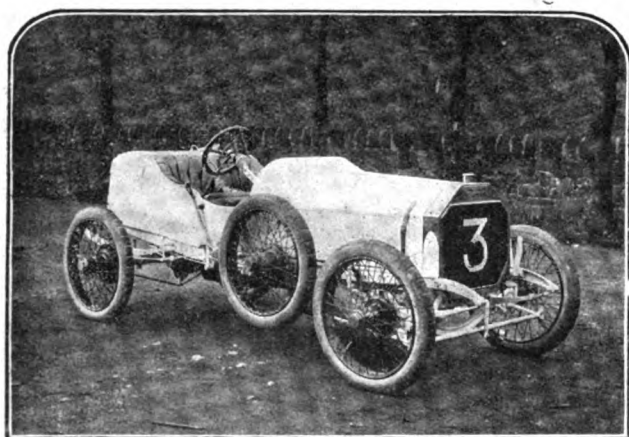
[BY TELEGRAM]

DOUGLAS, Wednesday Morning.

I hear that the Metallurgique cars left Belgium on Tuesday and are expected to reach Douglas by Friday.

This morning was fine and all cars in Island turned out to participate in practice. The feature of morning's accomplishments was a wonderful journey made by George on a Darracq. He completed the circuit of 38 miles in a few seconds over 42 min. This is the quickest time yet attained by any of contestants. Nothing serious in the way of accidents happened. Porter, of Belfast, driving a Calthorpe, took Hillberry Corner too fast and ran into hedge, sustaining broken spring and bent axle and body. Neither of occupants injured. Repairs are being quickly effected, and car will be out again to-morrow. Hodge, on Thornycroft, was in trouble near Ramsey through striking footpath, but with the exception of bent axle no damage was done. Vinot, driven by Outhwaite, had a narrow escape at the same point as the Calthorpe.

During the practice of competitors in the Tourist Trophy race a driver unfortunately ran into a number of calves which had strayed on to the road between Glen Helen and Kirkmichael, killing three of them. The owner's immediate concern was lulled when he found that the Royal A.C. would readily make cash recompense to him, but later on he announced his intention of



One of the Arrol-Johnston Cars which will take part in the "Four-Inch" Race.

Except that the valves are larger, that several parts have been lightened, and that a special carburettor is used, the vehicles are of the standard type. The cylinders are 4 in. bore by 5 in. stroke, and have overhead valves. The three-speed gear-box gives a direct drive to the live axle in the ratio of 3.05 to 1.

driving the whole of his live-stock on to the road during practice hours. In view of the possibilities, Mr. A. J. Wilson immediately detailed an additional couple of Dunlop flagmen to guard the scene of the threatened bovine promenade. Apart from their aversion to injuring live cattle, competitors have no inclination toward collision with even inanimate objects. The flagmen have been of great value on several occasions.

THE modern motor garage and repairing establishment of Messrs. Caffyn Bros. at Eastbourne is well known to all visitors to that popular resort. From a booklet they have just published motorists at a distance who may ever be likely to go to Eastbourne will be able to gauge the extent of this firm's accommodation for the storing and repairing of motor vehicles. The system of private lock-ups is evidently well developed and the engineering department, in charge of a fully qualified expert, is fitted with modern plant and appliances. The coachbuilding section of the establishment is equally replete with modern tools and the branch devoted to accessories is well stored with a variety of spare parts of every description.

THE SOCIAL WHIRL.

AT the instance of H.R.H. the Duke of Connaught, and at the request of the A.A., the M.U. is arranging for the erection of a warning sign on the main road on the London side of Bagshot, between the Cricketers' Arms and the bridge in the village.

DURING the visit of the Duke of Connaught to Rossmore Castle, Monaghan, as the guest of Lord and Lady Rossmore, an accident occurred, but, happily, no serious injury was caused. The Duke and the other members of the house party had motored to Eshnaglough Mountains on Friday for a day's grouse shooting in three motor-cars. On their return the Duke of Connaught and Lord Rossmore, who were in the first car, met at Cortolvin Bridge a horsed vehicle belonging to Mr. Patrick Kieran, of Monaghan. The duke's car passed the horse safely, but on the approach of the second car the animal became fidgety, and backed the vehicle into a ditch, snapping both shafts. Mr. Kieran attributes the accident to the glare of the light of the second car, the cob he was driving being very fresh.

ON Sunday evening Lord Curzon was travelling in his motor landaulet from London to his residence at Hackwood Park, near Basingstoke. About a mile from Sunningdale Station his car collided with another vehicle coming from the other direction. Both vehicles were damaged and his lordship received a wound on his forehead. After a while he was conveyed to Sunningdale Station and went to his destination by train.

THE Churchill wedding on Saturday was quite an automobile affair, the bridegroom and bride each going to St. Margaret's Church in a motor-car. Mr. and Mrs. Winston Churchill drove away to the reception in a car, and, later, made the journey to Paddington in an electromobile.

AT the Ampleforth (Yorks) Agricultural Show, to which the Hon. Gervase Becket, M.P., motored the other day, he made some remarks on the future of horse breeding, and said he did not think that the coming of the motor-car would be the going of the horse. The only suggestion he had to make was that motorists generally should drive with consideration for the use of other people—a piece of advice that is becoming a favourite text nowadays.

AN exciting encounter between an Irish stag and a motor-car has occurred near Killarney. The occupants of the car were the Gaikwar and Maharanee of Kapurthala, and they were being driven by Mr. J. Maher-Loughmann, chairman of the Urban Council and proprietor of the Victoria Hotel, where they were staying. They returned from a delightful drive from Glengarriff after nightfall through the forest, with two powerful acetylene gas lamps alight in front. Their passage was, however, disputed by a fine red deer, who charged full tilt at the radiator with disastrous results to himself. The Prince and Princess alighted from the car; the stag's body was removed from beneath it and placed beside the road on the side of the forest from whose fastnesses the deer had just emerged.

MISS MARIE CORELLI introduces the motor-car into her latest book, "Holy Orders." It appears at the opportune moment to kill a ruffian in the story who would have been hung for previous crimes had the car not been so merciful as to save him prolonged agony. And then—Miss Corelli is always up-to-date—the heroine and her lover go for a trip in a dirigible balloon, the climax being suggested in the following Kiplingesque fashion:—

When noon came both sun and sky were clear of anything more strange than the sea-birds flying across the roughening waves, and diving like winged sunbeams among the rising and falling crests of foam.

LOLLIUS.

THE NAPIER 1909 TYPE 45-H.P. SIX-CYLINDER CAR.

THAT the 1908 motor touring season is now nearing its end is indicated not merely by the keenness in the air and the presence of autumn leaves, but also from the fact that the announcements of the leading motor-car builders with regard to their 1909 models are beginning to make their appearance. Among the earliest in the field are Messrs. S. F. Edge, Ltd., who have sent us a long description and a large number of photographs of the new Napier 45-h.p. six-cylinder car, of which one or two have already been turned out, and of which regular deliveries will begin early next month. As will be gathered from the subjoined description, the changes that have been made, while large in number, are mainly confined to details, the whole chassis having been designed with the view of reducing both the cost of running and of upkeep.

Two views of the engine are given in Fig. 1, from which it will be seen that the cylinders are cast in pairs, the inlet and exhaust valves being operated from one cam shaft and inter-

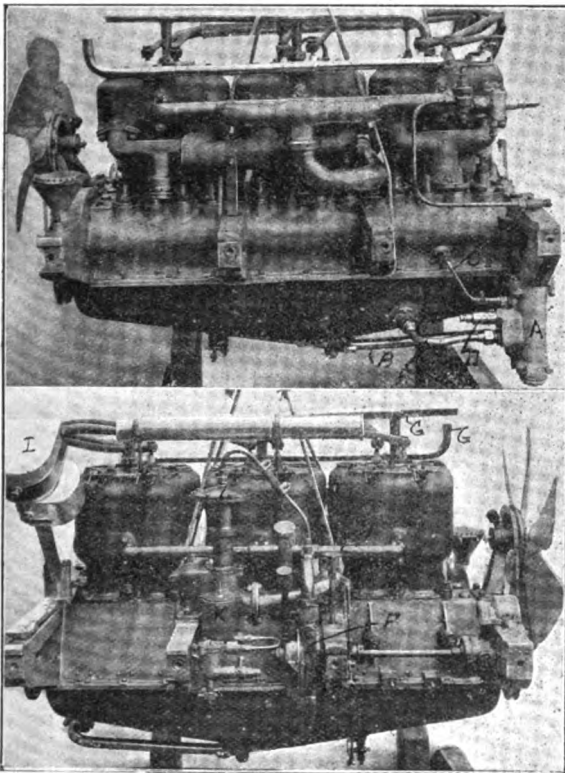


Fig. 1.—Two Views of Napier 45-h.p. Six-cylinder Engine.

changeable. The gears for driving the cam shaft, the water circulating pump and magneto (when fitted) are enclosed at the front end of the motor, the wheels having helical teeth to ensure quiet running. The high-tension distributor and oil circulating pump are driven by skew gear (Fig. 2) from the rear end of the cam shaft within the crank case. The water circulating pump is of the centrifugal type; the system is, however, so arranged that should, for any reason, the pump stop working, the circulation would still be maintained by thermo syphon, assuming that the water in the radiator is at a higher level than the outlet from the engine. The water pipes are of large diameter, and the method of their attachment in the centre of the large cover plate over each pair of cylinders is such that the plates can be readily removed to give ample access to the cylinder jackets for cleansing them from water incrustation and deposit.

The water inlet pipe to the jacket is seen at H in Fig. 1, and the outlet pipes to the radiator at GG. The radiator fan, which is of cast aluminium, runs on ball bearings, supported in a substantial bracket carried on the forward end of the base chamber. The explosive mixture is furnished by a new design of car-

burettor, the main feature of which is that the opening of the jet can be varied by the driver in accordance with the work that the engine is called upon to do, so preventing waste of petrol. A general view of the carburettor, together with the hydraulic regulator controlling the admission of extra air, is seen at K and L in Fig. 1, while details are shown in Fig. 3. In the latter the regulator R is shown in a horizontal position with the air shutter chamber T unscrewed. On the engine the regulator stands verti-

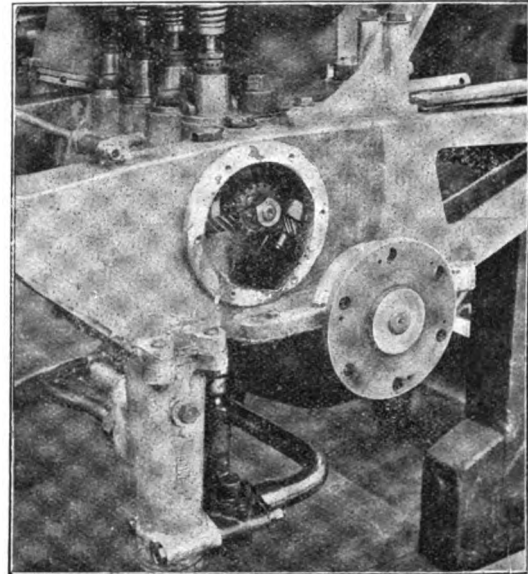


Fig. 2.—Rear View of Engine, showing method of operating the oil pump and the high-tension distributor.

cally over the jet, and the pressure of the water (being greater or less in accordance with the speed at which the engine runs) acts on the diaphragm, to which is attached a plunger opening the triangular ports as the speed rises and gradually shutting them as the speed decreases, thus automatically adjusting the mixture of the gas to suit all variations of speed. The jet V has for its opening a minute hole and a narrow slot which can be just discerned. On the top of the jet is a cover or baffle held down by a spring, and having a slot corresponding in radius to that of the slot in the jet. The movement of the baffle is made to coin-

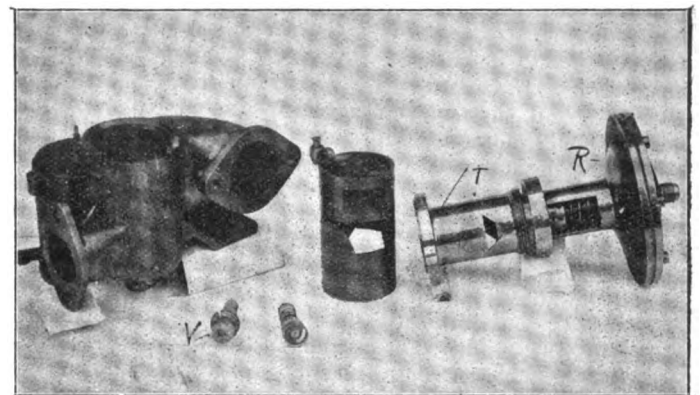


Fig. 3.—Details of "Controllable" Carburettor.

cide exactly with the gas and air throttle, and is under the control of the driver, who can uncover as much of the slot in the jet as is desired, and so regulate the supply of petrol so that no more flows than is required for the speed at which the car is required to run.

Another point to which attention may be drawn is that of ignition. While provision is made for readily installing a gear-driven magneto where desired, the standard type is by coil and accumulators in conjunction with the Napier synchroniser or high-tension distributor, which, together with the low-tension.

contact-maker, is now enclosed on the upper end of an aluminium support bolted to the rear end of the engine crank-case. Just below the high-tension distributor I, Fig. 1, is the low-tension contact maker; the shaft driven by the skew gear is provided with a six-pointed cam, on which works a roller connected with the platinum make and break points. The high-tension distributor carries a finger taking current through a steel strip and distributing it as it revolves to each of six fixed contacts connected with the plug wires, which are carried in an aluminium tube. The high-tension collector is fixed to the plate which carries the low-tension roller and the advance and retard is effected by moving this plate round its own axis, so simultaneously altering the relative position of the roller with the cam and the distributor with the collector. The whole device is beautifully made, substantial in all its details and frictionless in action; the spindle revolves in a ball bearing, while the thrust is taken on a ballrace mounted between two hardened discs.

Special attention has been devoted to the question of the lubrication of the engine, this being maintained by the pump seen at A, Fig. 1, and which, as has already been mentioned, is driven by skew gearing off the rear end of the crank shaft. B is the delivery pipe from the reservoir in the base chamber to the pump; C, the pipe through which the oil is delivered to the engine. Alongside the pump is a chamber containing a gauze

Leaving the engine and passing to the transmission it may first be noted that the clutch is of the multiple disc type. Plugs are placed in the clutch casing so that the plates can be easily washed to free them from dirt and prevent them becoming gummed together. A leather-faced plate brake or clutch stop is provided to prevent the clutch "spinning" and so facilitate gear changing. The pressure between the plates of the clutch is obtained by means of three coil springs, the tension of which can be readily adjusted. A double universal gimbal coupling is provided on the shaft between the clutch and the gear-box, which relieves the transmission from any strain which might otherwise come on it when travelling over rough roads. This joint has numerous greasers fixed to it so that every part can be lubricated.

The gear-box is adapted to give three forward speeds and a reverse with direct drive on the top. The gears, which are operated by a "gate" lever, are so arranged that when the top or direct drive is in operation the lay shaft is out of mesh and therefore not revolving; furthermore, the box is so designed that when a gear is in mesh there is always a bearing immediately next to and supporting it. The sliding gear sleeves are mounted on castellated shafts of large diameter, which ensure an easy movement together with great strength and rigidity. A special stop contained in the upper portion of the gear-box prevents

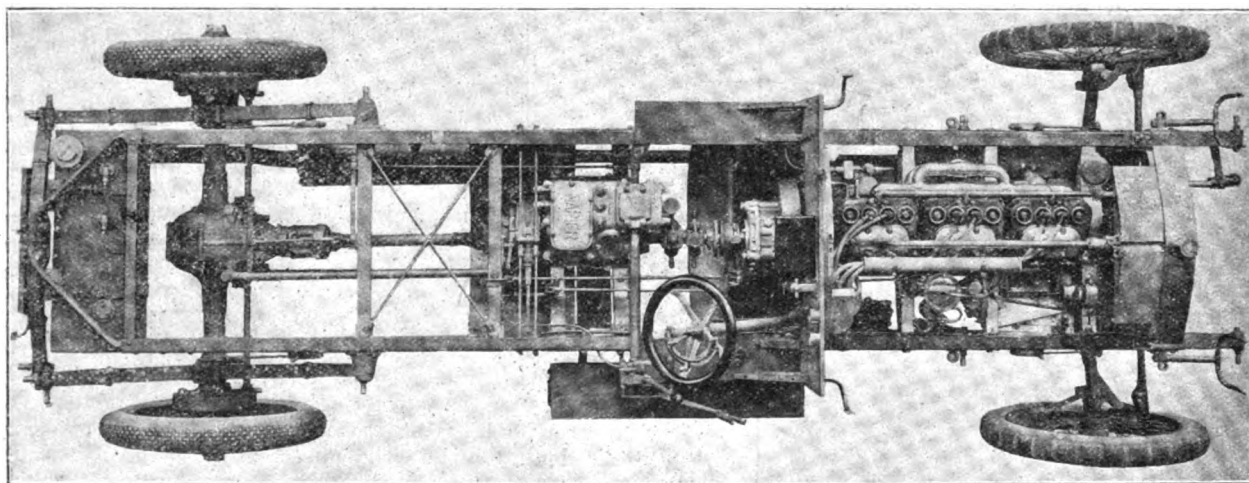


Fig. 4.—Plan of Chassis of Napier 45-h.p. Six-cylinder Car.

strainer, which can be easily removed for cleaning and through which all the oil passes. D is a relief valve which comes into operation should more oil than is actually required for the lubrication of the engine be delivered; when the correct pressure is exceeded this valve opens and the excess of oil runs back to the reservoir by the pipe E, thus preventing any smoke being emitted from the exhaust. The presser of the oil pump has an adjustment nut for the purpose of taking up any play between the plunger and the valve stem.

The crank shaft, which is made of nickel chrome steel, is retained in position by caps bolted to the upper part of the crank case, and runs on four bearings. The base chamber does not take any part in supporting the shaft but acts simply as a sump for the oil, and can be readily removed for inspection purposes. The main journal bearings and crank pins are lubricated under pressure, holes which extend from each journal bearing to a crank pin being drilled in the crank shaft. The webs connecting the pair of cranks at each end of the shaft are in the form of discs, with the view of balancing the reciprocating parts of the engine, and of ensuring freedom from vibration. The substantial design of the various smaller details of the engine is also worthy of attention, particularly the inlet pipe, with its flanged ends, the packed gland joints at the end of the exhaust pipes which allow for expansion and contraction, and the substantial size of the guides in which the valve tappets work, and the manner in which each pair is held in position by a double fork.

the gear wheels moving out of position when the gate change lever is in the neutral position. The whole of the operating mechanism and the reverse wheel are contained in the top portion of the gear-box, which is provided with three inspection covers.

The final drive is by a cardan-shaft and bevel gear to a ball-bearing live axle. The latter is of substantial design and construction, being built strong enough to transmit 120-h.p. The two internal shafts have the differential wheels forged solid with them; the differential gear is of the parallel type with six dead-hard steel pinions, these being bushed with phosphor bronze and mounted on hard steel pins. The outer ends of the external casing of the live axle, upon which the spring brackets bear, are prolonged to take the weight of the car from off the ends of the driving shafts.

The frame of the car, which is of pressed steel, is perfectly straight, without any upward or in-set, the deep section being prolonged well towards the ends to give the necessary rigidity. The rear suspension is composed of three elliptical springs, a special feature of which is that the bracket to which the transverse spring is attached projects from the side members. All strains, therefore, are transmitted through it to the latter, instead of to the centre of the rear cross member. Beyond the induction coil the only other fittings on the dashboard are the oil circulation and air pressure gauges, and the hand pump for starting the air pressure in the petrol tank.

NOTES FROM PERTHSHIRE.

THERE is perhaps no county in Scotland better adapted for motor travelling than Perthshire. The main roads are wide and in good condition; there is an excellent supply of hotels, while the scenery is superb. Situated as Perth city is, in the centre of Scotland, and forming as it does the gateway to the land of the heather and the grouse, it has ever held an important place in the now historic "rush to the North." Up to a few years ago, however, this rush was entirely confined to the railway, but this year has gone to prove that the motor-car must now be included. Prior to the opening of the grouse shooting there was a continual stream of cars of all varieties proceeding northwards, and since then dozens of automobiles have been passing and repassing daily to and from the Highlands.

This, of course, opens up a question which in the future will become a much more burning one than at present, namely, what effect motor traffic may have upon railway travelling, and it is in an annual event like the shooting season that some idea of the important place motoring is now taking as a mode of locomotion can be got. The number of passengers by rail who have come to the grouse shooting this year shows a considerable increase, but this is entirely composed of third-class passengers, there being, on the other hand, a considerable falling off in saloon and first-class travellers, or, in other words, those possessing motor-cars. When one considers the advantages derived from motoring, provided time does not interfere, as compared with journeying by rail, the reason for the growing popularity of the newer mode of locomotion is not difficult to find.

In Perthshire the motorist has been faced with the bitterest opposition from farmers, and the police-traps with which the county abounds are all more or less directly traceable to the numerous complaints made by "tillers of the land." No doubt the automobile will live down this opposition, but to advocate a give and take policy with some Perthshire farmers in their present frame of mind would be next to useless. This feeling, however, has been largely engendered through inconsiderate driving on the part of a few automobilists, and had a little more discretion and consideration for others been exercised in the infancy of motorism much of the unpleasantness now existing might have been avoided. In quite a score of cases prominent farmers in the county are all in arms against motorists, not so much from objections to the motor-car, but because at one time or other they have had an accident, or nearly so, which they believe, whether imaginary or not, was due to carelessness on the part of a motor-car driver. Whatever may have been the faults of the motorist, there can be no doubt he has begun to see through the error of his ways, as only the other day, in the course of a conversation with some half-dozen Perthshire farmers, they all admitted that greater care and consideration was now being shown by drivers when passing horses.

From the number of police prosecutions which have taken place in Perthshire this season, and the heavy penalties inflicted, one would imagine that not only would motorists drive at a slow speed, but that they would have been "driven out" of Perthshire altogether. It would be well if automobilists would contest these cases. No doubt the easiest and the cheapest way is to plead guilty, but the continual submission without any attempt whatever to controvert the statements of the police is, in Perthshire at least, creating a very bad impression against motorists in the public mind.

HEATHER.

MESSRS. BROWN BROS., LTD., to whose Autoclipse lamp and other motor specialities reference has recently been made in our columns, have just issued their new Catalogue of motor vehicles and accessories, fittings, tyres, &c. This comprises nearly 200 pages and more than 1,000 illustrations of the many specialities of this well-known motor house, whose West End showrooms are at 15, Newman Street, Oxford Street, London, the trade being supplied from their extensive depot at 22 to 32, Great Eastern Street, London, E.C.

CONTINENTAL NOTES.

The Mont Ventoux Hill Climb.

Under the auspices of the Automobile Club Vaudois, a two-days' hill-climbing meet was held on Mont Ventoux, France, on Saturday and Sunday last. The course is 21.6 kilometres long, the gradient varying from 1 in 16 to 1 in 7. The starting point was at Bedoin, between which place and the finishing point there is a difference in altitude of 5,345 ft., or just over a mile. On the first day the fastest performance was that of Gauthier, on a Griffon motor-bicycle, who climbed the hill in 28 min. 33 1-5 sec. Notwithstanding the bad weather a large number of spectators assembled to witness the performance of the high-powered cars. Bablot, with his Brasier Grand Prix, proved the hero of the day, for he succeeded in scaling the hill in record time, 19 min. 8 4-5 sec., equal to over forty miles per hour. Last year the best time (19 min. 30 2-5 sec.) of the day was made by Rougier, on a Lorraine-Dietrich. The previous record for the course was 19 min. 13 sec., made by Cagno on a Fiat in 1905.

British Motorists in France.

Recent British motoring visitors to France include Mr. Scott, London (40-h.p. Napier); Lord Rosslyn (50-h.p. Mer-



The Delivery of Milk by Motor Vehicles.

Messrs. Mooney and Sons, of Blackrock, co. Dublin, are employing the 8-h.p. Benz car shown above for the daily conveyance of milk from their farms at Baldonell to Dublin, as well as for the retail delivery to customers.

cedes); Mr. N. Reichardt (25-h.p. Darracq); Mr. Durham (24-h.p. Brasier); Sir John and Lady Brunner (24-h.p. Panhard); Lord Haversham (24-h.p. C.G.V.); Captain Jeffray (40-h.p. Daimler); and Colonel Allen (24-h.p. Napier).

Aeronautical News.

The record for flying has during the past week passed from France to the United States. Mr. Orville Wright, the brother of Wilbur Wright, astonishing the world by two flights at Fort Myers, near Washington, on the 9th inst., lasting 57 min. 31 1-5 sec. and 1 h. 2 min. 15 sec. respectively. The following day he remained in the air for 1 h. 5 min. 52 sec., on the 11th for 1 h. 10 min. 24 sec., while on the 12th he surpassed all his previous records by flying 1 h. 14 min. 24 sec. The greatest altitude reached by his aeroplane was 250 feet. Earlier in the day he had taken a passenger with him and flew for 9 min. 6 sec. In France one of the events of the week has been the formation in Paris of a company with the object of encouraging those who are bent on the conquest of the air. The concern, which is known as the Compagnie d'Aviation, has a capital of £8,000, and M. Delagrangé is a director, and a moving spirit in the enterprise. A suitable ground near Paris is being secured for experiments. A charge will be made for the use of sheds, though aviators who do not require them will be permitted to use the field free of charge. To encourage the sport contests and races will be

organised. There will be stands on the field, and, of course, the public will have to pay for admission. The aim of the company is to offer valuable prizes, so that aviators from all parts of the world may be attracted to give exhibitions and trials. On the 10th inst. Mr. Wilbur Wright made the longest flight he has so far achieved since he settled at Le Mans. Rising to about 100 feet he flew for 21 min. 45 sec., covering about 17½ miles. M. Bleriot suffered another disaster at Issy-le-Moulineaux on Saturday last. He made a number of successful flights, reaching an average altitude of 45 ft. Finally his machine fell to the ground from a height of 30 ft. and was totally wrecked. M. Bleriot was fortunately not injured. The German army airship the Gross, on Friday and Saturday last week, accomplished a circular tour which occupied 13 h. 2 min., thus establishing a new record. The average speed was 20 kilometres per hour and the distance covered about 300 kilometres.

Speed Trials at Salon.

A series of flying kilometre and five kilometre speed trials

French Motor-car Imports and Exports.

Returns just issued show that the value of the foreign motor-cars and parts imported into France during the eight months ending with August last amounted to only £200,400, as compared with £245,040 in the corresponding period of last year. As regards the exportation of French motor-cars and parts, the aggregate shipments during the eight months recently ended only totalled £3,581,880, as contrasted with £3,884,240 in the similar period of 1907.

Industrial Motor Vehicles in Russia.

It is announced that a syndicate of financiers have just submitted to the Russian Minister of Finance the articles of association of a joint-stock concern formed with the object of providing a motor service for goods transport in the districts of St. Petersburg, Moscow, Odessa, and Kieff. The capital of the company is 5,000,000 roubles. Twenty motor lorries are stated to have already been ordered in England. Another company has applied for a concession to run a public motor-car service



Speed Trials at Salon, France.—Bablot finishing the Flying Kilometre at a speed of over 100 miles per hour on a Brasier Grand Prix Racer.

was held on the road between Salon and Arles, France, on the 10th inst. In the flying kilometre the honours of the day fell to Bablot, who, driving a Brasier Grand Prix racer, covered the distance in 21 2-5 sec., equal to a speed of nearly 104 miles per hour. Alezy, on a Clement-Bayard six-cylinder, who came next in 22 1-5 sec., had, however, his revenge over the five kilometres, his time for which was 1 min. 52 sec., as against Bablot's 1 min. 54 sec.

German Motor-car Imports and Exports.

A very quiet state of affairs continues to prevail as regards the imports of motor-cars into Germany. The arrivals of pleasure and industrial motor vehicles and chassis into the country during the seven months ending July last only attained a value of £435,718, as compared with £608,173 in the corresponding seven months of 1907. During the same periods the value of the similar exports from Germany declined from £421,160 to £411,225.

between Elima Kyrokoby, Lapptrask, Mushla and Koria, in Finland.

Miscellaneous Items.

The Northern Games, which are to be held at Stockholm in the second week of February, 1909, will include a number of motor-car races on an ice-bound lake.—Over sixty entries have been received for the Austrian Automobile Club's annual hill-climbing competition up the Semmering, which takes place on Sunday next. In the racing car section the competitors comprise several Grand Prix cars, including the Mercedes, Fiat, Benz, and Mora.—The Automobile Club of Ostend et du Littoral is organising a flexibility and reliability trial for the 26th and 27th inst.—The Automobile Club de la Sarthe is organising a hill-climbing competition to be held on the road between Le Mans and Saint Calais, France, on October 4th.—The annual hill-climbing competition at Gaillon, France, is also to be held on October 4th.

ONE of the leading motor-car firms in the United States is adopting an automatic tyre inflator as a standard fitting on its 1909 models.

A MOTOR-CAB driver was fined 1s. at Lambeth for carrying a greater number of passengers than his vehicle was licensed to carry. He descended Brixton Hill with five passengers in a cab permitted to hold two.

THE military authorities at Dublin are inviting tenders for the supply of motor-cars in the Irish capital for the use of the Army Service Corps for a period of six months from October 1st. Such will be received at Lower Castle Yard, Dublin, until noon on Monday next.

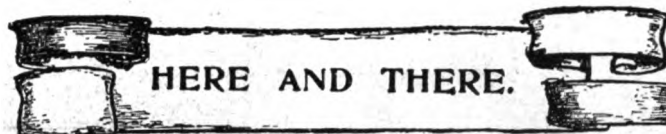
A TWENTY-FOUR HOURS' motor race on the Brighton Beach track, New York, was held on the 12th inst. The event was won by a Lozier car, which, driven by Mulford and Cobe, who took the wheel in turns, covered 1,107 miles. Another Lozier was second with 1,092 miles to its credit, and a Fiat third.

MESSRS. C. S. SADGROVE AND CO., of 4, Hans Road, London, S.W., have sent us a photo depicting the fleet of four Darracq cars they have supplied to the sons of Admiral Bromley. The admiral himself has now ordered a 25-35-h.p. Darracq landaulet from the same firm, which will bring the number of vehicles of one make in the family up to five.

THOSE who are intending to take positions in the automobile industry should become acquainted with as many aspects of its work as possible. Several applicants for situations have lately failed, despite their other qualifications, owing to lack of knowledge of the H.F. vulcanizing process. This can easily be remedied on application to Messrs. Harvey Frost and Co., at 39, Great Eastern Street, London, E.C., where the firm provides ample facilities for chauffeurs to obtain complete knowledge of their standard vulcanizing methods.

ON a recent evening a 12-16-h.p. Clement-Talbot car, with a limousine body, the property of Messrs. Strettons, Ltd., was being driven by Mr. L. Edwards from Northleach to Cheltenham. On the way the car ran out of petrol, and the driver got down and proceeded to open a can to refill the tank. Just afterwards the vapour given off by the liquid became ignited by the side lamp which was near by. The whole car immediately burst into flames, which, despite prompt action, could not be checked. In a short space of time the flames got a hold on the car, and the vehicle was soon destroyed. The affair was a pure accident, no one being to blame in the slightest way. The car was partly insured.

MR. B. S. KEMP, of Chesham Birs, Bucks, has furnished the Rover Company with a brief account of an interesting tour he recently made on one of their 6-h.p. cars which had previously run nearly 5,000 miles. Leaving Chesham on June 27th, the first day's run was Huddersfield, 180 miles. Thence he went through the Lake District, over Shap, up the west coast of Scotland as far as Ballachulish, taking "Rest and Be Thankful" among other notable hills. From Ballachulish he crossed Scotland to Inverness and on up the east coast to John o' Groat's, and nearly to Cape Wrath. Then down through Sutherlandshire and across again to Inverness and on over the Grampians to Dalnaspidal and Dalwhinnie to Pitlochry, where Mr. Kemp turned and came down the west coast to Dumfries, and over Shap and so home. The trip, including various off days for fishing, walking, &c., occupied a month, and the total distance covered was just under 1,900 miles. Throughout the entire period he had not one single stoppage on the road, and he never touched the car with a spanner or any tool throughout. The passenger and driver totalled 24 stone, and a large trunk of considerable weight, fishing rods, bag and oilskins, &c., were loaded up behind. In addition Mr. Kemp carried four gallons of oil, a spare two gallons of petrol, a spare tyre, tubes, and a large kit of tools, including a vulcanizer. The petrol consumption worked out at 37½ miles per gallon, and that of lubricating oil for all purposes 450 miles per gallon.



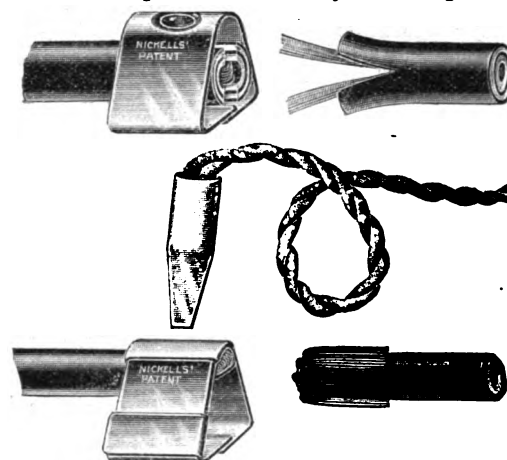
At the recent Cardiff Horse Show Messrs. J. Norman, Ltd., exhibited two motor bodies they have built for two well-known motorists.

THE War Office having offered Bradford Corporation terms for the hire and purchase of motor vehicles in case of emergency, the Tramways Committee have agreed that the two tramway motor-lorries owned by the Corporation should be enrolled.

THE Bradford Fire Brigade Committee has recommended the Council to purchase a motor fire engine from Messrs. Dennis and Co., of Guildford, at a cost of £850. The engine of this machine drives the vehicle, works the pump, and can also be used as a chemical extinguisher in the early stages of a fire.

ACCORDING to a report from Sydney there has recently been a marked expansion of the motor-car business in Australia, it being estimated that there are at least 1,000 cars running in New South Wales alone, although only three or four years ago there were not over forty. Originally French cars were most in demand, then American vehicles came to the front, but now British makers have succeeded in largely capturing the market.

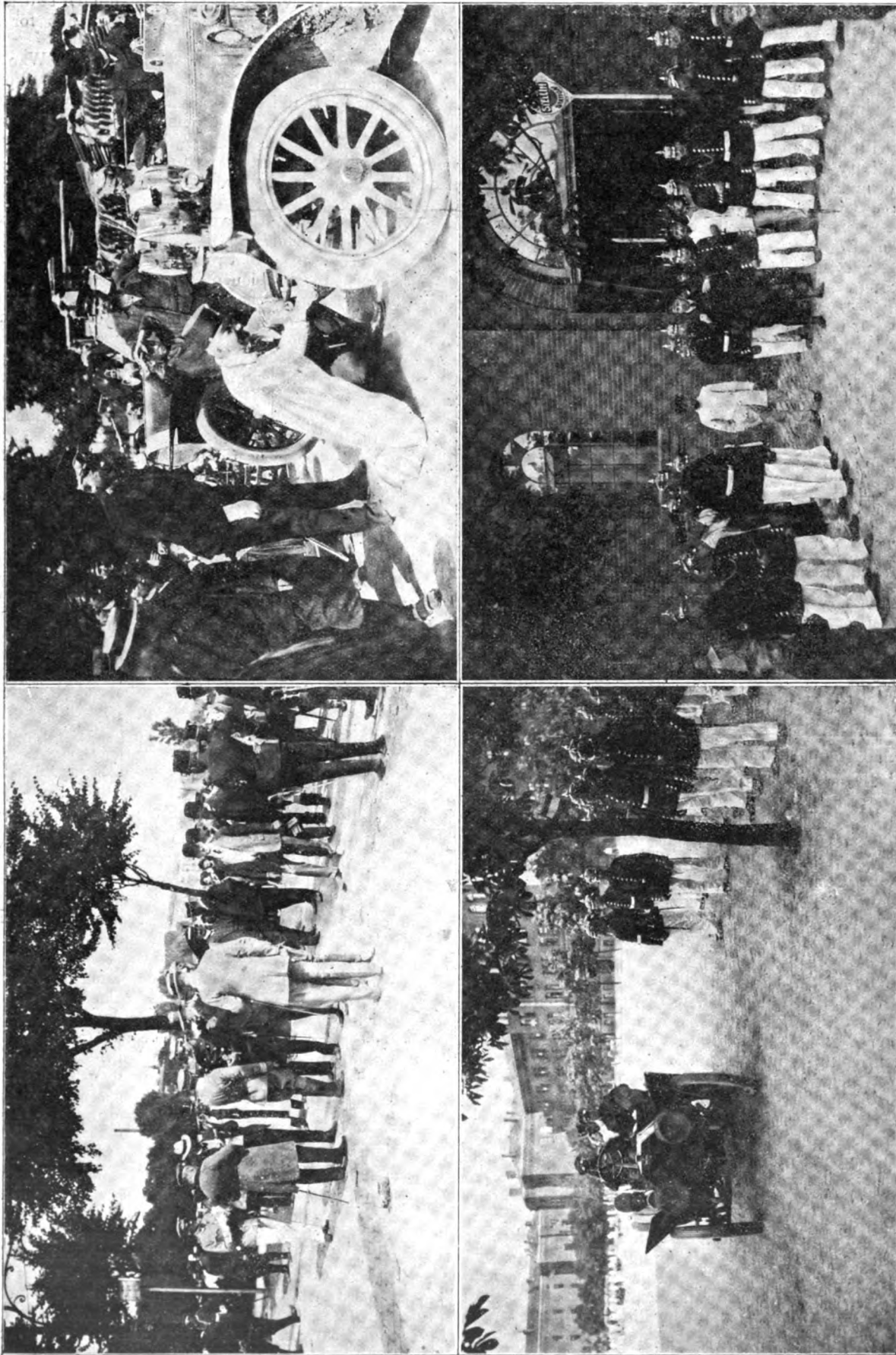
MESSRS. F. S. NICKELLS AND CO., of 2, Dornberg Road, Blackheath, S.E., have lately brought out an improved form of instantly detachable ignition terminal connection, which appears to possess some useful features. The device as made for high-tension wires is shown in the upper portion of the accompanying illustration, while that for the low-tension system is depicted at the bottom. The method of attaching the wires is so clearly shown that no description is necessary. The point about the



device is, that by simply squeezing the side, holes in the two bottom strips are made to coincide, so that the connection can be slipped on to the terminals of the accumulators or sparking plug, &c., a firm and rigid connection being made as soon as the pressure on the fingers is relieved. The little fitting shown in the centre of the picture is a device by means of which an electric inspection or tail lamp can be connected up to the accumulators without interfering with the ignition wires, the metal end of the flexible connection being simply pushed into the special position provided for it on the terminal. Messrs. Nickells are putting these useful accessories up in boxes of eight at a popular price.

WE have received from the Manufacturers' Association of Great Britain, Queen Anne's Chambers, Westminster, an official copy of the new Australian Tariff (with index) as finally revised for 1908, and are informed that British manufacturers may obtain copies of same on application to the offices of the association. The following are the import duties relating to automobiles:—Bodies for motor lorries, and wagons and parts thereof, general tariff 35 per cent. *ad valorem*; British productions, 30 per cent. Chassis for motor wagons and lorries, general tariff 5 per cent.; British manufactures free. Bodies for motor-cars and parts thereof, general tariff 35 per cent.; British 30 per cent. Chassis for motor-cars, but not including rubber tyres, general tariff 5 per cent.; British made free.

THE AUSTRO-GERMAN MOTOR VOLUNTEER COMPETITION.

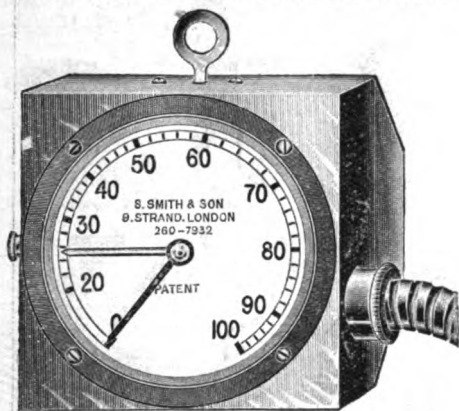


The Austrian and German Motor Volunteer Corps recently held a joint trial between Vienna and Berlin. The above illustrations, reading from left to right, show (1) a group of officers awaiting the cars at Berlin, (2) Officers inspecting the cars at the end of the run, (3) An early arrival at Liegnitz, (4) The Control at Liegnitz. *Autosport, Liegnitz.*

SUCCESSFUL SPEEDOMETERS.

Smith's Speed Indicators.

In many police-courts throughout the country Messrs. S. Smith and Son, Ltd., have demonstrated the capacity of their speedometers to rebut police evidence in motor cases; and at their show-rooms at 9, Strand, London, W.C., we have just examined a range of the firm's specialities, which illustrate the scientific care taken in their construction. For three-quarters of a century Messrs. S. Smith and Son have held a great reputation in connection with watches and other instruments where precision was absolutely necessary, and when they commenced the manufacture of speed indicators the King naturally ordered one for his car. Since then the royal appointments of the firm have been extended and there is scarcely a Royal garage without its Smith's speed indicator. The instrument is made in various types—a simple speed indicator showing speeds varying from 5 to 40-100 m.p.h.; a new model in which a speed indicator and a watch are cleverly combined; a speed indicator and electric communicator, and a triple instrument, comprising indicator, watch and communicator in one excellent device. The driving mechanism consists essentially of an aluminium ring, screwed to the wheel of the car, and of a pulley, which is pressed against the ring by a flat spring. The pulley is provided at its periphery with a rubber tyre. This not only ensures silent running, but also serves the useful purpose of increasing the friction between pulley and ring. When the car is in motion the pulley is rotated by friction, and transmits its rotation, by means of a flexible steel wire, to the speed indicator proper, which may be placed in any position convenient to the driver. The steel wire is enclosed in a flexible metal tube. Within the case of the speed indicator there is a small centrifugal governor, which is driven

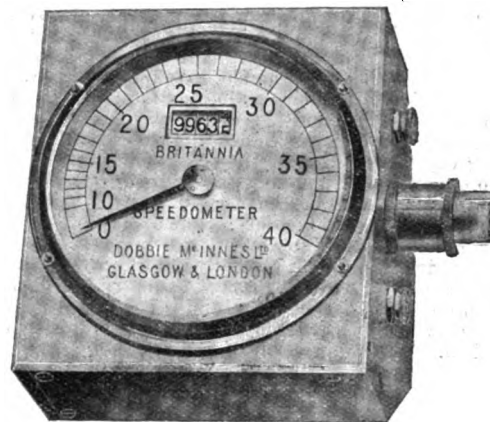


from the steel wire above referred to through a train of toothed wheels. The axle of this centrifugal device is horizontal, and consists of three parts, which telescope within each other. There are also three springs of different size, which successively come into action as the speed increases, the weakest spring being compressed first. After a certain speed has been attained, the latter is prevented by a suitable collar from being compressed further, and the next size of spring comes into action. After a further increase of speed, the third spring is also used. The three spring device described forms the special feature of the instrument, and its advantage lies in the fact that it permits of an open scale, not cramped at one end as is often the case. The movement of the centrifugal governor is transmitted to the dial hand by a grooved sleeve and a pinion, and any backlash is taken up by a spiral spring, which continually tends to move the hand back to zero. The latest form of indicator is fitted with a mileage register up to 10,000, and a trip recorder which can be set to zero at will. The indicating hand is placed in the centre of the dial, and indicates in the standard design all speeds from ten to sixty miles per hour. Lubrication is simple, and the indicating hand is unaffected by vibration. Recently we described and illustrated some of the popular types of these indicators, notably the "Runabout" and the "Popular," which are specially designed to meet the pockets of men of moderate means—a phrase that is losing its point now that such motorists constitute the majority. In attaching the indicators a S spring is now employed to enable a perfect contact with the wheel. The firm have brought out the new model illustrated above, fitted with a maximum hand, which by the use of the key shown, instead of a push pin as previously employed, can be made to fall to the ordinary hand, thus combining to indicate the speed at which the vehicle is then travelling. Motorists near London will be well advised to inspect the exhibition of these devices at No. 9, Strand,

London, W.C.; those living at a distance will find much of interest in the firm's excellent catalogue.

The Britannia Speedometer.

The "Britannia" combined speedometer and mileage recorder is the introduction of Messrs. Dobbie McInnes, Ltd., of 45, Bothwell Street, Glasgow, and is illustrated below. The makers have long been associated with the manufacture of speed indicators for general purposes, so that in developing their ideas in connection with motor-cars they had the advantage of experience in kindred directions. The "Britannia" speedometer has a horizontal centrifugal regulator, and



this is combined with a subsidiary clock-gear mechanism controlling the movement of the pointer. The latter being thus separately energised, and not directly connected to or moved along the scale by the centrifugal regulator, does not hamper the finer movements of the latter, on which, of course, the accuracy and sensitiveness of all such instruments depends. A friction drive of simple construction is employed. The mileage recorder is contained within the case of the speedometer, and the mileage up to 10,000 miles is shown through a small window in the dial, a feature of value being the distinctness of each figure. Ample provision is made for the lubrication of every working part of the instrument. The "Britannia" speed indicator is secured to the dashboard by bolts or screws with ease, and altogether the device is one of merit and ingenuity.

Bailey's Miloscope.

At the Cordingley Motor Show held in the spring one of the novelties attracting considerable attention was the speciality of Bailey's Motor Miloscope Company, 225, Oldfield Road, Salford, Manchester. This was the miloscope or motor-car speed indicator illustrated herewith. The makers lay great claim to the simplicity of the device, which is entirely without gearing, governor, or other delicate mechanism liable to soon get out of order. There is only one moving part, which runs in a ball bearing, and the indicator will stand the vibration, jolts, and jars which may be encountered when fitted on a car. This miloscope depends on centrifugal force, the material acted upon being a liquid which cannot wear out. The revolving vessel consists of two parts, an upper and a lower, connected together by three tubes. The centre one is of glass, the outer two being of brass. The lower chamber and the tubes are filled with liquid; on revolving the instrument round its vertical axis the liquid falls in the glass tube, rising through the brass tubes into the upper vessel, taking up a level which varies according to the speed. There is a float in the centre tube seen in the illustration which acts as a pointer, and enables the speed to be read from the scale at the side. On this scale the speed is indicated at anything from zero to fifty miles an hour. The instrument is hermetically sealed, is instantaneous in action, and quite dead beat. The ball bearings are the only wearing parts in the instrument, and the driving gear, by means of a flexible shaft running at a moderate speed, is simple and easily fixed. Bailey's Miloscope can be driven from the front wheel of the car through this flexible shaft or from any revolving shaft by means of a spring belt. In addition to the miles per hour, the device also indicates the total mileage, and has a neat appearance when fixed to the car.



Correspondence.

(Letters to the Editor should be addressed to the office, 27-33, Charing Cross Road, London, W.C.)

THE PUBLIC ATTITUDE TOWARD MOTORISTS.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—I am sure I have only shared the interest which must have been felt by your other readers of Mr. Stenson Cooke's letter in your recent issue; and assuming, as we are entitled to, that the statements are true, the attitude adopted by the Newmarket police is deserving of the utmost reprehension on the part of right-thinking citizens. One can only regret that the pernicious example set by certain benches of magistrates and their obsequious minions has had this baneful influence on the police.

Now, it would be unreasonable to expect that everyone should welcome the introduction of the new form of locomotion. A reference to the pages of history would quickly dispel any such expectation. The outcry against the railways was, indeed, far more virulent than that at present being engineered against the automobile. But in the deluge of unmerited obloquy and atrabilious vituperation to which the motor-car, and everything and everyone connected with it, is being at present subjected there may be, undoubtedly, some occasional complaint which has some more legitimate foundation than mere owlish obscurantism, and such complaints should be carefully inquired into, and the cause, if existent, removed. This is the attitude adopted by the overwhelming majority of motorists in this country, and it is certainly the attitude, if not the very cause of the existence of the various motoring organizations in the kingdom. The suppression of the road hog is the aim not only

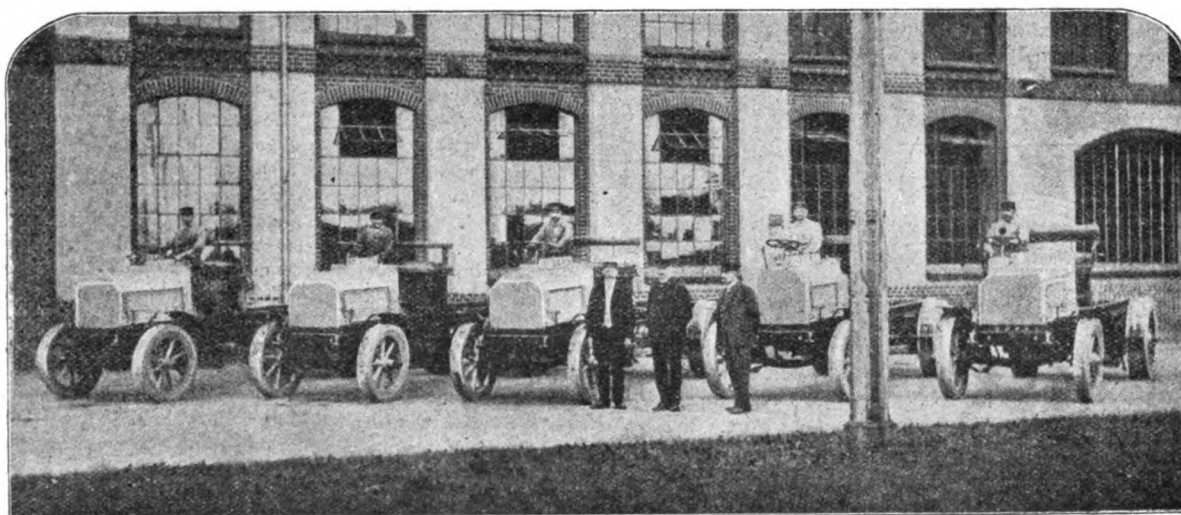
make it popular to journey through the highways, which have been practically deserted since the extinction of the stage coach. Such traffic through those highways must confer immense benefit on the rural population, just as the withdrawal of the stage coach was the cause of considerable distress, and when we hear that an attack on motoring is being engineered at Newmarket, it might be pointed out that such an attack is surely very ill advised.—Yours truly,

FAIR PLAY.

DISC CLUTCHES.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—My experience of disc clutches has impressed on me the importance of correct lubricating in obtaining efficient results; but, as is always the case, the tests of the suitable lubricant have to depend on the pressures, temperature, and speed. For instance, on my Napier, if my clutch springs are screwed up, I must use a more viscous oil if I wish to avoid fierceness. Again, on a cold morning the clutch may slip, owing to the oil being too viscous at the low temperature. Or, on a hot day, and especially with the frequent declutching as in traffic, the oil may be too thin. My firm, when asked to advise in cases of clutch troubles, suggest to the applicant that he should fill his clutch with a medium bodied oil, and gradually add paraffin until he gets the best all-



Five of the German Daimler 6-ton Motor Lorries that are about to be put in service in Antwerp.

of the few hysterical anti-motorists who attain a brief notoriety in the columns of the daily newspapers, or in the meetings of various insignificant local bodies. That the present speed limit is utterly inefficient in attaining the object of its imposition is proved by the attitude of these wisecracks of the eastern counties. Everyone, motorist or non-motorist, desires that all forms of traffic should make use of the highways in such a manner as not to endanger the lives or limbs of the lieges, or in any way cause detriment to property. But, while the policy of the A.A. in placing its scouts upon the road would largely conduce to this end, that in no way, apparently, meets with the views of the Newmarket police. The compilation of a handsome addition to the local revenues by means of fines seems an object of a much more meritorious description, and in the present unfortunate state of our legislation on the subject the Dogberries of any squalid hamlet are given an unfortunate amount of freedom in this direction.

The automobile organizations have done everything in their power to prevent the misinterpretation of the law, yet we find that a very common accusation hurled against these bodies by the Press is that they and their members are desirous of "evading the law." Were a refutation of this calumny necessary it would be found in the fact that the Archbishop of Canterbury, the Bishop of London, many Cabinet and ex-Cabinet Ministers and members of both Houses of Parliament belong to one or other of these organizations. It would be supererogatory to point out that men in such positions are incapable either of personally evading the law or giving any encouragement to such evasion. But, on the other hand, men holding such exalted ecclesiastical and political positions are ever ready to give every encouragement to the eradication of such a social nuisance as has evidently broken out at Newmarket. Without even claiming for the motorist that "even his failings leaned to virtue's side," it might be pointed out, especially to the authorities at Newmarket, that the motorist has again begun to

round results. He then sends a sample of this all-round mixture to us, and we are able to supply him with a clutch oil of the same viscosity, but of course free from paraffin. I trust this simple and fairly efficient method may be of use to your readers who have trouble of this nature.—Yours truly,

A. DUCKHAM.

A CAR FOR THE SCOTTISH HIGHLANDS.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—As there must be many who, like myself, require each season, for shooting lodges in Scotland, a moderately-priced car, which is able to run over roads that are sometimes little better than tracks, I think it would be interesting to hear from your readers what they consider the best chassis for such a purpose. My own ideas are that the following conditions are essential:—

- (1) Chain driven, for I feel sure no cardan shaft would stand the work.
- (2) A four-cylinder engine (probably two ignitions).
- (3) Extra strong springs.
- (4) Weight of chassis not more than 15 cwt.
- (5) Top speed up to 25 m.p.h. without accelerating, and carrying six people.
- (6) Tyres, solid would be best if the machinery would stand it.
- (7) Price of chassis not to exceed £400.

For the last three seasons I have used the same 8-11-h.p. three-cylinder Panhard (with a very light wagonette body), which has been most satisfactory, but it just lacks a little power for hills, although it will go up anything at its own pace, and, although only fitted with magneto ignition, I have never had the slightest trouble with it. As to

tyres, I use the old-fashioned Collier, and these stand very well, some of them doing two seasons' work, but, of course, they are somewhat difficult to detach if one does have a puncture.

In conclusion, I think the Panhard would be an ideal car for the purpose if it had four cylinders without increase of weight, and as the present price of a three-cylinder chassis is only £300, such a car could easily be built at the price of about £350. If anyone knows of a suitable chassis I should be glad to hear of it, but of course one wants a car that will last, and not merely do for one or even two seasons.—Yours truly,
W. P. BRIGSTOCKE.

SOME NEEDED IMPROVEMENTS.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—In response to "Arcanum's" invitation in the *M.C.J.* of the 29th ult. for points in which makers of motor-cars might effect some improvements in their vehicles, I venture to draw attention to the undershields fitted to many cars. Many of these are so fitted that it is quite a task to detach them whenever the operation becomes necessary. While these shields no doubt fulfil their purpose admirably, they are sometimes a great nuisance, especially when one happens to drop any small tool they may be using, or even a nut or bolt which one has usually to "fish" for in a pool of oil and dirt. That this is not an unusual thing is shown by the introduction by one of the accessory firms of a device known as an electro-magnetic nut-catcher, by means of which any small parts which may drop into the gear-box or undershield can readily be recovered.—Yours truly,

S. KNIGHT.

THE CAUSE OF A KNOCK

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—I am the driver of a 10-12-h.p. Argyll car with Aster engine, and would be obliged if you could give me the cause and remedy for the following:—The car runs well on the level road, but on going up a very slight hill will knock very badly, and practically stop. I have retarded the ignition but the knocking still keeps on. At times I hear an explosion at the exhaust. Would too rich a mixture cause the trouble? The carburettor is of old pattern, the air and gas are regulated by hand. I shall be greatly obliged by any information you can give me.—Yours truly,

ERNEST BROWNLESS.

[Perhaps the ignition on our correspondent's car is not sufficiently retarded for hills. Looseness of the connecting joints or other cause may allow too small an arc of movement to the contact maker. This should be verified by checking the position of the pistons when spark passes at plugs with the ignition lever retarded.]

The knock suggests the advisability of a thorough overhaul of the engine, taking up all loose bearings and scraping out the cylinder heads. Too rich mixture, if such is the case, will certainly not improve matters, and is most likely the cause of the explosions occasionally heard in the silencer.]

TAPER CYLINDERS.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—The motor-car of the present day has now reached such a high state of efficiency that it is somewhat difficult, when taking general construction as a whole, to see in what given particular any great improvement can be embodied that will add to economy in working or materially assist in obtaining a higher state of evolution. Makers have spent much time and money—doubtless from a business point of view—in bringing about the present standard of car as we now know it, but a fruitful source of information is the correspondence columns of the *M.C.J.* and other papers that are devoted to the automobile or self-moving vehicle.

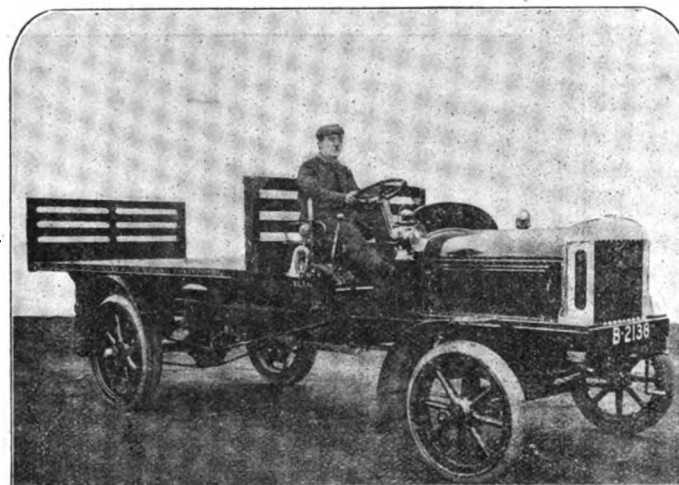
The cylinder of the internal combustion engine forms a most important part of the latter's anatomy, for it must be remembered that it is here that the "vital spark" springs into life; the latent energy takes active form, which causes a harmless mass made of various materials to burst forth into a wild-tearing monster that is capable, when under control, of giving untold joy to those who throw their lot in with it; but which, if, on the other hand, like all great powers, it is allowed to get beyond control, is turned into an engine of destruction that may spread disaster around. There have of late appeared many letters on the subject as to the advantages or otherwise that may be gained by boring the cylinders of a petrol motor so as to give more clearance at one end than the other; in other words, to bore it taper so that the sides are not parallel.

I do not propose to go into the many technicalities but only to explain in simple words the reasons why the matter is worthy of consideration. To realise the very high temperatures that the cylinders of an internal combustion engine are subjected to, it is only necessary to remember that resort to some kind of a cooling process, either through the agencies of air or water, is absolutely necessary, whereas in the cylinders of the steam engine not only is such a heat-reducing factor not required, but the reverse element is brought into play, the trunk being encased in a steam jacket to stop as far as possible condensation. The heat in this latter form of cylinder is nothing like so great, and water, though a

poor co-efficient, is to a limited extent a lubricant; in addition to this the steam enters the cylinder at alternate ends and combats the piston on the reverse side each stroke that it travels the cylinder walls. In the case of the internal combustion engine, on the other hand, the ignited gases always make their entry at the same end of the cylinder and on the top side of the piston.

The natural consequence of this is that the cylinder walls are hottest at the compression end, and so must expand more than at the other. It may be said that the piston also being hot expands too, and so equalises any over-expansion of the trunk; but it must not be forgotten that the piston travels into a cooler part of its casing every trip. Such a sequence of events tells one that if the rings are a perfect gas-tight fit at the cool end, they must be loose when they reach the zone which has the highest temperature; if the rings, when in the coolest part are not a good gas-tight fit, there is loss of compression and consequent decrease of power. If the fit is all that it should be at the compression end, there is a decided tendency to "seize" at the other. The grooving and loss of effective force (so often heard of) by undue pressure on the side walls is oftentimes the result of such excessive friction. Motorists may think this is a subject that is not within their province, but one for manufacturers only; this is quite an erroneous impression; cylinders that have parallel sides may be rebored and made taper. For the information of those who may feel disposed to try it, a clearance of 1-70th to 1-90th of an inch may be accepted as ample for all purposes, but no actual hard and fast line can be laid down, as the amount of taper must depend upon the size of the cylinder, although any great variation from the above mentioned tapers would only apply to very large and powerful engines.—Yours truly,

E. T. H.



The 2-ton Petrol Lorry recently supplied to Mr. W. Banfield, of the Taff Aerated Water Works, Pontypridd, by Leyland Motors, Ltd.

CHARGING ACCUMULATORS.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—I have an electric lighting plant from which I should like to be able to charge my 15 ampere-hour ignition accumulator. The installation consists of 150 lamps of 16-c.p. at 100 volts continuous current. The lamps are ground in sets of ten, i.e., one switch controls ten lamps, and I also have at intervals wall sockets for connecting up extra lamps as required. I should be glad if you could inform me if I would be safe in taking current from one of these wall sockets to charge my accumulator?—Yours truly,

DONCASTER.

[It is an easy matter to charge a 15 ampere-hour accumulator from a 100 volt installation, but on no account should the attempt be made to do so from a wall socket, as this would result in connecting 100 volts on to the accumulator, which would probably destroy it in a few moments. All that is necessary is to obtain what is known as a charging adaptor from an electrical firm, and use this from one of the electric lights. A charging adaptor is simply an ordinary lamp holder with a flexible cord attached to it in such a manner that one can charge an accumulator in series with an incandescent lamp. The lamp should be removed from one of the pendant fittings (inserting the charging adaptor in its place, which it is made to fit), the lamp being put into the holder which is provided in the adaptor. A flexible cord is fixed in the holder, and after testing the two ends of this with pole-finding paper to ascertain which is the + wire, the accumulator should be connected up, taking care to connect the wire from the adaptor to the terminal of the accumulator. The latter is charged by the current passing through the lamp and then through the battery, the lamp acting as a resistance and preventing too much current flowing through the accumulator.]

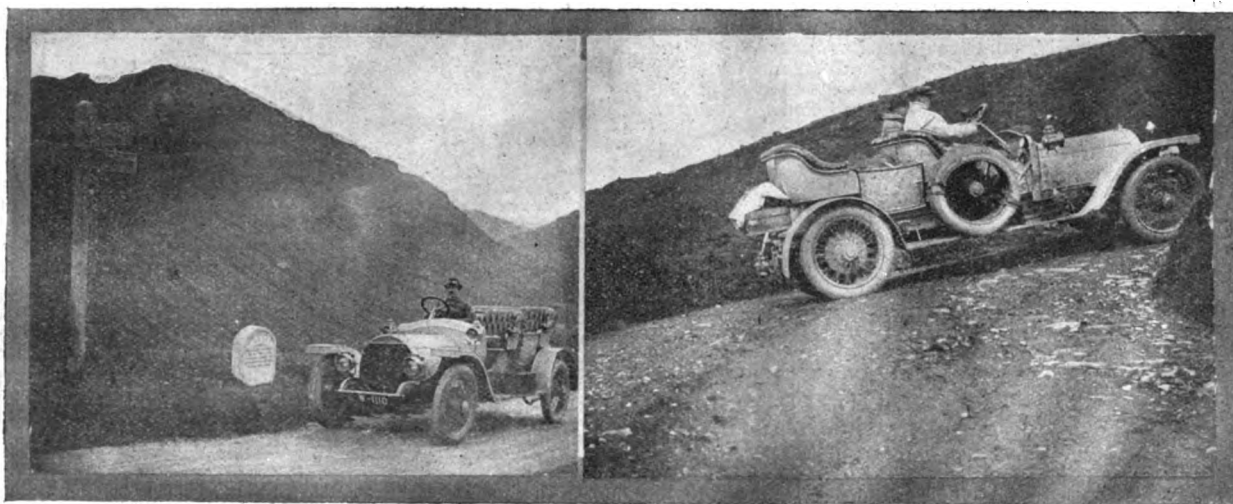
A TRIAL RUN IN SCOTLAND.

MR. PERCY RICHARDSON, the managing director of the Sheffield Simplex Motor Works, Ltd., has furnished us with the following account of a run he recently made over a greater part—including an official hill climb—of the Scottish Reliability Trial course with one of the new model Sheffield-Simplex cars which the company are putting on the market for the 1909 season: Owing to the question of patents we are not at present able to make known the details of the improvements which have been effected, but we are breaking no confidence in stating that they relate to a considerable simplification of motor vehicles, a large number of parts which have hitherto been considered essential to a touring car having been entirely done away with. Previous to starting on the trip described below by Mr. Richardson, the car had, according to the motometer, already covered 3,597 miles, during which period it had climbed a number of well-known hills in Derbyshire and Yorkshire, and also in the South and South-West of England, of such fame as Chapelton, Mam Tor, Snake, Cat and Fiddle, Birdlip, Bath Street, Frome, Porlock, &c.

"The start was made from Tinsley, Sheffield, on the afternoon of Friday, the 28th ult., and the road taken was that to Doncaster, where the Great North Road was joined, to York, Thirsk, Northallerton, Darlington, and Newcastle-on-Tyne. Here a stop was made for the night, the car having covered this distance of 134 miles on the top gear. After showing the vehicle to a few friends in Newcastle the following morning we passed through Morpeth, Alnwick, Berwick, Dunbar, on to Edinburgh. At the latter place we had arranged for Mr. W. E. Townsend to accompany us over the Scottish trial course in order to guide us aright over the unknown roads brought to light by the Scottish Club.

at the commencement, varying from 1 in 5 to 1 in 10 in gradient, we slipped in the top gear, which the car took rapidly for a considerable distance at a surprising speed, and it was not until the steep and tortuous portion near the top of the hill was reached that it was necessary to drop to a lower gear, on which the vehicle finished the hill climb with the greatest ease. Returning again by the same route to Aboyne, we put up for the night there at the Huntley Arms. The distance for the day was 123 miles, and included two hill-climbs; up to this time it had only been necessary to come off the top gear on five occasions, those being at the actual hill climbs themselves.

The next morning we started off for the Trinafour Hill, and leaving Aboyne passed over the trial route through Dafftown, Tomintoul, to Grantown-on-Spey, where we lunched. On the way to this point we took the two stiff ascents of the Bridge of Avon and the Bridge of Brown, as well as the difficult descent between these two points. The car glided along on the top gear the whole of this distance with the exception of the two steep ascents mentioned, which made it necessary to drop to a lower gear, and even on this the vehicle did these stiff climbs well up to the legal limit. Leaving Grantown we passed along the main Highland road running from Inverness to Perth, going through Aviemore, Kingussie, Dalwhinnie, and Dalnacardoch. On leaving the main road for Trinafour at this point we crossed the old disused road across the moor, the car still maintaining its top speed notwithstanding the long and difficult ascent, then on descending the opposite side of the hill our Scotch companion pointed out the Trinafour Hill climb rising in the distant country. Stopping the car at the starting point of the hill-climb my friend gave the word and off we went. Within twenty yards the car was again on top speed, and for some time, owing to the curves on the road, it was necessary to keep the throttle partially closed; however, when the road became visible for a safe distance, the throttle



At "Rest and Be Thankful"

On An ulree Hill.

TESTING THE 1909 TYPE SHEFFIELD-SIMPLEX SIX-CYLINDER CAR IN SCOTLAND.

Arriving in Edinburgh late in the afternoon, we pushed on, after having tea, to Perth, making a total for the day of 193 miles—everything having still been taken on top gear. Leaving Perth on the Sunday morning we ran on through Blairgowrie, and entered the famous Spittal of Glenshee. The car was still sliding along on its top speed, and continued to do so right away up to within a short distance of the bottom of the notorious "Devil's Elbow," where the gradient, for the first time since leaving Sheffield, a distance of approximately 360 miles, made it necessary to use a lower gear. On this the car romped round and up the awkward, steep double bend of the "Elbow" with ease, after which it was reversed down on to the worst portion for the purpose of snapshotting. The vehicle easily started again on this bad gradient, and after having to keep it on the lower gear a short distance until the top of the ascent was reached, the top speed was again slipped in, and we ran silently and smoothly on to Braemar.

After leaving Braemar and proceeding along the main road towards Aberdeen, passing on the way Balmoral Castle, we turned south at Aboyne and reversed that portion of the Scottish Trial road in order to get direct to "Cairn o' Mount." From Aboyne we passed through Strachan and went up the opposite side of the hill climb. This is not quite so steep in itself as the hill climb, but will be remembered by those who took part in the trials as having a very long and severe gradient with a rough and loose surface. The car went at this gallantly, and with the exception of one short piece at the bottom and the last few hundred yards at the top, took the whole of the ascent on the top gear, at a speed well above the legal limit. Arriving at the top we ran down the "Cairn o' Mount" and turned round at the bridge at the bottom, so as to start at the same point as in the trials. The car, starting on the low speed, sprang at the hill, and after mounting the well-known steep bit

was opened full and the car simply shot forward, taking the top gear with ease right over to the top of the hill. Our cautious Scotch friend had been gradually getting enthusiastic over the capabilities of the car, but after climbing Trinafour on the top gear he could not control his enthusiasm any longer, and came out with the words, "Well, Trinafour on top, it is the best piece of work she has done, and if I had not been with you I should not have believed it."

After this we passed on to Tummell Bridge, across the famous Pass of Killiecrankie, through Pitlochry and Dunkeld, and put up for the night at Birnam, in order that first thing the next morning we might tackle the much-discussed Amulree Hill, having during the day covered 169 miles. On leaving Birnam in the morning we were soon at this noted hill, and without a doubt it certainly did look, and proved to be, by far the most severe hill that we met. We ran on the top gear from Birnam to the bridge at the bottom of Amulree, when it became necessary to slip into a lower gear, on which the car easily tackled the hill. All went well until we came to the noted bad double bend, and here we misjudged the first corner and were just unable to get the car round. However, on getting down to examine the corner we came to the conclusion that it was quite possible to get round without reversing, so we let the car run backwards down the hill for a matter of 20 yds., and then went at it again. This time the car took the difficult double bend without a falter in a perfectly clean manner, though there was little left to spare. In order to test its starting qualities under such severe conditions, the car was again backed on to what appeared to be the very steepest part and was started again with ease.

After having had the experience of going over this hill we must say that it is the worst we have ever encountered with a car, and deserves the notoriety that it has gained. Whether it is fair to ask cars to climb

a hill like this in a trial or not we do not propose to discuss, but certainly a vehicle that can take such a hill would be capable of going anywhere even the most exacting would require. After surmounting this "masterpiece of a hill-climbing test," we drove the car across the moor and down the practically equally difficult descent into Kemore. From there we drove along the side of the lovely Losh Tay to Crianlarich, where we lunched. After this we passed along the side of Losh Lomond, and, arriving at Tarbet, we turned west through Arrochar and on to the renowned "Rest and be Thankful." We pulled the car up on the official starting place for this hill, and starting off at the same the car quickly took the top gear, on which it romped along for about two-thirds of the way, when it became necessary to use a lower gear, on which the vehicle travelled as fast as the tortuous road would permit and climbed to the summit with the greatest of ease.

This completed all the official hill-climbs of the Scottish Trials, so at this point we turned for Edinburgh and home. At the bottom of the "Rest and be Thankful," on our return journey, we met that ardent motorist Lord Shrewsbury, on his peculiar boat-shaped Talbot car, evidently on his way to mount the "Rest and be Thankful" Hill. We duly arrived in Edinburgh, and the next day drove on to Newcastle-on-Tyne, where our friends had some more hills ready for us to try the car on. In the city of Newcastle itself we were taken up a steep gradient which is well known to motorists there as "Bottle Bank," and up which the car raced with ease. Spending the night in Newcastle, the works at Tinsley were safely reached on the following day.

On returning, the motometer showed that the car had covered a total distance of 1,207 miles for the trip, making the total altogether of 4,804 miles that the car had run since first put on the road for testing purposes. During the whole of the trial it was wonderful the way the vehicle was able, without any feeling of effort whatever, to maintain its top gear, and it was only necessary to drop off this when tackling the steepest parts of either the official hill climbs themselves, or such well-known bad bits as Bridge of Avon, Bridge of Brown, and Amulree. All the normal running on the main roads and through towns was easily done on the top speed. The only incidents during the run were the sooting up of one sparking plug and two punctures.

AUTOMOBILE INSTRUCTION.

THE Northampton Institute at Clerkenwell has an excellently equipped engineering section, which includes automobiles in its scope. The day classes are held on Thursdays and also on Saturday mornings, while the evening classes are held on Tuesdays and Thursdays in the design, construction and working of motor-cars, the lecturers and instructors being Messrs. C. E. Larard, D. G. Snodgrass and R. Curtis. The course of thirty lectures begins on the 29th inst. and for advanced students drawing office work and practical design is dealt with on Wednesdays. Laboratory work and workshop practice are also included in the course, a thoroughly practical opportunity for becoming acquainted with the technical side of motoring being given.

The special classes and course of instruction in motor-car driving for mechanics and engineers at the Battersea Polytechnic commences at the end of the present month. These are divided into four classes, including (a) Evening and Saturday classes for chauffeurs, (b) Similar workshop tuition for mechanics, (c) Day college course and preparation for motor engineering, and (d) Special lectures and laboratory work in motor-car engineering. Mr. R. J. Taylor is the lecturer and instructor in driving, Mr. L. H. Hounsfield also lecturing to the motor classes. The Polytechnic possesses a modern 20-h.p. Darracq car, 12-h.p. Mors car, and a two-cylinder 10-h.p. car for demonstrations and tests, the two former being also available for driving lessons.

There are several lectures and laboratory courses at the East London College, Mile End Road, E., suitable for those who wish to study to become automobile engineers. In the heat engine laboratory there are two petrol engines upon which brake trials are run by students at the College. There is also a Campbell paraffin oil engine, a Crossley gas engine and apparatus for determining the calorific value of gas and oil. In design work students make working drawings from their own calculations for motor-car engines. In the strength of materials laboratory research work is at present being conducted upon the strength of vanadium and other special steels used in motor-car work and of aluminium. The importance of a University degree in engineering is now fully recognised, and special facilities are given to students to take such subjects for their degree as will be helpful to them in whatever branch of engineering they may enter.

The syllabus of the Petrol Motor Class at the Borough Polytechnic Institute, 103, Borough Road, London, S.E., is of a practical character. The instructor is Mr. A. Marsden, who is assisted by Mr. W. Hill. Course A includes lectures, drawings and calculations and practical work. Arrangements are being made for students to receive demonstrations upon and inspect a typical car, but it is not at present proposed to teach driving upon the road. Course B will relate to motor-car design, and is for motor engineers and draughtsmen. It is intended to carry out the complete calculations and designs of a modern 20-h.p. commercial lorry chassis.

THE "Perfecto" non-skid of the London Motor Tyre Company, of 9A, Newman Street, Oxford Street, London, W., has attained some distinction. A motorist writes that he obtained one two years ago and that it has stood the test of time.

CASES AGAINST MOTORISTS.

ALLEGED RECKLESS DRIVING.

Lord Newborough's chauffeur, Max Dalloz, was charged at Woking on Saturday with having, at Worplesdon, recklessly driven a motor-car, thereby causing the death of one William Larby, aged 13, who was found dying on the roadside just after a dark green car had passed the spot. He was remanded. At the court Lord Newborough was represented by counsel, who stated that his lordship was staying at Harrogate at the time of the fatality. He had telegraphed expressing his deep sympathy with the relatives, and offering to defray the funeral expenses.

"FAILING TO GIVE INFORMATION."

At Chelmsford on Saturday, Benjamin Wickens, of Cranbrook Park, Ilford, was summoned for failing to give information to lead to the identification of the driver of a motor-car, of which he was the registered owner. Mr. F. P. Sutherly prosecuted; Mr. T. W. Staplee Firth defended. Mr. Sutherly said it was alleged that an offence was committed by the driver of the defendant's car at Chelmsford and Widford, and on August 21st Deputy-Chief Constable Somerset wrote to the defendant asking him to give the name of the driver of the car, who, it was "averred," committed an offence on the day in question. No reply was received to this letter, and on the 25th Mr. Somerset wired to the defendant that, if a reply was not sent, he must proceed for refusal. On the 28th the defendant wrote, stating that he had referred the matter to his solicitor. On the 27th he wrote, stating that there was nothing in the Motor Car Act fixing the time in which the information should be given, and that it would be given within a reasonable time. On the 28th the defendant wrote, stating that no offence was committed by the driver of the car. In this case, however, it was not a question of refusing, but of "failing" to give information. Mr. Firth said the rights of the police had been misconceived. He submitted that the prosecution must fail, because no offence had been proved to have been committed. It was not sufficient merely to "aver" that an offence had been committed. The prosecution had not proved that the driver of the car had committed any offence, and the defendant had not been told what offence was "averred" against the driver. The defendant was fined £5 and costs, £1 6s. Mr. Firth said the case would be taken further, and undertook to produce the defendant's licence when required.

CHAUFFEUR SENT TO PRISON.

Claude Levy, 31, a chauffeur, of East Dulwich, was indicted at the Central Criminal Court for the manslaughter of William Burr, aged 34, of Bethnal Green. The case was tried before the Recorder at the July Session, when the jury disagreed. The prisoner was employed by Mrs. Freshfield, of Hampstead, and on the day in question, June 27th, she gave him permission to use her car. In the evening he went to a theatre at Shoreditch, and there took on board some passengers, and proceeded with them into Bishopsgate Street Without. He had gone a distance of about 700 yards when the car knocked down the man Burr, who died from his injuries. On Monday the jury returned a verdict of guilty, and five previous convictions having been proved, Mr. Justice Pickford sentenced the prisoner to four months' imprisonment in the second division.

BATCHES.

Several batches of motorists have been before the courts during the last few days, notably at Newcastle, Carlisle, Basingstoke, Bridlington, Grantham, and the usual Surrey and Sussex rendezvous.

AT TOTNES.

The Totnes Bench have decided that in future motorists summoned to appear before them shall do so in person. Representation by a solicitor alone will not be sufficient for the magisterial dignity.

ROAD REPORTS.

EASTBOURNE.—A system of finger posts is to be introduced at Eastbourne, which will considerably facilitate the passage of motorists through the town.

WARWICK.—The surveyor to the town of Warwick has been instructed to prepare a plan showing the streets that are dangerous to motor-car traffic, with a view to the application to the Local Government Board for a speed limit through the town.

MAYFIELD.—The East Sussex County Council is applying for an Order restricting the speed of motor-cars along the main road through the parish of Mayfield to ten miles an hour.

COWFOLD.—The West Sussex County Council have applied to the L.G.B. for a regulation limiting the speed of motor-cars to 10 m.p.h. on certain roads in the parish of Cowfold.

PENZANCE.—The Penzance Town Council are making application to the L.G.B. to make regulations fixing ten miles per hour as the maximum speed at which a motor-car may be driven within the area of the borough.

MESSRS. A. J. DEW AND CO., 8, Hart Street, High Holborn, London, W.C., have issued a list of spare parts for De Dion Bouton cars which they can supply.

CLUBS AND ASSOCIATIONS.

ROYAL.

ARRANGEMENTS have been concluded with the L. and S. W. Railway, by which members may now purchase passenger tickets and arrange for the transport of their cars from London or Southampton to St. Malo. A representative of the club has been appointed in St. Malo to give assistance and arrange for the issue of French licences without delay.

Arrangements have also been completed so that members may now obtain French licences in Cherbourg, where up to the present it has been impossible to procure them.

THE MOTOR UNION.

THE Motor Union has recently voted small grants for improvement on the coast road from Branton to Croyle, on the north-eastern side of Barnstaple Bay, and on a road near to West Heslerton village (Yorkshire).

The Union has also contributed 20 guineas towards the cost of further proceedings by the legal advisers of Mr. H. M. Gordon in connection with a case that recently occurred at Lancaster.

AUTOMOBILE ASSOCIATION.

THE Automobile Association Road Department has grown to such proportions that there is no longer room for it in the head offices. The

standard class short championship race similarly restricted and a 90-h.p. race with similar conditions. For the first Mr. J. W. Stocks's 25.6-h.p. De Dion is alone eligible, Mr. S. F. Edge's 39.6-h.p. Napier for the 40-h.p. race, and for the 90-h.p. race the only eligible cars are Mr. S. F. Edge's 90-h.p. Napier and Mr. F. R. Fry's 76-h.p. Mercedes. The sixth 26-h.p. race, fourth 40-h.p., third 60-h.p., and the fifth 90-h.p. races are among the events to be decided at the next Brooklands meeting.

YORKSHIRE AUTOMOBILE CLUB.

ON Saturday last the Yorkshire A.C. held a hill-climbing competition on Greenhow Hill, near Pateley Bridge. A large number of spectators were on the course. The latter has an average gradient of one in twelve, the steepest part being one in six. Weighing in commenced at eleven o'clock, and about two o'clock the first car, the 10-h.p. De Dion owned and driven by Mrs. Guy Barrett, of Horsforth, was despatched, and Mrs. Guy Barrett had the distinction of winning the gold medal for first place in Class A, the second prize winner being Mr. C. Pariah, whose 9-h.p. Sizaire-Naudin was driven by Mr. A. Bell. In Class B Mr. T. H. Woollen's 15-h.p. Talbot, driven by Mr. J. W. Hedge, secured first place, making the fastest time, and Mr. P. C. Kidner's 20-h.p. Vauxhall, driven by the owner, was second. In Class C Mr. T. C. Pullinger's 20-h.p. Beeston Humber, driven by Mr. Rowland Winn, of Leeds, secured first place, and Mr. T. H. Woollen's 25-h.p. Talbot,



The Yorkshire Club's Hill Climbing Competition at Pateley Bridge.—The Scene at the starting point.

department has therefore been transferred to 8, New Coventry Street, London, W.C., where all communications with reference to patrols, applications for agencies, positions, &c., should be addressed.

ROADS IMPROVEMENT ASSOCIATION.

ON Wednesday a meeting of the council of the Roads Improvement Association (Incorporated), was held at 7, Albemarle Street, London, W., when reports were presented with regard to the forthcoming International Road Congress, and as to various tests lately conducted with regard to the dust nuisance.

BROOKLANDS.

THE programme of races to be run on the Brooklands track on Saturday, the 3rd prox., includes the 5th all-comers' handicap sweepstakes, the October sweepstakes, the Large October sweepstakes, an obstacle race, a motor-cycle handicap and the Brooklands Grand Prix. Entries for all these events close at mid-day on the 28th inst.

The other events on the programme are the 1908 26-h.p. standard class short championship race for winners of any previous 26-h.p. race who have not competed in any subsequent race of that class. A 40-h.p.

driven by Mr. T. H. S. Atkins, of Leeds, was placed second. In Class D Mr. Albert Farnell, of Bradford, drove his 30-h.p. Daimler car to victory, the second prize falling to Mr. E. G. Cundy, of London, who, on a 60-h.p. Napier, made the fastest time of the day.

MOTOR-CYCLE SPEED TRIALS.

SPEED trials under the auspices of the Dublin and District Motor-Cycle Club were held at the Velvet Strand at Portmarnock on Saturday. Two of the races were won by R. H. Taaffe, while the third was secured by N. J. Chambers, the hon. secretary of the club. Mr. T. W. Murphy acted as timekeeper and starter. The placed men in each of the races were as follows:—

Two Miles Handicap.—R. H. Taaffe (Triumph), 30 sec. start, 1 N. J. Chambers (F.N.), 40 sec., 2; H. J. Wilson (F.N.), 50 sec., 3. Won by 21 sec., a poor third. Winner's net time, 3 min. 9 sec.

Four Miles Handicap.—N. J. Chambers (F.N.), 1 min. 30 sec. start, 1; R. H. Taaffe (Triumph), 20 sec., 2; T. W. Batey (F.N.), 1 min. 30 sec. start, 3. Won by 10 sec.; 49 sec. between second and third. Winner's net time, 7 min. 2 sec.

Six Miles Handicap.—R. H. Taaffe (Triumph), 10 sec. start, 1; F. J. Walker (Rex), scratch, 2; T. W. Batey (F.N.), 1 min. 50 sec., 3. Won by 11 sec.; a poor third. Winner's net time, 8 min. 58 3-5 sec.

NORTHAMPTONSHIRE.

THE speed trials of the Northampton A.C., which were to have been held on the 10th inst. on the drive of the Marquis of Northampton's Park at Castle Ashby, were abandoned owing to an unfortunate mishap which occurred a few moments before the time at which they were to have started. Two vehicles, one driven by Mr. Moreham, of Spratton Hall, the other owned by Mr. W. E. Wren, of Northampton, collided, both vehicles being badly damaged and Mr. Wren sustaining injuries that necessitated his removal to the hospital at Northampton.

MOTOR CYCLING CLUB.

THE annual M.C.C. petrol consumption trial was held at Gerrard's Cross on Saturday last. Thirty-two competitors faced the starter, Mr. S. J. Sewell.

The Car class was won by J. Platt Betts on an 8-h.p. Rover. He covered 19 miles on his allowance of petrol, equalling 47½ miles per gallon. J. van Hooydonk, 8-h.p. Phoenix, was second, doing 16 miles, and H. Fuller, 6-h.p. Piccolo, third with 15 miles to his credit. A gold, silver and bronze medal will be awarded to the above gentlemen, subject to confirmation by the committee. F. J. Jenkins, 20-h.p. Rover; G. A. Phillips, 10-12-h.p. Humber; F. C. Dee, 8-h.p. Rover; R. G. Booth, 15-h.p. Buick; E. A. Anthony, 15-h.p. Ford; J. Cozens, 10-h.p. Lagonda tri-car, finished in the order named.

The Motor Bicycle class was won by G. L. Fletcher on a 2-h.p. Moto-Reve, who will receive a gold medal. W. Smith, 2-h.p. Moto-Reve, was second, silver medal, and A. G. R. Slingo, 6-h.p. Griffon, third, bronze medal.

A storm delayed the start, causing the roads to be very heavy and making the winner's performance all the more meritorious.

Messrs. Camparole, R. M. Brice, R. C. Davis, E. D. Dickson, S. H. Fry, Robert H. Head, and S. J. Sewell have to be specially thanked for their valuable assistance.

THE Southern M.C. will hold a hill climb on the 27th inst., the competitors being divided into five classes.

A MOTOR CLUB for owners of motor-cars as well as motor-cycles has been formed at Ashton-under-Lyne, with Mr. Ellis Brooks as hon. secretary.

TWENTY-ONE new subscribers and six new members were elected at the last committee meeting of the Cycle and Motor Trades Benevolent Fund. A bank balance of £475 was reported.

THE motor gymkhana of the Lancashire A.C. attracted about 300 people, and twenty-four competitors participated in the sports. Mr. A. Birtwistle, J.P., was the hon. secretary of the meeting.

BY the kindness of the Earl of Devon (a vice-president of the club) a meet was held at Powderham Castle on Saturday, the 5th inst., when over forty cars were drawn up in the beautiful old castle yard.

AT the invitation of Mr. and Mrs. Geo. H. Hodgson, a garden party was held on Saturday afternoon at Hexton Manor, to which the members of the Hertfordshire County Club were also invited.

IN the Yorkshire A.C. closed hill climb at Pateley Bridge, on Saturday, the fastest time was made by a Dunlop-tired six-cylinder Napier, whose performance lowered the record for the ascent by five seconds.

THE CARE OF MOTOR-CAR BODIES.

THE following hints as to the maintenance of the paint work, bright parts and upholstery of motor-car bodies are taken from the book of directions issued by one of the best known French body builders. With regard to paint work, after the car has been out on a run it should be washed immediately upon its return to the garage, as mud and dirt will affect the paint if allowed to cake upon it. Starting with the mudguards and wheels, these should be hosed to loosen the mud, which can then be removed by means of a spoke brush. The stream from the hose should not be fierce, but only of sufficient strength to soften and loosen the mud. If a strong stream is allowed to strike the paint work upon a wooden body the panels will be swelled, developing cracks and seams, and the paint will flake off, to the detriment of the appearance and service of the body. The latter should next be lightly run over with a dripping sponge to remove dirt, &c., and then with a clean wet chamois leather, after which it is dried by means of another clean dry chamois. Under no circumstances should petrol, paraffin or siccatives of any nature be mixed with the water, as they are harmful to the surface of the paint. Dust can be readily removed by means of a feather duster used for the purpose.

Care should be taken when using the hose to avoid wetting the spare tyre cases and the various pockets and receptacles, on account of the tendency to rot and crack them. A damp cloth followed by a dry one should be used for cleaning these. The splashing of water from the hose into the interior of the body should be avoided. Stains and small scratches can be removed by the application of a preparation obtainable from coachbuilders, this being applied by means of a pad of cotton wool and dried up by a similar clean pad.

The interior of the car should always be neat and clean; the carpets, therefore, should be removed and beaten after each trip, and the hangings carefully brushed with a silk or other soft brush. Leather upholstery should not be washed, but simply well wiped off; brocades should be given over to the coachmaker, and their cleaning not be attempted in the garage, as the use of benzine and other stain removers tends to cause the material to become streaky. Grease spots may be treated by the

application of petrol and removed by rubbing when dry. Floor boards should be examined as to their fit, whether they have warped, &c., as, if they show cracks or spaces between them, the heat and odour of the motor, mud, and even grease may get into the car. When the body is of the landaulet type it is essential that the leather head or heads should always be kept closed when in the garage, to prevent cracking and bulging. As soon as the car has returned from a run the head should be closed and wiped over with a flannel dampened with linseed oil. A thorough washing with the oil should be given to the head once a month as well.

All bright work, such as lamps, horns, rails, &c., of copper, brass or nickel plating, should be taken special care of, polishing powder or fluid being applied immediately after the parts have been wiped dry with a flannel, as soon as the car is in the garage. The parts are then polished with a soft flannel or other polishing cloth. Oxidised or silver plated parts should be lightly wiped with a chamois or clean flannel and not rubbed briskly. Rubber foot mats, treads on the steps, &c., should be scrubbed with water and black soap, using a stiff scrubbing brush, and afterwards wiped dry with a cloth. To prevent their decay, particles of oil and grease thereon should be immediately removed, but not with petrol or the like, as this rots the rubber.

When a tyre bolt or mud guard is removed the paint at the junction is broken; this should be renewed, when the operation is completed, by means of a camel's hair brush and the necessary paint, which can be obtained from the coachbuilders.

COMPANY NEWS.

E. W. WILLARD AND CO.—This company has been registered, with a capital of £2,500, to acquire the business of a motor accessories factor and manufacturer, carried on by E. W. Willard at 187, Newhall Street, and 32, Paradise Street, Birmingham. The subscribers are Messrs. E. W. Willard; R. C. Willard, and P. H. Johnson.

THE BERNA COMMERCIAL MOTORS, LTD., with an authorized capital of £50,000, has been formed in Toronto, Ontario, to acquire the selling rights of the Berna Commercial Motors for Canada, the United States and Mexico.

THE second annual general meeting of the General Motor Cab Company (Limited) took place on Monday under the presidency of Mr. Davison Dalziel. At the present moment, he said, they were running on the streets (including those taken over from the United Motor Cab Company) nearly three times as many cabs as the average number which earned such good profits for the period to July 31st, and that number would naturally be materially increased until the whole of the 4,000 cabs they would own should be in use. The directors had fully gone into the question of depreciation, and it was amply met by the charging of all up-keep and maintenance to revenue, and the setting aside of one-sixth of the value of the average number of cars in use each year until their total value had been set aside. Unless the whole question of garaging and up-keep could be dealt with upon a comprehensive scale, no motor-cab company could be made to pay in London. The arrangements for taking over the United Motor Cab Company had been completed, and since August 1st that concern had been worked for the benefit of the General Motor Cab Company. In the course of a few days the liquidator of the United Company would be in a position to announce the distribution of the dividends accruing to the shareholders of that company, when an exchange of shares would forthwith follow, and the amalgamation be concluded. By that amalgamation the capital of the company had been increased to £1,000,000, with 1,000,000 shares of £1 each, and the directors had under consideration the possibility of asking the shareholders to approve the conversion of these million £1 shares into 200,000 shares of £5 each, or 250,000 of £4 each, one of the reasons being to meet the wishes of the French market, where the shares were already actively dealt in. The company's interest in and friendly alliance with the Provincial Motor Cab Company were of a most satisfactory character, and that company was successfully running motor-cabs in Manchester, Sheffield, Leicester, Harrogate, Bristol, Brighton, Bournemouth, Folkestone, and Aldershot, and was on the point of opening in Liverpool, Glasgow, Edinburgh, and other large towns. Mr. Edgar Cohen seconded the motion and the report was adopted.

PUBLIC SERVICES.

At the forty-ninth annual general meeting of the London General Omnibus Company it was reported that the number of omnibuses running was 1,336, the mileage run was 32,176,100, and the number of passengers carried was 195,894,900, the latter a decrease of over 12,000,000. Mr. Henry Hicks, the chairman, said they had gone in for motor-buses unwillingly, but having done so they were determined to keep up to the mark. He hoped that the contemplated amalgamation would result in economies that would act favourably on the future results.

AN application for the introduction of the electro-buses into Harrogate has just been made to the authorities.

A SERIOUS accident is reported from Alsackby, a village on the main road between Lincoln and Peterborough, a car overturning while running up a steep embankment; the passengers, two ladies and two gentlemen, being seriously injured.

FORTHCOMING EVENTS.

SEPTEMBER.

- 19th (Sat.).—Provincial meet of the Motor Union at Oxford. Sheffield and District A.C. hill climb at Padley Wood, Grindleford.
 North Middlesex A.C. 100 miles reliability run.
 Meet of the Hull Auto Cycle Club and the Lincolnshire Motor Cycle Club at Brigg.
 Lunch of the Kent A.C. at Dover.
 L.G.B. inquiry into application of the Bangor Town Council for a restriction of motor-car speed.
 Lancashire A.C. closed speed trials.
 22nd (Tues.).—A.C.U. International Auto-cycle Tourist Trophy Race, Isle of Man.
 Last Practice Day for Isle of Man Race; weighing of competing cars, 10.30 a.m.
 23rd (W.).—"Graphic" Trophy (10 a.m.) and "Henry Edmunds" Competitions (2.30 p.m.) in the Isle of Man.
 24th (Th.).—The "Four Inch" Race organised by the Royal A.C. in the Isle of Man.
 25th (F.).—Welsh A.C. reliability trial for motor-cycles.
 26th (Sat.).—N.W. London M.C.C. petrol quantity judging competition.
 Invitation to the Kent A.C. by Mr. and Mrs. Schlentheim to Chislehurst.
 Examination for R.A.C.'s driving certificates at the Adelphi Hotel, Liverpool.
 27th (Sun.).—Southend M.C. run to White Hart Hotel, Braintree.

OCTOBER.

- 3rd (Sat.).—Brooklands A.R.C. meeting.
 4th (Sun.).—Gaillon Hill Climb.
 11th (Sun.).—First International Road Congress and Exhibition opens at Paris.
 International long distance balloon race, starting from Berlin.

NOVEMBER.

- 6th (F.).—Invitation Smoking Concert of the Stanley Cycling Club at the Queen's Hall, London, W.
 14th (Sat.).—Thirty-third Annual Dinner of the Stanley Cycling Club, Hotel Metropole, London, S.W.
 20th-28th.—Stanley Show at the Royal Agricultural Hall, London, N.
 26th (Th.).—400-mile International Grand Prize Race of the Automobile Club of America.
 28th (Sat.).—Opening of the Paris Motor Car Exhibition.

DECEMBER.

- 23rd (W.).—Speed and reliability trials at Nagpur, Central Provinces, India.

LIGHTING-UP TIMES—LONDON.

| | | | |
|---------------|-----------|-----------|-----------|
| Sep. 19th—7.5 | 21st—7.1 | 23rd—6.56 | 25th—6.52 |
| " 20th—7.3 | 22nd—6.59 | 24th—6.54 | 26th—6.49 |

To find the approximate lighting-up time in September for Birmingham 9 minutes should be added to the above times, 8 for York, 13 for Manchester, and 25 for Glasgow.

POLICE "CONTROLS."

MOTOR traps leading to Hailsham Petty Sessions have been established at Chiddingfold and Farmfield, the police being stationed near the Pear Tree Inn at the latter place. The control at Rottingdean is also in frequent operation.

THE Oakham police have established a trap of a quarter of a mile at Great Casterton.

THE Yorkshire traps recently reported include one at Fryston Park Corner, near Selby.

THE police are paying considerable attention to the speed of motor vehicles ascending Shilton's Hill, near Retford, observing the district from a position of vantage at Carolgate Bridge.

POLICE traps have lately been reported on the road between Glenshee and Blairgowrie.

THE Boroughbridge road, near Knaresborough, is again the scene of active police operations against motorists.

A POLICE TRAP is frequently in operation on the road between Melbourne and Cambridge.

THE police have established several motor traps in the vicinity of Camborne.

LINCOLNSHIRE controls lately reported include those between Long Bennington and Great Gonerby (4 miles), South Witham and Colsterworth (2½ miles), Great Ponton and Spittlegate (2½ miles), and Foston and Long Bennington (4 miles).

MESSRS. MINERVA MOTORS, LTD., have acquired the Belgian rights in the "Silent Knight" valveless engine. A 38-h.p. chassis embodying the new engine will be exhibited on the Minerva stand at the forthcoming Olympia.

THE RUBBER EXHIBITION.

AT Olympia, London, there is in progress, and will continue till the 26th inst., a Rubber Exhibition which is serving a great educational purpose, acquainting the public with the methods of cultivating and enlarging the view as to the utility of the finished product.

The India-rubber, Gutta Percha and Telegraph Works Company, of Silvertown, E., show models of motor tyres, including the Persian and the rubber-tread, Palmer cord, as well as examples of india-rubber matting and floor covering. Several machinery exhibits are on view, one of the most interesting being that of Messrs. David Bridge and Co., of the Castleton Ironworks, Castleton, Manchester, who have an electrically driven washing and sheeting machine in connection with which the Heywood and Bridge's improved patent clutch is employed to demonstrate how easily rubber machinery can be put in and out of gear. Their machinery is to be found on the leading rubber plantations, the firm having laid themselves out specially for this particular branch. They are able to deal with all species of rubber in a satisfactory manner in the washing, sheeting, crepeing, drying and blocking process, thus enabling the exportation of rubber in a pure state from the rubber growing countries. Messrs. Fleming, Birkby, and Goodall, Ltd., 39, Lime Street, London, E.C., have a representative exhibit illustrative of their "Teon" belting for power transmission. Ara, Ltd., have also a stand.

Latterly the "Prowodnik" tyres have come well to the front in this country, and considerable interest attaches to the Prowodnik Reclaimed for goloshes. This contains 40 per cent. of rubber and is going largely into use, Mr. John Lang, of 137, Fenchurch Street, E.C., being the selling agent in London. Messrs. John Bright and Brothers, Ltd., of Rochdale, show cotton ducks for motor tyres and the New Motor and General Rubber Company, Ltd., of Harpenden, has a good display. Another exhibit of motorial interest is that of Mr. A. W. Leslie, the well-known dealer in motor tyres and scrap rubber, of 119, Stoke Newington Road, London, N. Messrs. Piggott Bros. and Co., Ltd., 57-59, Bishopsgate Street Without, London, E.C., show their camp furniture and tents, and Messrs. Diespeker, Ltd., 57-60, Holborn Viaduct, E.C., display the Dunlop rubber tiles which they have supplied to many famous vessels and popular institutions.

BUSINESS NEWS.

MR. GEORGE TAYLOR, of All Saints' Street Works, Bolton, has recently put on the market a patent pressure indicator known as the "Okillo," for internal combustion engines. The device can be readily attached to the cylinders, and accurately records the actual explosion and compression pressure.

THE PETER UNION TYRE COMPANY, LTD., of 6, Upper St. Martin's Lane, W.C., has opened a Midland branch at 160, Corporation Street, Birmingham, where a stock of Peter Union pneumatic tyres will be kept.

WE are informed by Messrs. Clement-Talbot, Ltd., that they are now offering for sale the Talbot cars which have been used by them for contest work during the year. Among these vehicles are the 15-h.p. and 25-h.p. which came through so satisfactorily and successfully in the 2,000 miles trials, winning the silver cup in Class F; also the 15-h.p. car used at Saltburn, where it won the Yorkshire A.C. trophy, and afterwards distinguished itself so conspicuously at Astor and Newnham hill-climbs, &c.

MESSRS. J. KEELE AND CO. have now on view at their depot at 72, New Bond Street, London, W., the 1909 models of Belsize cars, trials on which can be arranged.

COINCIDENT with the information given in our last issue in respect of the establishment of an English agency for the Belgian "Imperia" cars in Great Russell Street, London, W., comes the information of the success of a 22-28-h.p. car of this type at the Mont Ventoux hill climb held in France last week end, the vehicle climbing the hill in 24 min. 7 sec.—the fastest in its class.

THE Motor House have made arrangements with the makers to supply them with 200 Jackson light cars fitted with De Dion motors for the coming season. Deliveries will commence in November, and cars for trial runs have already been received by the Motor House in Euston Road, N.W., which intends to dispose of these vehicles at a price which will enable them to reach many who have hitherto had to keep outside the ranks of motorists.

At the Yorkshire A.C. Hill Climb at Pateley Bridge on Saturday last, Mr. T. H. Woollen's 15-h.p. Talbot was again remarkably successful. In addition to making fastest time in Class B it secured first prize on the formula. This is probably the last competition in which a Talbot car will take part during Mr. Woollen's tenure of office as general manager to Clement Talbot, Ltd., and it is gratifying to note that his car has been so conspicuously successful on this occasion. It is doubtless the spirited enthusiasm which Mr. Woollen has all along displayed, and has inspired in those around him, in these events, that has contributed largely to the continuity of Talbot successes.

THE Motor-Car Journal.

VOL. X.]

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COMMENTS.

The Week End at Brighton.

OUR Brighton correspondent writes:—
“Last week end, with its renewal of summer weather, brought forth interesting proof of the establishment of a new régime, for I was informed during the course of Sunday that all of the hitherto known police traps along the main road from London to its favourite seaside suburb had been temporarily abandoned, with the exception of one at Haywards Heath—a sign, apparently, of the willingness of the police authorities to test the sincerity of the crusade of reformation to which the R.A.C. has pledged itself. As a consequence the motoring traffic into Brighton was thicker than I have known it for many months past. The luncheon tables of the Metropole and Royal York were gay as gay could be, and up and down the Front the whirl of cars of all shapes and sizes was animated and incessant enough to suggest the marshalling of some big motor gymkhana. Among those calling at the Metropole were Mr. Alfred Rothschild, driving a beautiful Renault of imposing strength and dimensions; Mr. Abrahams and Mr. Bellisoe, each with a Darracq; Mr. Knox and Mr. Beck with Argylls, Mr. Brown (Mercedes), Mr. Edgar (Napier), and Mr. James (Mercedes). To identify a tithe of the Sunday visitors, who merely run their cars into a garage for an hour or two, and fetch them away without bothering to register the ownership, is, however, a matter of impossibility in a town like Brighton. But among the people whose fleeting presence at one or other of the best hotels I did hear of were Mr. Greening (Humber), Mr. Clase (Standard), Mr. Grace and Mr. Howlett (Darracqs), Mr. Randolph Barnes, with a particularly fine Napier, Mr. Acklam (La Buire), Mr. Cridlan and Mr. Cooper (Minervas), Mr. Peall (Panhard), and Mr. V. V. Schaposchinskioph—a gentleman whose imposing name I insisted on having carefully spelt over to me two or three times—with a handsome Renault.

The L.G.B. Circular.

THE circular which we were recently able to announce as being in preparation at the Local Government Board has just been issued to the County Councils and to the Town Councils of boroughs with a population of over 10,000. This recognises that there is ground for some of the complaints that have been made, and places on official record the existence of the inconsiderate driver. At the same time they note a growing desire among motorists to check the abuses that have been alleged, and before dealing with the representations which have been made as to further legislative restrictions being imposed on cars, have thought well to direct the attention of local authorities to those provisions of the existing law which have a bearing upon the subject of motor-car driving. These are contained in Sections 1, 8, 9, and 11 of the Motor Car Act of 1903, and they are considered at some length in the circular from the L.G.B. They suggest that the provisions for the suspension of licences and the conviction of reckless drivers should be carefully and systematically enforced, and in particular that racing on the public highways, especially by motor-buses in London, should be rigorously suppressed.

Importance of Section 1.

ALTHOUGH the Board thus calls the attention of the local authorities to the methods by which motor traffic can be dealt with at present, they do not encourage applications for the imposition of low speed limits. They would, in fact, prefer to see motor traffic regulated under Section 1 of the Act, where such is possible, and are convinced that a steady and systematic enforcement of that section would prevent the flagrant abuse of the highways by drivers. Thus it would seem that they are inclined to the abolition of the speed limit altogether, and would rely for convictions on the “reckless, negligent, and dangerous driving” rather than by the methods pursued by some of the police to trap motorists. We are glad to notice that the circular also emphasises the part that the local authorities can play in connection with this matter. Their whole duty does not consist in suggesting to the police a more watchful attitude towards motorists, but they should use “every effort to diminish the risk of accidents.” Where there are dangerous corners advantage should be taken of a suitable opportunity to obtain their removal where practicable; street corners in towns should be rounded and in rural areas pruning hedges should be undertaken in cases where, by obscuring the view, they constitute a danger to traffic at cross roads. In some instances it might be found possible, considers the Local Government Board, to arrange for open fences being substituted for hedges, while they cannot but think that centre posts in connection with tramways and light railways, electric and other standard lamps should if possible be avoided.

Restricted Speed Limits.

AN important section of the circular is that which gives the official view with regard to the authorisation of speed limits. It has been widely recognised “that motor-cars can often travel with safety at a speed exceeding ten miles an hour, and that for a careful and considerate driver who drives his car slowly through towns and villages, and when passing other traffic or pedestrians restricts his pace so as to avoid enveloping them with dust or bespattering them with mud, a compulsory low speed limit is scarcely ever necessary.” Unfortunately, however, all drivers are not of such exemplary character. It is pointed out that such speed limits are more suited for application to lengths of road or street than the isolated points of danger, the latter being more appropriately marked with danger signals. In some country towns extra precautions are necessary on market days and special occasions, and it might often, according to the Local Government Board, be best met by constables on point duty rather than by restrictions of speed to be observed at all times.

The Four-Inch Race.

THERE is no doubt that the opinion expressed by Mr. Joynson-Hicks at Oxford on Saturday with respect to the race for the Tourist Trophy is the view of many motorists who have followed the course of public opinion during recent months. The times attained by the cars during the practising days have alarmed many people, who have wondered

whether these "touring" cars capable of speeds far beyond the legal limit are to be frequently met on the road during the next season. They do not look forward to such a prospect with pleasure, and will feel much sympathy with the speech of Mr. Hicks.

The Motor Trade in India.

THE somewhat glowing account of the prospects of business with motor-cars in Bombay, which was recently published in an English journal, has brought forth a rejoinder from the "Indian Motor News," from which it would appear that India is not at present the El Dorado that we have been led to believe. "Indeed," writes our contemporary, "the opposite is the case. Several motor-car firms at home have considered that India is a good dumping ground for their surplus stock, and they have ruthlessly consigned to this country cars which they could not sell elsewhere, and the majority of those cars are still here. All the importing firms are overstocked, as buyers are fewer this year than last. Many manufacturers at home have been led away by the imaginary boom of cars in India, and have appointed agents who have meant well, but have in the majority of cases done little business. It is estimated that at the present moment there are some 200 new cars in Bombay for sale. Of



Touring in Sweden.—The Harbour at Sundsvall.

course, matters will improve after the monsoon, as there is no doubt that there are a large number of prospective purchasers for next cold weather."

Police Traps in Perthshire.

IN a recent issue we called attention to the number of convictions that were being recorded against automobilists in Perthshire, and suggested the advisability of chauffeurs and others contesting these cases. Since then the wisdom of that suggestion has been exemplified by a noteworthy discovery. A police trap was laid on a mile of the public road between Newton of Logierait and Knockintober, and a local motor-car driver was reported for exceeding the speed limit. He challenged the accuracy of the police authorities regarding the distance, which, judging by the speedometer on his car, he considered short. Before taking proceedings it is understood the police requisitioned the services of the Highland district road surveyor and had the mile measured, with the result that the actual chain measurement disclosed a deficiency of 218 yards! Needless to say, no further proceedings were taken in this case; at the same time it discloses an extraordinary state of affairs. It has always been asserted that in Perthshire there are long miles and short miles, and in cases where prosecution is intimated it is now absolutely necessary, in the interests of motorists themselves, that they should have the distance accurately measured. The speeds

in the majority of the prosecutions have ranged about twenty-five miles an hour, so that it will be seen a question of a few seconds and a slight shortage in the mile makes all the difference in the world.

Motorists and Cyclists.

JUST as magistrates laugh at the absurdity of giving a blind man a licence to drive a motor-car, so, in lesser degree, might the folly of really deaf persons riding bicycles nowadays cause a smile. But they do; and hence the wisdom of the C.T.C.—which seems to have become the possessor of a Roneo—in suggesting to those thus afflicted the advisability of affixing to the back forks of their machines two red and white semi-circular discs. If this signal becomes understood and recognised by users of the road, deaf cyclists would have the assurance that their affliction will not endanger their lives. In addition to notifying the Press, the C.T.C. might suggest to the A.A. the advisability of asking their scouts to warn their members of the presence of such discs on the road ahead. The idea is a good one; but we are afraid its object will be somewhat difficult of attainment. The fact that we have given it publicity, however, shows our practical sympathy in the matter.

Club Life.

AGAIN, at this season of the year, when the evenings have perceptibly shortened and the dull days are coming along, we renew our annual invitation to the motoring clubs in the provinces to acquaint us with the leading features of their winter programmes. Possibly some of them may find it an effective means of conciliating public opinion by organising discussions, to which public men of the locality—irrespective of their possession of motor-cars—are invited. The moral effect of such work universally carried out would be great.

An all-round Adviser.

AT the luncheon of the Easingwold Agricultural Society, Lord Londonderry, himself the owner of several motor-cars, has been lecturing to agriculturists and motorists alike. To the former he pointed out the value the automobile might be in farming operations, whilst in industrial districts "the motor-car was a great convenience in conveying working men to and from their work." Motorists were urged to proceed with "care, caution and courtesy," the local authorities were advised to urge a return to the turnpike system, and the police were recommended to attend to their own business rather than the pastime of setting motor traps in which to catch travellers by the road. We are afraid, in his endeavour to advise everybody, Lord Londonderry has satisfied no one. It might be well if speakers at such functions would confine themselves to a few obvious pleasantries or take the opportunity of emphasising the actual fact that the progress of the motor-car is inevitable.

Inflaming the Public Mind.

ANOTHER instance of how the public mind is incensed against motor vehicles occurred last week, when several London papers came out with startling lines on their placards as to a "motor tragedy" in which one person was killed and several injured. The accident, sad as it was, could, however, by no means—other than the vivid imagination of the placard compilers of a daily paper—be attributed to the automobile. As a matter of fact, the mishap illustrates the obvious dangers of horses in connection with traffic in crowded places. A cabhorse was quietly standing on the rank by the side of Paddington Railway Station when, slipping its bridle and nosebag, it suddenly made off down the street. Missing some mail vans outside the local post office the horse ran into Praed Street and

there dashed into a motor-bus, knocking down three or four people who were preparing to mount the vehicle. One of the passengers was struck on the back of the head and succumbed within a few minutes. Others were injured, and only the horse seemed but little the worse for the encounter. The fact that a motor-bus was concerned, although the cause of the escapade was a horse, did not worry the newspaper man, who at once described it as one of those tragedies for which the motor-car is responsible.

Illegal Speed Notices.

SEVERAL times have we referred to suspicions of restricted speed limits being notified at various English villages, and have drawn attention to the same. Now we are glad to learn that the Motor Union have discovered other instances of the same kind, and, satisfactory to relate, have been able to secure their removal. The cases in question were at Stairfoot and Burnley-in-Wharfedale, Yorkshire. The Motor Union having been in communication with the Yorkshire County Council on the subject, has received a reply saying that the attention of the Urban Councils in question is being called to

Corporation step-ladder, which when erected has a platform on top. From this standpoint the signs were removed—to the amusement of the onlookers. When the last trader was visited it was found that the first whose signs had been prohibited was re-erecting his motor sign, and ere long new signs had appeared in most instances. Everyone in Devizes is wondering what will happen now that the municipality has thus been set at defiance.

The Great Cab Battle.

MR. G. K. CHESTERTON, who is as prolific in paradoxes as an orchard in leaves at this season of the year, has been writing on the great cab crusade in connection with which he threatened to publish a work of fourteen volumes on "The Cab in All Ages." He describes an alleged debate between the motor-cab drivers and those who adhere, from force of habit as well as circumstances, to the driving of horse-drawn vehicles, and chronicles a pitched battle between a battalion of motor-cabs and a battalion of hansoms. Writing in the style of the "Battle of Dorking" and other volumes with which a past generation was amused, Mr. Chesterton describes the final stage of the conflict as follows:—"It was supposed at first that the superior force and impact of a motor



The Dennis Petrol Motor Fire Engine at Weybridge.

the illegality of the notices, and they will doubtless be removed without delay.

Motor Signs at Devizes.

A VERY amusing dispute is now in progress in the town of Devizes, and, although the matter is of purely local concern, it may be of national interest. Throughout the country it is the custom for motor agents, vendors of petrol and motor oils and the like requirements for motorists, to "hang their banners on the outward walls." These signs are sometimes of artistic effect, often of a very glaring description, and generally could be improved upon with advantage. But they serve the utilitarian purpose of acquainting travellers with places where they can be supplied with their wants. So far they have been tolerated in all the cities of the kingdom, but now the Wiltshire town of Devizes has drawn attention to itself by ordering the withdrawal of such signs from the streets of the borough. The Order has just been issued, on the authority of a regulation dating from the time of Charles I. But the traders did not comply, and the Borough Property Committee thereupon instructed the surveyor to take the signs down. Accordingly he set forth with a number of sturdy workers, armed with the

could always crush another cab; but in this, as in so many other cases, the experts were found to have made a miscalculation. The cabmen from Hammersmith Broadway, enrolled under the name of The First Chiswick Charioteers, soon adopted a manoeuvre which was entirely successful at the battles of Brompton and Sloane Square, and was only with difficulty evaded even on the tragic field of Clapham Junction. They trained their horses to swerve so as exactly to avoid the rush of the motor, and then, rearing on their hind legs, to kick out the brains of the chauffeur: a trick that seldom failed," but rarely happens outside the range of Mr. Chesterton's writings.

ONE of the "Dennis" motor-buses belonging to the Cardiff Tramways Company, Ltd., has recently been fitted with a novel speed controller devised by Capt. Beattie and Mr. R. J. Sully and put on the market by Sully's (Cardiff) Ltd., of Penarth Road, Cardiff. The device, which is driven off one of the shafts of the car, is arranged to ring an electric bell when a speed of twelve miles per hour is attained and give audible warning to the driver; when thirteen miles is reached the governor short circuits the ignition, so stopping the engine until the speed is reduced.

The "Four-Inch" Race.

(FROM OUR OWN CORRESPONDENT.)



The "Four-Inch" Race in the Isle of Man.—A View of Douglas Promenade.

DOUGLAS, Monday.

THIS is the week of the International "Four-Inch" Race for the Tourist Trophy—to give the event its full official title as decreed by the R.A.C. It was founded "for the purpose of encouraging the development of the touring car of the horsepower required by the ordinary user as opposed to the racing car." In previous years there has been a limitation in respect to the fuel allowed by competing cars; but on this occasion a different basis has been established, the fuel consumption being discarded as a factor in the race and the bore of the cylinders limited to four inches.

This year there are thirty-eight entrants, and nearly all are probable starters. The three previous events have resulted as follows:—

| | Starters. | Finished. | Winner. | Speed. |
|------|-----------|-----------|--|-----------------|
| 1905 | ... 42 | ... 18 | 18-h.p. Arrol-Johnston ... (Mr. G. S. Napier) | ... 33.9 m.p.h. |
| 1906 | ... 29 | ... 9 | 20-h.p. Rolls-Royce ... (Hon. C. S. Rolls) | ... 39.5 m.p.h. |
| 1907 | ... 22 | ... 2 | 20-h.p. Rover ... (Mr. E. Curtis) | ... 28.8 m.p.h. |

In 1905 Mr. Percy Northey was second on a 20-h.p. Rolls-Royce; Mr. Norman Littlejohn, on a 14-h.p. Vinot, third.

M. Bablot, on a 22-h.p. Berliet, was second in 1906, and Mr. A. Lee Guinness third on a 15-h.p. Darracq.

Last year only two finished, Mr. J. Reid being second on a 15-20-h.p. Beeston-Humber.

Among this year's drivers who participated in the 1907 event are Messrs. E. J. C. Roberts, A. Lee Guinness, L. Coatalen, O. Cupper, M. Porporato, J. E. Hutton, J. Reid (second last year), K. Lee Guinness and T. Rimmer. Mr. A. E. George, who now drives a Darracq, steered an Argyll in the 1906 Race. The order of starting this year, which will be at half-minute intervals, is as follows:—

| No. of Starter. | Name of Car. | Driver. |
|-----------------|------------------|------------------|
| 1 | Rover... | H. B. Browning |
| 2 | Hutton | W. Watson |
| 3 | Arrol-Johnston | E. J. C. Roberts |
| 4 | Darracq | A. Lee Guinness |
| 5 | Coventry Humber | G. W. Brown |
| 6 | Hillman-Coatalen | L. Coatalen |
| 7 | Metallurgique | Oscar Cupper |
| 8 | Berliet | M. Porporato |
| 9 | Thornycroft | G. V. Baxendale |
| 10 | Vinot... | M. Ross Browne |

| No. of Starter. | Name of Car. | Driver. |
|-----------------|------------------|-------------------------|
| 11 | Calthorpe | Leslie Porter |
| 12 | Deasy | P. Graham |
| 13 | Westinghouse | A. Gaal |
| 14 | S.C.A.T. | R. O. Harper |
| 15 | Hutton | J. E. Hutton |
| 16 | Arrol-Johnston | D. Resta |
| 17 | Darracq | A. Rawlinson |
| 18 | Beeston-Humber | J. Reid |
| 19 | Hillman-Coatalen | K. L. Guinness |
| 20 | Metallurgique | J. T. C. Moore-Brabazon |
| 21 | Berliet | |
| 22 | Thornycroft | D. S. Hodge |
| 23 | Vinot | T. R. Outhwaite |
| 24 | Calthorpe | J. Robinson |
| 25 | Deasy | E. W. Lewis |
| 26 | Westinghouse | J. Gaal |
| 27 | S.C.A.T. | F. Ward |
| 28 | Hutton | P. D. Stirling |
| 29 | Arrol-Johnston | G. Moss |
| 30 | Darracq | A. E. George |
| 31 | Beeston-Humber | T. C. Pullinger |
| 32 | De Dion Bouton | J. W. Stocks |
| 33 | Metallurgique | Warwick Wright |
| 34 | Piccard | Andre Debuissy |
| 35 | Thornycroft | Tom Thornycroft |
| 36 | Vinot | L. Molon |
| 37 | Vulcan | T. Rimmer |
| 38 | S.C.A.T. | H. S. Buckley |

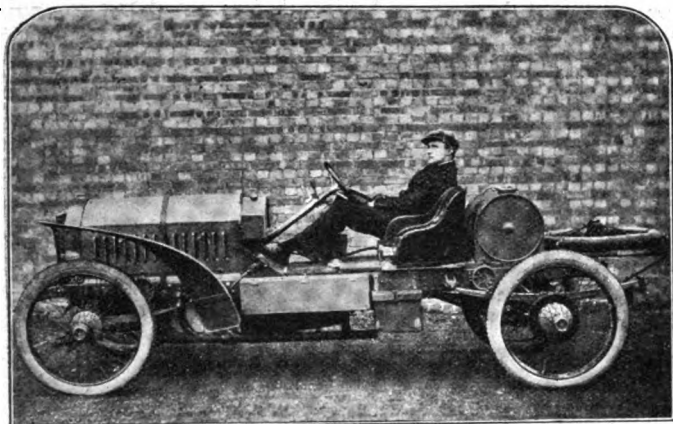
For the first time every driver this year will be medically examined before he starts in the race, so that the physical fitness of those who take part in the event shall be assured—as far as is humanly possible.

The complete circuit of the course is $37\frac{1}{2}$ miles, and as the cars will be required to make nine rounds, the total distance to be covered is $337\frac{1}{2}$ miles. The start will take place at 9 a.m. on Thursday at Ballaskilly. Thence the cars will go to Ballacraigne, where they will leave the course of last year's race and go northward to Kirkmichael. Then the previous track will be followed by way of Ballaugh and Sulby into Ramsey, from whence the ascent of the "hairpin" corner will be made for Snaefell and by the Bungalow for the finish at Ballaskilly.

Wednesday was to have been devoted to the "Graphic" and "Henry Edmunds" trophies, but, owing to the few entries received for these events, both have been abandoned. For each, two Napier and two Metallurgique cars were entered, and for the "Graphic" contest one Westinghouse car.

DOUGLAS, Tuesday.

The morning of Thursday last week was characteristic of the bad weather that has been general throughout the preparations for the race, and none of the drivers attempted very high speeds. Only about eighteen cars faced the elements, and they were content to tour the course, with the intention, no doubt, of making themselves better acquainted with the nature of the corners, but even in this process a number got stuck on the mountain road. The Vulcan car, however, had a good spin. The two Westinghouses were out, No. 20 being noticed to be "missing" badly. The second car of the same make, No. 12a, was out



Mr. P. D. Stirling at the wheel of his Hutton "Four-Inch" Car.

again, the necessary adjustments having been effected to the magneto and its timing. Rawlinson on the Darracq took matters very easily, and perhaps the fastest round of the morning was accomplished by Ward on a S.C.A.T., his time being 47 min. The topic of conversation at the practices on Friday morning was the arrival on the previous day of the three Metallurgiques, accompanied by Oscar Cupper and a large number of mechanics. No risks were apparently taken with regard to the safe arrival of the cars, and no expense was spared in their transport, as they were conveyed to the Island from Belgium by special boats and trains. On arrival of the steamer in Douglas Bay it was found that the tide would not permit of the steamer entering the harbour, so they were ultimately landed at Ramsey. A large number of cars were out, but practising had hardly begun when a serious accident happened to the Metallurgique No. 7, driven by Cupper. He was turning Willaston corner when he ran into the hedge with such force that the car overturned with Cupper and his mechanic (Brandt) underneath. Several spectators on the scene rushed to the assistance of the unfortunate men, and it was only after much difficulty and after some length of time that the car could be righted and the men extricated. While the rescue work was proceeding the oncoming cars were stopped, George and Lee Guinness having been following close on the heels of Cupper, who was starting on his second circuit. Guinness went back to Hilberry and brought Dr. Finnay to the scene of the disaster. Cupper, with the exception of suffering from a slight shock and receiving a cut eye, was not hurt, but Brandt, who was on the side of the car which struck the hedge, had not escaped so luckily, and was removed to Nobles (Isle of Man) Hospital. The car was not badly damaged, the most serious injury being to the steering gear. Practising after this was practically stopped for the day, it being thought that Brandt was more seriously hurt than ultimately proved to be the case. Cupper, seen during the day, stated that he had accomplished his first circuit (38 miles) in 37 minutes; his speed up the mountains was 63 miles an hour, and his pace down Hilberry reached 100 miles an hour, while his car developed 97½-h.p. He wired to Belgium for another mechanic, and expected to be out in the course of a day or two. On Friday afternoon another accident occurred, the victim being Slaughter, on a Triumph motor-bicycle, while practising for the Motor-cycle

Race. He collided with the hedge on a corner and sustained a badly-cut head.

On Monday morning many spectators took advantage of the fine conditions, and all seemed pleased to see Cupper out again on his repaired car. The injury to his eye was, however, still prominent. He took matters very easily and stopped and keenly surveyed the corner at which he came to grief with such disastrous results. Most of the competitors took matters more or less easily, no doubt recognising that, owing to the proximity of the day of the race, a smash would at this period be fatal, as time would not permit of any necessary repairs being effected. The fastest time was done by the Beeston-Humber—50 min. The Piccard car was round this morning and met with favourable comment.

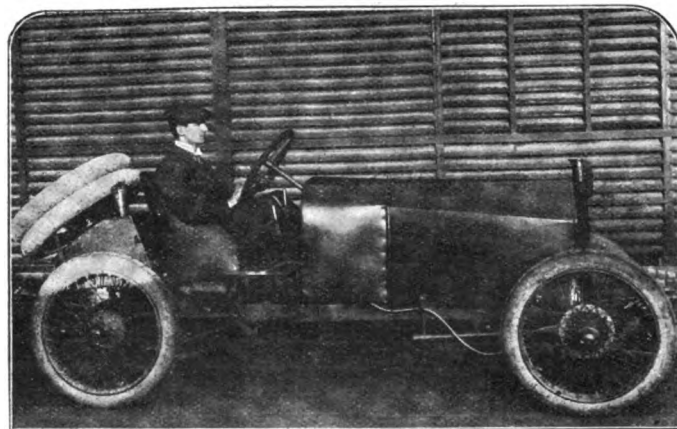
Much curiosity has been evinced to-day in the absence of the special "Hutton" car driven by Mr. Hutton from practice since Thursday. This evening I learned that it is evident that something serious is the matter with some part of the engine. My informant happened to pay a surprise visit to the Hutton garage at Glen Helen this afternoon, and was surprised to find a big staff of mechanics busily employed on parts of the engine.

[BY TELEGRAPH.]

DOUGLAS, Wednesday.

Tuesday morning was the last occasion allowed for practice for the Four-inch Race; the weather was fine, but only very few cars were out, on account of their having to be presented for inspection at ten o'clock at the enclosure at Hilberry. Most of the competitors who indulged in practice only toured round the course, and no high speeds were attained, as will be understood from the fact that several carried ladies as passengers, Porter on his Calthorpe, however, did several fast rounds, and the chances of this competitor are viewed with considerable favour. Thirty-six cars were presented for the inspection yesterday morning, the only absentees being the two Berliets. The scene was a busy one; no fixed time had been stipulated prior to which cars must put in appearance, but weighing-in began at ten o'clock, and competitors made an attempt to get there before that hour.

Three Darracqs and two Thornycrofts were actually the last to appear. A weighing machine had been erected, and the officials proceeded rapidly with the checking of the cars, which have to be over 1,600 lb. in weight. The racing cars are not this year being detained in the custody of the Club, and were at liberty as soon as they had passed the scales. Most of the



Mr. G. W. Brown at the wheel of his Coventry Humber.

drivers have now submitted themselves and passed the doctor's examination. Prince Francis of Teck, chairman of the R.A.C., arrived last night, and is staying with the Lieutenant-Governor of the island. The Hon. Arthur Stanley is also expected. To-day a motor meet takes place, the Government House officials making a tour of inspection of the course. Admirable arrangements have been made for the race, which is expected to be keenly contested.

THE TOURIST TROPHY MOTOR-CYCLE RACE.

ON Tuesday the Tourist Trophy Motor-cycle Race was run, over the same course as last year, starting from St. John's to Ballacraine, Glen Helen, Kirkmichael, Devil's Elbow, St. Germain's, Peel and back to St. John's. This was covered ten times, making a total distance of 158 miles 220 yards. The allowance of petrol was 1 gallon 4 pints 13 oz. for the single-cylinder, and 1 gallon 7 pints 16½ oz. for the multi-cylinder machines, calculated on a basis of one gallon per 100 miles for the former and one gallon per 80 miles for the latter.

The following is a complete list of entrants of single-cylinder machines:—C. R. Collier, 4-h.p. Matchless-J.A.P.; H. A. Collier, 4-h.p. Matchless-J.A.P.; Triumph Cycle Co., Ltd., 3½-h.p. Triumph (three): R. W. Ellis (P), 3½-h.p. Rex; C. Gordon Gibson (P), 3½-h.p. Triumph; C. B. Franklin (P), 3½-h.p. Chater-Lea-J.A.P.; Brown Bros., 3½-h.p. Brown; W. G. McMinnies (P), 3½-h.p. Triumph; H. Lister Cooper (P), 3½-h.p. Triumph; H. Brown (P), 3½-h.p. Triumph; Rex Motor Manufacturing Co., 3½-h.p. Rex (two); N.S.U. Motor Co., 3½-h.p. N.S.U.

The multi-cylinder entrants were:—H. Rem Fowler (P), 5-h.p. Norton; H. Collier, 7-h.p. Matchless-J.A.P.; Bat Motor Manufacturing Company, 6-7-h.p. Bat-J.A.P.; W. H. Wells, 5-h.p. Vindec Special; W. H. Bashall (P), 6-7-h.p. Bat-J.A.P.; W. E. Drury (P), 5-h.p. Jap; S. C. Perryman (P), 5-h.p. Norton; W. H. Wells, 5-h.p. Vindec Special; W. Gurr, 5-h.p. F.N. (four); A. J. Moorhouse (P), 5-h.p. Rex; E. G. Young, 3½-h.p. Young-Bentinck; E. Varney (P), 7-h.p. Crownfield; H. Reed, 5-h.p. Dot-Peugeot; Rex Motor Manufacturing Company, 5-h.p. Rex (three); R. O. Clark, 5-h.p. F.N. (four); N.S.U. Motor Company, 4-h.p. N.S.U.; Pellant and Bilbie, 3½-h.p. Young-Bentinck; J. O. M. Dixon (P), 5-h.p. Vindec Special; J. Lang (P), 6-h.p. N.S.U.; J. Baxter (P), 5-h.p. Rex. (P) Private owner.

All of the fifteen entrants in the single-cylinder class started, while of the twenty-two competitors in the multi-cylinder class there was only one absentee, E. Varney. The riders were dispatched in pairs of one single and one multi-cylinder machine, there being an interval of 30 sec. between each couple. At the half distance, when the competitors were allowed five minutes to take in a re-fill of petrol, the leading positions were:—Single cylinders.—C. R. Collier, 2 h. 8 min. 49 sec., first; J. Marshall, 2 h. 11 min. 7 sec., second; Capt. Sir R. K. Arbuthnot, 2 h. 14 min. 57 sec., third. Multi-cylinders.—W. H. Bashall, 2 h. 8 min. 54 sec., first; W. H. Wells, 2 h. 13 min. 49 sec., second; R. M. White, 2 h. 16 min. 25 sec., third. A keen struggle was maintained in the single-cylinder class between Collier and Marshall, but eventually the latter won by nearly three minutes, thus reversing the positions in the 1907 contest. The result was:—J. Marshall, 3½-h.p. Triumph, 4 hr. 4 min. 50 1-5 sec., first and winner of Tourist Trophy; C. R. Collier, 3½-h.p. Matchless, 4 hr. 7 min. 6 4-5 sec., second; and Capt. Sir A. R. Arbuthnot, Bart., 3½-h.p. Triumph, 4 hr. 17 min. 57 sec., third. Seven other competitors finished the contest, while five retired.

In the multi-cylinder class the honours of the day fell to H. Reed, 5-h.p. Dot, in 4 h. 15 m. 58 2-5 sec., W. H. Bashall, 6-7-h.p. Bat, being second in 4 h. 18 min. 15 sec., and R. O. Clark, 5-h.p. F.N., third in 4 h. 21 min. 2 4-5 sec. Of the other competitors seven finished and eleven retired. There were two or three falls during the race, which did not occasion any injury to the drivers, but Gurr, who was on a 5-h.p. F.N. machine, had a side-slip, and his face, coming into contact with the ground, was badly disfigured. It was by no means serious, however, and, although he retired from the contest, he was not compelled even to seek medical aid.

So far fifteen entries have been received for the race for the American Automobile Club's Grand Prix, which is to be held in Savannah on November 26th next; they include six European—three each Fiat and Benz—and nine American vehicles.

THE SOCIAL WHIRL.

PRINCE FRANCIS OF TECK, the chairman of the Royal A.C., has accepted an invitation to attend the annual dinner of the Northamptonshire Automobile Club on October 16th. Among those who have signified their intention of being present on the occasion are Lord Annaly, Lord Lilford, Sir Thomas Fermor-Hesketh, Sir Charles V. Knightley and Mr. S. G. Stopford Sackville, chairman of the Northamptonshire County Council. Mr. Sackville sat in the last Parliament, and is keenly interested in local government.

THE motor-car played a conspicuous part in the recent appearance of Mr. Harry Lauder before the King at Rufford Abbey, Newark, where His Majesty was the guest of Lord and Lady Savile. Mr. Lauder first visited Captain Laycock at Wiseton Hall, near Retford. Captain Laycock is a member of the R.A.C., and a few years ago was well known in connection with all club events. He and the Scottish comedian motored to Rufford Hall, twenty-two miles away, and later they returned to Wiseton.

MR. HENRY C. PEARSON, Chairman of the Contest Committee of the Massachusetts Automobile Club, is at present touring with his car in this country. He writes that he is delighted with the London traffic regulations, with the skill of the drivers of motor-cars, the good nature of the operators of horse-drawn vehicles, and the sound common-sense of the police. "No city in the world has anything equalling it. Your country roads are very nearly perfect."

THE chauffeur to the Duchess of Newcastle escaped the police on Saturday, when taken before the magistrates of the Eastern Ainsty Petty Sessions at York. The facts of the case were that the Duchess of Newcastle, who was at Harrogate, had lent her motor-car to take a party to York races. The chauffeur (defendant) knew the road perfectly well, was aware there was a police-trap at that place, and drove at an ordinary normal pace. The defendant was cautious in passing traffic on the road. Defendant, said his solicitor, was formerly in the service of Lord Linlithgow, had been driving ever since 1896, and had never been cautioned. The case was a serious one for him, as the Duchess of Newcastle would not employ a chauffeur who drove at a dangerous pace along the public roads. The magistrate dismissed the case.

MOTORISTS in the quiet cathedral city of Hereford, the Bishop of which is a vice-president of the M.U., know both the Mitre and Green Dragon hotels. Each has played its part in connection with local motoring, and now the latter will come even more to the front, Mr. James Fryer, the well-known motor agent, of Kington, having taken over the Green Dragon garage, at the rear of the hotel. Accommodation will be provided for a hundred automobiles.

SIR JOHN BETHELL, who represents the largest constituency in the country, viz., the Romford division of Essex, is a motorist—so too are the representatives of a couple of constituencies nearer the City of London. Mr. Stopford Brooke, M.P. for Bow and Bromley, has a car, and the other day motored from his residence at Cranleigh, in Surrey, to Chingford, in Epping Forest. Mr. Leverton Harris, M.P. for Stepney, has just toured Ireland in his automobile, and has now taken his car with him to Scotland. Later it is his intention to go to the Continent and have a motor tour in the Loire Valley.

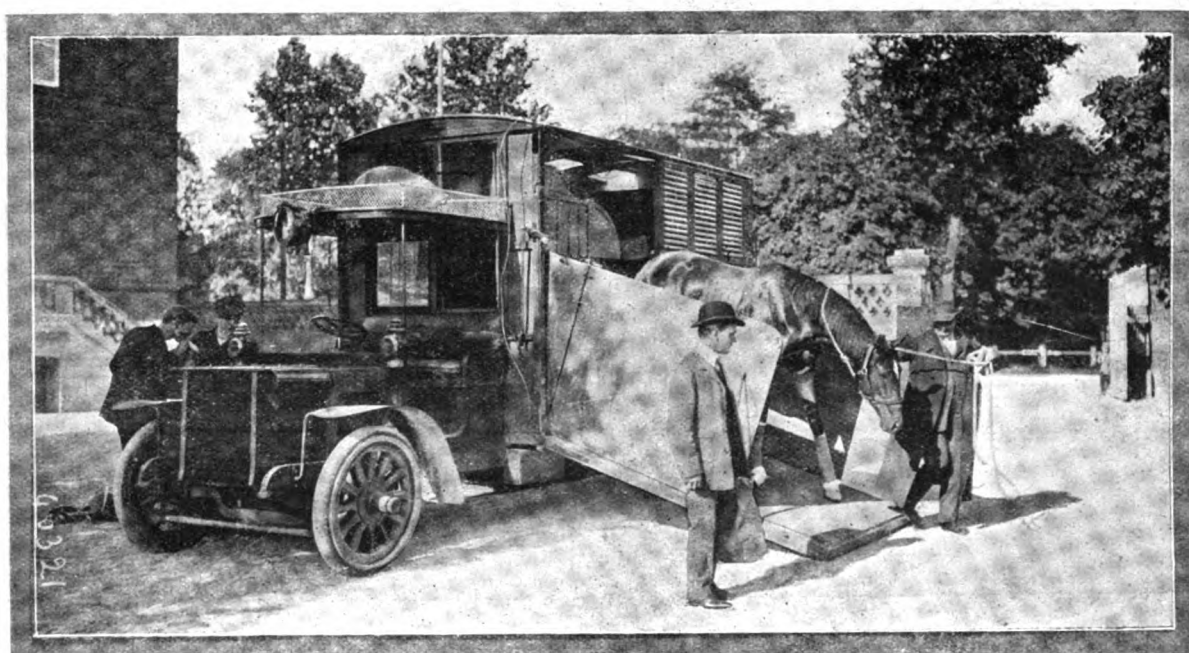
VISITORS to Llandudno are probably better served in the way of seeing the surrounding country by motor-car than those who go to any other resort. Mr. Thomas Foster, the manager of the Llandudno Motor and Garage Company, Ltd., has arranged various trips to places of interest and delight in the district. Often motorists, fearful of their tyres over the mountain passes, take trips by these public conveyances, and cause much wonderment among the "ordinary trippers" by the variety and extent of their technical knowledge.

LOLLIUS.

GOSSIP FROM PARIS.

SOME people have predicted the coming Paris Salon will be less successful than its predecessors. I do not pretend to prove the contrary, but if it is not a success it will not be because it will be wanting in novelties; for instance, there will be the aeroplanes, which will surely make a brave show, and constitute one of the great attractions. Then again, most if not all of the automobile manufacturers have learned by experience and will exhibit cars really suitable for every-day work, and not simply vehicles which only the very rich can purchase and use. The Panhard firm has in this respect turned over quite a new leaf. Instead of devoting all its attention to the production of high power touring cars, it will exhibit as one of its most important models for next year a chassis destined to compete with the Renault taxi-cabs and suitable for a comparatively light body. Though I have not as yet been able to ascertain the exact horse-power of the motor, I am assured it will be about the same as that of the Renault. The Panhard Company is also making a six-cylinder of about 20-h.p. But even that is not all. The company has acquired the

find autophobes. There are plenty of them still left in France, and even in the immediate vicinity of the Ville Lumiere some communes, believing they have a free hand against automobilists, and that they can levy blackmail on them with impunity, are trying to make the persecution of the motorist a paying enterprise. For instance, the Mayor of Rueil, almost at the gates of Paris, not long ago gave instructions which resulted in the fining of very nearly every motorist who was unfortunate enough to approach the locality. He wanted to make them in this way pay for the tarring of the roads; but after a time, finding the money did not come in so quickly as he had expected, he conceived the idea of "catching" innocent cyclists and making them also contribute to the fund. With this object he had one of the most frequented roads broken up and covered with a thick layer of stones which were left for forty-eight hours before being rolled in. Of course the unsuspecting cyclists took to the footpath. But the Mayor's men were awaiting them at the further end, and a *proces verbal* was drawn up against each of the offenders. It is affirmed the fines which thus fell into the municipal treasury amounted to quite a good round sum. In



The Special Motor Van which has lately been put into service in the Paris district for the Transport of Race Horses.

patent rights of a new change-speed gear invented by Henriad. The mechanism is practically lodged in the flywheel of the motor; consequently this new gear occupies but very little room. It is said to be most efficient and cheap to manufacture. Although it is premature to give a detailed description of it at the present moment, I may say the gear is of the epicyclic type, but quite different from what has been designed in that line up to the present moment. The engineers of the Panhard firm have been putting the new gear to all sorts of tests for several months, and it is possible, if not probable, that it will be employed in the 1909 cars. As for Messrs. Renault Frères, their new models for 1909 will include a small car complete with body having seats for two persons, and fitted with a two-cylinder motor of about 6-h.p. The price will be approximately 4,500 francs (£180).

"I SHOULD imagine that in the future the inhabitants of every civilised country, including the Japanese and Chinese, will class the persecution of automobilism with the former persecution of science." It was a gentleman who, making a tour in Switzerland, had suffered from the endless vexations imposed on motorists in that country, that expressed his sentiments to me in that elegant but forcible phrase. But unfortunately it is, as everybody knows, not necessary to go to the land of William Tell to

any case the Mayor appears to be satisfied with the result of his stratagem.

ANOTHER vexatious and incomprehensible measure has been taken at St. Malo. When a motor-car is shipped on a steamer the petrol tank is always emptied to avoid the possibility of an accident, consequently all the touring automobiles arriving by boat at St. Malo require essence immediately they are put on shore. Until quite recently there was a petrol depot on the quay, but for some unknown reason the St. Malo authorities have suppressed it, and, what is more, they have prohibited the vendors of petrol from bringing even a litre or two on the quay to enable the cars to reach the nearest garage in the town.

MARNEY.

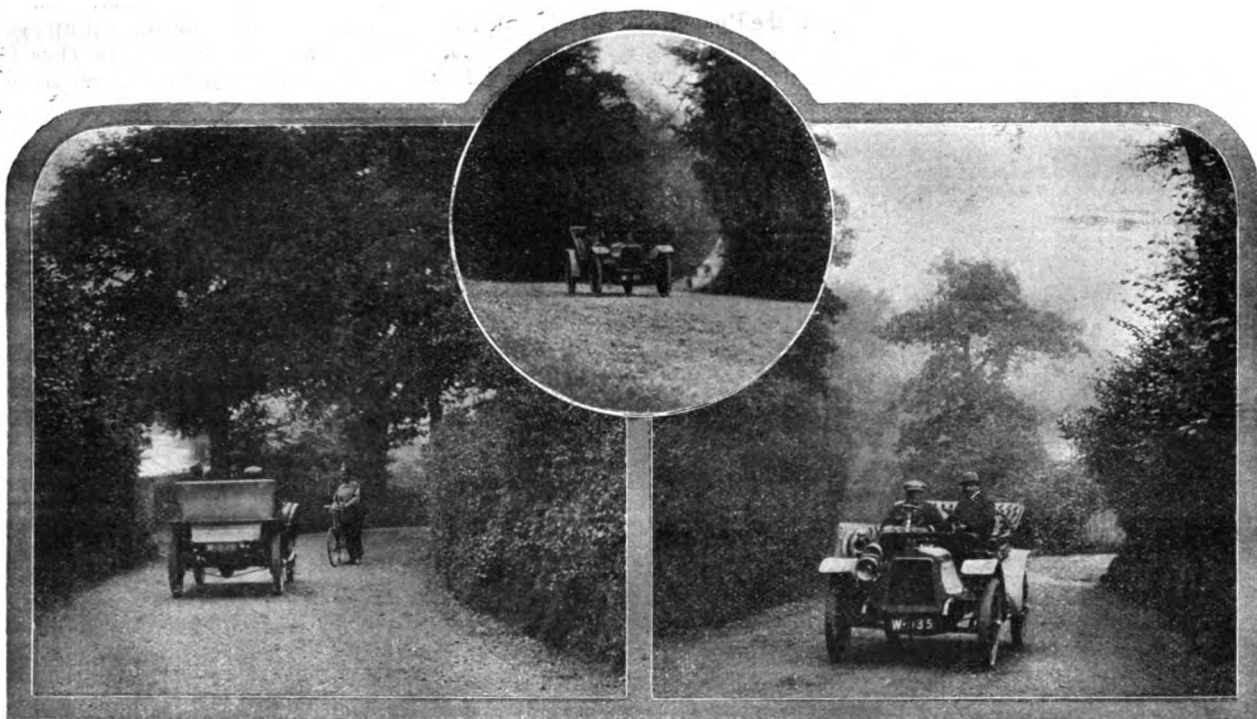
AN American motorist writing to the "Automobile" of New York states that he has found old newspapers a useful aid to touring. "I have found it a good plan," he writes, "to carry several newspapers in the car when touring. If the rear wheels start to spin round in a muddy spot a couple of newspapers spread over the mud will often enable the rear wheels to climb out. Newspapers will also be found handy when any adjustments have to be made under the car."

HUNTING FOR HILLS ON A 15-H.P. TALBOT.

"WOULD you like to go on a hill-hunting expedition?" was the message that came over the telephone a few days ago from Mr. H. W. Cutler, of the Clement-Talbot, Ltd., and as the proposal was both novel and interesting, I readily acquiesced. The result was the arrival outside the offices of the M.C.J. of a smart-looking 15-h.p. Talbot, with Mr. Cutler on board, and Mr. F. W. Hedge, one of the company's most experienced drivers, at the wheel. A brief "council of war" was held, during which it transpired that not only had the car which was standing quietly near us successfully mounted most of the steepest hills in Kent, including one having a piece as acute as 1 in 4.3, but that it was the identical vehicle which had carried off the gold medal in its class in the Irish Reliability Trials (where it scored the maximum number of marks

"which is Hendon way," was quickly passed, as was also Edgware. Then came Brockley Hill, up which the car glided so easily that doubts arose in my mind as to whether Woodcock Hill would, after all, prove any obstacle to the Talbot. Arrived at Elstree, we turned sharp to the right and within a few minutes the vehicle was ploughing its way up the hill at a rate which, four years ago, would have been deemed impossible. As a matter of fact, the major portion was taken on the top speed, only the steep part towards the summit necessitating a drop to "third."

Hedge made so light of the hill that I determined to find one that he at least would deem worthy of the name. After taking a by-road which landed us in a farmyard, and retracing our steps, we got to South Mimms and eventually to Ridge Hill, where we found a narrow road known as the Old Lane, the gradient of which appeared to present some possibilities in the way of putting the vehicle to the test. I was, however, doomed



Hunting for Hills on a 15-h.p. Talbot.

The centre picture depicts the car on Woodcock Hill, Elstree, while the two lower ones show it on the steep gradient near the railway station at Radlett.

on all the three hills as well as for reliability), and also proved the victor in Class B in the Pateley Bridge hill climb of the Yorkshire A.C. on the 12th inst.

With such a record as this, any idea I had entertained of finding a hill in the neighbourhood of London that the car could not negotiate was dashed to the ground, and it was with a sort of *nil desperandum* feeling that I suggested we should make for the district bounded on the north by St. Albans, on the west by Watford, and to the east by Barnet. Our driver seemed to scoff at the idea that there were any gradients worthy of the name in that centre; but I had not forgotten that the last Glasgow to London run promoted by the Scottish Club included in its itinerary Woodcock Hill, a gradient on the road between Elstree and Barnet, which, starting with a stretch of 1 in 18, and increasing in steepness to 1 in 7 and 1 in 8, proved the undoing of several competitors who up to that part of the 1904 Scottish Trial had scored full marks. Proceeding along the busy Edgware Road, I had ample opportunity of noting how easily the vehicle can be handled in traffic, and how quickly both the engine and car respond to the slightest movement of the throttle lever. Once clear of the traffic, Hedge also gave me a short demonstration of the speed of the machine on the level, as a sort of proof that it is not specially geared for hill-climbing and hill-climbing work only. The Welsh Harp,

to disappointment again, for the car made almost as light of it as Woodcock, going up on "third," and that from a standing start. Making inquiries of some local people, we ascertained that there was a very stiff hill near Radlett, whither we rapidly journeyed, passing on the way through the quaint village of Shenley, with its old round-house or village lock-up near the horse pond. "Here we are," cried Hedge, when he caught sight of a C.T.C. danger board, and we wended our way down a very steep and winding road into Radlett. Arrived at the bottom, the car was turned round, and from a standing start was set to the task of mounting what even our driver was bound to admit was worthy of his metal. However, the Talbot forged its way up without a falter. Starting on the first speed, the second gear was quickly slipped in, this being maintained to the top, the speed at which the car made the climb greatly astonishing the constable seen in one of the photos reproduced herewith.

The run back to town, while uneventful, further emphasised the fact that the Talbot 15-h.p. four-cylinder car should meet the requirements of a very large section of the motoring public. Silent and easy running, it is not only extremely speedy on the level, but, as is shown above, its hill-climbing capabilities are considerable; indeed, in view of the size of the engine—the bore is only 90 mm. and the stroke 117 mm.—they are extremely noteworthy.

ARCANUM.

A CANADIAN MOTORIST'S TOUR IN ENGLAND.

IN a recent issue of our Canadian contemporary, "Motoring," Mr. Lloyd Harris gives an account of a tour he recently made from London to Land's End, from which we take the following:—

While in England this summer I found that I would have a week to spare, and decided that I would rather spend it motoring than in any other manner. I made inquiries in London and found that it is quite easy to hire good cars on reasonable terms. There are a number of motor-car companies who have cars for this purpose, and who let them out for a day at prices ranging from five guineas, by the week for £30 upwards, and by the month at about £100, including the services of a chauffeur. I came across a man who had recently purchased a Panhard touring car with seating capacity for seven people who is at present devoting his time to hiring his vehicle and driving it himself. I made arrangements with him for a week, to take my party from London to Land's End and back, across the South of England. My arrangement with him was for an inclusive charge per day, he paying all his own expenses and agreeing to look after the car and to be responsible for any damages which might occur. Before the trip was over I decided that this arrangement was a most excellent one from my own standpoint.

I left London on the afternoon of Friday, June 5th, with one of my party. The traffic in the Metropolis certainly makes motoring in the City very difficult and not a very pleasant pastime, but when once in the country the beauty of motoring gradually begins to impress itself upon you, and after a few days of it you become imbued with the idea that the sport, under Canadian conditions, is not all that it should be, and it will take a very long time for us to have the same splendid roads that exist in England. We passed through Kingston, and on reaching Guildford stopped for afternoon tea for half an hour, and then continued our journey, travelling by the Hog's Back, which has one of the most beautiful views I have ever seen. The road itself runs along a high ridge, very much above the level of the country on either side of the car for some distance. We passed through Farnham, Petersfield, Havant, and arrived at our destination, Southsea, at 7 p.m., the distance covered being seventy-six miles.

Starting on the afternoon of the following day with our whole party, numbering five, including the chauffeur, we took the road following the sea coast through Southampton West, and from there, skirting inland, passed through the New Forest to Ringwood, and then on to the old agricultural town of Dorchester, a distance of seventy-five miles. The next morning, June 7th, we set out at ten o'clock and followed the road running along the coast to Bridport and Charmouth. Just before reaching Charmouth we had a front tyre burst and unfortunately did not have a spare one with us, but were able to make repairs which carried us to Exeter, through Axminster and Honiton. After lunch we continued our journey, and passing through Chudleigh and Ivy Bridge, went on to Plymouth. Everyone has heard about the beauties of Devon, so that I do not propose to enlarge upon them, but I certainly think that this is one of the finest and most interesting counties in England to see from an automobile. The hills are very steep and it is practically all up and down hill, so that it requires a good car with high power and with the brakes in excellent condition.

On Monday, June 8th, we left Plymouth at 10.30 and ran down to the ferry, where we ferried across to Saltash. When

leaving, it was raining slightly, but by the time we landed in Saltash the rain had ceased, and this was the only time on our whole trip that we had any rain, so that we were exceedingly fortunate in this respect. We were now in Cornwall, passing through Liskeard, thence to Lostwithiel, and from this point we branched off to a small watering place named Fowey, where we had arranged to lunch. This I found one of the most beautiful spots I had ever visited, and, it being a public holiday, all the people were out in their gala attire, and we interested ourselves for a couple of hours after lunch watching and listening to the Cornish people, who were enjoying themselves in their own way. On arriving at Truro in the afternoon we looked into the cathedral which has been in process of building for several years past, and which is now about completed, but has not the same interest as some of the older cathedrals in England. Leaving Truro, we took the road running to Penryn, thence to Helston, and some distance further on St. Michael's Mount came into view. From the side that we approached it, it was a most beautiful and impressive sight to see the old castle standing on a rock rising out of the ocean. As we had all visited the castle before we did not stop but ran on into Penzance, having covered about eighty-five miles for the day. The following day was spent in Penzance, renewing old acquaintances and calling at Newlyn, the famous fishing village which so many English artists make their permanent home.

We left Penzance early on June 10th, taking a road further north than the one we had arrived by, passing through Camborne and Redruth, then across the moors, where the road is straight and wide. After lunching at Launceston we quickly entered Devonshire, and the whole afternoon was spent crossing the moors of Devon, the road taking us through Okehampton to Exeter, where we arrived before five o'clock, having covered about 112 miles for the day. We visited the famous cathedral and had a good look over the town, some parts of which are very old and quaint.

The next day we followed the same road as far as Honiton as we had journeyed on our way west. At this point we branched off to Chard, passing through Yeovil, Sherburne, and Shaftes-

bury to Salisbury. Here we stopped for a view of the cathedral, which we found very interesting, although not so much so as that at Exeter. We then started for Winchester, and on our way there had the first accident which occurred on the trip, and which fortunately was not as bad as it might have been. A horse and trap coming down a side road, travelling at a rapid rate, ran into our car; the result was that the occupants of the trap, a lady and her coachman, were thrown out and injured. However, we were able to render all necessary assistance and took the lady to her home. Although we were unable to reach Winchester until 7.30 at night we were able to see something of the town, which is one of the most interesting in the whole of England. The tour came to an end on Friday, June 12th, and the following day I sailed for New York.

I was greatly delighted with the experience, and am ready to take another tour of the same kind. The country is perfect for motoring, and the only danger is that the roads generally are rather narrow and very winding, so that it is impossible to see any great distance ahead, and for this reason it is very unsafe to travel at an excessive speed.

From my experience I do not think I would go to the trouble of taking my own car over for use for a month or two, as I believe that satisfactory cars can be hired in England, and the cost would not be any greater than that of taking a car from Canada, when everything is taken into consideration.

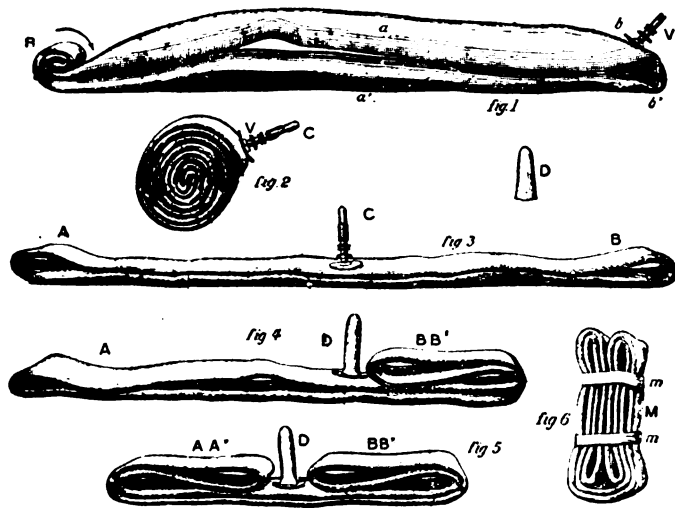


The Fore Street, Okehampton.

HOW TO FOLD AN INNER TUBE.

NUMBERS of automobilists, especially novices, are unaware of the proper method of folding spare inner tubes or how to carry them on the cars, writes Baudry de Saunier in our French contemporary "Omnia." To fold a tube in the most satisfactory manner the detachable parts of the valve should first of all be removed in order that the air may easily escape during the latter operation. The work should be done on a table, or other convenient flat surface, providing it is free from oil or any liquid, and especially from grit. If no table is available, it can be done by holding the tube against one's chest, but the operation is then more difficult, and the operator's clothes are not improved. Whatever may be the support, the tube should be rolled up as tightly as possible, beginning at the end farthest removed from the valve. A large part of the air is thus partly driven out through the open valve tube, but, owing to the bend at *bb'*, some will accumulate at *aa'*. To get rid of this, while holding tightly the rolled part *R* with the left hand, draw to the rear from time to time the opposite end *V*. Continue to do this until the tube is completely rolled, as shown at Fig. 2.

Still holding the tube as tightly as possible, insert the valve parts and put on the cap, screwing up as tightly as possible with the fingers, but not on any account using the pliers. The inner tube is now completely flattened, and it should always be brought into this condition (if it is not so already) every time it is desired to put a new tube in a tyre. When perfectly flattened



the insertion of a tube is greatly simplified and at the same time it is largely preserved from nipping or injury from a lever or other tyre tool. The results are well worth the little labour.

The next stage in the folding of the spare tube in order to carry it in as small a space as possible is to open it out again, as at Fig. 3, the valve being in the centre and uppermost. Careful motorists will find it advisable to cover the valve with a rubber finger similar to those sold at drug stores. If these are not available, one can be made out of a piece of cloth. This covering protects the tyre against the ill effects which may arise when the valve is allowed to rub against the rubber. Now fold each end of the tube inwards towards the valve as indicated in Figs. 4 and 5, forming the flat package Fig. 6, which should be secured by a couple of tapes, or, better still, by a couple of rubber bands made out of an old tube.

If the tube is punctured or without a valve, it is useless to attempt to fold it, for, although the air may be driven out, it will enter again by the hole or through the valve as soon as pressure is removed. In cases of this kind, the tube, as soon as it has been rolled in the way shown at Fig. 2, should be held securely with tape in order that it may not lose its shape, and left in that condition. The particular advantage of this is that it enables one at a glance to distinguish between perfect and imperfect tubes, the perfect ones being folded and the punctured ones rolled.

Each tube should be placed in one of the waterproof bags specially made for the purpose. This is only a detail, but it is a very important one. The bag protects the tube better than any other kind of packing, preserving it from contact with tools or other rough objects, and keeping it out of the way of oil and water. If a handful of French chalk is thrown into the bag, the tube automatically prepares itself for being mounted within the tyre. If no bag is available, the tube should be wrapped in a piece of clean cloth and secured with a string. When on the road the spare tubes, packed in the way indicated, should be carried in a separate box and not in the common compartment where oil cans and tools struggle for the most comfortable position.

SOME USEFUL NOTES.

VALVE springs, more particularly the exhaust, will not remain the same for ever. When everything else has been tried, and still the engine lacks its usual power, put a new set of valve springs all round and the trouble will then probably vanish.

WHEN side brakes are actuated by a wire rope, keep a lookout now and again at the places where the wire rounds a bend, or anywhere where it is liable to chafe. These wires, after a strand or two has gone, soon go altogether, and to suddenly find the side brake useless is most disconcerting, more particularly as a roadside repair is not particularly easy.

Do not neglect a "blow" in an engine. It may only be a faulty joint, such as a leaky valve cap, &c., but it may be an internal blow, which means badly-fitting piston rings, or possibly the rings have so moved that the slots are all in line. In any case an internal blow is very bad, as it causes a carbon deposit to eventually accumulate in the base chamber, and then the big end and main bearings are liable to be scored.

THE fouling up of cylinder heads, tops of pistons, valves, and valve ports, is frequently the cause of loss of power. This is a bad feature of an engine, and is due to either (a) bad carburation, (b) over-lubrication (c) or both these causes. Sometimes an inferior brand of lubricating oil will cause a rapid deposit to form on these parts. It is always well, if there is any doubt in the matter, to examine them every thousand miles.

A COVER that is nearly worn out frequently gives way at the head and is usually scrapped. This is not at all necessary, as a repair can be made, and it is one of the many cases where the careful man can save money. First patch the burst inside with a piece of very short canvas, bringing the latter just up to the inside edge of the bead; then stick another piece of canvas over this one, but bring it right over the bead, and about one inch and a half higher than the bed of the same on the outside. The whole lot should then be stitched with a wax-end, so that the canvas will not stretch. A repair of this description is good, if used on a front wheel, for fully three hundred miles.

It may not be clear to all motorists why the gaseous charge in the cylinders of a petrol motor is compressed before ignition, especially since the compression absorbs power. By compressing the charge before ignition a proportionally higher explosion pressure is obtained, and also a much higher mean pressure during the explosion stroke. Much greater power is therefore obtained from the same engine, and the thermal efficiency—i.e., the relative amount of power obtained from a certain amount of fuel—is also increased. Generally speaking, the higher the compression the greater the power of an engine of given dimensions and the greater the fuel economy; but there is, of course, a limit beyond which it is not advisable to go, this being fixed by the facts that when the compression is too high the charge is liable to ignite spontaneously at a too early period—a phenomenon known as pre-ignition—that the motor is hard to start (for the first explosion the charge must be compressed by hand), and that if the piston and valves are not a perfect fit a considerable part of the charge is likely to leak out.

It is said that Brighton is losing £3,000 every week end owing to the fear motorists have of motor traps between Redhill and Crawley.

A GOOD garage at Hereford is that of Messrs. Bowen and Co., whose establishment in the Commercial Road is well equipped for assisting motorists passing through the city.

THE decision of the directors of the Humber Company to concentrate the whole of their works at Coventry has occasioned very serious concern at Beeston, which owes so much of its development to the Humber Company.

MR. C. F. KNIGHT, the designer of the engine which has been adopted by the Daimler Company, will read a paper on "The Valveless Engine" at the Royal Automobile Club on the 15th prox., while on October 29th Mr. Charles Wicksteed will give one on "Change-speed Gears."

THE "Simplex" Speedometer, which was submitted to the Royal A.C. for official test on their calibrating machine, by Mr. A. T. Hawkes, on the 15th September, was found to be, at twenty miles an hour, absolutely correct, there not being the slightest fraction of error to be recorded.

WE learn from the Star Cycle Company, Ltd., Wolverhampton, that they have decided to call the 10-h.p. two-seated vehicle (built on racing car lines) illustrated in our issue of the 29th ult., the "Little Briton." A four-page leaflet giving full particulars of the car has just been issued by the makers.

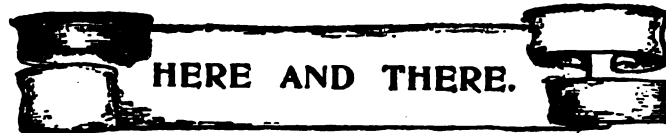
A COMPANY in India is in the market for the supply of nine motor vehicle chassis, to carry loads of about 4 tons, and a dozen trailers of 2½ tons capacity. Full particulars can be obtained from the Manufacturers' Centre, Ltd., Commercial Buildings, Steelhouse Lane, Birmingham, to whom tenders for the supply of the vehicles are to be sent.

THE Kirkham police are said to be very busy working "traps" between Preston and Blackpool, and especially on the length between Lea Gate and Kirkham in the direction of Blackpool. Quarter-mile stretches are being timed at various points. The other Saturday about eight motorists were "held-up" between Lea Gate and Lane Ends, leading up to Freckleton Marsh.

It is announced that the differences between the Automobile Club of America and the American Automobile Association have been settled, the two bodies having arranged to work harmoniously together in future and to co-operate in organising the Vanderbilt Cup and the Savannah Grand Prize races. The first-named event will, it is reported, be confined to American-built cars.

THE County Chemical Company, Ltd., Excelsior Works, Birmingham, send us particulars of a new lubricant they have lately brought out for use in the gear-boxes and differential cases of motor-cars. The use of "Vasoleum," as the preparation is called, secures that a film of oil will adhere to each of the rubbing surfaces, and thus, by keeping them apart, preventing the friction of solids taking place and setting up fluid friction only. The lubricant is of sufficient consistency to prevent leakage either through the gear-box or axle sleeve, and is claimed to ensure quiet running and prevent wear and tear.

As stated in our last issue, Messrs. Dennis Bros., Ltd., Guildford, gave a demonstration of their new petrol motor fire engine at Weybridge, on the 16th inst. The machine was driven to the riverside town from London, and on arrival was coupled up to the mains in company with the local steam fire engine, in order that some idea of their respective powers could be obtained. Afterwards both machines were set to work to pump water from the Thames, and in this test the new appliance proved to be well ahead of the horse-drawn steam engine. Pumping 450 gallons of water to the minute, the automobile sent a spray into the air about 140 ft. high, which was considerably higher than that pumped by the steam engine. Even pumping a double spray the motor was able to exceed the heights attained by its rival, while it also succeeded in forcing three sprays of water through 300 ft. of hose 120 ft. into the air.



AN American steam car enthusiast—Mr. W. Hazelton, of Oneonta, N.Y.—has lately completed a steam car, the boiler of which uses coal as fuel.

THE Dumfries District Committee of the County Council have been considering applications by a number of schools in the district for the erection of caution boards.

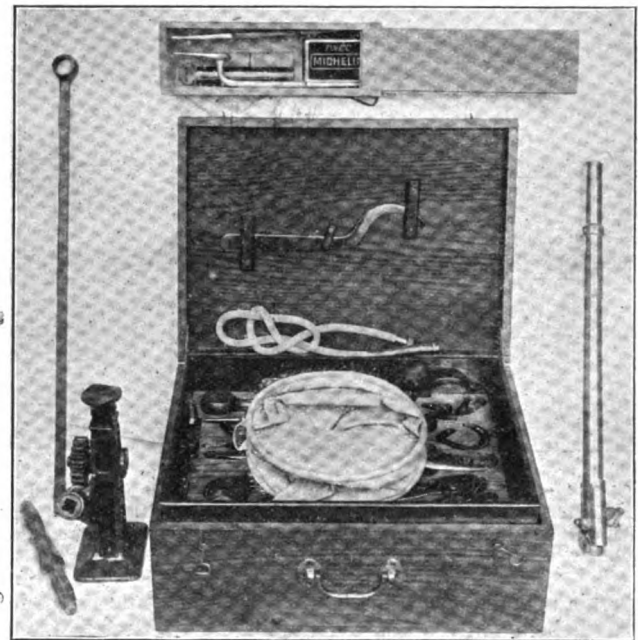
AN addition to the Clydebank Fire Brigade has been made in the form of a motor fire engine of the "Fire King" type.

NEARLY all the paper manufacturers in Indianapolis, U.S.A., now employ motor-lorries for the delivery of paper to their customers.

THE Lord Provost of Aberdeen has given notice to suggest a report to the magistrates as to the propriety of regulations being made restricting the speed of motor-cars within the city boundaries to ten miles an hour.

CAPTAIN WINDHAM, of Clapham Junction, S.W., is taking steps to form an aeroplane club, the object of which will be to bring together all interested in the development of aeroplanes or "heavier-than-air" flying machines.

WE give an illustration herewith of the tool kit which is now being supplied gratis with the Lorraine-Dietrich cars. It will be noticed that this is remarkably complete, and includes, in addition to a large outfit of tools, a good assortment of spare



parts, as well as a jack, tyre pump, repair outfit, and a water bucket. All the tools are fitted in special places and contained in a handsome polished oak chest, which adds considerably to the appearance of a car when mounted on the footboard.

A STELLA 16-20-h.p. car belonging to Mr. F. J. Norbury has recently completed a tour of over 5,000 miles on some of the worst roads in India, Malay Peninsula, Straits Settlements, China and Java, including the Poeutjak Pass in Java. The latter is a six mile ascent, the average gradient of which is one in five, and the Stella car carried three passengers and luggage.

SIGNOR SCARFOGLIO, the Italian competitor in the New York-Paris race, arrived in London on Tuesday afternoon on his Züst car, which, since February last, has travelled across three continents, the journey extending altogether to about 28,000 miles. Scarfoglio reached Paris last week end and motored straight on to Calais, crossing by special boat. On Tuesday morning he ran up from Dover to the metropolis, accompanied by Mr. A. Pereno, of the Züst Motor Company, and amidst the cheers of a huge crowd his car came safely to rest in the temporary depot of the company in Long Acre, W.C.

AT Epsom, situated on the main road to Leatherhead and Dorking, Mr. T. Hersey not only has garage accommodation for about twenty cars but is well equipped for carrying out repairs of all kinds.

DURING the seven months ending with July last 558 motor-cars valued at £234,124 and parts to the extent of £59,751 were imported into the United States, the total of £293,875 comparing with £458,844 in the corresponding period of 1907.

Two Local Government Board inquiries in connection with proposed limitations of speed are about to be held. The first will be held at the Newhaven Urban District Council offices on October 1st to consider a proposal by the East Sussex County Council for restricting to eight miles an hour the speed of any motor-car driven along a portion of the Brighton to Eastbourne main road within the urban district of Newhaven. The second will be held at the Church Schools, Shepperton, on October 3rd to consider a proposal by the Middlesex County Council to reduce the speed limit in a specified portion of the parish of Shepperton to ten miles an hour. The Wimbledon Borough Council have also applied to the Local Government Board for a regulation reducing the speed limit to ten miles an hour on certain roads within the borough.



The 24-28-h.p. Petrol Van recently supplied by Messrs. Marten and Jellisee, Ltd., of Thames Ditton, to Messrs. W. H. Smith and Sons. The van carries two tons and runs daily between London and Letchworth, where Messrs. Smith have large printing and book-binding works.

QUITE a new departure in electric headlights and lamps for motor-cars is being introduced by the Sylverlyte Electric Lamp Company, Ltd., of 11, Poland Street, Oxford Street, London, W., the great feature being that by the use of an electric lamp of only 8 candle power an illumination is obtained equal to that given by a powerful acetylene headlight. This great capacity is attained by the use of a special lens, the rear conically-shaped face of which is silvered in the same way as a mirror. The lamp is not set, as usual, between the lens and a reflector at the back of the lamp, but is inserted directly in the lens—that is to say, in a recess specially made to receive it. In this way the whole of the rays of light emanating from the electric lamp are utilised, with the result that a Sylverlyte lamp will, it is claimed, throw a light 160 yards ahead of the car and clearly illuminate the road for 70 yards; furthermore, one of its special advantages is said to lie in its capacity to penetrate the thickest fog. The lamps, which are being made in various sizes, are intended to be run off a 10-volt battery of accumulators, which will provide sufficient current to run two lamps for thirty hours continuously, or three lamps for twenty-four hours. Apart from the lighting capacity of the new lamp, its cleanliness and freedom from the care and attention needed by acetylene generators are points which will no doubt appeal to a large number of motorists.

ONE of the Darracq-Serpollet steam 'buses running on the Hammersmith-Piccadilly Circus service has been fitted with a speed indicator.

THE Coulsdon Parish Council have forwarded to the Surrey County Council a resolution in favour of the imposition of a special road tax on motor-vehicles.

AT Ashton-under-Lyne Town Council meeting it was decided to bring the matter of the speed of motor-cars through the borough to the notice of the Watch Committee.

A SECRET trial of the British military aeroplane is reported to have taken place on Saturday last, on a level stretch of grass-land near the aeronautic factory at Farnborough.

LA SOCIÉTÉ LORRAINE-DIETRICH ask us to mention that there is no truth in the report that Duray is leaving the firm in order to drive an Italian car in the forthcoming American Grand Prix race.

THE motor water-van purchased by the Surbiton District Council has now been in use for more than a year, and a comparison of the cost with the old horse-drawn water-vans is distinctly in favour of the steam motor. After meeting the annual payments for principal and interest, and allowing for depreciation, there is a saving shown of over £80.

DR. JAMES AITKEN, medical officer for the Lancaster Union, motored into Dalton Road, Lancaster, the other night, to attend a patient. While absent from the car a group of small boys commenced to play with it, one inadvertently starting the engine. The car ran away, collided with a lamp-post, which it broke at the socket, and ultimately dashed into a stone wall. The front part of the car was wrecked.

A LOCAL GOVERNMENT BOARD inquiry was held at Bangor on Saturday last into an application by the city council for power to restrict the speed of motor-cars through the main street of the city to five miles an hour, and to ten miles an hour through certain other streets. Opposition was offered by the Motor Union, the North Wales Automobile Club, and the Automobile Club. The Mayor stated that he had witnessed scores of hair-breadth escapes on the part of motor-cars in one part of the city, but he admitted that he had not given information to the police. On the other hand, several tradesmen gave evidence in opposition to the application.

THE Scottish A.C. has observed a trial over 1,008 miles of road of the R.R.H. patent motor-car wheel, and have come to the conclusion that the trial has demonstrated—first, that the wheel was reliable, and showed no important wear under the prolonged and somewhat severe test; and second, that the use of these wheels does not unduly, if at all, increase the petrol consumption of the vehicle to which they are fitted, nor does it unduly affect the speed of the vehicle on hills, or its capability to climb steep gradients. In this device the internal wheel is an ordinary pneumatic-tyred wheel of small size, upon which is mounted an external or slipper wheel consisting of a solid rubber tyre with the necessary channel or rim, on either side of which are bolted steel plates. The inside of the rim of the external wheel is lined with wood, which forms the path against which the inner pneumatic tyre presses. The side plates take up the thrust and keep the slipper wheel in position over the inner wheel. The drive is transmitted from the inner to the outer wheel by friction of the pneumatic tyre on the wood lining. Two of the patent wheels under trial were fitted to the driving wheels of a 16-20-h.p. Mass car, driven through a live axle by a four-cylinder engine, bore 98, stroke 130, having three forward speeds and one reverse. The wheels measured 36 in. in diameter, or 2½ in. more than the measurement of the wheels which are standard to the car. This alteration would have had the effect of increasing the speed of the car on top gear at normal revolutions from 38 miles to 41 miles per hour, but by an alteration of the gear in the back axle from the standard type the gear ratio was reduced from 18-60 to 15-60, and the speed consequently reduced to 34 miles per hour on the third or top gear. The weight of the car unladen, but including petrol, water, and spares, was 28 cwt. 2 qr. and the average laden weight of the car during the trial is stated to have been 35 cwt. 1 qr. 15 lb.

CONTINENTAL NOTES.

The Semmering Hill Climb.

The annual hill-climbing competition up the Semmering organised by the Austrian Automobile Club was held on Sunday last. The event, which was run over a ten kilometre stretch, during the course of which the road rises over 1,300 ft., attracted a very large number of entries, the competitors being divided into several classes. The best time of the day was made by Salzer, whose time on a Grand Prix Mercedes was 7 min. 23 3-5 sec., beating the record made last year by Poege, also on a Mercedes, by 5 3-5 sec.

Speed Trials at Evreux.

Some formidable speeds were attained on Sunday last during the course of the trials held at Evreux, France, under the auspices of "Les Sports." The morning was devoted to the flying kilometre events, when Alezy on a Clement-Bayard six-cylinder car covered the distance in 20 4-5 sec., equal to over 108 miles per hour. The next best performance was that of Bablot on a Brasier Grand Prix racer, his time being 22 sec. Other good times were made by Demeester on a Demeester Voiturette Grand Prix vehicle (41 2-5 sec.), Mademoiselle Hervieu (43 1-5 sec.) on a Werner touring car in the 86-90 mm. bore class, and Champoiseau (34 4-5 sec.) on an Imperia in the 101-110 mm. bore section. Bablot had his revenge over Alezy in the afternoon when the standing mile trials were run off, for the Brasier covered the distance in 52 3-5 sec., as against the Clement-Bayard's 58 sec. An interesting part of the day's programme was a flexibility trial for six-cylinder cars; this was won by a Vinot-Deguignand, which covered the flying kilometre in 35 1/2 sec. when driven at full speed, and in 4 min. 36 3-5 sec.—its slowest rate without allowing the road wheels to stop.

Aeronautical News.

Several notable flights on aeroplanes have been made in France during the past few days, among them being one of 39 min. 18 sec. by Wilbur Wright, on the 16th inst., and one of 30 1/2 min. by Delagrangé on the 17th inst. The event of the week, however, was Wilbur Wright's flight on Monday, which lasted for no less than 1 h. 31 min. 25 sec., during which time he covered over 40 miles—a record both as regards time and distance. A fatal accident occurred in connection with a flight of the Wright aeroplane at Fort Meyer, near Washington, U.S.A., on the 17th inst., when Mr. Orville Wright had taken Lieut. Selfridge with him as passenger. When about 70 ft. up in the air the blade of one of the propellers broke, and the machine overturned and fell to the ground. Mr. Wright was injured in the arm and hip, while Lieut. Selfridge, who was badly hurt about the head, succumbed to his injuries a few hours later. The German military airship "Parseval" met with disaster on the 16th inst. One of the fin-like balancing flaps attached to the rear of the envelope had been torn loose by the wind, and its jagged end tore a rent in the balloon, which collapsed and fell on the roof of a villa near Berlin. Fortunately none of the five occupants of the airship met with injury. The Aéro Club de France is reported to be about to offer a prize to the inventor of the aeroplane possessing the least volume.

British Motorists in France.

Recent British visitors to France include Mr. and Mrs. Enoch, London (20-h.p. Mors), Mr. S. A. Edenfield, Doncaster (Napier), Mr. and Mrs. P. Ronway, London (40-h.p. Daimler), Mr. and Mrs. Stafford (28-h.p. Mercedes), and Capt. and Mrs. Brett (30 h.p. Charron).

Motor Vehicles in the French Military Manoeuvres.

In response to the invitation of the French Ministry of War for the loan of at least 80 motor-wagons by manufacturers for use in the manoeuvres at present being held in the Blois, Tours, Chateauroux and Bourges district, only about fifty vehicles were offered and are now being used for various purposes.

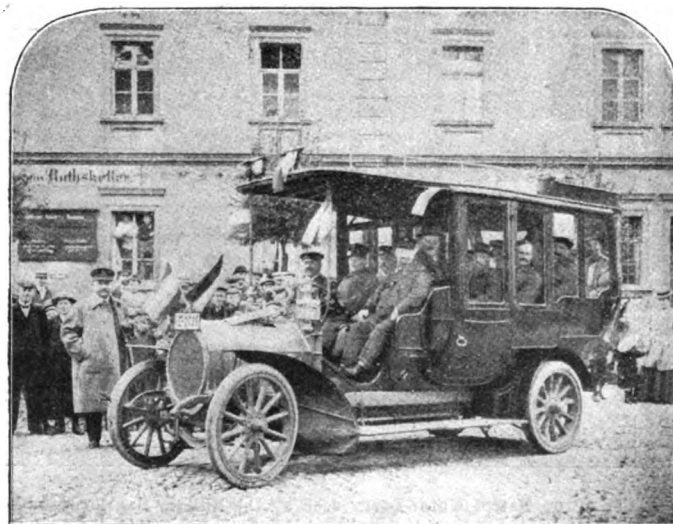
Among them are three Renard trains, three Ariei lorries, a Latil, two Mathian-Cohendets, two Panhards, ten Emress, three Peugeotts, a Lorraine-Dietrich, a Delaunay and a Berliet.

A Motor Coster's Barrow.

The latest development of the automobile movement is a motor coster's barrow, a patent for which has just been taken out in France by M. Lionel Gervais, who provides an ordinary wheeled hand cart with a small air-cooled engine, which drives the vehicle through a belt and chains. It is doubtful whether the new arrangement will ever supersede the familiar donkey and cart, as, although the coster will not have to push his load, he will be compelled to walk between the shafts in order to guide the vehicle.

Automobilism in Norway.

Owing to the physical character of the country, it is probable that Norway will prove but a limited market for motor-cars. Nevertheless, they have come into use in several parts of the country, both for pleasure and commercial purposes. There are about ninety cars registered in the country, the greater portion of them being in Christiania, which is the only city in Norway where registration of cars is compulsory. The strict rules and regulations laid down by the authorities for driving cars on the Norwegian highways is one of the serious drawbacks to the development of the movement. Every district has its special



The novel N.A.G. Public Service Vehicle lately put on the road between Marklissa and Flinsberg, Germany.

rules in regard to such matters; thus a new permit has to be obtained for each one to be traversed. In some districts motor-car driving has been entirely prohibited; in other places only certain roads may be used, and then only on specified days. The explanation given is that the roads are too narrow for the safe passage of horse vehicles and motor-cars at the same time. New and more liberal rules, uniform for the whole country as far as practicable, are now under preparation by a committee specially appointed for the purpose, but it will take a year or more before any new enactment comes into force.

Miscellaneous Items.

A Lorraine-Dietrich 5-ton petrol lorry was recently driven to the summit of the Acropolis at Athens.—The municipal authorities of St. Petersburg are about to inaugurate fresh trials of motor fire engines. The two vehicles which have been used for some time past have not answered expectations, they being not powerful enough to attain a good speed when carrying a full complement of men.—To meet the demand for a medium-power car, the Brasier Company has just introduced a 12-h.p. live axle vehicle fitted with a two-cylinder (90 mm. bore by 120 mm. stroke) engine.

Correspondence.

(Letters to the Editor should be addressed to the offices, 27-28, Charing Cross Road, London, W.C.)

TYRE PROTECTORS.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—Some time ago I asked in your columns "Can somebody invent a system of attaching non-skid detachable leather covers to motor car wheels independently of the tyre rim?" I have used all kinds of tyres on seven motor-cars that I have owned. My last car, a 40-h.p. Fiat, had plain Michelins. I had a complete set of detachable non-skid covers fitted to protect the smooth tyres, and for eighteen months the tyres were not disturbed nor did I have a puncture. At the end of this time, as I was going for a long motor tour in Ireland, I took off the tyres and put on a set of rubber non-skids. These have been cut to pieces by the sharp stones encountered in Ireland while running 1,155 miles. The plain covers that I took off were only worn or frayed where the hooks fit under the rim. They were also sodden, because one objection to this form of attachment is the fact that water gets into the tyre when the car is being washed.

I feel convinced that if a satisfactory system of attaching detachable leather non-skid covers, such as Durandal, Grose, &c., could be devised, they would be universally used, because there is no reason why a plain rubber cover or tyre should not run for two years on a car if it is protected by a well-constructed and independent detachable cover. The art of making these detachable covers is now fully understood, but the system of attachment is wrong, and can't, in my opinion, be easily



The 5-ton Petrol Motor Lorry used by the Buffalo Bag Company, of Buffalo, U.S.A.

The vehicle, which was built by the American Motor Truck Company, of Lockport, N.Y., is fitted with a 35-40-h.p. four-cylinder engine, planetary transmission giving two speeds forward and reverse, and side chain drive to the rear wheels. The owners report that "the vehicle has been in use daily for over six months in all kinds of weather, having displaced two of our double horse-drawn vehicles."

improved. Small castings could be made to receive the hooks, and these castings could be screwed on to the wheels by any handy man. It is well known that non-skid tyres do not run as long as ordinary smooth rubber tyres; they are also much more expensive. I find that these non-skid detachable cover can be repaired by any good belt man, and I think there is a great future for them if they are constructed as I suggest, to be attached quite independently of the rubber cover and its rim.

I shall be glad if others of your readers will give their experiences on this subject.—Yours truly,

C. D. LENG.

A SUGGESTED NEW AEROPLANE CLUB.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—Owing to the increasing and rapid development of the aeroplane, I have started a club to be devoted entirely to the aeroplane or "heavier than air machines," the object of the club being that those interested in aerostation shall be brought in touch with each other. The following are a few ideas which I suggest as a basis on which the club may be formed:—(1) That the subscription for the first 500 founder members shall be 10s. (2) That all printing matter from American, French, German and English papers relating to aerostation shall be obtained from press cutting agencies and suitably filed for reference. (3) That slides shall be made and kept, showing the various forms of aeroplanes in use, the parts used in the construction of same, and the various things connected with aeroplanes. (4) That no liability

will be involved to any member beyond the yearly subscription. (5) Until the club is self-supporting, I am prepared to do the secretaryship and to provide an office, telephone, lighting, &c., free of cost.

I have sent out some 8,000 circulars in connection with the matter, and have already had a large response from all parts and from all classes, expressing their wishes for the success of the club. I shall leave no stone unturned as far as I am concerned to make the club a success, and I hope that your readers will give me their encouragement by joining. The subscription for the present as "founder" members is 10s.; this, however, is shortly to be raised, as we anticipate a very large number joining. A general meeting is to be held, the date, time and place of which will be announced in your columns, for the purpose of electing a technical committee and drawing up the rules for the club.—Yours truly,

W. G. WINDHAM

(Captain.)

WHY LONG STROKE MOTORS?

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—I have been rather interested in the question of the R.A.C. formula for petrol engines, and have noticed the letter from Mr. S. F. Edge attacking the formula, and also against the use of a long stroke in a motor engine. Personally, I look upon any kind of restriction as good for the development of motor-cars, as it is always safe to assume that manufacturers, when confronted with a restriction which means they cannot obtain more power along that line, will at once set to work to obtain more power and better engines from the lines of thought that are left open to them. The R.A.C. formula, therefore, has been useful if only to bring out the possibilities of the long stroke.

Undoubtedly, the Club evolved its present formula on the ground that if the stroke were increased, the number of revolutions would be decreased, and so the power of the motor would be kept normal: that is to say, one maker would obtain 10-h.p. by having a small bore and a long stroke, and another would obtain 10-h.p. by having the big bore and a short stroke, and each would get the same piston speed and the same power, though the number of revolutions per minute would be quite different. But it was found, and here comes the rub, that if the engine, as regards shapes and sizes of valves, combustion chambers, inlet and exhaust pipes, and all the thousand and one small points that go to make a successful engine, were correctly designed, it was possible to get the engine to turn round practically as fast with the long stroke as it had previously been possible to get it to turn with the short stroke, with the great additional advantage that the piston would then pass through so many additional feet in a given time. This, in so many words, meant so many pounds lifted a tremendous additional number of feet.

For the R.A.C., therefore, to have succeeded in forcing the manufacturers to re-design their faulty valves, to re-design their ports and combustion chambers, &c., and nothing else, it would have still have had a beneficial effect on car design, because it must not be forgotten that, even though our manufacturers were now to revert to the obsolete short stroke, if they still retained their correct sizes and shapes of valves, ports, pipes, &c., that, for a given quantity of petrol, they would receive far and away more useful power at the road wheels than they did before they set out to improve their motors with the limited bore.

Mr. Edge sets out a series of objections to the long stroke which, to casual observation, might appear crushing.

Size of Engine.—Possibly, in an engine that is already too big either from its design or number of cylinders, a small addition to the stroke will be a serious item; but, with an engine correctly designed, and capable of giving an enormous power from a small size, the argument immediately falls to the ground. The alleged difficulty of the crank case having to be bigger to pass the longer crank shaft, and thus bring the crank case nearer to the ground, is surely not seriously put forward. The fly-wheel of all engines I am acquainted with invariably projects below the level of the crank case, and a very long stroke indeed would be required to make the crank case foul the ground before the fly-wheel did. So that, far from the centre of gravity being raised on this account, it can in reality be lowered, and the car made more stable, and less likely to skid or overturn on the road.

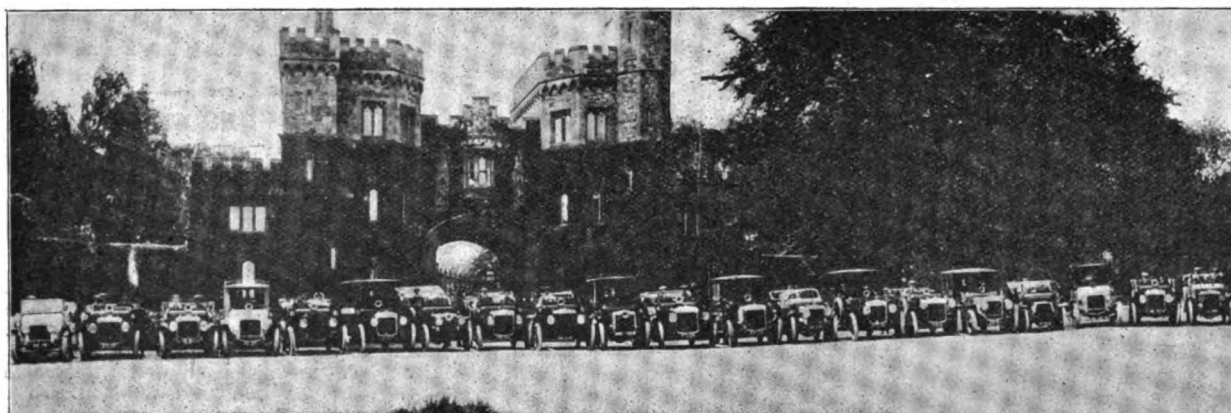
Vibration.—Vibration, we are told, is due to inertia of the forces of the reciprocating parts causing the crank case and crank shaft to distort and whip. This may be so in an unnecessarily long engine with only five bearings, but even in one in which the crank shaft is supported by a bearing between each crank, there can be surely little or no whip of the crank shaft. And, certainly, with a well-designed four-cylinder engine, the imaginary discomfort from engine vibration is so masked as to be a negligible quantity, and certainly should not be seriously urged as an argument against the long stroke. An advantage also of the long stroke is that when the long stroke engine is running at the same revolutions as the short, the piston speed is greater, and consequently more power is obtained, whereas to get the greatest

power with the short stroke means the reciprocating parts have to be reversed more times per minute, causing loss of power and wear and tear.

Weight of Engine.—I fear Mr. Edge has fallen into a strange error in this. I gather from his letter that he is comparing engines of equal bore as being of equal power, one to have a long stroke and the other to have short stroke. Obviously, this is not fair, and, if weights are to be compared, they should be of engines of equal power. This would necessitate that the short stroke engine would require a much bigger bore, and this would add weight out of all proportion to the reciprocating parts, which is bad. It would also add weight to the stationary parts of the engine; thus it will be seen that, power for power, the long stroke engine is no heavier than the short stroke engine, because the engine of the short stroke will have to have a bigger bore to equal it in power.

Noise from Engine (said to be due to vibration and valve actuation).—Possibly Mr. Edge's contention might be true if, with the small stroke absurdly small valves and other detrimental design were present; but, obviously, the same number of valves are operated not quite so often with a long stroke motor as with a short one. Indeed, it is one of the troubles that makers have had to surmount to get the engine revolutions of the long stroke motor as high as those of the short stroke motor; so that, if anything, the valves do not as a rule, move quite so fast.

Lack of Flexibility.—Here again, I fear, I must join issue with Mr. Edge. Some of the slowest running motors have had the longest strokes, and undoubtedly slow running and long stroke are not antagonistic for a given power with a given flywheel and a given compression. Indeed, it is questionable whether, with an engine of great power, obtained by a long stroke rather than by increasing the bore, the difficulties of starting are not lessened; because, assuming the two compressions equal on the two engines, one with a large bore and the other with a small bore,



The Photograph reproduced above depicts a Fleet of Daimler Cars all owned by Bristol Motorists. It is an interesting fact that all the owners of the cars reside within a radius of three miles of Bristol, the vehicles, with perhaps one exception, having been sold from the Daimler Company's Bristol Depot during the past three years.

then the pressure is acting in the small bore over a smaller area, and, against this, there is only the additional length of the crank for the starting handle to pull against. But, as the compression is not great or intense until near the end of the stroke, this possible disadvantage is not sufficient to neutralise what would be the pressure to overcome if acting on a much larger and proportionate bore to obtain the same power.

Danger from Pre-ignition.—I fear I cannot follow what Mr. Edge means with regard to this. I see no more difficulty in keeping an engine cool and avoiding pre-ignition with a long stroke, provided the plugs are correctly placed, &c., than with a short stroke. Neither can I see why the connecting rod should lie in a more oblique direction with the long stroke than with the short one, provided both are correctly designed.

Necessity for Stronger Shafts and Transmission.—Surely this is not a consideration that should enter into the calculations in connection with the modern motor-car. High-type steels can now be obtained that give enormous margins of safety for quite commercial weights of motor-cars. The only difficulty seems to be the question of manufacture.

Increased Wear and Tear on Tyres.—This trouble is more imaginary than real, and here again I think the transmission should be improved rather than the long stroke discarded. It has long seemed to me a crude way to transmit power from an engine through a solid shaft to the admittedly weakest portion of the car, namely, the pneumatic tyre. The designers of the Metallurgique car saw this years ago, and seriously tackled the question of a spring-drive that would absorb all unequal drive of the engine and all hard knocks that the tyre usually receives, and transform those knocks into a steady, even, elastic pull. This is the cure for the tyre bills for which Mr. Edge pleads so eloquently, not the re-introduction of the obsolete short stroke.—Yours truly,

WARWICK S. WRIGHT,

JUSTICE TO MOTORISTS.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—I am a medical man and the owner of a 10-h.p. car, which I use professionally.

I was run into by a tramway-car, and note the result. The police, at the instance of the "public," prosecute me for "negligence"; result, £4 fine and costs for going five miles an hour. By this means I am not only victimised by the courts for a thing I did not do, but I am deprived of redress in the civil courts, because it would be useless, with this conviction against me, to take proceedings.

In addition to all this injustice, I was compelled to attend twice at the courts, as the case had to be adjourned in the first instance owing to the deafness of one of the magistrates, who had been sitting and adjudicating all the morning.—Yours truly,

EDWARD A. PURCELL, L.R.C.P., &c.

TAPER CYLINDERS.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—In the last issue of the *M.C.J.* "E. T. H." advocates taper cylinders. Our experience, as specialists in restoring worn bores to a state of perfection and fitting new pistons, points to the fact that the best results are secured by making cylinders perfectly true and parallel throughout—within .001 in., but that the pistons should be slightly smaller at the upper end. The amount, of course, varies with the diameter of the bore. "E. T. H." mentions the fact of the piston making a "trip" "into a cooler part," but if he considers that it travels some 1,000 feet per minute (and much more even on some of the latest long stroke engines), he will see that the temperature of a solid plate of

metal like the head of the piston has not time to get very cool in a trip of a few inches.

It appears to us that "E. T. H." may possibly be confusing the rapidity with which gases lose heat with the comparatively long period during which solids retain it, for whilst the temperature at the end of an explosion stroke is reduced very considerably in the case of the gases expanded in the cylinder, we do not think that any loss of heat worth mentioning exists with regard to the head of the piston in a period so infinitesimal. The cylinder walls and combustion head are directly water-cooled, whereas the area of the top of the piston has a comparatively poor chance of getting benefit from same, especially as there is a film of oil (a very bad conductor) separating the piston from the cylinder.—Yours truly,

ACER, LTD.
A. E. S. Craig, General Manager.

ON Sunday evening last a lady's cape, which had been dropped from a motor-car, was found just outside of Scarborough. Mr. E. A. Hobson writes that if the owner will forward number of car and a correct description of the cape to 6, Shaftesbury Avenue, Roundhay, Leeds, he will be pleased to forward the same to them.

MR. R. G. BOOTH, of Harrow, has written to Buick Motors stating that the 15-20-h.p. Buick car he purchased some time ago has just completed 3,164 miles. On the 12th inst. Mr. Booth competed in the Motor Cycling Club's petrol consumption trial, and although he did not attempt to save petrol by stopping the engine down hill, &c., but drove consistently at about twenty miles an hour, his consumption came out at 31½ miles per gallon. Mr. Booth states that he did not adjust his carburettor for the trial, and carried besides himself his wife and boy of eight years and the official observer.

THE MOTOR UNION MEET AT OXFORD.

On Saturday the Motor Union held a provincial meet at Oxford. Some of the members reached the University City on Friday by motor launch from Reading, others by car and train on Saturday morning. St. Giles proved an excellent place for the cars, some forty of which lined the roadway near the Martyrs' Memorial and St. John's College.

The ordinary monthly meeting of the committee was held in the Municipal Buildings by permission of the Mayor of Oxford, who extended a cordial welcome to the Union.

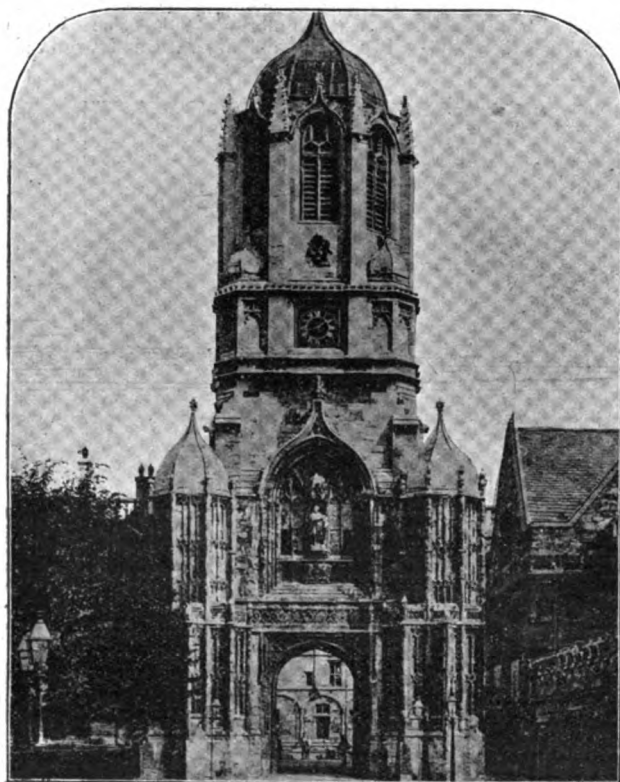
Further consideration was given to the attitude of the public towards automobilism, and the following important resolution was passed:—

"That the Union confer with the Royal Automobile Club and the Automobile Association with a view to joint action towards more effective prevention of dust and the improvement of roads.

"That the Motor Union do contribute to the above purpose the sum of £1,000, on condition that the Royal Automobile Club and the Automobile Association will each contribute the same amount.

"That in the event of these proposals being accepted by the Royal Automobile Club and the Automobile Association, the committee think it would be reasonable for the Government to make a similar grant."

Report was made that 360 road-signs had been erected by the Union at dangerous places, and it was resolved to adopt a new special sign for erection at the entrances to concealed carriage drives.



Tom Tower, Christ Church, Oxford.

The Union agreed to make a monetary grant towards road improvements on the main road from York to Scarborough, and to the cost of a road at Barnstaple Bay.

Following the business proceedings of the day visits were paid to many of the colleges and tea was enjoyed in the hall of Lincoln College.

In the evening the dinner was held at the Clarendon Hotel, Mr. Joynson-Hicks, M.P., presiding, and amongst those present were the Mayor of Oxford (Alderman F. W. Ansell), supported by Earl Russell (vice-chairman of the M.U.), Sir Robert Buckell, Sir Walter Gray, Mr. W. Ballin Hinde, Mr. Rees Jeffreys (secretary of the M.U.), and Mr. Claude Rippon (president of the Oxford and District Automobile Club).

Mr. Joynson-Hicks, in responding to the toast of the Motor Union, and after thanking the Mayor and the Oxford and District Club (which had made the visiting motor unionists honorary members for the day), alluded to the strong recrudescence of popular feeling against motor users. This had been aggravated by three factors—the dust of an exceptionally dry summer, inconsiderate driving, and the policy of the R.A.C. in relation to the "four-inch" race. For this race the Motor Union had no responsibility whatsoever. Speaking personally, and not on behalf of the Motor Union, he entirely deprecated the race, and he believed that it had gone far to exasperate the public, which saw no reason for it. An important organisation in motordom was

undertaking a grave responsibility in allowing a race to take place in which there was a probability of serious disaster, after several accidents had occurred in practice. These racing cars were not needed, and men who went in for road-racing were not likely to make considerate drivers. Mr. Burns had no doubt been right in saying that public opinion was hardening on the question of inconsiderate driving. The Motor Union had done from the centre towards remedying the evil that which the R.A.C. asked members of local clubs to do, and he thought this a more hopeful method than that of asking individual members of clubs to inform upon one another. The police, with some exceptions, were to be congratulated upon the reasonable and conciliatory manner in which they carried out unpleasant duties, and co-operation with them was to be recommended, although there were still some magistrates who boasted of having "netted" huge sums in a day by fines in the tone appropriate to a good day's shooting or fishing. Dust was the real enemy, and the roads must be reconstructed to meet the advance of traffic, as they had been repeatedly since the days of the pack-horse. He then stated the proposal made at the committee meeting, and said that he hoped to see great results from it. It might set right with public opinion motorists who, like the members of the Motor Union, desired to use the roads reasonably and with consideration, and had no sympathy with racers or with professional tryers of fast cars on the roads.

Replying to complaints from the Motor Union respecting unrolled stones on the roads the Clerk to the Devon County Council writes that arrangements are being made with a view to avoiding stretches of roads being left with the metalling unrolled.

The Middlesex County Council is erecting a warning sign at a dangerous crossing at Mill Lane, Hanwell, across the Uxbridge road; a similar concession has also been obtained by the Motor Union where Zion House, Isleworth, enters the main London road.

In response to a request by the Motor Union the London County Council last year affixed notices to the staircases of tramcars, warning passengers to beware of other traffic when alighting. In the process of cleaning these notices became obliterated, but are now being painted on the staircases.

ROAD REPORTS.

PAISLEY.—The Town Council of Paisley have decided to apply for a ten-miles limit for motor-cars proceeding through any of the streets of the burgh. The Chief Constable has also been instructed to obtain two stop watches for the use of the police in checking the speed of motor vehicles.

HORSHAM.—So many applications for tarring the road surfaces of places within the area of its jurisdiction have reached the Horsham Rural District Council, that that authority has decided to have reports from its surveyor as to the suitability of the localities which it is proposed to tar before considering applications.

HIGH WYCOMBE.—The Town Council of High Wycombe, Buckinghamshire, having petitioned the Local Government Board to reduce the speed of motor-cars through that town—through which the main road from London to Oxford runs—to ten miles an hour, various objections have been lodged with the authority at Whitehall by the Royal A.C., the Motor Union, Alderman A. Vernon, Dr. H. J. Wheeler, and others. The Town Council at their last meeting fully discussed the matter, and directed the town clerk (Mr. A. J. Clarke) to send their observations upon the objections to the Local Government Board, pointing out that there are a great number of roads leading into the main road, which made it more necessary for the safety of the public that motorists should not be at liberty to drive at a higher rate than ten miles an hour.

LANARK.—The Highways Committee of the Lower Ward of Lanark have accepted the offer of the Scottish A.C. to provide sufficient material to coat a mile of roadway with a view to mitigating the dust nuisance. The experiment is to be made with calcium chloride supplied by Messrs. Brunner, Mond and Co., through their Scotch agents, Messrs. Arthur and Hinshaw, 88, Cadogan Street, Glasgow.

FINDON.—It is notified that the West Sussex County Council have applied to the L.G.B. for a regulation limiting the speed of motor-cars to ten miles an hour over certain portions of roads in the parish of Findon, of which details are announced. Objections may be sent to the Local Government Board on or before October 7th, and a copy should be sent at the same time to the Clerk to the County Council.

REIGATE.—The Corporation of Reigate are applying for a ten-miles limit on the following main roads:—London to Brighton via Redhill, commencing where Linkfield Lane joins the main road, through the centre of the town to the Flying Scud public-house (between the nineteenth and twenty-first milestones from Charing Cross); on Reigate Hill where Beech Road joins it, through the tunnel and Bell Street to the inn at Woodhatch.

THE exports of Stepney spare wheels for the twelve months ending August 31st last, being the end of the company's financial year were, we learn, 100 per cent. in excess of those for the corresponding period of last year. The home trade has also increased very considerably. The colonial catalogue of the Stepney Wheel Company, which has been in preparation for some time and which includes a private code specially compiled for the Stepney business, is in the printer's hands. The company intend sending these catalogues during the next two months to at least 15,000 motorists in the colonies.

CLUBS AND ASSOCIATIONS.

ROYAL.

THE new candidates elected to the R.A.C. as individual associates include several ladies, among them: Lady Clifford, of Chudleigh; the Countess de Hamel De Manin, Mrs. Arthur Burgham, Miss Dorothy Whitney, Miss Beatrice Blair, and Miss Josephine Oakley. Lord Haversham has also become an associate, together with Sir George Armstrong, Bart., Sir George Polkington, the Rev. Joseph Wood, D.D., head master of Harrow School, Mr. E. H. Holden, M.P., and Mr. Chas. Manners, the well-known singer.

COMMERCIAL MOTOR USERS' ASSOCIATION.

At the September monthly meeting of the Executive Committee of this Association it was announced that the prize fund for good driving totalled about £32. The latest day for entry for the London competition was decided, viz., Monday next, the 28th inst.

The committee also resolved to ask Capt. Nott-Bower, Commissioner of City Police, to endeavour to supply a classified return of the street accidents in the City during the last two years.

ROADS IMPROVEMENT ASSOCIATION.

THE Roads Improvement Association (Incorporated), is arranging to exhibit at the Exhibition to be held in connection with the forthcoming International Road Congress at Paris, between fifteen and twenty samples of road materials, &c., in the space that has been placed at its

sympathy by attending in person, were Mr. Charles Hardy, the president, whose Daimler car led the procession, Dr. Hogarth, Messrs. Booth Grainger, W. B. Wells, J. Senior, A. King, J. W. Danby, H. Belcher, J. Truman, G. Cowen, and H. Stevens. Mr. T. Pyatt, the secretary of the Cripples' Guild, Mr. G. Sadler, the treasurer, Mr. F. Lees, and other members, also attended. Lieut.-Colonel Birkin, the chairman of the club committee, lent two cars.

HEREFORDSHIRE.

A SPECIAL meeting of the Herefordshire Automobile Club was held on Tuesday to consider the R.A.C. circular letter on inconsiderate driving. It was resolved to co-operate in the attempt to put down the evil. The President (Mr. Pennefather) suggested that all motor-car owners who employed drivers should give orders that the rule and ordinary courtesies of the road must be strictly observed in all cases.

HULL.

THE Hull and District Automobile Club held a speed-judging competition on Saturday last. The start was from Tranby Lane end (Anlaby), the route being Skidby, Beverley, Market Weighton, Sancton, Newbald, and Brough to Anlaby, the course being about thirty miles. Each competitor had to give his watch up before starting, the prizes going to those who most accurately travelled at the speed given them. The test varied from 15½ to 18½ miles an hour. Dr. Coates was



Photo by]

The Scottish Club's Cairn o' Mount Hill Climb.—A Group of the Competitors at Edzell.

[A. Ross, Stonehaven.

disposal by the Ligue Contre La Poussiere des Routes. The specimens will embrace samples of road tar treated and made with various dustless materials, and will include sections of road immediately after treatment and also sections cut from the road after a certain period of wear. The association has also appointed seven delegates to be present at the Congress, and the delegates are contributing papers for discussion at the meeting.

BROOKLANDS.

THE Brooklands A.R.C. on Saturday announced the official figures for the 60-h.p. short distance class record made by F. Newton, with a Grand Prix model Napier, on the previous day. His time for the flying half-mile was 17.61 sec., giving a speed of 102.20 miles per hour.

The previous record was 100.84 miles per hour, by D. Resta on a Mercedes car.

NOTTINGHAMSHIRE.

ON the 17th inst. the Nottingham Automobile Club held their annual outing for the crippled children of Nottingham. Sixty motor-cars were lent for the purpose of conveying 200 members of the Crippled Guild to Costock, about ten miles away. A car load of nurses from the hospitals attended to render help in case of emergency. At Costock, Mr. R. J. Bagnall-Wild looked after the arrangements, and among the Club members who not only lent their cars, but manifested their

the starter and judge, and he was assisted by Mr. Henry Strong, assistant secretary. Two prizes had been generously given by Mr. A. J. Atkinson and the Hull City Garage Company. The order of merit was as follows:—1, Mr. A. J. Atkinson (president of the Club); 2, Mr. A. T. Simpson. The other competitors in order were:—Dr. E. H. Howlett, Messrs. E. Robson and W. Fenner. The times were remarkable, as the two winners were only 2 sec. and 1 min. 10 sec. out respectively from the time required to complete the run at their allotted speeds.

SCOTTISH.

ON Saturday last the Scottish Automobile Club held a handicap hill-climbing competition confined to members of the S.A.C. and the Scottish Motor Traders' Association, up the well-known Cairn o' Mount Hill, at Clattering Brig, in Kincardineshire. The hill is 2 miles 35 yards in length, the gradient varying from 1 in 5.4 to 1 in 20. There were three classes:—(1) Cars of 12.8-h.p. and under; (2) cars up to 25.6-h.p.; and (3) cars over 25.6-h.p. The prizes were awarded under handicap on the following formula:—

Weight of car in lb.

Time in seconds \times H.P.

In Class 1, Mr. A. Hunter Crawford's De Dion was first; in Class 2, Mr. Boyd Macrae's Werbell; in Class 3, Mr. J. Hunter Steen's Gladiator. The cup, presented by Mrs. Seligman, for the best handicap result by cars having engines over 4 in. bore, was won by Mr. Steen's Gladiator. Mrs. Adams' prize for the best handicap result, irrespective of class,

went to Mr. Macrae's Werbell. The Motor Trade Association's handicap prize was won by Mr. T. Blackwood Murray's 24-h.p. Albion, with Mr. W. G. Maxwell's 22-h.p. S.C.A.T. second, and Mr. T. Shaw's 40-h.p. Ariel third.

The cars in Class I., in which two seaters were eligible, were all two seaters except the Argyll, which carried four passengers.

The following are the official results:—

| No. | Competitor. | Car. | Handicap H.P. Rating. | Time. | Figures of Merit. |
|--------------------------------------|-------------------------|-------------------------|-----------------------------|---------|----------------------|
| CLASS 1.—Cars of 12-h.p. and under. | | | | | |
| 16 | A. H. Crawford | De Dion | 10.61 | 15.58 | 190 |
| 8 | Major Fraser | Argyll | 11.98 | 14.31.2 | 180 |
| 31 | W. Renwick | Adams | 11.93 | 15.28.1 | 156 |
| CLASS 2.—Cars up to 25.6-h.p. | | | | | |
| 5 | J. M. Webster | Clem.-Talbot | 22.22 | — | Withdrawn on hill |
| 30 | B. M. M'Crae | Werbell | 26.21 | 6.37 | 284 |
| 15 | L. Henderson | Mass | 28.20 | — | Withdrawn on hill |
| 11 | R. Finlay | Darraeq | 24.60 | 13.19.3 | 138 |
| 6 | R. J. Smith | Siddeley | 27.30 | 11.5.4 | 155 |
| 29 | G. J. Lumsden | Rover | 24.66 | — | Withdrawn on hill |
| 28 | J. B. M'Nat | Humber | 29.34 | 9.49.4 | 155 |
| 12 | J. R. Nisbet | Humber | 15.97 | 9.59 | 216 |
| CLASS 3.—Cars over 25.6-h.p. | | | | | |
| 7 | T. Shaw | Ariel | 77.42 | 6.7 | 1404 |
| 26 | F. Eastmead | Sunbeam | 32.38 | 7.58.2 | 203 |
| 24 | F. Iawrie | Ariel | 44.50 | 7.0.4 | 206 |
| 8 | J. Adam | Sunbeam | 32.38 | — | Withdrawn on hill |
| 1 | J. G. Raphael | Metallurgique | 49.56 | — | Withdrawn on hill |
| 19 | J. H. Paterson | Peugeot | 28.07 | — | Withdrawn on hill |
| 14 | W. C. Macbeth | Delannay- Belleville | 52.22 | 7.49.2 | 183 |
| 20 | W. H. Cox | Rapid | 33.60 | 9.17.4 | 188 |
| 17 | F. J. Usher | Napier | 100.2 | — | Withdrawn on hill |
| 10 | J. H. Steen | Gladiator | 34.07 | 7.46.1 | 226 |
| 25 | J. F. Henderson | Albion | 31.34 | 10.14.2 | 180 |
| 2 | G. F. Paisley | Albion | 31.34 | 8.36.3 | 222 |
| SCOTTISH MOTOR TRADERS' ASSOCIATION. | | | | | |
| 21 | T. Blackwood- Murray | Albion | 31.34 | 6.39 | 268 |
| 21 | W. G. Maxwell | S.C.A.T. | 27.77 | 7.59.1 | 216 |
| 18 | W. R. Bell | Werbell | 26.21 | — | Withdrawn on hill |
| 7 | T. Shaw | Ariel | 77.42 | 6.7 | 1404 |
| 19 | J. H. Paterson | Peugeot | 28.07 | — | Withdrawn on hill |

Mr. Henderson's "Mass" was driven by Mr. Walter S. Macharg; Mr. Webster's "Talbot" by Mr. Gibbon, both members of the club; Mr. Usher's "Napier" was driven by his ordinary driver. In every other case the car was driven by the owner or a member of his family. Fine weather prevailed for the event, which attracted a large number of spectators. After the hill climb was over the competitors and their friends adjourned for tea to the Panmure Arms Hotel, Edzell, eight miles away, where the photograph reproduced on page 653 was taken.

DERBY AND DISTRICT A.C.

ON Saturday last the members of the above club held their closing competition for the present season, which took the form of a speed judging contest in lieu of the usual club run. The cars assembled at the Station Bridge at Mickleover and the route being from a point a short distance away and round a series of loop roads encircling the Radbourne and Langley districts, and so arranged as not to include any portion of the Ashbourne or Mickleover main roads. The total distance was under four miles. The course made an admirable one for the purpose, and consists of winding and narrow roads through beautifully wooded country, and as the exact route to be taken was not fixed upon until shortly before the start, competitors had no opportunity of previously traversing the course and making themselves acquainted with the hills and other difficulties to be encountered, and were thus forced to rely solely upon their judgment as to the average speed to be maintained.

The method in which the contest was run was that each competitor chose a speed at which he elected to travel up to twenty miles per hour, and this with the actual length of the course gave the time that should be taken, the error being the difference between the correct and actual time made, the competitor making the lowest percentage of time error winning. Each entrant nominated an observer, who rode in another car to point out the route and ensure that watches and speedometers were not used. It is a fact which speaks well for the careful driving of members of this club that in every case the competitors were slower than

the speed they elected to travel at, and as each car was dispatched singly, there was no passing on the course and nothing in the nature of a race; some of the cars, in fact, which had made as the drivers thought possibly too fast a speed down the hills, when coming suddenly in sight of the finishing point slowed down and crawled to the finishing line, notably Mr. D. C. Bolton (15-h.p. Standard), who in this manner hoped to neutralise what he considered had been too fast a speed, and, as a matter of fact, was coming in almost on time, and thus reduced his speed, making an error of 2.32.

The winner turned up in Mr. Herbert Jefferson, a 16.20-h.p. Humber, which it is worthy of notice he had only taken possession of during the week, his error being only 1.93.

Appended is a list of the competitors, their cars, and the percentage of error, with the actual placings:—

| Name. | Car. | Error. | Placing. |
|-------------------|-------------------|--------|----------|
| Herbert Jefferson | 16.20-h.p. Humber | 1.93 | 1 |
| D. C. Bolton | 15-h.p. Standard | 2.32 | 2 |
| B. Sadler | 8-h.p. De Dion | 2.79 | 3 |
| G. B. Fletcher | 10.12-h.p. Humber | 4.25 | 4 |
| F. A. Bolton | 15-h.p. Standard | 5.6 | 5 |
| Wm. Hart | 24-h.p. Minerva | 10.7 | 6 |
| Dr. Copestake | 7-h.p. Fafnir | 19.3 | 7 |
| C. J. Allin | 10.12-h.p. Humber | 20.2 | 8 |

Mr. Jefferson thus takes the silver medal (1st) and Mr. D. Bolton the bronze (2nd), while the Motor Union Medal, awarded for the best aggregate performances of the year, also goes to Mr. Jefferson, he being the only member who has won two first prizes in club events during the season.

The course was in admirable trim, there being an absence of dust and the weather was perfect. The results were again expeditiously worked out during the contest by the energetic hon. sec., Mr. E. H. Fryer, and the officials were:—Timekeepers: Messrs. C. J. Allin (hon. treasurer), and E. H. Fryer (hon. sec.); observers: Messrs. Wm. Hart, Dr. Copestake, E. J. Bolton, and P. E. Joule (assist. sec.)

LINCOLNSHIRE A.C.

THE last meet of the season was held at Revesby on the 17th inst., and, though the weather was threatening, there was a good attendance. The beautiful gardens and the famous shrubbery at the Abbey, the home of the Stanhopes, were thrown open to the members, and a very pleasant time was spent. Tea was taken at the picturesque Red Lion Inn.

LINCOLNSHIRE M.C.C.

A TRIP to London is being arranged for Saturday, October 24th, as a competition for the Palmer Cup presented by Mr. E. J. Mitchell, manager of the Palmer Tyre, Ltd. The members will start from the hill just outside Lincoln, and the competition will be a reliability one. A team trial for teams of four is also being arranged.

IRISH MOTOR-CYCLE UNION.

THE concluding hill climb of the season under the auspices of the Dublin centre of the Motor-Cycle Union of Ireland was held on Saturday last in Co. Wicklow, the long hill from Kilmacanogue to the top of Calary Bog being the locale. The competition was divided into two classes, non-peddalling and pedalling, and in each the awards were determined on Professor Callender's formula. In the non-peddalling Class B Dumphy (3½-h.p. Jap) made fastest time and won on formula. The same rider made fastest time in the pedalling class, but in this section he was beaten on formula by R. Walsh, who scored 268 points to Dumphy's 295. The times were taken by Messrs. J. A. Armstrong and T. W. Murphy.

THE Accrington and District M.C.C. held their first gymkhana on Saturday last.

THE Hull and East Riding Auto-Cycle Club held a pace judging contest on the Hedon Road, Hull, on Saturday afternoon.

FOR the purpose of assisting the town in the extension of its summer season, the Blackpool and Fylde District M.C. is arranging to hold a motor gymkhana at Blackpool on October 17th or 24th, and any profits are to be handed over to charitable institutions.

By courtesy of the Society of Motor Manufacturers and Traders the Automobile Association will have an imposing stand at the November motor-car show. The stand is being tastefully decorated in the A.A. colours—yellow and black—and will be easily recognised by a large model of the A.A. car badge.

ON Saturday, the 12th inst., Mr. W. Willis (chairman) and Miss Willis entertained the members of the Kent Automobile Club at "Philippines," Braisted Chart. A good number were present and all thoroughly enjoyed themselves. The Royal Hungarian Band played throughout the afternoon.

THE Victrix Motor Car Works, Kendal, are now making a speciality of a neatly-finished 3.10-h.p. single-cylinder engine, fitted with automatic carburettor and centrifugal water circulation pump. The same firm is also manufacturing an improved form of universal joint.

CASES AGAINST MOTORISTS.

TO COME UP IF CALLED ON.

At Windsor, on Saturday, Duncan Alves, of Tunbridge Wells, was summoned for driving a motor-car at twenty-six miles an hour along the Old Windsor road. Mr. Robb, who appeared for the defence, admitted a technical offence. He said his client was a keen motorist, who owned five large cars, and during the last four or five years he had travelled tens of thousands of miles in all parts of the United Kingdom, and his licence was absolutely free from stain or endorsement of any kind—almost a phenomenal record for a motorist. Having pleaded guilty, it might seem difficult to avoid a conviction, but, under the circumstances, he was going to ask the Bench to dismiss the case on payment of costs. His client would not feel a fine of £100 any more than he would a shilling, but he took a personal pride in his record, even though a conviction did not carry endorsement of the licence. After some discussion the chairman said that, in consideration of defendant's good record, the magistrates would make a distinction, and would bind him over in the sum of £20 to come up for judgment if called on within six months.

BIG BATCHES.

Several batches of motorists have recently been summoned and fined at Swindon, Stratton, Llanrwst, Epsom, Harrogate, Hexham, Christchurch, Morpeth, Helston, Cambridge, Kingstown (Ireland), Dundee, Kesteven (Lincoln), York, Chelmsford, Reigate, Newcastle and Morpeth.

THE WORPLESDON ACCIDENT.

At Woking Police Court, Max Dalloz, of French nationality, a motor-car driver in the employ of Lord Newborough, has been charged with having carelessly, negligently, and recklessly driven a motor-car and caused the death of William Larby, aged 13, at Worplesdon, on September 10th. He was remanded for a week. The magistrates remanded the prisoner to Brixton, but said that he would be liberated

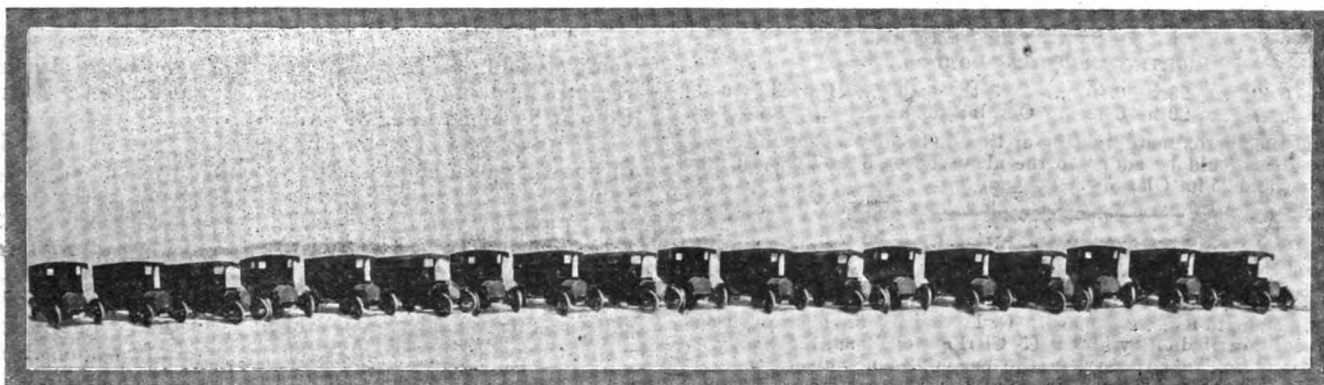
AUTOMOBILE ACCIDENTS.

A SERIOUS motor-car accident has occurred on Batchworth Hill, Rickmansworth. A party of six from Worcester Park, Surrey, were descending this declivity into Rickmansworth, when the car overturned. Two of the occupants—Mr. and Mrs. Freeman, of Oak Villa, The Retreat, Worcester Park—were so seriously injured that they were removed in a critical condition to Watford Hospital, where Mr. Freeman has since died.

WHILE a motor-car was being driven from Usk to Newport (Mon.) on Saturday the tyre of one of the rear wheels burst, resulting in the car colliding with a telegraph pole. Mr. L. B. Gaunt, who was seated by the side of the chauffeur, was killed instantly, but the driver and other passengers escaped injury.

A MOTOR-BUS accident took place in Trafalgar Square, London, at the corner of St. Martin's Lane, late on Sunday night. Three people were injured, two slightly, whilst a lady sustained a fractured leg. The two buses were travelling in the same direction. The first bus started to go backwards down an incline and collided with the other vehicle.

A SERIOUS motor-car accident occurred on Monday, on Titsey Hill, near Limpsfield, Surrey, in which Mr. H. Tomalin, of Sanderstead, received injuries which it is feared will prove fatal, while Mr. Rowe, a partner in the firm of Messrs. Cooper and Co., hosiers, Nottingham, his wife, and the chauffeur were also injured. After the descent of the mile-long hill had begun the chauffeur found that the car was getting out of control. Mr. Rowe jumped out and escaped with minor injuries. After the car, travelling at a tremendous speed, had proceeded a few hundred yards, Mr. Tomalin also jumped out and sustained injuries to his skull. On reaching the foot of the hill, where there is a curve, the car dashed through a fence, knocked the stump of a tree out of the ground, and was completely wrecked. Mrs. Rowe was rendered unconscious, and she received several bad cuts about the head and body. The chauffeur was also injured but not seriously. THE coroner's adjourned inquiry at Guildford into the circumstances



The Star Engineering Company recently secured an order from Messrs. Lever Brothers, of Port Sunlight, for no less than nineteen 9-h.p. two-cylinder motor-vans. The above illustration depicts eighteen of the vehicles which have now been delivered.

on bail in his own recognizance of £100, if, in addition, two sureties of £100 or one of £200 were forthcoming.

THE BRIGHTON ROAD.

At the Haywards Heath Petty Sessions on Monday a number of automobilists were fined for exceeding the speed limit on the London and Brighton road on September 6th, the fines aggregating £70. The police had timed the cars over a distance of six miles, from Bolney to Newtimber, and the speeds ranged from 25½ to 30 miles per hour. Among the defendants was a lady, who had to pay £5 and costs.

A CHARGE OF DRUNKENNESS.

At Bromley (Kent) Police Court, on Monday, George Warden, of Battersea, was charged with being drunk in charge of a taximeter motor-cab at Chislehurst. After hearing the evidence the Bench decided to convict, and fined defendant 40s. and costs.

DANGEROUS SPEED AT NEWMARKET.

For driving a motor-car at a speed dangerous to the public, Henry Carsley, chauffeur to Mr. Ernest Terah Hooley, was fined £10 and 39s. costs and his licence suspended for a month at Newmarket Police Court on Tuesday. The evidence for the prosecution was to the effect that the car was driven along the road at Newmarket at a rate of forty miles an hour, as a result of which several racehorses were frightened and bolted.

THE "Transvaal Leader," in referring to the recent hill-climbing competition organised by the Transvaal Automobile Club, states that "Several records were put up in different ways. One is undoubtedly that of Mr. C. Saker's Star car, whose time worked out at an average of 28.1 miles per hour, the highest in the competition; the trip of three hours three minutes from Johannesburg to Ristenburg is also likely to come in the list of records for such cars."

of the death of William Larby, a schoolboy who was run down and killed by a motor-car in front of the schoolhouse at Perry Hill, Worplesdon, on September 10th, was concluded on Tuesday, when, after twenty-five minutes' deliberation, the jury found: "The death of William Larby was caused by a motor-car recklessly driven by Max Dalloz."

AUTOMOBILE INSTRUCTION.

THE prospectus of the day and evening courses of motor-car engineering of the City of Bradford Technical College reaches us from Professor G. F. Charnock, the head of that department. This includes lectures and laboratory work, drawing and sketching, and workshop practice. In the laboratory an experimental motor of 16-h.p. has been installed, and practical work will be explained and illustrated.

THE University of Birmingham is arranging for a course on automobile engineering extending over four years, the first three of which are identical with the ordinary mechanical engineering course, it being considered essential that the training of an ordinary mechanical engineer should form part of the automobile course. During the fourth year the student will take the mechanical engineering, together with lectures, laboratory, and drawing, specially directed to the automobile industry, which will include tests on steam, petrol, and heavy oil motors, efficiencies of transmissions, &c. The designing class will deal with the existing types of leading motors, together with their application to road traction, and also to the development of the marine motor.

IN winning the petrol consumption trial of the Motor Cycling Club on the 12th inst., on an 8-h.p. Rover car, Mr. J. Platt-Betts achieved the remarkable feat of averaging no less than 47½ miles to the gallon of petrol.

FORTHCOMING EVENTS.

SEPTEMBER.

26th (Sat.).—N. W. London M.C.C. petrol. quantity judging competition.

Invitation to the Kent A.C. by Mr. and Mrs. Schlenheim to Chislehurst.

Examination for R.A.C.'s driving certificates at the Adelphi Hotel, Liverpool.

27th (Sun.).—Southend M.C. run to White Hart Hotel, Braintree.

OCTOBER.

3rd (Sat.).—Brooklands A.R.C. meeting.

4th (Sun.).—Gaillon Hill Climb.

11th (Sun.).—First International Road Congress and Exhibition opens at Paris.

International long distance balloon race, starting from Berlin.

14th (W.).—Incorporated Institution of Automobile Engineers. Presidential address at the Institution of Mechanical Engineers, by Mr. Dugald Clerk, F.R.S.

15th (Th.).—Mr. Knight's Paper at the R.A.C. on "Valveless Engines."

NOVEMBER.

6th (F.).—Invitation Smoking Concert of the Stanley Cycling Club at the Queen's Hall, London, W.

14th (Sat.).—Thirty-third Annual Dinner of the Stanley Cycling Club, Hotel Metropole, London, S.W.

20th-28th.—Stanley Show at the Royal Agricultural Hall, London, N.

26th (Th.).—400-mile International Grand Prize Race of the Automobile Club of America.

28th (Sat.).—Opening of the Paris Motor Car Exhibition.

DECEMBER.

23rd (W.).—Speed and reliability trials at Nagpur, Central Provinces, India.

LIGHTING-UP TIMES—LONDON.

Sep. 26th—6.49 ... 28th—6.45 ... 30th—6.40 ... Oct. 2nd—6.35
" 27th—6.47 ... 29th—6.42 ... Oct. 1st—6.38 ... " 3rd—6.33

To find the approximate lighting-up time in September for Birmingham 9 minutes should be added to the above times, 8 for York, 13 for Manchester, and 25 for Glasgow.

COMPANY NEWS.

(In the case of New Companies the file number is given at the end of the particulars.)

G. DAVENPORT AND CO., LTD., has been registered with a capital of £7,000, to adopt an agreement with G. Davenport for the acquisition of the business carried on by him at 95, Clerkenwell Road, E.C., as "G. Davenport and Co.," and to carry on the business of manufacturers and importers of, and agents for, goods in connection with motors, motor-cars and carriages, and horological, mechanical and electrical novelties, &c. G. Davenport is governing director for life. Registered office: 95, Clerkenwell Road, E.C.

THE Lancashire Taxicab Company, Ltd., has been registered with a capital of £5,000.

LONDON AND SOUTH-WESTERN MOTOR CAB COMPANY.—£20,000 Minimum cash subscription, 100 shares. Russell House, Streatham, S.W. (99,489.)

WINDOVERS.—£38,000 (£1) (18,000 preference). To take over businesses of coach builders, motor-body builders, and harness makers carried on by W. C. Windover, as Turrill and Sons, at Long Acre, South Audley Street, and Brompton Road, London, and at Croydon, and by Charles S. Windover and Co., Ltd., at Long Acre and New Bond Street, London, and at Huntingdon. Private. 30, Long Acre, W.C. (99,511.)

AN INDIGNANT DEFENDANT.

LORD ALASTAIR ROBERT INNES-KER, of Albany Street Barracks, W., has been fined £4 and costs at Kingston, for exceeding the motor-car speed limit on the Portsmouth Road, Esher, the police giving his lordship's speed at over thirty-two miles an hour. The defendant admitted the offence, and, after having paid the fine, he tore up his summons, and tossed the pieces into the jury box as he left the court.

POLICE "CONTROLS."

THERE is a trap between the third and fifth milestone from Nairn, in the parish of Auldearn, N.B.

POLICE operations are frequently directed against motorists between Mere and Bracebridge Heath (Lincoln).

TRAVELLERS on the high road between Cumberland and the Scottish border should be careful near Kingston, Carlisle.

THE London road, Chelmsford, is again the scene of motor "controls" leading to the local courts.

RECENT Scotch motor "controls" which have been reported to us include that on the Braemar road, on the way to Aberdeen; through the village of Auchterarder, and on the road between Forfar and Perth.

BUSINESS NEWS.

THE DAIMLER MOTOR COMPANY have been honoured with the Royal appointment to His Majesty the King of Spain.

MR. F. TURNER, of Brothwood Hall, Rochdale, received delivery of a 20-h.p. Beeston Humber landaulet in April last, since when the car has run between 3,000 and 4,000 miles without a single compulsory stop.

IN connection with the recent motoring events carried out at Spa, Salon, and Mont Ventoux, Dunlop tyres met with conspicuous success. In the first named they were fitted to the Clement-Bayard car, winner of the Coupe de Spa, to the Vivinus, which made fastest time in the Coupe Pilette, and to the Nagant car, fastest time maker in the Coupe de Spa Tourisme. At the Salon meeting, Dunlops were fitted to the Mors car, first in the seventh category in the flying kilometre race, and to the first vehicle in the ninth and eleventh categories in same event, while in the Mont Ventoux hill climb they carried the car which came in first in the ninth category.

MESSRS. DAVIES, TURNER, AND CO., LTD., the international carriers, 52, Lime Street, London, E.C., sound a note of warning to motoring tourists in Italy. Very careful arrangements should be made prior to importing cars into that country, as the unfortunate owners are subject to all manner of pains and penalties if clearance through the customs be not effected by experienced clearing agents fully conversant with the rules and regulations of the Italian customs. Should it happen that a technical mis-declaration takes place, or any formality be omitted or forgotten, the authorities do not hesitate to invoke the operation of the very drastic laws which necessitate the payment of a heavy fine. A provisional permit of importation has to be obtained which is available for a period not exceeding three months, and woe betide any motorist who fails to renew the permit before its expiry, as such an omission would result in the deposit paid on entry being forfeited, and the *tassa di circolazione* enacted for the space of a whole year. Messrs. Davies, Turner, and Co., Ltd., will be glad to furnish full information to any motorist contemplating a visit to Italy.

A MOTOR meet to celebrate the fifteenth anniversary of the completion of the first petrol car by Mr. Elwood Haynes was recently held under the auspices of the Kokomo Automobile Club at Kokomo, Ind., U.S.A.

THE exports of motor-cars and parts from the United States during the seven months ending with July last only attained a value of £722,788 as compared with £849,098 in the corresponding period of 1907. England is first in the list with £273,112, Canada being second with £138,567 and France third with £102,151.

AMONG the new names added to the nomenclature of human afflictions by Dr. Thomas Oliver in his recently published book, "Diseases of Occupations," the motor-car is responsible for at least one. It is described as "chauffeur's fracture," and is the unhappy result of endeavouring to start up the engine with the ignition too far advanced. Dr. Oliver is professor of physiology in Durham University, and his exhaustive treatise on the special dangers attending each different occupation gives considerable explanation of the dangers to the wrist and forearm attending a back fire.

TO CORRESPONDENTS.

All communications intended for insertion in this Journal or relating to Editorial matters should be addressed to THE EDITORIAL DEPARTMENT, MOTOR-CAR JOURNAL, 27-33, Charing Cross Road, London, W.C., and must be written on one side of the paper only. Letters must in all cases be accompanied by the name and address of the writer, as no notice will be taken of anonymous communications.

To insure insertion communications and contributions must be in the Editor's hands by Tuesday forenoon of the week in which the same are intended to appear. Disappointment may be caused by non-compliance with this rule, and to avoid this earlier receipt, if possible, is necessary.

Photographers, both professional and amateur, are invited to send photographs of current events or of motoring scenes and incidents. The fee, if any, required for reproduction should be stated in each case, otherwise no liability will be accepted.

The Editors cannot undertake to return MSS. or drawings, although every effort will be made to do so in the case of rejected communications. Where such are regarded as of value, correspondents are requested to retain copies.

The Editors do not hold themselves responsible for the opinions expressed by their correspondents, or for statements and facts which do not appear in the editorial columns.

The Editors and Publishers beg also to state that they will accept no responsibility for unsolicited contributions, even if used, unless payment for same is directly specified in forwarding, and the terms arranged before publication.

THE Motor-Car Journal.

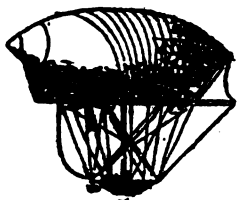
VOL. X.]

LONDON, SATURDAY, OCTOBER 3, 1908.

[No. 500.]

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COMMENTS.



WE understand that an Aeroplane Institute is to be formed under the auspices of the British Aero Club, with the view of providing a "flying ground" near London, encouraging the study of flight, arranging competitions, and generally forwarding the movement. Many members of the Aero Club have lately been in France watching the progress of the inventors now in that country, and endeavours will be made to bring Great Britain into similar prominence in connection with the aeroplane.

A School for Motorists.

ADDRESSING a driver of a motor-omnibus who appeared before him at the West London Police Court on Tuesday, Mr. Plowden said "this is a school for motorists," and that the defendant should have known that he was going as fast as was stated by the police. If the magisterial courts are thus to be made a kind of automobile academy, we trust that less harsh schoolmasters will be provided on many of the Benches in some of the southern courts. When will schools for policemen be established?

In Manxland.

THE race for the Tourist Trophy has, despite the rather belated moanings of certain daily and weekly journals, been run in the Isle of Man. The weather was ideal, the roads in fairly good condition, though bumpy in places, and the men as fit as medical examination could testify. The result has been a demonstration of the possibility of running a car continuously for nearly 6½ hours at a speed of over 50 miles an hour. Thirty-five cars started; during the progress of the event seventeen retired from causes fully detailed in our report on another page. Of those that survived, Mr. W. Watson's consistent driving of a car that has attracted considerable notice during the practising enabled him to achieve a popular victory. Mr. A. E. George was possibly robbed of victory by the firing of his carburettor—a snatching of reward that recalled the sensational incident of a couple of years ago. The Darracqs made a good showing, and Mr. A. Lee Guinness is to be congratulated on his success.

The Record of the Race.

THIS week we present a record of the Four-inch Race, which sets forth in a terse and lucid manner the happenings in that event. In addition to the descriptions written from two points of view, viz., the starting point, and the chief replenishing station at Ramsey, some "Echoes" on a later page have an interest for those who are concerned with all the details of automobile racing; and now that the great event is over the competitors who had ill-luck and other mishaps are asking was it worth the trouble, while the public is thinking of other things. General interest in motor-car racing is scarcely sustained from one event to another, and the Tourist Trophy

race has proved but a mild excitement. Fortunately the day was fine and the roads in good condition—facts which conspired with the caution of the drivers to reduce the risks a great degree.

The Effect of the Race.

THERE can be no question that the change in the regulations under which the Touring Trophy contest is held has this year had somewhat unexpected results. While in 1907 the main feature was a restriction in the fuel consumption, this year motor-car designers had the task of meeting two limitations—one of weight of car and one of cylinder bore. The first did not present any great difficulties, but the second was important in that it left them free scope to produce an engine which, with a four-inch bore, shall develop the maximum power. How well they have succeeded is shown in the account of the wonderful performance in the way of speed recorded elsewhere. Notwithstanding the idea which has hitherto prevailed that the longer the stroke of an engine the slower the speed, some manufacturers, by careful design and construction, have been able to produce long-stroke motors capable of running at as high a number of revolutions per minute as those with short strokes, consequently developing a considerably greater power than was hitherto deemed possible. The race, which has demonstrated, if demonstration were necessary, the futility of a horse-power rating in which the factor of stroke is ignored, will certainly give an impetus to a further study of petrol engine design, and for some time to come the question of long v. short stroke engines may be expected to be an important topic of discussion in motor engineering circles. What effect, if any, it will have on the general design of touring motor-cars remains, however, to be seen.

A Prize Parade.

THE second parade in connection with the Commercial Motor Users' Association's scheme for good driving and maintenance and the excellent condition of commercial vehicles will be held at 3 p.m. to-day (Saturday) on the Thames Embankment. We understand that a large number of entries have been received, many of the vehicles having been driven more than 40,000 miles each. The General Post Office, the South Metropolitan Gas Company, the Westminster City Council, and many of the leading commercial firms have consented to allow their vehicles to be entered in the competition, and, although we do not think Saturday is the best day that could have been selected for such a parade, the movement is certainly deserving of encouragement by all interested in the industrial side of automobilism.

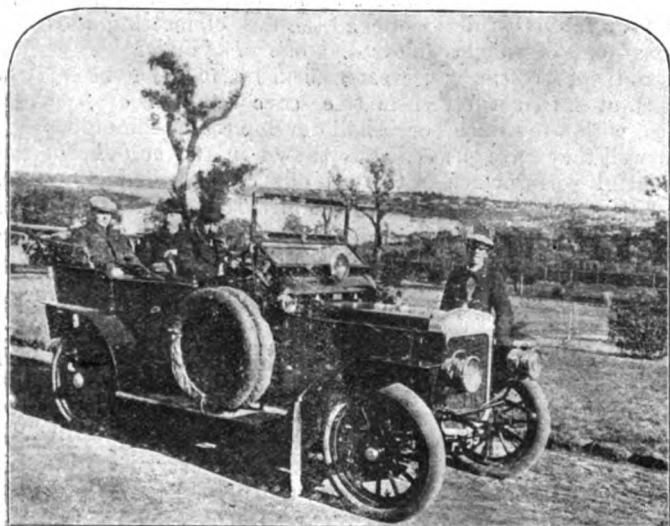
Glaring Head Lights.

THE letter which appears in our Correspondence columns this week with regard to the use of large and glaring head lights on vehicles is one that comes at an opportune moment in view of the shortening days and longer evenings that are coming upon us. Not only is the inconsiderate use of the glaring head light a source of irritation to horses in town and annoyance to pedestrians, but it can become an object of danger to those

who use the roads on otherwise equal terms. So many devices are now available to motorists for minimising the glare when occasion arises that the trouble can easily be overcome, and motorists should certainly give attention to this aspect of their pastime before the winter really sets in.

Traffic at Slough.

AT the instigation of the Slough District Council, a traffic census has just been taken which is to be placed before the Local Government Board with a view to securing a ten mile per hour speed limit for motor-cars passing through the town. This shows that during the last ten years the vehicular traffic has increased 22 per cent. per hour. It is interesting to learn that a considerable decrease is noticed in the number of horse-drawn vehicles, whilst the highest number of vehicles passing through Slough in one day was 618, or an average of rather more than fifty-six per hour. There has also been an increase in the cost of cleaning and sweeping the roads, and the surveyor has come to the conclusion that the present system of road construction is quite inadequate to withstand the needs of modern traffic.



A Daimler Car in Australia.

The Hon. J. H. Keating, the Australian Minister of State for Home Affairs, has recently been visiting Western Australia. During his stay he made several journeys by motor-car, and in the above illustration he is seen in Mr. W. T. Robinson's Daimler car. Mr. Robinson himself is at the wheel, and Mr. W. N. Hedger, M.P., is seated on the right hand side of the Hon. J. H. Keating. The photograph was taken as the party were leaving Mr. Robinson's residence, "Killowen," Mount Lawley, on the Swan River.

A Committee of Public Safety.

AT a time when the public Press is teeming with suggestions for staying the progress of motor-cars, which, in the opinion of nervous persons and official authorities, are driven too fast, mention may be made of the good work done by the Committee of Public Safety organised by the Automobile Association. This was formed in May last, and a special organisation of patrols under the command of an experienced official has been devoted to the work of checking, timing, and reporting upon those vehicles which, in their estimation, were driven improperly. We understand that 200 cases of this kind were registered with the A.A., and in 159 explanations were invited. In eighty-eight instances the owners not only reprimanded their drivers, but have also expressed their regret and thanked the Association for calling their attention to the fact. In only four cases can it be ascertained that the offence has been repeated, while in five instances the driver has been discharged. Of the 159 cars reported as travelling too fast, only twenty-six belonged to the Association—a proof of the point we have frequently urged in these columns, that it is the unattached

motorist as well as those who drive trade cars who render so much harm to the industry. Those in association with the great national organisations and with the county clubs generally recognise their duty to their fellow motorists.

The A.A. Assists the Police.

IN connection with this we may mention what the police do not appear to have given credit for, that the A.A. was instrumental in tracing the suspected car in the recent Worplesdon accident. The vehicle in question passed the patrols of the A.A. at Peasmarsh, Rodboro, Thursley, Hindhead, and Rake, two of them being asked to direct the driver to Southampton. Upon the information thus available the police were able to telephone direct to those in charge of the matter and put them on the right scent—an act of courtesy that ought to do something to assist the establishment of reciprocal relations between the police and the motoring community.

Motor Signs at Devizes.

IN our last issue we referred to the little warfare which has been waged at Devizes with regard to the hanging of signs outside their establishments by motor agents. The subject has now been fully discussed by the Town Council, and the report with which we have been favoured extends to three columns of ordinary newspaper length. Apparently it all arose from some misunderstanding and is to be averted in the future by the Borough Property Committee being given authority to charge a quit rent at the rate of 1s. per annum for a square foot of each projecting sign, so that the Corporation may maintain its right to the full control of the pavement and all space on the public side of the building line. The discussion has brought out very clearly to motor agents the value of advertisement, for we find that Messrs. Willis and Sons, who have an establishment in the Market Place of Devizes, laid in a stock of motor requisites, practically none of which they sold until they erected a small sign indicating their ability to supply motorists with oils, &c. Since the erection of such an announcement they have sold as many as 270 gallons of petrol alone in one week, a definite statement with regard to the value of advertisements which should be of interest to those who are complaining of trade depression without at the same time making some real effort to attract motoring customers to their places.

Magisterial Nescience.

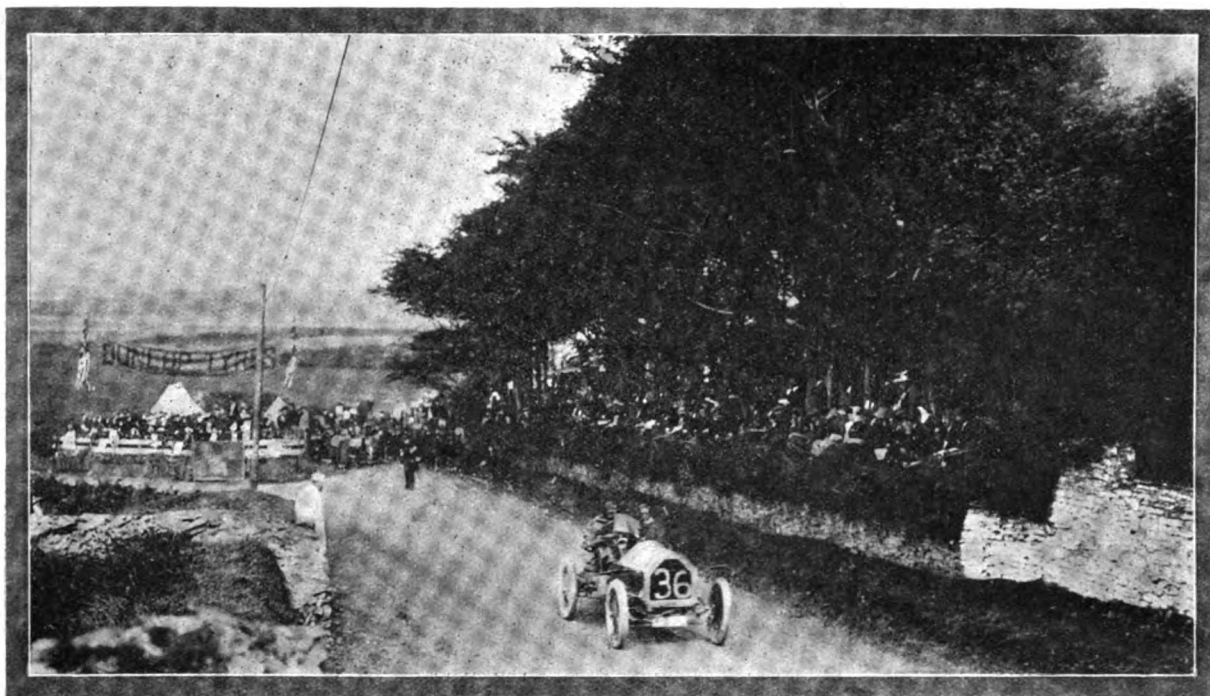
A "COUNTY MAGISTRATE," writing to the "Times," shows as great an absence of legal knowledge in print as many of his *confrères* exhibit when on the Bench. He declares that "motorists are a privileged class, as every driver of a horse-drawn vehicle is subject to the evidence of a single constable as to furious driving," and then he takes pen to paper again, and asks, "Why should motorists be exempt?" But are they so immune in the matter as this legal dispenser seems to think? We have reported cases in which the magistrates have accepted the evidence of a single policeman as proof of driving at "a speed dangerous to the public," even when no one but the policeman was about. True, in connection with exceeding the speed limit two witnesses are necessary, but one can secure a conviction under Section 1 of the Act. Since writing the foregoing we notice that Mr. R. Jeffreys has replied in similar vein, and we have no doubt that a majority of our readers will agree with him when he says that "so far from motorists being a privileged class they are subject to greater restrictions, heavier taxation, stricter supervision, and severer penalties than any other class of users of the King's highway." In many districts a man can knock his wife down and be mulcted in fines not exceeding 40s.; but if he ventures to travel two miles an hour quicker than the law thinks he should go, he may have to pay anything up to £20, in addition to the inconvenience of compulsory attendance at court.

Motor Drives for Nurses.

DURING the summer months the nurses in the Edinburgh Royal Infirmary and Chalmers Hospital and those of the patients who were well enough have been taken in detachments for short motor-car runs into the country. The idea originated with Dr. Alexander Veitch, Edinburgh, who gave the use of his own car and persuaded a number of other owners to follow his example. The outings, which took place weekly and which were greatly appreciated, were concluded the other day, when a party of nurses were driven out to Clifton Hall, Ratho, and entertained by Mr. Arthur Dewar, K.C., M.P., and Mrs. Dewar. The company numbered about fifty, and were accommodated in a dozen cars, owned by the following gentlemen: Dr. Morrison Milne (30-h.p. Humber), Messrs. J. D. Wallace (30-h.p. Renault), Reginald Smith (30-h.p. White steamer), John Lamb (40-h.p. Napier), James Fairbairn (20-h.p. Humber), F. B. Anderson (20-h.p. Daimler), Sir Oliver Riddell (18-h.p. Siddeley), Messrs. William Robinson (18-25-h.p. Siddeley), Adams (15-h.p. Humber), Dr. Stewart (16-20-h.p. Argyll), Mr.

THE WINNER OF THE FOUR-INCH RACE.

—●—
MR. W. WATSON has had many successes in hill-climbing competitions in this country, and has previously distinguished himself in the Rivington Pike climbs, while he took part in the races in the Isle of Man last year, and was second in the Graphic Trophy race on a 40-h.p. Berliet. In 1906 he was third in the same contest. But last week's race was his first really great test of skill and endurance. He set about the business in a very determined fashion, after a somewhat dilatory start, caused by a momentary misunderstanding of the shouting and waving that marked his setting forth. Once in the stride he never faltered. The consistency of his running may be imagined from the time occupied in completing his circuits, the slowest time being 47 min. 20 sec. in the fifth round—which, curiously enough, was the fastest of the race, and credited to George with 43 min. 15 1-5 sec.—and the speediest being 43 min. 45 3-5 sec. We had



The "Four-Inch" Race.—Molon on the Vinet at Hillberry Corner.

John Paxton (14-h.p. Argyll), and Dr. Alex. Veitch (16-20-h.p. Argyll). After tea the Rev. E. G. Lovell, of the Baptist Church, Edinburgh, moved a vote of thanks to Mr. and Mrs. Dewar, and the former in reply commended the movement and invited the organisers to make Clifton Hall their objective on other runs.

The Police and Motorists.

◆ ◆ ◆
ANOTHER instance of the injustice motorists often experience at the hands of the police came to light at Eastbourne last week, when Mr. Louis Russell, of Bexhill, was summoned before the borough Bench for driving at night on Seaside Road at a speed dangerous to the public. It was proved that the police were mistaken in identifying both the number of the car and the personality of the driver, yet in face of this and in spite of the case against the defendant being dismissed the Bench declined to grant costs against the police. It certainly seems unreasonable, not to say unjust, that the police can summon a motorist for an alleged offence, and yet when it is proved that they have made a gross error the motorist is unable to recover a farthing towards the costs he has been forced to incur in defending the case.

a chat with him on the Promenade at Douglas on the morning following the race. He had recognised the dangers of the corners, and, keeping his car well in hand at such points, had gone "all out" on the road between Quarter Bridge and Ramsey, frequently attaining a speed of 70 m.p.h. on certain long stretches. He was fortunate in having no tyre mishaps during the whole six hours his car was on the road. Although he knew his car was doing well, he scarcely realised how the race was progressing, nor was he aware of the progress made by Mr. George, of Newcastle, on his Darracq. Resolved not to take risks, he had previously studied all the details of the course, and knew how to run his car to a nicety according to the particular character of any section of the road. Mr. Watson had one or two exciting runs, with Mr. Lee Guinness hard in his wake; otherwise there was not much to tell beyond the record of the win. That in itself was a great feat.

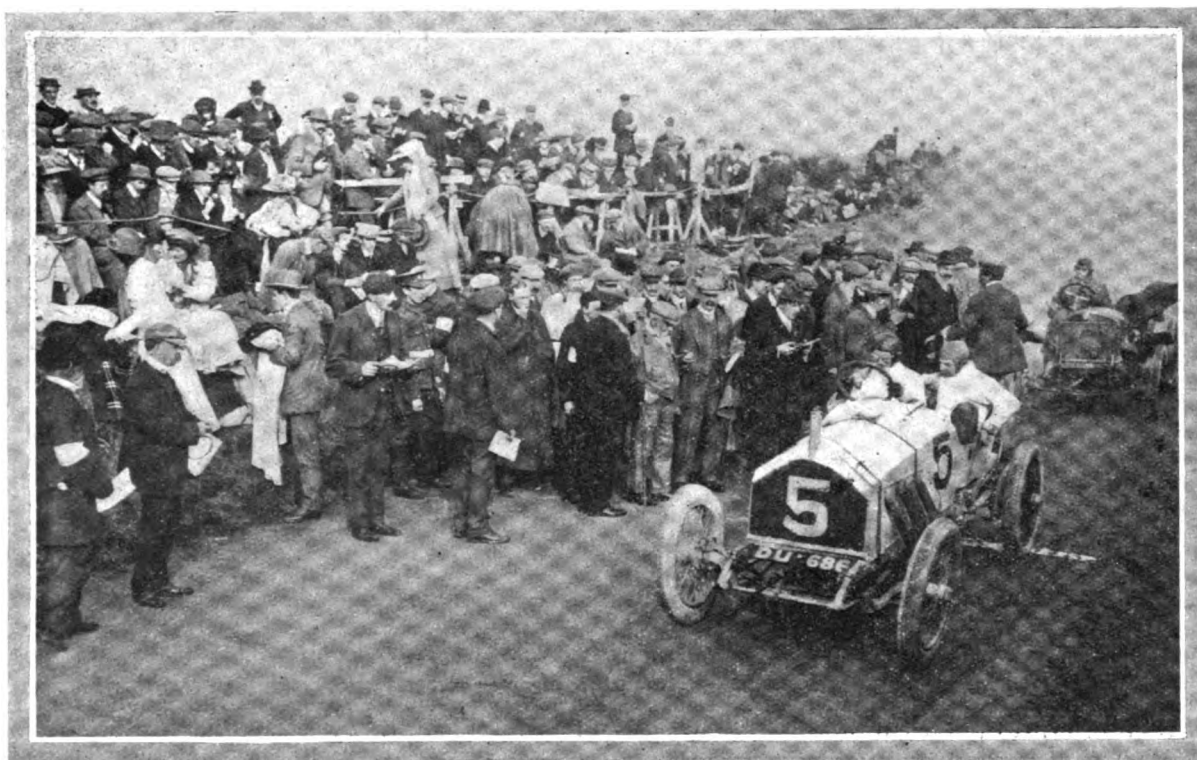
Like some other motorists of the present day, Mr. Watson originally had dreams of law and courts, but the advent of the motor drew him into trade soon after the legalisation of the automobile. His headquarters are at Liverpool, where he directs the fortunes of Messrs. W. Watson and Co., motor agents, of Renshaw Street.

The "Four-Inch" Race.

BELOW we give the impressions of our correspondents at the leading points of observance of the great race of last week—a contest of 337½ miles on a circuit of 37½ miles, which had to be traversed nine times. Excellent arrangements were made for the conduct of the event, and Mr. J. W. Orde and his able and enthusiastic assistants are to be congratulated on the way in which the race was carried through. The winner thoroughly deserved his victory, and the consistent running of his car was a triumph of reliability that the railway train could not excel. As a team the Darracqs gave a splendid performance, all three drivers showing what pluck and adventure can do when coupled with a car of such merit; the Calthorpe, Metallurgique

tioned, and when filled with journalists and cameras were driven beyond Hillberry Corner to the starting point. The horses of one vehicle shied at a motor-car and caused the passengers to jump, or be thrown out—a piece of manœuvring that should reconcile the *Times* correspondent, who was one of the victims, to motoring for many a long day.

One race is much like another, and the scene at the start was a familiar one. The cars were drawn up in the order given in the last issue of the *M.C.J.*, with the exception that, as the Bishop of Sodor and Man observed, "the first shall be last," for Mr. H. B. Browning, of Manchester, whose Rover was No. 1, went to the end of the long thin line of cars, so as not to be in



The Scene at the Starting Point.—G. W. A. Brown just off on the Coventry Humber.

and Vinots deserved their positions, and the two latter successfully overcame difficulties that would have daunted less confident drivers than those who piloted them. For Mr. Cupper had only been on the Island a few days, and Mr. Ross Browne had had but two days' experience of the Vinot. Hard luck followed some other creditable entrants; but none will begrudge the winners their triumph—and in connection with this mention must be made of the Rudge-Whitworth wheels, which have established themselves in an indispensable position in such contests.

DOUGLAS.

Ere the clock tower of Douglas marked the hour of seven on the morning of the 24th ult., Mr. T. C. Aveling, who had been appointed Press steward, was collecting from the various hotels in the town the six score of Pressmen who were to chronicle the doings of the day. Horse-drawn brakes, with side-entrance bodies peculiar to the Isle of Man, were requisitioned,

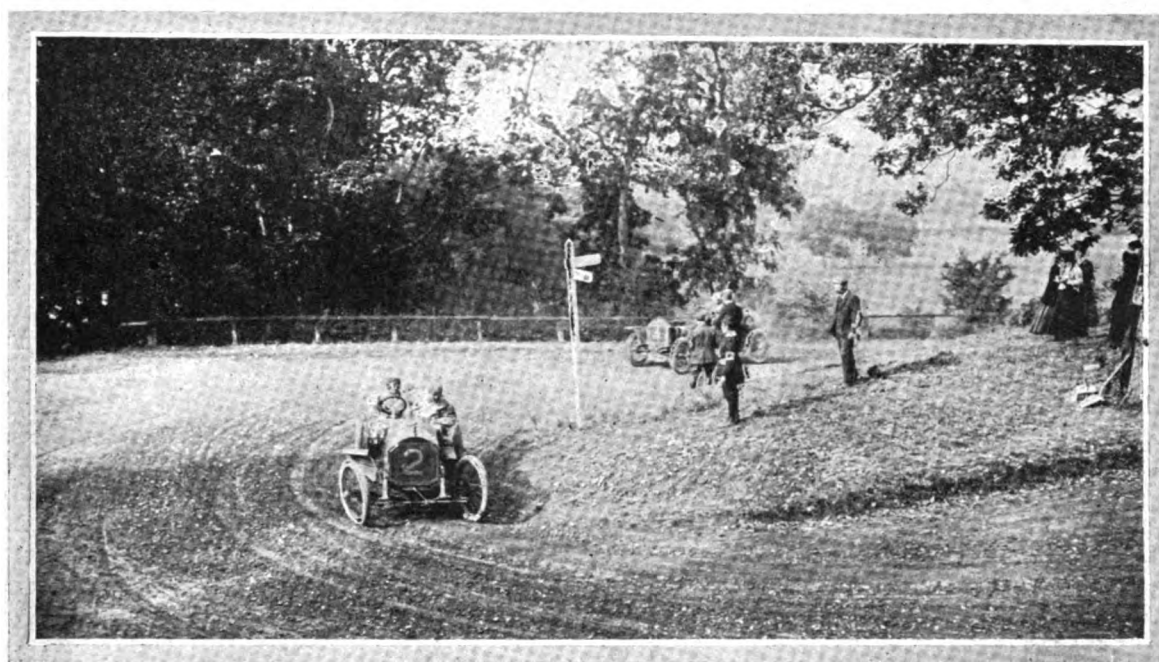
and when filled with journalists and cameras were driven beyond Hillberry Corner to the starting point. The horses of one vehicle shied at a motor-car and caused the passengers to jump, or be thrown out—a piece of manœuvring that should reconcile the *Times* correspondent, who was one of the victims, to motoring for many a long day. One race is much like another, and the scene at the start was a familiar one. The cars were drawn up in the order given in the last issue of the *M.C.J.*, with the exception that, as the Bishop of Sodor and Man observed, "the first shall be last," for Mr. H. B. Browning, of Manchester, whose Rover was No. 1, went to the end of the long thin line of cars, so as not to be in the way of any racers who wished to pass him before Quarter Bridge. He took the whole event in a very leisurely way, and had the satisfaction of seeing the race in progress at various stages. The Rover Company had withdrawn their cars, and Mr. Browning's entry was a private one. A few changes of drivers were noted. Mr. L. Hartridge replaced Mr. A. Gaal on the Westinghouse (12A). The latter had had a collision the previous evening with Mr. T. Thornycroft's car, the latter sustaining a bent axle, and being rendered *hors de combat*. Mr. G. V. Baxendale handed his car to Mr. Thornycroft, who thus started with No. 9. Mr. Ross Browne, of Nottingham, was substituted for Mr. Gordon Usmar on the Vinot (No. 10), Messrs. Rawlinson and George changed cars, and W. G. Tuck drove the Beeston Humber in place of Mr. T. C. Pullinger, who was among the spectators at the start. Otherwise the drivers were according to the list previously given.

At 9 a.m. punctually the first car, driven by Mr. W. Watson, was sent on its way, and most of the competitors made capital starts; Mr. G. W. Brown, however, had an engine stop just off the line, and the S.C.A.T., driven by Mr. R. O. Harper, did not get quickly away. Surprise was expressed when D. Resta's engine stopped just over the starting line, but he soon got going again, and then the other competitors went well, and we had a chance of observing the clearly expressed scoring-board and other facilities provided for the circulation of news to the Press for transmission to the public. They worked admirably all day.

From 9.30 a.m. onward news came of incidents that were occurring round the circuit. First we heard that Mr. P. D. Stirling had run into a wall at Ballacraine, and, although no one was hurt, his Hutton car was out of the race. Then Mr. A. Rawlinson overturned at Ramsey, but, righting his car, was quickly under way again—a feat that was recognised when he passed the Grand Stand again nearly eighty minutes after his start. The Piccard was the next to have a mishap, and, after doing well in the first round, buckled a wheel at Quarter Bridge. A new one was substituted and the journey continued—to the

wall; K. Lee Guinness was near the Bungalow when he broke the frame of his Hillman-Coatalen; Reid was delayed by the breaking of the steering arm, which was replaced at Ramsey. A long wait succeeded, broken only by the passing of a few cars completing their earlier circuits, and news of the retirement of the Deasy driven by Mr. E. W. Lewis, the designer. It was unfortunate enough to have a broken crank shaft at Sulby Bridge, which led to the withdrawal of the car. The next news was that James Reid had repaired the steering arm of his Beeston. Humber at Ramsey and was again on the road.

Meanwhile the cars were overlapping each other, changing places in the way we illustrate in the table on page 663, which, better than any letterpress, depicts the order in which the cars progressed through the race. We heard that Mr. Robinson's Calthorpe had overturned at Brayhill, that Cupper had withdrawn, and that the Piccard was also out of the event owing to failure in the water circulation. Tuck, too, was handicapped with ignition troubles. More was to follow. 12A ran into a hedge at Glen Helen and broke a wheel. Mr. Rawlinson knocked corners off a cottage near the same place, but kept going, and



Watson, the winner, on the Hutton Car, and A. Lee Guinness on the Darracq rounding the Hairpin Corner, near Ramsey.

satisfaction of Mr. Morgan Donne, who was awaiting its passing through Ramsey. Then came the Rover, Mr. Browning reaching the Press gallery with his thumb cut in re-starting his car after a stoppage. After a delay of ten minutes he was on his way again. Mr. Moss, who had had trouble from the start, retired at Ramsey on the second circuit with three valve tappets broken. Tyres were changed on Stock's De Dion, K. Lee Guinness's Hillman-Coatalen and Hutton's car.

Thus the race progressed, with news coming along of mishaps and troubles to several of the competitors. Mr. Robinson's Calthorpe was delayed by a broken spindle, and the stripping of the timing gear of Mr. Warwick Wright's Metallurgique prevented his continuance, a similar cause leading to the withdrawal of the S.C.A.T. in the next round. By the fourth round it was possible to become interested in the leaders, and several exciting runs were witnessed. Unfortunately a broken clutch caused the withdrawal of Resta, and Mr. Stocks did not appear again after the third circuit, while Mr. Moore-Brabazon lost two hours on his round owing to a broken exhaust valve.

Of the thirty-five starters twenty-one finished the fifth round, in which George made the fastest time of the day, attaining an average speed of close upon fifty miles per hour. But the lap brought disaster to some of the competitors. Hutton ran into a

Reid's car ran into a wall at Kirkmichael, his mechanic sustaining the most serious accident of the day. Unfortunately for Roberts and Outhwaite, in completing the eighth round they came over the time limit in which to complete the last circuit, and Moore-Brabazon withdrew owing to a misapprehension, fostered partly by the delay caused by the broken exhaust valve.

Then came the final effort, and although we knew the three leaders, the result of the premier position was still in doubt. At the end of the eighth round the position was:—

| | | | | | | h. | m. | s. |
|---|----------|-----|-----|-----|-----|----|----|----|
| 1 | George | ... | ... | ... | ... | 5 | 56 | 2 |
| 2 | Watson | ... | ... | ... | ... | 5 | 58 | 4 |
| 3 | Guinness | ... | ... | ... | ... | 6 | 1 | 39 |

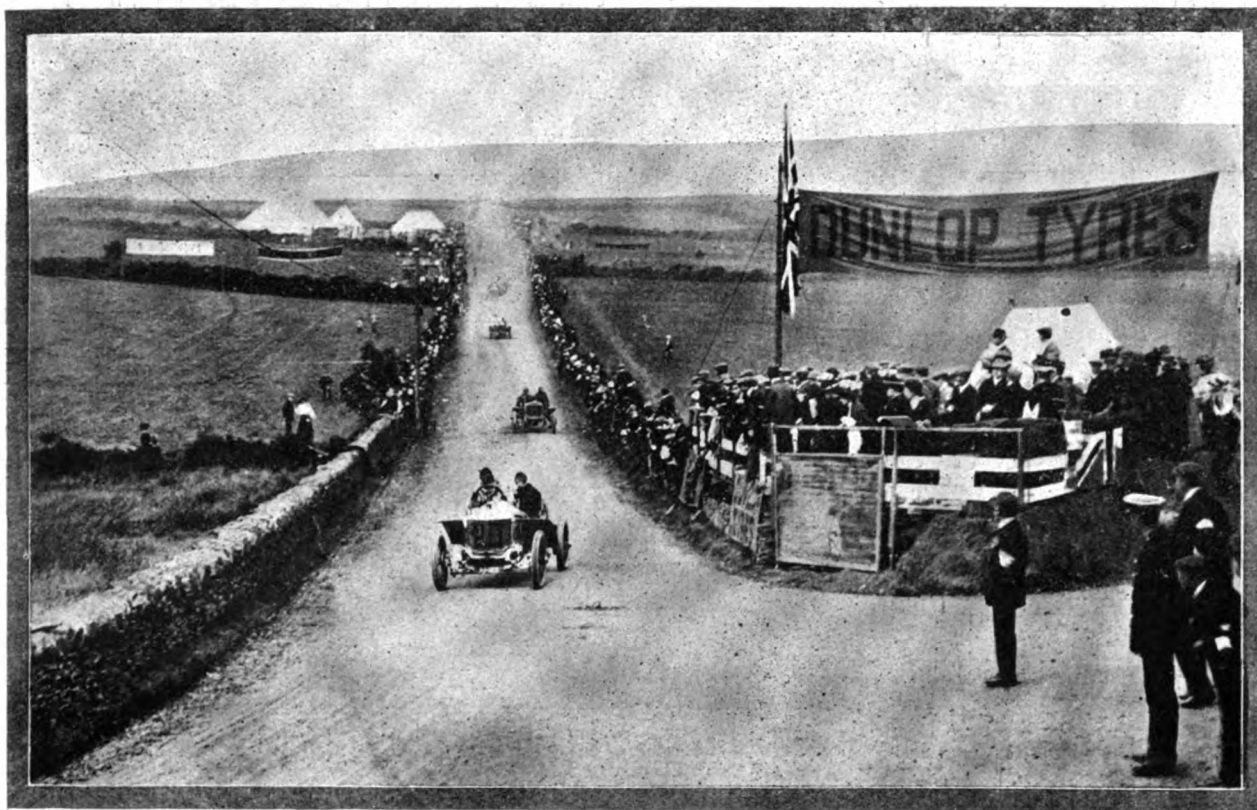
Despite a stop of 5½ min. at Ramsey for water, petrol and changing tyres on the seventh lap, George was thus 2 min. 2 sec. ahead on time, although Watson retained his leadership in the order of advance. Only 37½ miles had to be run, and we waited stolidly till forty minutes had elapsed; then excitement became intense. Watson came along with the easy confidence he had all along shown, his time being 45 min. 1 sec. Could that be beaten? A. Lee Guinness came next, in even better time, 43 min. 42 sec., but was 2 min. 15 sec. behind his rival on the aggregate. Still no news of George. At last—though only 5 min. 31 sec. behind the winner—he came

speeding along. It transpired that his carburettor had caught fire at Glen Helen. He dismounted and put out the flames with the help of a borrowed coat and resumed. That, and the stop for replenishment, robbed him of victory; just as he was baulked two years ago by the floorboard incident, when driving the Argyll. Then interest vanished, and although we had to stay till after 5 p.m. ere the roads were opened, the main curiosity was to see whether the Darracq team would all get home. Mr. Rawlinson's pluck secured that.

The Vinot team deserved better luck. Mr. Ross Browne drove his car into the sixth place; that driven by Mr. Outhwaite completed six rounds in good time, but trouble afterwards occurred with seized exhaust valves, which delayed him so that he was unable to finish owing to the time limit. M. Molon had changed two exhaust valves which seized and was going well when he reached the starting point again $1\frac{1}{2}$ min. too late to entitle him to run his last circuit. All the three cars were, however, in fit condition to return home by road from Liverpool.

to enable the drivers and mechanics to effect any necessary repairs, and also to take in supplies. All Wednesday night lorries loaded with replenishments, &c., continued to arrive, and when the time drew near for the race to start the place resembled the appearance of a huge motor manufactory. A large staff of mechanics was at each depot, and the place was quite a hive of industry. For both spectators and competitors alike the conditions approached the ideal. A great crowd of people lined that part of the course which passed through Ramsey, Cruickshank's Corner joining the road leading up to the mountain road proving a favourable spot. The "Hairpin Corner," now known as "The Devil's Elbow," was also the centre of great interest. The first car to arrive was Watson's Hutton (No. 2) at half-past nine, followed one minute later by A. Lee Guinness on No. 4 (Darracq). The next car to arrive was No. 9, Thornycroft. Three minutes later Hutton, on his special Hutton, No. 15, dashed through the control, going well, having accomplished the journey from Hillberry in 30 min.

Cars continued to pass through the control at frequent



Moore-Brabazon on the Metallurgique at Hillberry Corner. Three other cars are seen closely following.

In view of the discussion which has recently taken place with regard to the dimensions of the engines of the "four-inch" cars, the following table showing the bore and stroke of the vehicles which completed the race, will be of interest:—

| Car. | Bore mm. | Stroke mm. | Car. | Bore mm. | Stroke mm. |
|-----------------|-------------|---------------|------------------|-------------|---------------|
| Hutton ... | 102 | x 130 | Vinot ... | 102 | x 130 |
| Darracq ... | 100 | x 160 | Vulcan ... | 102 | x 127 |
| Calthorpe ... | 102 | x 120 | Hillman-Coatalen | 102 | x 120 |
| Thornycroft ... | 102 | x 127 | | | |

*Not made public, probably about 180 mm.

The speeds of the cars that finished were:—

| | | | |
|-----------------|-------------------------|------------------|-------------------------|
| Hutton ... | 50 $\frac{1}{2}$ m.p.h. | Vinot ... | 41 $\frac{1}{2}$ m.p.h. |
| Darracq ... | 50 | Darracq ... | 41 |
| Darracq ... | 49 $\frac{1}{2}$ | Vulcan ... | 40 $\frac{1}{2}$ |
| Calthorpe ... | 46 $\frac{1}{2}$ | Hillman-Coatalen | 40 $\frac{1}{2}$ |
| Thornycroft ... | 44 | Thornycroft ... | 37 $\frac{1}{2}$ |

RAMSEY.

I watched the race from Ramsey, and at this point of the circuit interest in the contest was augmented by the fact that it was here that the different makers had their depots,

intervals, but the irregular order in which they arrived showed that a great deal of passing must have taken place since leaving the starting point. The first incident of interest in the control took place at a quarter to ten, when Outhwaite, on a Vinot, rushed through, with Tuck's Beeston Humber a few yards in the rear. The latter gained rapidly and shot ahead of the Vinot car a hundred yards past the control. Stocks, on his De Dion, was next to appear, and reported having had to change a wheel. Rawlinson, on No. 30 (Darracq), arrived at 10 o'clock, having been delayed through his car having overturned as the result of a bad side-slip at Glen Helen. No one was hurt, but the car sustained a bent axle. Moss (Arrol-Johnston) also stopped in control to repair some valve trouble. At 10.16 Watson's Hutton passed in his second round—Guinness's Darracq being one second behind. Watson had accomplished the round from this point in 45 minutes, and George, on No. 17 (Darracq), who followed five minutes later, had completed the circuit in 44 minutes. Even at this early stage of the race it was apparent that these three cars were the leaders, with George

holding a slight advantage on time; and interest was, consequently, centred in their performances. The S.C.A.T. team were noticed to be making consistent running. Porter on his No. 11 (Calthorpe) aroused interest by his good performances and prominent position in the race, and the same could at this stage be said of the Beeston Humbers. As the race proceeded several cars were obliged to retire at this point through trouble of one sort and another. Graham's Deasy (Scarlet Pimpernel) gave up owing to his reversing gear going wrong, and Cupper's Metallurgique was in the same predicament with other trouble. Watson, Guinness and George continued to keep close together; interest had now depreciated as far as the other competitors were concerned, and the spectators awaited the return of the leaders. On the fifth round both Watson and Guinness stopped together in control to take in replenishments. It was an interesting race to get away first, and Guinness was successful through the celerity of his mechanic (Davey) and the fact that Watson experienced a little delay in getting his engine restarted. However, on the next round Watson was seen to be regaining his former position, with Guinness two seconds behind. At 12.40 Hutton dashed through on his fifth round. Passing the control he appeared to be going well, but on reaching Cruickshank's Corner a tyre burst, causing the car to swerve and collide violently with the hedge. On his eighth round Watson passed the control 1 min. 11 sec. in front of Guinness, with George 5 min. later. It was 28 min. past three when Watson arrived on his ninth and last lap, apparently travelling as fast as at any previous time.

Hearing of a rather serious accident at Michael, I proceeded to the spot, and learned that at a quarter to four Reid, on his Beeston Humber, had struck the corner of the stone hedge at the Station Road. The impact was severe, and, although the car caught the hedge broadside on, some loose stones on the top were dislodged, and two ladies who were sitting on the wall were thrown down, and for a moment or two pinned to the ground. They were, however, unhurt, and escaped with torn dresses. The car had lost little of its velocity, and cannoned off on to the opposite corner, striking the low rubble wall, knocking down six or eight feet of it. Reid was thrown on to the road, but suffered no injury, except a severe shaking. The mechanic (Guttridge) was less fortunate, and was found unconscious amid the debris of the fallen masonry, while the smashed car rebounded into the middle of the road. The ambulance party at once attended to the injured mechanic, and found on

It was nearly ten o'clock when a great shout from the entrance heralded the arrival of the winning car; the band struck up "God Save the King" and the procession of Club and Island dignitaries wended its way before the footlights. Prince Francis of Teck presided, and thanked everybody for their welcome to the motorists; then Mr. Watson was called on to receive the honour he had won, and, hoisted on the shoulders of his friends, he was carried to the platform. Calls from the audience for a speech only brought smiles, and there came the cry from a Lancashire throat "Wurs the mechanic"? It was re-echoed throughout the building, and when he, too, was hustled to the



Mr. Frederic Coleman (on the right) gives Tom Thornycroft and his amateur mechanic a reviving draught of champagne at the conclusion of the race. [Mr. J. H. Atherton. Photo by]

front, the modest confused mechanic had the heartiest greeting of the night. Messrs. Marshall and Reed received the trophies they had won in the Auto-cycle Race, and then Col. Holden explained that such contests were necessary to gain knowledge and experience, and that the risks were not nearly so great as had been represented. Mr. J. W. Orde also spoke, and the Club officials filed away, while the great audience dissolved, leaving the floor in possession of the dancers. On the following morning most of the motorists left Mona—and now Lord Raglan is consoling the islanders with the hope that they may be back again next year.

ORDER OF FIRST TEN CARS AT CONCLUSION OF EACH CIRCUIT:—

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|----|----|----|----|----|----|----|----|----|
| 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 2 |
| 31 | 31 | 31 | 4 | 4 | 4 | 2 | 2 | 4 |
| 18 | 4 | 4 | 31 | 2 | 2 | 4 | 4 | 17 |
| 3 | 2 | 2 | 2 | 31 | 31 | 11 | 11 | 11 |
| 14 | 3 | 18 | 18 | 3 | 11 | 38 | 9 | 9 |
| 2 | 33 | 3 | 3 | 11 | 38 | 9 | 10 | 10 |
| 33 | 18 | 20 | 11 | 9 | 9 | 30 | 37 | 30 |
| 15 | 16 | 15 | 15 | 38 | 10 | 10 | 30 | 37 |
| 9 | 20 | 24 | 7 | 23 | 37 | 6 | 6 | 6 |
| 16 | 24 | 16 | 9 | 22 | 30 | 37 | 22 | 22 |

examination that he had sustained several contused wounds about the body and was also suffering from concussion of the brain.

Prince Francis of Teck, the Lieut.-Governor, Mr. Orde, and the Lord Bishop have all called and inquired after the condition of Guttridge, who, at the time of writing, remains in a critical condition.

PRESENTATION OF THE TROPHY.

The presentation of the Trophy was the occasion of a demonstration in the Palace at Douglas, and four thousand persons cheered Prince Francis, Lord Raglan, Mr. J. W. Orde—one of the most popular visitants of Manxland—Mr. W. Watson, the winner of the trophy, his mechanic, and, in fact, everybody who appeared on the platform and did not make a long speech.

TWO-CYCLE ENGINES AND MOTOR-CARS.

NOTWITHSTANDING many attempts to introduce a petrol engine working on the two-cycle system as compared with the ordinary Otto cycle, for use on motor vehicles, there seems no immediate likelihood of the familiar type of four-cycle motor being ousted from its lofty position. Even in France, where a special trial of two-cycle engines was held about a year ago, and in which several engines gave a very good account of themselves, the position appears to be much the same as in this country. At the same time there is a fascination about a two-cycle engine which makes one wonder that more attention is not paid to it by motor-car designers and builders. Its freedom from valves, valve springs, cam shafts and other complications, the simplicity as well as the small number of its moving parts, its relatively low cost of construction, are important points. Against its advantages may be set its reputed unreliability, due principally to the poor results that have been obtained by badly-designed and cheaply-built motor-boat engines, its unresponsiveness to throttle control, and its relatively low fuel economy. These are, it seems to us, merely matters of detail which would quickly be remedied were the same attention given by designers to the improvement of the two-cycle engine as has been centred on the four-cycle.

THE SOCIAL WHIRL.

THE King journeyed from Balmoral to Dunblane on Monday to open the Queen Victoria Military School as a Scottish memorial to the late Queen Victoria. His Majesty motored from Balmoral to Blairgowrie, a distance of fifty-five miles, travelling by way of Braemar down the well-known Spittal of Glenshee.

ON Sunday the Prince and Princess of Wales, Princess Mary, and the young princes had luncheon with the King at Balmoral, and in the afternoon went by motor-car to Mar Lodge on a visit to the Princess Royal and the Duke of Fife.

FOLLOWING the example of Princess Henry of Battenberg last week, Princess Victoria of Schleswig-Holstein, accompanied by Earl Beauchamp and members of the Madresfield Court house-party, visited Gloucester Cathedral on Saturday afternoon. The party spent an hour in the cathedral, and subsequently they motored to Tewkesbury Abbey and took tea with the vicar at Abbey House.

MR. LLOYD GEORGE, accompanied by Mrs. Lloyd George and Mr. William George, arrived at Criccieth the other night by motor-car from Carnarvon. The next day the Chancellor and Mrs. Lloyd George motored through Portmadoc to Harlech for a game of golf, and apparently the right honourable gentleman is becoming as enthusiastic a motorist as is the Leader of the Opposition.

It is unfortunate that the many should suffer for the indiscretion of the few, and that several of the great pleasant roads across ducal and other estates should have lately been closed owing to the misbehaviour of a small section of people who are only capable of learning manners in solitary confinement. One of the prettiest avenues in the Fylde district of Lancashire is the Green Drive at Lytham, which has been open to motor and other vehicular traffic. In future only pedestrians are to be allowed its use, owing, it is reported, to some cabman having made use of offensive language to the Lord of the Manor, Mr. J. T. Clifton, while the latter was motoring through the Drive with Mrs. Clifton.

AT a time when motoring and motoring offences are engaging so considerable a share of public attention, an anecdote told by Lord O'Brien, of Kilfenora, the Lord Chief Justice of Ireland, the "Law Times" thinks, may well be recorded. The Lord Chief Justice spent the Whitsuntide vacation in London, and brought over his motor-car from Ireland. At Hyde Park Corner the automobile in which the Lord Chief Justice and some members of his family were driving collided with another car. The chauffeur of the Lord Chief Justice's motor-car immediately stopped its course, and entered into an animated exculpation of himself from any imputation of negligence with the policeman. The policeman came up to the Lord Chief Justice and said, "Please, sir, I don't understand one word your man is saying." "I can quite understand that," said the Chief Justice, with a grave assumption of sympathy, "the man is an Irishman, a native of Tipperary. I am myself an Irishman, the Irish Chief Justice, and, of course, both he and I only speak broken English." After a very short parley the innocence of the chauffeur was completely established.

THE scene within the Scone and Perth policies which occurred at the conclusion of the Perth Steeplechase and Hunt race meeting last week was unique in the history of the sport. Heavy rains for some days previous had rendered the ground, where scores of cars were packed, like unto a quagmire, and many of the cars became embedded in the "glaur." Lord Dunedin's car was one of the first to get stuck, and the Hon. A. D. Murray and other well-known county gentlemen put their shoulders to the vehicle to get it out of the ruts. Many visitors were in full Highland costume, and the scene as, bespattered with mud, they gained the higher ground was entertaining indeed to the onlookers.

LOLLIUS.

CONTINENTAL NOTES.

British Motorists in France.

Among the British motorists who have lately visited France with their cars are Mr. and Mrs. Jessop, London (45-h.p. Fiat); Mr. A. Lloyd, London (12-h.p. De Dion); the Marquis of Anglesey (40-h.p. Mercedes); Baron and Baroness de Forest (De Dietrich); Lady Inverclyde (60-h.p. Daimler); Mr. and Mrs. Geoffrey Duveau, London (35-h.p. Mercedes); Mr. C. Bayer, London (35-h.p. Darracq); Mr. Sairsay, London (15-18-h.p. Delaunay-Belleville).

Aeronautical News.

Henry Farman, whose aeroplane is now located at Chalon-sur-Marne, made a flight of about forty-three minutes' duration on Tuesday last. On Monday Wilbur Wright competed for the prize offered by the Commission of Aviation. He covered just over 48 kilometres in 1 h. 7 min. 11 4-5 sec. By this performance he beat by 9 kilometres his record for distance in his attempt for the prize and by 13 min. 11 sec. the record for time. Later in the day he made two flights of 13 min. and 11 min. duration respectively, each time carrying a passenger. A trial is about to be made of two German aeroplanes. One is the design of Professor Reissner, of the Technical College, Aix-la-Chapelle, and the other of an engineer at Magdeburg. It is announced that an airship of a new type is being constructed by Messrs. Siemens and Halske, of Berlin. It will be semi-rigid, and driven by four propellers instead of two.

The Coupe des Voiturettes.

The annual light car competition known as the Coupe des Voiturettes, organised by the "Auto," was held on Sunday last. The contest was open for cars up to 100 mm. bore for single-cylinder engines, to 80 mm. for double cylinders, and 65 mm. for four cylinders, the minimum weight for all classes being 600 kilogs. The event took place on a closed 50-kilometre circuit, taking in Compiègne, Pierrefonds, and Crépy-en-Valois, which had to be covered eight times, giving a total distance of 400 kilometres, or approximately 250 miles. The start took place at 7 a.m., when, of the thirty-three entries, thirty-one cars were sent off at minute intervals. At the end of the first lap Naudin, on a Sizaire-Naudin, was leading by three seconds from Sizaire on a similar car in 39 min. 58 sec. He retained the lead throughout and eventually finished in 5 h. 14 min. 8 sec., equal to 47.7 miles per hour, after having been fastest on every lap except the last, when Sizaire was slightly the better. Just as Naudin kept the lead, so did Sizaire maintain second position right from the end of the first lap to the finish. The fight for third place was very keen; at first it was announced that it had been secured by Lebouc, the other Sizaire-Naudin driver, but, as shown below, the honour fell to Goux on a Lion-Peugeot. The result was as follows:—

| Position. | Driver. | Car. | Time. | | |
|-----------|-------------|------------------|-------|----|----|
| | | | H. | M. | S. |
| 1 | Naudin | Sizaire-Naudin | 5 | 14 | 8 |
| 2 | Sizaire | Sizaire-Naudin | 5 | 21 | 20 |
| 3 | Goux | Lion-Peugeot | 5 | 43 | 30 |
| 4 | Lebouc | Sizaire-Naudin | 5 | 43 | 53 |
| 5 | Colomb | Corre La Licorne | 5 | 47 | 29 |
| 6 | Ménard | Taine | 6 | 14 | 49 |
| 7 | Sonvico | Martini | 6 | 19 | 29 |
| 8 | Beck | Martini | 6 | 19 | 43 |
| 9 | D'Avary | Guillemin | 6 | 35 | 13 |
| 10 | Richard | Martini | 6 | 36 | 16 |
| 11 | Riviere | Guillemin | 6 | 39 | 48 |
| 12 | Boillot | Lion-Peugeot | 6 | 40 | 39 |
| 13 | Roisan | Aleyon | 6 | 54 | 48 |
| 14 | Gassier | Werner | 6 | 57 | 22 |
| 15 | M. St. Marc | Aries... | 7 | 3 | 16 |
| 16 | Schweitzer | Taine | 7 | 3 | 41 |
| 17 | Giraud | Truffaut | 7 | 33 | 2 |

The team prize went to the Sizaire-Naudin firm, with an aggregate for three cars of 16 h. 19 min. 21 sec., the Martini Company being second with 19 h. 15 min. 28 sec. The result of the race has again demonstrated the wonderful possibilities of long stroke engines. The Sizaire-Naudin cars are fitted with single-cylinder motors of a bore of 100 mm. and a stroke

of no less than 250 mm. (approximately 10 in.). The Lion-Peugeot engine is 100 mm. by 200 mm. while that of the Corre is 100 mm. by 160 mm. It may be added that this is the third year in succession in which the Coupe des Voiturettes has been won by a Sizaire-Naudin car.

Racing in Belgium.

On Sunday last the Ostend Automobile Club held a motor race over a 25 kilometre course, which, starting and finishing at Ostend, took in Nieuport and Snaeskerke. The seven competitors were divided into two classes:—(1) Cars having engines of a capacity of not more than 3.75 litres (Liedekerke cup rules), which had to cover ten laps—250 miles, and (2) vehicles having four-cylinder engines of a bore of 90 mm., distance seven rounds—175 miles. In the first named section the winner was Fischer (Vivinus), his time (3 h. 24 min. 46 sec.) being equal to 61½ miles per hour. Victory in the second class went to Sauveniere on an Imperia, he covering the seven circuits in 3 h. 17 min., equal to 44½ miles per hour.

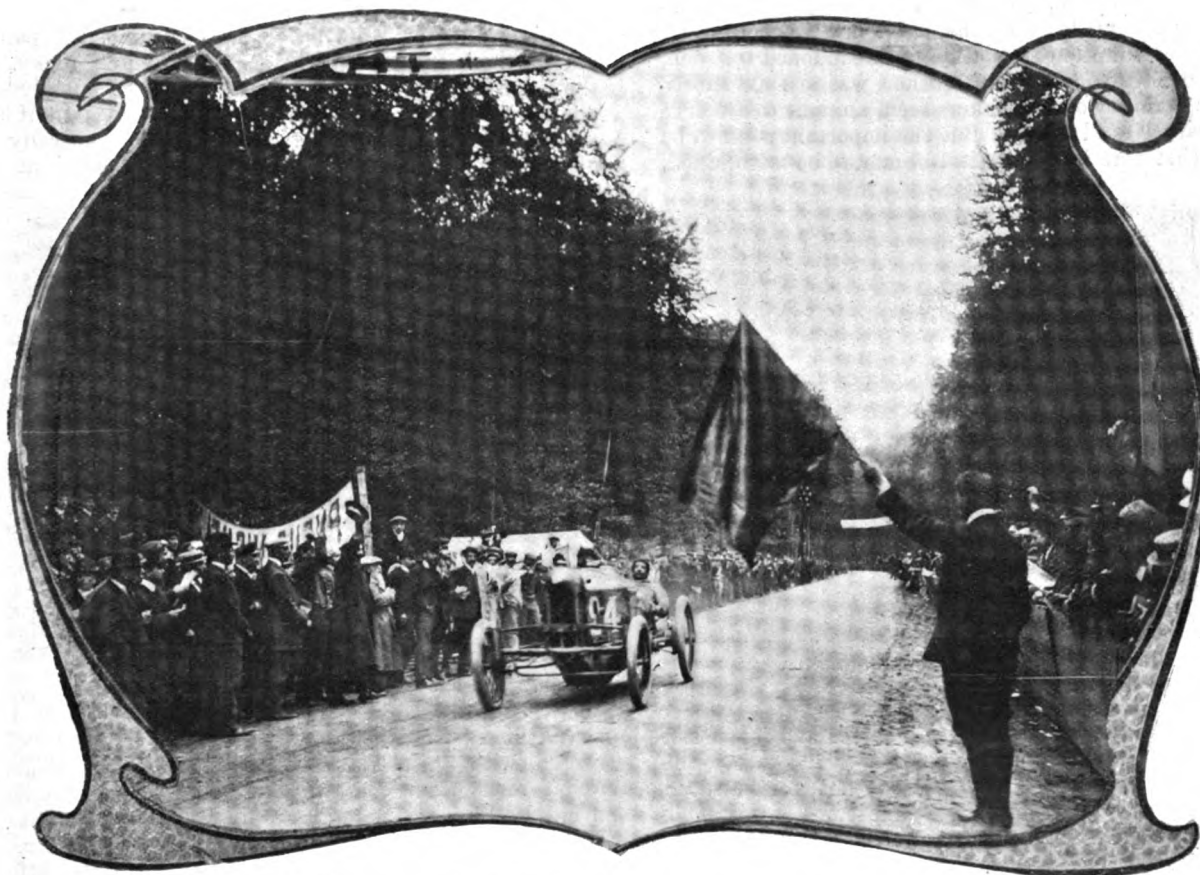
duction of motor vehicles for the transportation of milk to all the big centres in Germany will be brought up for discussion at the next annual meeting of the German Milk Dealers' Association.

A Novel Motor Fire Engine.

A somewhat novel motor fire engine has lately been added to the fire brigade equipment at Wilmerdorf, near Berlin. The machine, which was built jointly by Messrs. Gottfried Hagen, of Kalk, Cologne, and Messrs. Flader, of Johstadt, is electrically propelled, and carries a vertical boiler, engine and pump for pumping purposes. The vehicle is provided with a battery of forty cells, one charge of which enables it to run a distance of from fifteen to seventeen miles at a maximum speed of nineteen miles per hour. Two electric motors are used, these being mounted in the hubs of the front wheels.

The 1909 Prince Henry of Prussia Touring Competition.

It is proposed that the 1909 Prince Henry of Prussia Touring competition shall be under the auspices of the German Im-



The Coupe des Voiturettes.—The Arrival of the Winner, M. Naudin, on his Sizaire-Naudin Car.

Milk Delivery by Motor Vehicles.

The present method of conveying the milk consumed in Berlin from the farming centres is said to be very unsatisfactory. Not only is much time lost by the shunting of the trains in the station yard and the loading of the milk cans on to the vehicles which carry them to the distributing depots, but the distance of some of the latter from the railway station is so great that the transportation by wagon requires several hours, which considerably adds to the cost. Another disadvantage of railway transportation is the fact that large country districts at a considerable distance from railway stations are unable to send any milk to Berlin. With these various disadvantages in view, the President of the German Milk Dealers' Association, Herr J. Lulay, of Schöneberg, has made arrangements to carry out some trials of the transportation of milk by motor vehicles. Two motor-lorries with trailer, capable of carrying a total load of ten tons, are to be used for the purpose, and it is intended to carry about 5,000 gallons per day from the vicinity of Anhalt to Berlin. If the experiment proves successful, the question of the general intro-

perial, Bavarian, Austrian, and Hungarian Automobile Clubs, and that the event shall extend over six days. The projected route is from Berlin to Breslau, Brunn, Budapest, Vienna, Salzburg, and Munich, where the contest will come to an end. The hill-climbing trial will probably be substituted by a series of timed runs over measured distances *en route*. Special care will be paid in drawing up the regulations to prevent the entry of any "freak" touring cars.

Miscellaneous Items.

Among the first entries for the Gaillon Hill Climbing Competition, which is to be held on Sunday next, is Mr. Kidner's Vauxhall car.—The German Imperial Automobile Club proposes to hold a reliability trial of industrial motor vehicles in May, 1909; the event will be spread over three weeks.—It is rumoured that a large French firm of motor tyre manufacturers is introducing a wired-on tyre as a substitute for the beaded edge variety.—A few days ago the King of Italy had a short spin on a Fiat Grand Prix racer with Nazzaro at the wheel!

GOSSIP FROM PARIS.

THE regulations for the Grand Prix of 1909 are again pre-occupying the minds of French automobile manufacturers. Some people, and among them M. Arnoux, the vice-president of the Technical Committee of the French Automobile Club, would like to see the Sporting Committee make a regulation suppressing all regulations, that is to say, granting complete liberty. The adversaries of this course have, however, a good many powerful arguments against it. The race, they say, would be reduced to nothing but a doubtlessly amusing spectacle. Cars weighing 400 or 500 kilos, with a horse-power of 50-h.p. or 60-h.p., would compete with heavy vehicles weighing 1,000 kilos or more, with 120-h.p. or 130-h.p. motors. The racing cars would have two, four, six or eight cylinders. M. Faroux, a well-known technical writer, says, "Such an Omnium would be most amusing but not serious." There is much truth in his remark, and it is incontestable that during the five years preceding the adoption of the limitation of the fuel consumption in 1907 but little progress was made except in the materials of which the motors and the frames were made. In the opinion of a good many experts the fuel consumption regulation was abandoned too soon, but as a restriction of the cylinder dimensions was in 1908 substituted for it, the majority of the makers seem anxious to preserve this for next year's Grand Prix. But the important point to be settled is what that bore is to be. Is 155 mm. to be maintained,

single new cab on the streets, and the condition of their horses is as deplorable as that of their vehicles. The animals are almost all old, underfed, thin, lank, and broken kneed, while the cabs are dilapidated and dirty. Though, unlike the omnibus service, the cab industry is not a monopoly, the horse-drawn cabs will disappear from the streets of Paris all the more quickly because the motor-cab owners are reducing their tariffs, and it is announced that next winter a large number of motor-cabs will ply in the streets for hire at the same rate as the ordinary horse-drawn vehicle. As the cheapness was the only advantage the *moteur à crottin* had over the *moteur à pétrole* for cabs, the prompt disappearance of the former may be regarded as a certainty. In addition to all this the old-fashioned delivery wagons and vans, &c., are being fast replaced by self-propelled vehicles. Before very many years the "noble animal" that has rendered so much good service to man will be a rarity in the streets of Paris, where it will be chiefly used to draw the elegant carriages of the upper ten thousand when they take their drive in the Bois de Boulogne.

AN inventor who succeeds in selling his patent for a reasonable price may always consider himself lucky. Whether the companies formed to acquire them are equally so is quite another question. It is never easy to ascertain if the patent will hold good, and even if it does there is generally some way of obtaining the same result by slightly different means. I



Motoring Under Difficulties in Cambodia.—The Duke of Montpensier's Lorraine-Dietrich Crossing a River at Pneu.

or is it to be increased or diminished? The race at Dieppe last July demonstrated that the very fast cars were, so to say, the victims of their own speed. The tyres could not resist a speed of 160 or 170 kilometres an hour. Would it not be advisable to diminish the bore? A reduction to, say, 140 mm. or 130 mm. would, according to M. Faroux, have the advantage of securing the participation of a hundred or more cars in the Grand Prix of 1909, whereas were M. Arnoux's proposal to grant complete liberty to be adopted there would, he predicts, not be more than twenty cars entered for the race. The decision of the Sporting Committee on this point is looked forward to with great interest.

It looks very much as if the year 1910 would see the last of the omnibus horses, or *moteurs à crottin*, as they are called, driven off the streets of Paris by the *moteur à pétrole*. The concession of the old omnibus company comes to an end on May 10th of that year, and all those persons who have sent in tenders to the Municipal Council in the hope of obtaining the new concession propose to use only self-propelled vehicles. The transformation is to be complete. As that is the case, it is to be hoped the new omnibus company will put into service more convenient vehicles than the noisy, lumbering, top-heavy, trepidating specimens of motor-buses now employed on certain routes. As for the horse-drawn cab companies, they seem to have abandoned all idea of seeking to compete with the motor-taxi cabs. For the last two years they have not put a

think this is especially true with regard to the inventions connected with aerial navigation. For instance, Captain Ferber and several other competent authorities have assured me that even the Wrights' patents are in themselves worth but little. The name of Wright may, they admit, be worth buying at even a high price, but not their patents. Nevertheless there are already hundreds of other patents relating to aeroplanes and steerable balloons taken out by less celebrated inventors or by men who may be said to have "no name," or, at least, not a name of any marketable value. They are the persons who should rejoice at the present moment because a number of companies have been formed in France and other countries to buy up their patents. The last I have heard of is the Compagnie des Express Européens, constituted, it is said, with Belgian and German capital. The progress in aviation has within the last twelve months advanced with such giant strides that it would perhaps be rash to bet against this company and the numerous other similar societies paying a good dividend. But, however that may be, the inventors who may succeed in disposing of their patents to them must be congratulated. MARNEY.

A MOTOR-CAR gymkhana in aid of the unemployed fund was held in Dundee on the 19th ult., the use of Baxter Park having been granted by the Town Council for the purpose. The event was the first of its kind in Dundee, and attracted much interest.

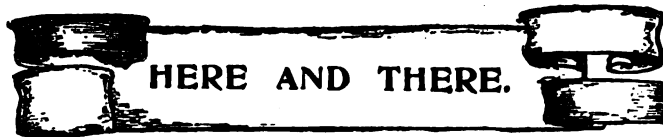
THE police of Guildford are summoning for obstruction those motorists who leave their cars unattended for any length of time.

SHOWROOMS at 310A, St. Vincent Street, Glasgow, have been opened by Messrs. G. Gar-scadden and Co., who have also a motor repair shop in Bishops Street, and head offices at 40, St. Enoch's Square, Glasgow.

"DRIVE slowly past school" is the warning notice to be erected in the Church Road and in the Highlands Road, Leatherhead.

THE first annual motor race meeting of the Automobile Club of Canada has been held this week in the De Lorimier Park, Montreal.

A CORRESPONDENT in Hong Kong writes that cars intended for export to that market should be of a medium wheel base and



THE Corporation of High Wycombe have just erected danger signals at various important points in the town.

A RESIDENT of Woking picked up a pocket-book containing a motor-licence, a number of

private papers, and a valuable note. The finder sent the pocket-book to the owner by post. Soon afterwards he received a reply. It contained neither word of acknowledgment nor thanks. The envelope enclosed only a penny stamp for postage.

AMERICAN motor-car manufacturers are reported to be now using linoleum in place of rubber for covering the floor boards and side steps of their vehicles. The makers of one car are stated to have used over 5,000 yards during the past season. It is claimed that linoleum is an ideal floor covering; no dust or disease germs can lodge in it, and it can be cleaned and purified

PROGRESS OF THE "FOUR-INCH" RACE—CIRCUIT BY CIRCUIT.

| Official No. | Name of Car. | Driver. | 1st round Min. sec. | 2nd round Min. sec. | 3rd round Min. sec. | 4th round Min. sec. | 5th round Min. sec. | 6th round Min. sec. | 7th round Min. sec. | 8th round Min. sec. | 9th round Min. sec. | Order of Finish. |
|--------------|----------------------|-------------------------|------------------------|------------------------|--------------------------------|------------------------|--------------------------------|---|------------------------------------|------------------------|------------------------|------------------|
| 1 | Rover ... | H. B. Browning ... | 86 5 | 161 51 | 320 44 | 384 7 | 474 8 | stopped | by time | | | |
| 2 | Hutton ... | W. Watson ... | 45 45 | 90 32 | 13 0 | 179 4 | 226 21 | 270 9 | 313 56 | 358 4 | 403 5 | 1 |
| 3 | Arrol-Johnston ... | E. J. C. Roberts ... | 45 40 | 90 53 | 138 48 | 184 3 | 235 35 | 359 23 | 496 34 | stopped | by time | |
| 4 | Darracq ... | A. Lee Guinness ... | 45 40 | 89 51 | 133 51 | 177 53 | 224 35 | 269 26 | 314 8 | 361 39 | 405 21 | 2 |
| 5 | Coventry-Humber ... | G. W. Brown ... | 52 30 | 139 16 | 207 4 | 269 49 | 345 25 | | | | | |
| 6 | Hillman-Coatalen ... | L. Coatalen ... | 50 55 | 101 56 | 180 19 | 231 5 | 290 40 | 336 25 | 389 14 | 446 59 | 500 35 | 9 |
| 7 | Metallurgique ... | Oscar Copper ... | 50 4 | 97 13 | 145 13 | 193 56 | 277 52 | 497 28 | retired | | | |
| 9 | Thornycroft ... | T. Thornycroft ... | 47 27 | 103 32 | 150 54 | 198 35 | 250 25 | 305 39 | 360 49 | 410 35 | 459 15 | 5 |
| 10 | Vinot ... | M. Ross Browne ... | 53 50 | 106 39 | 158 14 | 216 59 | 270 50 | 323 8 | 379 49 | 433 22 | 487 52 | 6 |
| 11 | Calthorpe ... | Leslie Porter ... | 48 5 | 95 26 | 143 57 | 191 12 | 241 28 | 289 2 | 336 53 | 386 5 | 439 19 | 4 |
| 12 | Deasy ... | Phillip Graham ... | 50 24 | 99 30 | 157 18 | 316 38 | retired— | broken gear | | | | |
| 12A | Westinghouse ... | A. Gaal ... | 54 57 | 112 51 | 171 52 | 229 59 | 288 21 | 349 31 | ran into | hedge | | |
| 14 | S.C.A.T. ... | R. O. Harper ... | 49 13 | 97 54 | 152 18 | retired— | owing to timing gear | | | | | |
| 15 | Hutton ... | J. E. Hutton ... | 46 34 | 98 2 | 141 48 | 193 32 | ran into | wall at Mayhill and bent front axle | | | | |
| 16 | Arrol-Johnston ... | D. Resta ... | 47 41 | 94 10 | 142 15 | retired— | broken clutch | | | | | |
| 17 | Darracq ... | A. E. George ... | 44 57 | 88 44 | 132 10 | 176 32 | 219 48 | 263 5 | 312 17 | 356 2 | 408 36 | 3 |
| 18 | Beeston Humber... | James Reid ... | 45 36 | 92 54 | 137 6 | 181 22 | 282 21 | 332 56 | ran into | wall Kirk michael | | |
| 19 | Hillman-Coatalen ... | K. Lee Guinness... | 61 14 | 110 59 | 172 17 | 222 16 | retired— | broken frame | | | | |
| 20 | Metallurgique ... | J. T. C. Moore-Brabazon | 48 37 | 95 25 | 141 30 | 272 50 | 319 12 | 365 26 | retired— | broken exhaust valve | | |
| 22 | Thornycroft ... | D. S. Hodge ... | 52 27 | 106 44 | 157 10 | 209 35 | 266 46 | 342 27 | 414 0 | 475 59 | 536 10 | 10 |
| 23 | Vinot ... | T. R. Outhwaite ... | 50 58 | 100 31 | 149 59 | 199 36 | 254 20 | 441 8 | 500 32 | | | |
| 24 | Calthorpe ... | J. Robinson ... | 48 26 | 95 20 | 141 50 | 207 47 | broken spindle and rear spring | | | | | |
| 25 | Deasy ... | E. W. Lewis ... | 54 4 | 106 30 | 159 4 | 213 48 | broken crank shaft | | | | | |
| 26 | Westinghouse ... | — Hartridge ... | 56 7 | 120 25 | retired— | magneto troubles | | | | | | |
| 27 | S.C.A.T. ... | F. Ward ... | 50 32 | 100 11 | 161 35 | 210 36 | retired— | damag e axle. | | | | |
| 28 | Hutton ... | P. D. Stirling ... | ran into | wall at Ballacraigne | on first round | | | | | | | |
| 29 | Arrol-Johnston ... | Geoffrey Moss ... | 103 18 | troubled from start | and three valve tappets broken | | | | | | | |
| 30 | Darracq ... | A. Rawlinson ... | 78 20 | 126 0 | 172 12 | 235 5 | 284 20 | 330 8 | 375 38 | 434 2 | 491 51 | 7 |
| 31 | Beeston-Humber... | W. G. Tuck ... | 45 4 | 89 11 | 133 37 | 178 36 | 220 43 | 276 56 | retired owing to ignition troubles | | | |
| 32 | De Dion-Bouton ... | J. W. Stocks ... | 57 25 | 106 50 | 155 1 | clutch trouble | | | | | | |
| 33 | Metallurgique ... | Warwick Wright ... | 46 8 | 91 99 | retired— | timing gear stripped | | | | | | |
| 34 | Piccard ... | Andre Debuissy ... | 54 51 | 115 25 | 167 8 | 219 19 | 286 38 | retired owing to faulty water circulation | | | | |
| 36 | Vinot ... | L. Molon ... | 54 28 | 107 34 | 165 23 | 221 30 | 286 1 | 369 52 | 427 0 | 484 18 | time limit | |
| 37 | Vulcan ... | Thomas Rimmer... | 52 23 | 116 42 | 168 25 | 219 31 | 273 46 | 325 42 | 389 51 | 425 | 494 29 | 8 |
| 38 | S.C.A.T. ... | Harold S. Buckley | 49 20 | 101 39 | 153 24 | 202 14 | 251 35 | 304 16 | 356 3 | retired | | |

track, and especially adapted for hill-climbing, Hong Kong being a very hilly place.

THE Atlas Motor Company, of 172 and 174, Queen's Road, Peckham, S.E., are well laid out to undertake motor repairs of all kinds. The firm are also making a speciality of hiring out cars both of the pleasure and business type.

LORD GLERAWLY, who acted as mechanic to Mr. Thornycroft on the car which Mr. G. V. Baxendale was to have driven in the Tourist Trophy race, is the eldest son of the Earl of Annesley. Needless to say, he is an enthusiastic motorist.

MESSRS. G. PHILLIPS AND SON, LTD., have published another of their "finger post" strip maps to which we gave commendation on their first appearance some months ago. The new map is of the London to Exeter road, and the clear diagrammatic method will enable motorists to know the objects likely to be met with on the road, with a view to discerning the right or wrong corners to take.

in a few minutes with a damp cloth. It is unaffected by petrol, impervious to moisture, and resilient to the foot.

THE steamship "Tangemuende," arriving at King's Lynn from Hamburg, reported having picked up three motor-boats in the North Sea 200 miles east of the Wash. There were no persons on board. The derelicts were taken in tow, but two broke adrift during the night. The third, which was taken into port, has the appearance of being a river passenger boat. The nationality is unknown.

ACCORDING to the annual report of the Postmaster-General for the year ending March 31st last, motor-vans are now employed, under contract, on about fifty mail services in various parts of the country. The working of the vans shows continued improvement, and their use has resulted in an acceleration of service, besides in some cases effecting economy. Other services are under consideration, and will, it is hoped, be established during the current year.

It is proposed to start a service of electro'-buses in Loughborough and district.

MESSRS. G. JOHNSON AND SON, Mundesley-on-Sea, have installed a Harvey Frost plant for the vulcanising of tyres.

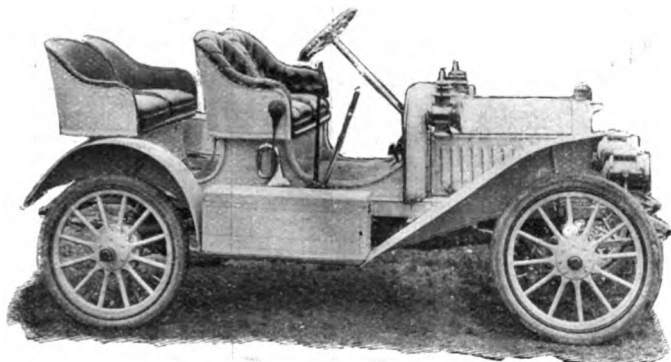
It is reported that the President of the Local Government Board will shortly receive a deputation from the R.A.C. with regard to legislative proposals in connection with automobilism.

THE "new" Zenith carburettor which has just been re-discovered was first shown in this country at the last Olympia Show, and was fully described and illustrated in our issue of December 28th, 1907.

MR. H. C. LAMBERT, whose garage and works are at Mordaunt Yard, West Street, Pimlico, and offices at 26, Pimlico Road, London, S.W., is doing good business in the sale and purchase of cars, and finds a steady demand for vehicles of high reputation in the second-hand category.

A THEATRICAL company known as the Players Company is now touring the United Kingdom, and they have selected a motor'-bus in preference to the more usual means of getting about. The vehicle, which was built by Commercial Cars, Ltd., Luton, is of 36-h.p., and carries the properties and costumes, as well as the artistes.

AN ingenious device known as a petrol economiser has lately been put on the market by Mr. S. de Beer, of 432, Mansion House Chambers, London, E.C. The arrangement, which is fitted in place of the usual petrol jet in the carburettor, is claimed to increase the mileage per gallon 50 per cent. and render the engine extremely flexible.



The 15-20-h.p. Buick Car which secured the first place in the Manufacturers' Section in the recent R.A.C. Dust Trials.

THE military aeroplane underwent a short but successful trial at Aldershot on Tuesday evening. After describing several circles over Farnborough Common the machine was sent up Farnborough Hill, and on coming down the reverse slopes the wheels were off the ground for about 100 yards. No serious attempt was made to fly, the trials being for the purpose of practising with the steering-gear.

THE new "Popular" two-seated car which the Renault firm are putting on the market for the 1909 season is fitted with a 7-8-h.p. two-cylinder engine. Ignition is by high tension magneto and the water circulation is on the thermo-syphon system, the familiar type of dashboard radiator being retained. The transmission is through a leather-faced cone clutch, three speed gear-box, cardan shaft and bevel gear to a live axle. On the top speed the drive is direct.

MESSRS. WARWICK WRIGHT, LTD., write us with regard to the Graphic Trophy and Henry Edmunds hill-climbing contests, regretting the action of the R.A.C. in cancelling the events. They point out that they went to a good deal of trouble and expense in bringing a chassis over from Belgium, and having a body fitted to it to meet the R.A.C. requirements, the vehicle being on the way to the Isle of Man before they received advice that the competitions would not be held. They suggest that the two contests should be decided in England under the auspices of the R.A.C., they maintaining that, as the Graphic Trophy is an annual event, however small the number of entries might be, it should be run off.

A FEATURE of the Scottish Club's recent hill-climb at Cairn o' Mount was the performance of a non-competing car—a Sheffield Simplex 45-h.p. six-cylinder. The car carried five officials and luggage, and went up the hill in between five and six minutes—a performance which should have seen it well placed in the competition.

A POINT in motor-cab law was decided at Marylebone Police Court last week, when the magistrate refused to grant a summons to a driver whose taximeter, by going the longer way round to the house to which he was called, had registered a charge of one shilling before his fare entered the cab. The fare refused to pay, and the magistrate's decision upheld the refusal.

THE Züst motor-car in which Signor Scarfoglio made his round the world journey was damaged by fire at Bromley, Kent, on the night of Friday, last week. The petrol was being removed from the car preparatory to its being sent to Folkestone by rail, when somehow or other the spirit became ignited. A mechanic named Maynard, from a local garage, was badly burned and had to be taken to the hospital, where he has since died.

SOME speed trials were carried out on Saturday last with the Singer 12-14-h.p. (15-9-h.p. R.A.C. rating) which proved the winner in class D in the 2,500 miles trial. The vehicle, which had been stripped for the occasion, was driven by Mr. Gerald Herbert. The first test was over one lap at Brooklands with a flying start, this being covered in 168.6 seconds, equal to 59.05 miles per hour. The second trial was over a distance of 5 miles 54.7 yards, the car accomplishing this, with a flying start, in 314.6 seconds, or at a rate of 57.56 miles per hour, an achievement which speaks well for the speed qualities of the Singer Motor Company's standard 12-14-h.p. model.

THOSE owners and drivers of motor-cars who take an interest in preserving the smart appearance of their vehicles will be interested in the new preparation known as "Rubberwhite" which has lately been introduced, and for which Messrs. Gutteridge and Zambra, Ltd., 308, Euston Road, London, N.W., have secured the sole agency. "Rubberwhite" is a liquid paint put up in tins of various sizes and intended for the renovation of indiarubber mats and tyres; it is stated to be non-inflammable, and, in addition to smartening the looks of the car, is claimed to preserve the rubber to which it is applied. The paint, which is supplied in two colours—white or grey—will be found a useful addition to the cleaning outfit.

INCREASING attention is being given to the possibilities of trolley motor'-buses or "trackless trams" as they are sometimes called, for use in this country. The system, which is already at work in various parts of the country, obviates the necessity of laying tram lines, the vehicles, while running on the ordinary road, taking the necessary current from overhead conductors the same as electric tramways. A sub-committee of the Manchester Corporation has recently been to Germany to inspect the system in operation, and as a result of the visit it has been decided to insert a suitable clause in the bill to be promoted in the next session of Parliament empowering the Corporation to run trackless trolley cars. The Dundee Corporation has also decided to adopt it on one of their routes.

THE placing of a supplementary notification to the public in certain of the motor-cabs of the General Motor-Cab Company led to a brief strike of the drivers on Friday, last week. The notice requested the "fare" to pay only what is registered by the taximeter; and also to see that any "extras" such as payment for additional passengers and luggage shall be charged on the meter by the driver at the commencement of the hiring. The men construed the first portion of the notice to mean that in future "tipping" was to be prohibited, and consequently they declined to take the cabs out, contending that without tips their wages would be entirely inadequate. A conference was arranged between the employers and the employed, with the result that the notices were temporarily removed and the drivers took out the cabs, it being understood that the general manager would have an interview with the Chief Commissioner of Metropolitan Police with the view to the wording of the notices being altered so as not to convey the impression that "tipping" was prohibited.

THE ELEMENTS OF ELECTRICITY FOR MOTORISTS.

BY H. WAYMOUTH PRANCE, A.I.E.E., A.M.I.A.E.

NO excuse is needed for writing upon this subject, as one comes across so many motorists who have such hazy notions of this all-important detail of motor-cars, and who, although willing to learn, cannot spare the time to make a proper study of the absorbing subject. Upon suggesting to such motorists that it would repay them to peruse any of the small handbooks upon electricity, the answer invariably has been that they have not time, but that, if only someone would condense into a page or so the elementary details which it is necessary to understand, they could study that and find out all that they want to know. At the suggestion of a motoring novice such as the above, I have made the following notes in popular language on just as much about electricity as a motorist must know, and no more.

Let me, first, consider the electrical units which concern the motorist; these are the ampere, the volt, the ohm, and the ampere-hour. The ampere is the unit of quantity or strength of current. We speak of an electric current of so many amperes in

Expressed simply, the effect of increased voltage or pressure is to force more amperes of current along a conductor; the effect of a resistance of so many ohms is to offer resistance to the passage of that current. Of course, it must be understood that nothing moves along the conductor—the “passage” of the current is merely a figure of speech. Thus we see that all connections must be clean and firmly made, and that all joins in a wire should be soldered, as the interposition of grease or other foreign matter, or in the case of a join, air between the two surfaces connected would add to the resistance offered to the current. In the case of that known as high-tension current, or current at an exceedingly high pressure, the pressure is so great that it will force the current across obstacles such as air, or even compressed gas, this being the action across the gap at the points of a sparking plug, hence the wires used for the conveyance of high-tension currents in ignition circuits are insulated with a very thick layer of rubber to prevent the escape of the current.

A few remarks about accumulators may be of use to the novice. Without entering into a technical description of the principle of secondary cells, it will suffice to state that an accumulator consists essentially of two plates, one called the positive and the other the negative, immersed in a solution of dilute



Two of the “Sight-Seeing” Vehicles in Buffalo, U.S.A.

much the same manner as we speak of a water current of so many gallons per minute. The volt is the unit of electrical pressure, or electro-motive force (E.M.F.); it corresponds to the pound per square inch used to denote steam and water pressures. The ohm is the unit of electrical resistance, and here we can find no corresponding unit in hydraulics. It is simply the resistance which a wire or other conductor offers to the passage of a current, the number of resistance units of an electric circuit being determined by dividing the number of volts by the number of amperes passing through the conductor. The ampere-hour is the unit of capacity of a battery or accumulator. It is the number of hours for which the battery or accumulator will supply a current of one ampere, or, what is the same thing, twice the number of hours for which it will supply two amperes, three times the time which it will supply three amperes, and so on.

The most common error one comes across in the employment of the above terms is the use of the expression “a current of so many volts.” This has no meaning whatever; the correct expression would either be a current of so many amperes or a pressure of so many volts. Another error one sometimes sees printed upon the instructions fastened upon accumulators is the somewhat misleading expression, “Capacity, so many amperes,” instead of “ampere hours.”

sulphuric acid. The result of passing a current through these plates (the positive terminal of the charging dynamo and battery being connected to the positive terminal of the accumulator, the two negative terminals also being connected together) is to effect a chemical change in the plates, which change enables the accumulator to give a current of electricity when connected to a coil or other such conductor. When the plates are in this latter condition the positive one will be of a chocolate and the negative ones of a clean lead colour. In most cells the negative plate is made up of two pieces—one placed on either side of the positive plate. One such storage cell, when fully “charged,” will give a voltage of about 2.3. Two cells connected “in series” (that is, the positive terminal of the first connected to the negative terminal of the second), as is usually done to form the ordinary four-volt ignition accumulator, will give the sum of the two voltages, thus $2.3 + 2.3 = 4.6$ volts. The positive terminals are generally painted red and marked with a +, and the negative terminal with a —. Care must be taken never to take an excessive current from an accumulator—such as by “shorting” the + and — terminals with any metallic substance; the plates are covered with paste and the violent action of an excessive current causes the paste to fall away.

(To be concluded.)

Correspondence.

(Letters to the Editor should be addressed to the offices, 27-28, Charing Cross Road, London, W.C.)

THE TOURIST TROPHY RACE.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—On our return from the Isle of Man we were much surprised to learn that some erroneous information had got about with reference to the non-success of our Metallurgique cars in the above race, said to be occasioned by the fact that we have had trouble with our ignition. Allow us to state, in the first place, that our four-inch cars were fitted with Bosch magneto and E.I.C. ignitions, and both of them gave us the utmost satisfaction; in fact, Mr. Bennett, of the Bosch Company, was continually at our garage in Douglas, examining the magnetos in case any trifling adjustment was necessary, but we are glad to say that his services were not required. Mr. Hall, of the E.I.C. Company, was also in attendance, and before the race made one or two minor adjustments, but during the race itself nothing occurred so far as the ignition was concerned.

The real reason of our non-success in the event was, in the first place, the late arrival of our cars from the works in Belgium, as the slight defects which became apparent could easily have been remedied had we had sufficient time over there. As no doubt you are aware, the cars only arrived in Douglas on the Thursday night at 7 o'clock, and the following morning were out to practice, and as without a doubt the majority of the cars during the practice had similar defects which were remedied, those in our cars could also have been remedied had we had



The Metallurgique Car which was to have competed in the Graphic Trophy and the Henry Edmunds Hill-Climb, had they not been abandoned by the Royal Automobile Club.

Messrs. Warwick Wright, Ltd., built the body specially to meet the R.A.C. conditions, and altogether a considerable amount of money was expended in preparing for the race and the hill-climb.

sufficient time to do the work. We are anxious to remove any false impression as to ignition troubles in this race, and shall be greatly obliged if you can see your way to insert this in the next edition of your excellent journal.—Yours truly,

OSCAR CUPPER.

TYRE PROTECTORS.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—In reply to Mr. C. D. Leng's letter in last week's issue, we cannot help thinking that this gentleman is just a little bit hard to please, as most people would be more than satisfied with eighteen months' wear out of one set of tyres fitted to a 40-h.p. Fiat without a single puncture. He rightly attributes this long life to his having used them in conjunction with a complete set of Durandal non-skids, which we fitted to his chassis in December, 1906, before it left London. As regards damp, no tyre that has been in use so long would remain damp proof. Rubber washers under security bolts perish very quickly, as does the rubber washer round the valve stem, and that is where the damp gets in. Any tyre that has been in constant use on a car for six months would show considerable signs of rust on the rim. If the clips of the Durandal had really let in damp, as Mr. Leng seems to think, the fabric in the tyres would have become rotten long before eighteen months' use.

Any form of fastening independent of the rim has many drawbacks—it is a complication—which is all against the trend of motors and motoring, and from the experiments we have made we find it impossible

to find anything to compensate for the air pressure which keeps the clip so securely in its place when it is inserted in the rim. The small castings which Mr. Leng suggests would leave a space between the detachable and the wall of the tyre where mud or dust would accumulate, the clips would be constantly moving, and would inevitably jump out on a very bumpy road. We sympathise with Mr. Leng outting a new pair of tyres to pieces in 1,155 miles, and are left wondering why he discarded his Durandal non-skids just when they were most wanted.—Yours truly,

STUART MORRISON AND CO.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—With reference to the letter from Mr. C. D. Leng in your issue of the 26th ult., we would point out that for some time we have made a detachable non-skid band that is attached to motor-car wheels independently of the car rim. We refer to our chain adjustment type non-skid. We found a demand for a non-skid of this type for cars with detachable rims, those using Elastes, wired on covers, &c., as in these cases there is nothing for our usual clips to hold to. We do not make a band of this type because of the moisture having any effect on the tyres in the case of our clipped on bands. We may say that we have run our clipped-on bands for thousands of miles, and when taken off there has been no more effect upon the tyre from moisture than if there had not been a band on at all. We attribute this to the fact that our clips are made of a lighter gauge steel than the ordinary non-skid and they do not push the beads so far away from the flange of the rim, and we would here point out that it is an unknown thing to us for one of our clips to break.—Yours truly,

THE LOMAX TYRE COMPANY.
(C. H. May.)

A POLICEMAN'S GUESS.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—I would urge all motorists travelling in the district of Rollesby, near Yarmouth, to be warned, as, just after crossing Bradenwater Bridge from Repps to Rollesby, there is a smaller bridge, and from this bridge to the fingerpost No. 13 directing users of the road to Oby and Thurn there is a trap. The police allege that from that fingerpost they can see across the fields to the latter bridge and time all cars travelling along the road between those two points.

The defendant in a recent case was charged with driving to the danger of the public, and you may pretty well guess what motorists have to contend with when one of the constables, after having timed the defendant and charged him with having driven at the rate of 22½ miles per hour, when pressed in cross-examination as to the manner in which he made his calculation as to speed, most reluctantly admitted that he had guessed the speed.—Yours truly,

S. R. RHODES.

THE GLARE OF HEADLIGHTS.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—May we ask you through the medium of your valuable paper to advise your readers to, as far as possible, cease to use the present large headlights, many of them of great power. A most deplorable accident occurred between one of our cars and another the other night, causing serious injury to several persons, fortunately without loss of life. The light was so brilliant that our man mounted the path on his near side to avoid them. This apparently caused the car to swerve; hence the collision. It was quite impossible to see anything outside the radius of their light.

We have for the past two years ceased the use of the lamps, as we know from experience that they terrorise pedestrians and cyclists to an alarming extent, and are a source of danger to motorists who do not use them.—Yours truly,

S. F. F.

INCONSIDERATE DRIVING.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—Setting aside the man who would be dangerous with a gun, bicycle, motor-car or perambulator, and who obviously cannot be made an innocuous member of the community, the whole of the anti-motorist case is based on inconsiderate driving by those who, though quite safe to themselves and the public, yet drive in such a manner as to cause unnecessary dust, mud and alarm to other users of the road. No reasonable motorist will argue that this kind of driving is unknown or even very infrequent. Sometimes it is due to sheer thoughtlessness, or to the selfish enjoyment of the undeniable pleasure of speed. Increased experience, however, is bringing wisdom, and it is now rare indeed for a motorist of more than a few months standing to start out on a journey with his time table so made out that it will involve speeds that, having regard to the road conditions, are likely to inconvenience other users of the road. The remaining cause, and it is a frequent one, is the unfore-

seen, and the unforeseen is generally a delay due to tyre trouble. For there is a very great temptation when appointments have been made to make up for the time lost by an increase in speed, not to the danger of, but very much to the inconvenience of the general public.

It is here, curiously enough, that the results of motor-car racing most directly benefit the non-motoring public. For success in racing, tyre delay must be eliminated. For the protection of the public from the inconvenience of inconsiderate driving, the same condition must obtain, namely, the elimination of tyre delay. It therefore becomes a duty that each motorist owes to the motor movement as well as to the public to provide his car with one or other of the devices—and there are many—which make for this end. It may be that the general public regards devices invented for general touring, but developed and proved by racing, as associated with high speeds on the road; but, as shown above, the exact contrary is the case, and the use of such devices is evidence of consideration, in the widest sense, for others. This is especially true of the speedy-looking detachable wire wheel, which, in addition to eliminating tyre trouble, actually raises less dust than does the older form of artillery wheel.—Yours truly,

JOHN PUGH.

PETROLEUM JELLY AS A LUBRICANT.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—Would it do to use petroleum jelly or vaseline in the gear-box of a motor-car instead of the usual grease? Any information on the subject you can give me will be gratefully received.—Yours truly,

T. W. BEVAN.

[There is no special reason why vaseline or petroleum jelly should not be used for gear cases, as it would only mean employing a lighter grade of the same base from which the best mineral greases for this purpose are prepared. Petroleum is most prolific in the various lubricating products that are obtained from it, not to mention paraffin and the distilled spirits of various specific densities. The thick yellow greases that are sold for motor-car gear-boxes are going somewhat out of vogue, and gear oils and clinging semi-fluid lubricants are found more suitable. The use of ball bearings is perhaps the chief reason, as these are best lubricated with oil. Further reasons against the use of thick greases are: The centrifugal action of the wheels throws the grease against the walls of the case, sometimes leaving the teeth dry eventually; a lot of power is absorbed in churning thick grease; and the bearings do not get so well lubricated, unless self-feeding grease-cups are fitted.]

COURTESY UNREQUITED.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—A great deal has been said about the "motor murderer" and the "garage shark." I have wondered whether the customer's views were always the correct ones, and we would therefore like your readers' opinion on the following case:—

A car stranded at 11 o'clock p.m. with no carbide in a main street with a fifteen mile journey to go that night. We went back to the garage, some two or three hundred yards, procured carbide, and as the car was starting off from Salisbury Garage noticed the back electric lamp was out. The owner was not very familiar with the wiring and we tested and found them both down. We went back to the garage again, taking a 20 amp. accumulator and lending the owner a new 40 amp. accumulator.

This was kept nine weeks, and no reply was vouchsafed to our enquiries as to whether it would be returned or purchased outright. At the end of that time the servant called and asked for the owner's 20-amp. accumulator in the afternoon; it was put on the charging board and "touched up" and delivered in the evening. A charge of 2s. 6d. was made for nine weeks' loan of our accumulator (this includes re-charging it when it was returned to us) and a charge of 9d. was made for charging the 20-amp. accumulator, making a total of 3s. 3d.

We received a letter enclosing a postal order for 3s. (the 3d. being evidently too trivial a matter to bother about) and saying "the charge is exorbitant in view of the fact that we had used the other accumulator," a statement without foundation of fact.

The only thing we are surprised at is that the accumulator is in good condition; for, as a rule, they are returned to us showing about two volts and terminals and plates badly sulphated.—Yours truly,

J. SMALLWOOD.

WELSH JUSTICE.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—As a regular subscriber and supporter of your valued journal I would like to give publicity to a measure of justice (?) I had inflicted upon me last week, with a view of warning careful drivers touring in North Wales against any similar actions which may be taken against them.

My attention was drawn to the case outlined below by receiving a summons for reckless driving, which was alleged to have taken place a month back, and on attending the court it appears that a lady was supposed to be inconvenienced by a motor-car passing close to her, while strolling on the high road. This lady swore that the wheels of a car passed within one inch of her foot, and that it must be the car owned by

myself, as it was lettered D, although she had no idea as to the number.

Without prior knowledge of the exact nature of the charge I had to meet, it was impossible for me to procure any witnesses on my behalf besides my wife, who invariably accompanies me on our tours, and by sketches and photographs I have shown that it is physically impossible for the wheels of my car to pass within one inch (or six inches) of any person's foot without injuring them, owing to the projection of the mudguards and running boards extending some six inches beyond the tread of the wheel.

For the last three and a half years I have driven about 12,000 miles annually without a single complaint of any description. Yet the Chairman of the Bench generously declared they would let me off lightly (?) by a fine of £5 and costs and advocate's fee and suspension of licence for three months!!

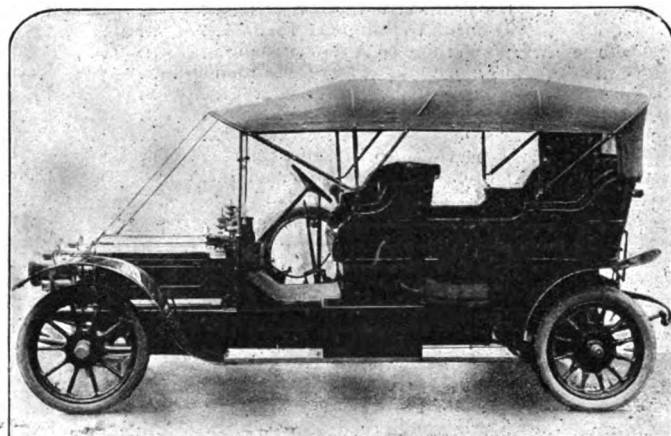
Hoping you will not consider my letter too long for insertion or unduly detailed for early publication.—Yours truly,

E. H. WHEELER.

THE PRICE OF LUBRICATING OIL.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—May I use some of your space to air a small grievance with regard to the price in some parts of the country of motor requisites, especially lubricating oil? I have recently been down into Norfolk and ran short of oil, but, on trying to buy some, found I could not get any for less than 4s. 6d. a gallon. Most of the places I tried had nothing but one-gallon and half-gallon sealed tins, which I quite understand have to be sold at that high rate to allow of any profit, but even those motor-houses that had their oil in casks or drums wanted to charge the same, and finally I had to buy it at that rate. I inquired at other places on my way up to London, and both in Suffolk and in Cambridge it was the



The Mors Car recently purchased from Mors (England), Ltd., by Sir Frederick Fryer as a present to his son, Col. Fryer, who is taking it with him to India.

same; one of the places I inquired at was kept by an official repairer to the R.A.C. and M.U. Now, I have bought oil in various counties, e.g., Surrey, Hants, Herts, Warwickshire, Lincolnshire, and Yorkshire, and have not been charged more than from 2s. to 2s. 9d. a gallon. Moreover, I can myself buy oil at from 1s. 9d. to 2s. 8d. the gallon, and presumably the trade can get it cheaper, so that it is preposterous to charge more than 2s. to 3s. for it. Of course, the price of petrol and accumulator-charging is high too, but nothing to the oil.

I hope that the R.A.C. and the M.U. can do something to alter this state of affairs, at least in the case of their own official repairers.—Yours truly,

R. ROBINSON.

THE LUBRICATION OF DISC CLUTCHES.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—Some time ago I wrote you with reference to the lubrication of disc clutches, but omitted to add a caution as to filling the clutch too full. If an excess of oil be used, it will be found almost impossible to get the first gear into mesh when the car is stationary, owing to the fact that the discs do not separate. A pint to a pint and a half is, I believe, sufficient for any clutch of this type, and on my car with three pints I cannot get in my lowest gear when standing.

There is seemingly another bone which we have to pick with the insanitary horse, and that is the spotting and dulling of varnish. The other day I asked a varnish maker how it was possible that rain and road grit could have this effect upon coach work, and he astonished me by saying that it was not the rain and pure inorganic grit that had this effect, but the ammonia evolved from the excrement of animals, chiefly horses. As a chemist I feel that he is quite justified in making this accusation.—Yours truly,

A. DUCKHAM.

HILLS AND THEIR GRADIENTS:

THE appended list of some of the steep hills in this country, together with their gradients, will no doubt be of interest to motorists, especially to those anxious to test the hill-climbing capabilities of their cars. We shall be glad to receive from readers particulars of any hill (and its gradient) in their locality not included in the list.

| Hill. | Location. | Average gradient. |
|---------------------------|---|-------------------|
| Lynmouth ... | Ilfracombe to Minehead road ... | 1 in 5 |
| Porlock ... | Ilfracombe to Minehead road ... | 1 " 6 |
| Birdlip ... | Gloucester to Cirencester road ... | 1 " 7 |
| Paracombe ... | Ilfracombe to Minehead road ... | 1 " 7 |
| Salcombe ... | Sidmouth road ... | 1 " 7 |
| Stammerly ... | Axminster road ... | 1 " 7 |
| Edge ... | Banbury to Stratford-on-Avon road ... | 1 " 8 |
| Garrowby ... | York to Driffield road ... | 1 " 8 |
| Nately ... | Kirkby Stephen road ... | 1 " 8 |
| Sutton Bank ... | Thirsk road ... | 1 " 8 |
| Titsey ... | Croydon to Limsfield road ... | 1 " 8 |
| Westerham ... | London to Edenbridge road ... | 1 " 8 |
| Eastbourne ... | Eastdean to Eastbourne road ... | 1 " 9 |
| High Wycombe ... | Reading to Amersham road ... | 1 " 9 |
| Holywell ... | Chester to Holywell road ... | 1 " 9 |
| Kingsbridge ... | Exeter road ... | 1 " 9 |
| Lyme Regis ... | Lyme Regis to Crewkerne road ... | 1 " 9 |
| Shotley Bridge ... | Durham road ... | 1 " 9 |
| Bury ... | Arundel to Petworth road ... | 1 " 10 |
| Bradford-on-Avon ... | Warminster road ... | 1 " 10 |
| Duncton ... | Guildford to Chichester road ... | 1 " 10 |
| Folkestone (Up-hill) ... | Folkestone road ... | 1 " 10 |
| Goudhurst ... | Goudhurst to Maidstone road ... | 1 " 10 |
| Gittisham ... | Roniton to Sidmouth road ... | 1 " 10 |
| Hurstbourne ... | Newbridge to Andover road ... | 1 " 10 |
| Langdon ... | Chelmsford to Gravesend road ... | 1 " 10 |
| Riverhill ... | London to Tonbridge road ... | 1 " 10 |
| Southam ... | Cheltenham road ... | 1 " 10 |
| Teignmouth ... | Exeter road ... | 1 " 10 |
| Upwey ... | Weymouth to Bridport road ... | 1 " 10 |
| Wantage ... | Oxford to Hungerford road ... | 1 " 10 |
| Whitby ... | Stockton road ... | 1 " 10 |
| Crockham ... | London to Edenbridge road ... | 1 " 11 |
| Castleton ... | Macclesfield road ... | 1 " 11 |
| Dashwood ... | High Wycombe road ... | 1 " 11 |
| Goreott ... | Alcester road ... | 1 " 11 |
| Leatherhead ... | London to Epsom and Guildford road ... | 1 " 11 |
| Studley Green ... | High Wycombe and Oxford road ... | 1 " 11 |
| Totnes ... | Exeter road ... | 1 " 11 |
| Boughton ... | London to Canterbury road ... | 1 " 12 |
| Hogs Back ... | London to Farnham road ... | 1 " 12 |
| Ham ... | Salisbury to Exeter road ... | 1 " 12 |
| Oare ... | Marlborough road ... | 1 " 12 |
| Shaftesbury ... | Salisbury to Exeter road ... | 1 " 12 |
| Sowerby Bridge ... | Rochdale to Halifax road ... | 1 " 12 |
| Wotton ... | Dorking to Guildford road ... | 1 " 12 |
| Arundel ... | Arundel to Petworth road ... | 1 " 13 |
| Barnard Castle ... | Bowes road ... | 1 " 13 |
| Eastdean ... | Brighton to Eastbourne road ... | 1 " 13 |
| Limsfield ... | Westerham to Oxted road ... | 1 " 13 |
| Reigate ... | London to Reigate and Brighton road ... | 1 " 13 |
| Shooter's ... | London to Dartford road ... | 1 " 13 |
| Wells ... | Bath to Taunton road ... | 1 " 13 |
| White ... | London to Henley road ... | 1 " 13 |
| Burnley ... | Bolton road ... | 1 " 14 |
| Chatham ... | London to Canterbury road ... | 1 " 14 |
| Guildford High Street ... | London to Portsmouth road ... | 1 " 14 |
| Glossop ... | Glossop to Sheffield road ... | 1 " 14 |
| Littleborough ... | Rochdale to Halifax road ... | 1 " 14 |
| Shepton Mallet ... | Bath road ... | 1 " 14 |
| Wrotham ... | Gravesend to Tonbridge road ... | 1 " 14 |
| Ilfracombe ... | Barnstable road ... | 1 " 15 |
| Macclesfield ... | Buxton road ... | 1 " 15 |
| Seal ... | Sevenoaks to Maidstone road ... | 1 " 15 |
| Ightham ... | Sevenoaks to Maidstone road ... | 1 " 16 |
| Handcross ... | London to Brighton road ... | 1 " 17 |
| Portsmouth ... | London to Portsmouth road ... | 1 " 17 |
| Forest Row ... | London to Eastbourne road ... | 1 " 18 |
| Hindhead ... | London to Portsmouth road ... | 1 " 19 |
| Aston ... | High Wycombe road ... | 1 " 21 |

REFERENCE has already been made to the success of Mr. T. H. Woollen's 15-h.p. Talbot at the Yorkshire A.C. hill climb. The figures relating to this competition have since been furnished by Mr. C. P. Wilson, secretary of the Yorkshire Club, and it transpires that the car has augmented its splendid performance by beating the world's record for efficiency by 1085. A claim accordingly has been placed before the R.A.C.

ECHOES OF THE "FOUR-INCH" RACE.

THE Dunlop flagmen were of great service during the practising, and the Dunlop tyres won distinction during the race, being fitted to the winning car as well as to the vehicles that were in the second and third places.

FOR the third time the Tourist Trophy has been won on "Shell" motor spirit. It was used by the winning cars in 1905 and 1906, as well as by Mr. Watson in the contest last week.

THE winning car was fitted with a "Castle" coil and a "Castle" accumulator, supplied by the United Motor Industries, Ltd.

MOST elaborate precautions had been taken by the R.A.C. to provide for the safety of the public and the competitors, and Lieut.-Col. W. M. Freeth, the Chief Constable, caused 610 special constables to be sworn in to act in connection with the race. The course was divided into twenty-one sections, each in charge of an official, these including Col. Holden, Major T. Cochrane, Capt Dyke Acland, Capt. Hume, Capt. Bagnall-Wild, Messrs. R. Todd, W. Worby Beaumont, J. Lyons Sampson, S. F. Beevor, P. Dawson, W. E. Rowcliffe, Mervyn O'Gorman and other well-known motorists. Ten ambulance stations, each in charge of a doctor, were provided, and there were thirty-eight ambulance units.

THE Darracq cars were without bonnets, and several cars had small screens in front of the steering wheel, notably Mr. J. E. Hutton's car and M. Molon's Vinot.

THE Hutton car that won the race was the heaviest engaged in the contest, weighing 2,830 lbs. The Vulcan was only 142 lbs. above the minimum weight limit of 1,600 lbs.

THE Wednesday night excursion from Liverpool brought a large contingent of workmen from Southport to watch the progress of the Vulcan in the race.

LORD RAGLAN went over the course in a motor-car driven by Mr. J. W. Orde on the day before the event. Ascending Crag Willyshill a motor-cyclist was met. The Governor's car and the cycle collided, and Mr. Cove was cut and bruised. Subsequently he recovered sufficiently to go on to Ramsey, where he joined the Governor and his party at luncheon.

THE race for the Tourist Trophy is being run over again at the Palace Theatre, London, through the medium of the Urbanora Bioscope.

THIRTEEN of the cars engaged in the Tourist Trophy race, including the winning Hutton, used the Ilo lubricating oil, which has been introduced by Messrs. Easton and Melville, and has rapidly attained distinction in the motoring world.

ONE of the smartest engineering feats of the day was performed by Mr. E. W. Lewis, whose crank shaft broke. While contemplating his ruined chance of success he bethought himself. The shaft had broken forward of the timing gear, which in the Deasy engine is located near the central bearing, and dropping out the front portion of the shaft he put back the under casing and ran his car on two cylinders. For a lap and a half he travelled thus at a speed of 35 m.p.h.

MESSRS. J. KEELE AND CO. have the Darracq cars driven by Mr. A. Lee Guinness and Mr. A. Rawlinson on view in their show rooms at 72, New Bond Street, London, W. Although Mr. Rawlinson overturned his car in the first round, and ran into a brick wall in the fifth lap, he was yet able to finish seventh and complete the unity of the Darracq team.

THE following twenty-two cars were fitted with the Rudge-Whitworth detachable wire wheels, viz.:—Hutton (3), Arrol-Johnston (3), Darracq (3), Hillman-Coatalen (2), Metallurgique (3), Thornycroft (3), Calthorpe (2), De Dion, Piccard and Vulcan.

COMPANY NEWS.

(In the case of New Companies the file number is given at the end of the particulars.)

A. DARRACQ AND CO.—A dividend on the preferred ordinary shares has been declared for the half-year ending September 30th, making a distribution of 10 per cent. for the year.

AEROPLANE ENGINE COMPANY, LTD.—Capital £2,225. Registered offices, Redbridge, Southampton.

A.B.C. CAB COMPANY, LTD.—Capital £200,000. To establish services of taximeter motor-cabs in London and the provinces. Registered offices, 21, Great Winchester Street, E.C.

NEW registrations at Somerset House include the Earl's Court Motor Garage Company, Ltd., with a capital of £1,050; the Two Wheel Motor Car Syndicate, Ltd., with £600, and C. E. Whittaker, Ltd., with a capital of £100.

VANGUARD.—A meeting of the Vanguard Motor-Omnibus Company was held on Tuesday in London, when it was resolved to confirm the resolution to wind up the company, Mr. W. B. Peat being appointed liquidator.

MR. T. GARNER, 12, Peter Street, Manchester, has been appointed the agent for the B.S.A. cars in that district, while the Glasgow agency is in the hands of the St. Vincent Motor and Cycle Company, Ltd., 161 North Street, Glasgow.

CLUBS AND ASSOCIATIONS.

ROYAL.

ON Thursday, the 1st inst., the R.A.C. General Committee held the first meeting that it has convened in London since June, when the question of inconsiderate driving was again considered.

Upwards of 1,800 associates' badges have been issued to individual associates and to the members of the local clubs.

THE MOTOR UNION.

As a result of representations by the M.U., steps are being taken to trim the hedges on portions of the Reigate-Dorking road.

Following a letter addressed to the Manager of the Croydon Tramways, as to a 3-in. gap in the metals opposite the Thornton Heath depot, and many other places where the aperture is dangerous to motor vehicles with tyres smaller than 65 mm., the Union is informed that the dangerous place at Thornton Heath has been repaired.

The M.U. has received £17 during the past week towards the Legal and Legislative Defence Fund. To defray the expenses incurred this year some £500 is required.

BROOKLANDS.

ENTRIES closed on Saturday for the race meeting at Brooklands on October 3rd. The Brooklands Grand Prix has fallen through. The motor-cycle race has received the best support of any event, twenty-eight machines being on the list. The entries are as follows:—

The Autumn Handicap.—A. Van Hoboken, 35.7-h.p. Mercedes; C. Hobson, 48.6-h.p. Brasier; H. G. Nalder, Germain Yellow Peril; R. Creyke, 8.9-h.p. Sizaire; Sir G. W. Abercromby, 58.1-h.p. Fiat; O. S. Thompson, Austin Poble; C. A. Bird, 34.5-h.p. Mercedes.

The Large October Sweepstakes.—Sir G. W. Abercromby, 58.1-h.p. Fiat; H. G. Nalder, Berliet Grayling; W. Jochems, 48.6-h.p. Mercedes; O. S. Thompson, Austin Poble.

The 26-h.p. Championship.—J. W. Stocks, 25.6-h.p. De Dion.

The Motor Cycle Handicap.—J. C. Davis, 5-h.p. Rex; G. Gibson, 3.4-h.p. Triumph; W. L. R. Moorhouse, Jap; F. G. Andreae, 5-h.p. Rex; G. Schink, 8-h.p. N.S.U.; G. Schink, 2.4-h.p. N.S.U.; G. Schink, 6-h.p. N.S.U.; W. H. Wells, 5-h.p. Vindeo Special; H. G. Partridge, 6-h.p. N.S.U.; W. M. Partridge, Minerva; W. W. Genn, Minerva; W. H. Bashall, 3.4-h.p. Triumph; R. M. Brice, 3.4-h.p. Brown; H. H. Bowen, L.M.W.; H. Shanks, jun., 2.4-h.p. Chater-Lea; F. Toman, Laurin and Klement; H. V. Colver, Matchless; E. W. Caswell, 2.4-h.p. machine; F. Eagles, N.S.U.; A. J. Sproston, 5-h.p. Rex; A. G. Forster, 7-h.p. N.L.G.; A. Cumming, 3.4-h.p. Givandan; C. R. Collier, Matchless; H. A. Collier, Matchless; T. H. Tessier, Bat; R. O. Clark, 5-h.p. F.N.; Phil Cater, 2.4-h.p. Minerva; M. Arnott, Chater-Lea.

The Fifth All-Comers' Handicap Sweepstakes.—F. R. Fry, 59.6-h.p. Mercedes; Sir G. W. Abercromby, 58.1-h.p. Fiat; H. G. Nalder, Germain Yellow Peril; J. B. Hissey, Aster Queenie; C. Hobson, 27.9-h.p. Nagant-Hobson; C. Hobson, 48.6-h.p. Brasier; L. Squire, 18.8-h.p. Straker-Squire; H. P. Martin, 38-h.p. M.A.B.; W. Jochems, 48.6-h.p. Mercedes; C. J. Ratcliff, 25.6-h.p. Beeston-Humber; R. Creyke, 8.9-h.p. Sizaire; Hon. L. Bruce, 48.6-h.p. De Dietrich; C. E. Whittaker, 27.9-h.p. Imperia; G. C. Colmore, 14.7-h.p. Beeston-Humber; O. S. Thompson, Austin Poble; R. Lascelles, two 5-h.p. Varsity cars.

WILTSHIRE.

THE annual gymkhana was held on the 23rd ult. on the private cricket ground at Leighton Park, Westbury, a course for the purpose having been prepared and kindly lent for the second time by Mr. W. H. Laverton.

A programme of six events was arranged, and was carried out expeditiously and without a hitch by the officials concerned, namely, Messrs. Palairt, Laverton, Meek, and Erskine. The results were as follows:—

| Event. | Winner. |
|---------------------|----------------------|
| Adam and Eve Race | Mr. S. J. Applegate. |
| Tortoise Race | Mr. F. B. Oldfield. |
| Passenger Race | Mr. E. T. Shorland. |
| Academy Race | Mr. S. J. Applegate. |
| Potato Race | Mr. S. J. Applegate. |
| Tilting at the Ring | Captain Colston. |

A meeting of members was previously held on the question of affiliation, it being resolved, before coming to a decision, to send delegates to the proposed conference organised by the Manchester A.C.

NORTHAMPTONSHIRE.

A MEETING of the committee of the Northamptonshire A.C. has been held at the George Hotel, Northampton, when it was reported that the Manchester A.C. had asked for an expression of opinion as to the advisability of holding a conference of provincial clubs for the purpose of considering the relationship existing between the R.A.C. and the M.U. The hon. sec., Mr. Sidney Harris, was asked to reply to the effect that the committee was not disposed to take any action beyond that of "supporting the R.A.C. in whatever course they decide upon."

MOTOR.

ON Tuesday a meeting of the General Committee of the Motor Club was held for the election of new members, and on the following day the Entertainments Committee discussed their arrangements for the winter.

The club has been presented with a series of aeroplane photographs by Mr. H. O. Mack.

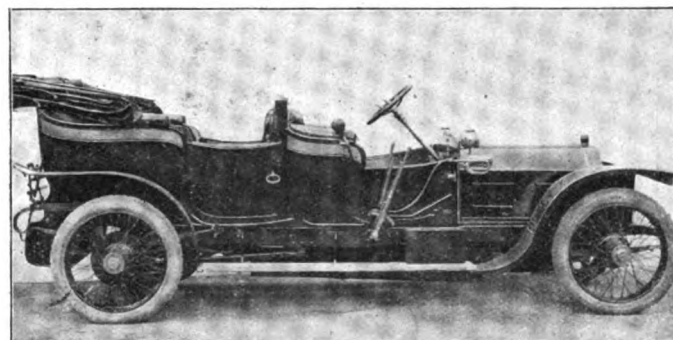
CAMBS AND ISLE OF ELY.

THE committee met at the University Arms Hotel, Cambridge, on Saturday, Mr. Douglas Newton in the chair. Letters from the secretary of the Royal A.C. were read and discussed. The scheme put forward by the Club to check inconsiderate driving was welcomed as a step in the right direction, and the secretary was instructed to report that the committee would carry out the main details of the scheme to the best of its ability.

The future action of the club with regard to affiliation was discussed, and it was decided, as a preliminary step, to ascertain the views of members by means of a postal vote. Each member is to be asked to answer "Yes" or "No" to the following questions:—1. Are you in favour of affiliation with both the R.A.C. and the M.U., if this can be carried out? Failing this, or if you do not approve of it:—2. Are you in favour of association with the R.A.C. alone? 3. Are you in favour of affiliation with the M.U. alone?

DUBLIN AND DISTRICT MOTOR CYCLE CLUB.

ON Saturday afternoon the Dublin and District Motor Cycle Club carried out a penalty competition over a circular course of about forty-five miles. The starting point was at Inchicore, and the finish at Terenure, the route covered being by Naas, Ballymore, Eustace and



The 30-40-h.p. Ariel Car fitted with Park Phaeton Body by Salmon and Sons recently supplied to Lieut.-Col. C. W. Coote, of Creaton, Northampton.

The leather hood and falling glass screen behind the driver completely closes the rear part of the body for wet weather. The high front wind doors also add greatly to the comfort of the forward seats.

Blessington. The competitors were required to cover the distance at a speed of between twenty and eighteen miles an hour, and any excess of the minimum time of 2 h. 15 min., or the maximum time of 2 h. 30 min., was penalised, as also were any involuntary stops en route. Although the weather was fine overhead, the roads were very greasy owing to the previous day's rain, and, in consequence of side-slips, only one of the competitors succeeded in doing a non-stop run. The result of the trial was as follows:—

| | Time. | |
|---|-----------|---|
| | hrs. min. | |
| F. J. Walker, 5-h.p. Rex, non-stop | 2 17 | 1 |
| J. Doleman, 3.4-h.p. Rex, two stops | 2 19 | 2 |
| R. H. Toaffe, 3.4-h.p. Triumph, one stop | 2 32 | 3 |
| T. Geoghegan, 3.4-h.p. Triumph, one stop | 2 53 | 4 |
| M. J. Chambers, 2.4-h.p. F. N., three stops | 2 50 | 5 |

Mr. J. Browne acted as starter and timekeeper.

NORTH BERKSHIRE.

THE North Berks A.C. hill climb took place on Saturday last at Woolstone, by invitation of Mr. and Mrs. Butler. The result of the handicap was as follows:—Mrs. Viner Ellis, 12-h.p. Peugeot; E. W. Bond, 7-h.p. Peugeot; Captain Loder Symonds, 8-h.p. Peugeot; Mrs. Barnett, 15-h.p. Fiat; W. S. James, 20-h.p. Rothwell (fastest time); Miss C. Fletcher, 14-h.p. James and Browne.

Mrs. Viner Ellis holds the silver challenge cup for the second time, having won it last year. The fastest time was made by Mr. W. G. James on his 20-h.p. Rothwell, who came up the one in six gradient in under a minute—a very fine performance. Of the heavier cars, Mr. Barnett's 15-h.p. Fiat came up in excellent style. After the hill climb

a gymkhana was held on Woolstone Lodge. The first event, Academy Sakes, driving round and drawing on a blackboard, was won by Miss Butler. The second event, Victoria Cross Race, in which three dummies had to be separately fetched and placed in the car, was won by Captain Loder Symonds. The Chauffeurs' Race proved a victory for Judge Bacon's chauffeur.

THE Crewe and District Motor Club is holding a Petrol Consumption Trial to-day (Saturday). A gold medal presented by the president, Mr. J. J. Verdin Cooke, will be given to the competitor accomplishing the greatest distance on a given amount of petrol, which will be supplied at the rate of $1\frac{1}{2}$ pints per 300 lb. total weight.

THE Auto Cycle Union is holding a Penalty run at Woodford to-day (Saturday). A meeting will be held at Leamington on the 10th inst. The Council will meet in the afternoon, and in the evening a dinner will be held, to be followed by a smoking concert.

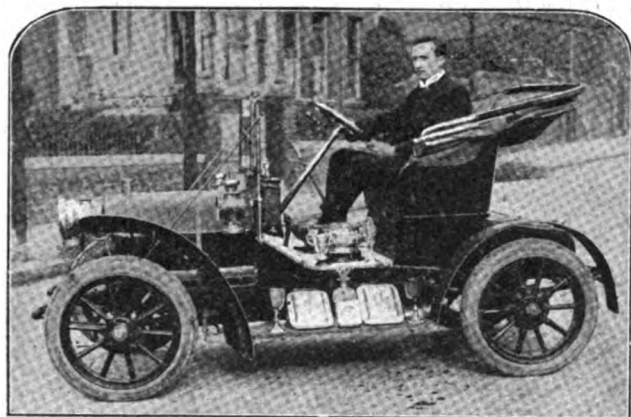
THE next ordinary meeting of the Society of Engineers will be held on the 5th inst. at the Royal United Service Institution, Whitehall, when a paper will be read on "The History of Mechanical Traction on Tramways and Roads," by Mr. H. Conrad, A.S.E.

THE Wiltshire Automobile Club held a successful gymkhana at the Leighton Cricket Ground, Westbury, on Wednesday of last week.

PUBLIC SERVICES.

THE motor-bus service at Birmingham has come to an end, eight motor-buses and four motor char-a-bances having been sold last week at an average price of £50 each.

THE Chief Commissioner of Police suggests in a report to the Public Control Committee of the L.C.C. the employment of a "governor" or automatic speed recorder. He also suggests an increase in the number of street refugees, as providing places of safety for



Mr. G. Hill, of Brighton, at the wheel of the 8-10-h.p. Darracq on which he won so many prizes last year at the Worthing and Eastbourne Gymkhanas held by the Sussex Automobile Club. Mr. Hill, who is the local agent for Darracq and Minerva cars, is now running six Darracq cabs in Brighton.

pedestrians, and so breaking up the traffic that excessive speed will be possible only with difficulty.

BRISTOL will soon have a number of motor taxi-cabs in service. The Tramways and Carriage Company have entered this field with several up-to-date motor vehicles.

THE Hove Council has declined to licence the motor-cabs of the Provincial Motor Cab Company, Ltd., to ply for hire in Hove, apparently because they are licensed in Brighton. Instructions have therefore been given that a number of vehicles are to stand just at the boundary of the two places, and on being telephoned to at their garage (No. 5050) the company undertake to dispatch cabs to any house in Hove, within one mile of that boundary, free of charge.

A NEW development in the motor traffic of London comes in the inauguration of a system of season tickets by the Great Eastern (London) Motor Omnibus Co.

THE Cardiff Tramway Company proposes to inaugurate a motor-bus service between Llandaff and Cardiff.

WITH Lord Mountmorres as chairman, and Mr. Augustus Pereno as managing director, the Zust Motors, Ltd., has been formed to take over the sole agency for Great Britain and Ireland for the Zust cars. The company are temporarily located at 104, Long Acre, London, W.C., pending the completion of their new West End showrooms.

MESSRS. HODGSON AND STEAD, LTD., Egerton Ironworks, Salford, are making a speciality of a self-contained drawbridge for weighing motor-loeries and other industrial motor vehicles. A large number have already been supplied to millowners in Lancashire, while an order for one has just been secured from the Hampton Urban District Council.

CASES AGAINST MOTORISTS.

A CHARGE OF MANSLAUGHTER.

Max Dalloz, chauffeur to Lord Newborough, was committed for trial at the Guildford assizes in November, by the Woking magistrates, on the 24th ult., on the charge of driving a motor-car in a reckless manner and causing the death of William Larby, a schoolboy, aged twelve, at Perry Hill, near Worplesdon, on September 10th. Bail was allowed, prisoner in the sum of £100 and two sureties of £50 each or one in £100.

ADJOURNED TILL AFTER CIVIL ACTION.

A sequel to the motor-car collision at Chailey on the 2nd ult., when Julia Marchioness of Tweeddale was injured, has been heard at Lewes Petty Sessions, when Mr. Keith Lucas, of Forest Row, and John Crowley, of Warringlid, were summoned by the police for driving motor-cars negligently, having regard to all the circumstances of the case. Mr. W. J. Disturnal, barrister, who appeared for Mr. Lucas, at once applied for an adjournment pending the settlement of a civil action in the High Court, of which the collision was the subject. A writ had been issued in the High Court against his client, and there would be a cross-claim by Mr. Lucas and the lady who was riding with him. Any decision which the Court might come to must seriously prejudice the case in the High Court; therefore he submitted that, under the circumstances, the police prosecution should be delayed. The Bench agreed that the case should come into the list after the judgment of the High Court.

LICENCE SUSPENDED.

At Southwell Petty Sessions, William Birkett, motor driver to Mr. L. R. Starkey, of Norwood Park, has been summoned for driving a motor-car to the danger of the public. Witnesses estimated the speed at from twenty-five to forty miles per hour. The defendant, who had been twice previously convicted, was fined £10 and costs, and the magistrates also suspended his licence for six months. Notice of appeal was given.

A VICTIM OF AN ERROR OF JUDGMENT.

Brentford magistrates have concluded the hearing of a summons against Henry H. Sawyer, of Bethune Road, Stamford Hill, for driving a motor-car to the common danger, at Ealing, on July 28th. The accused was defended by Mr. Staples Firth, the case having been before the Court on two previous occasions. A great deal of conflicting evidence was heard, and Mr. Montgomery, in giving the decision of the Bench, said that they had the independent evidence of bystanders, which they could not ignore. The defendant was no doubt the victim of an error of judgment, and the fine would only be 10s., but a sum of six guineas must be paid in respect of costs.

NOTICE OF APPEAL.

Henry Hedges, chauffeur to Viscount Ridley, was charged, at Newcastle, on Saturday, with having driven to the danger of the public at Seaton Burn on September 4th. Mr. Clark, for the defence, said they did not admit the rate of speed complained of, and suggested that there had been some mistake made in timing the car. Mr. Riversdale Grenfell said he was in the car at the time of the alleged offence, and it was not being driven at more than ten miles an hour. Lady Ridley remarked at the time that the car could not possibly have been exceeding the speed limit. Viscount Ridley said his chauffeurs were perfectly well aware of the police trap at Seaton Burn, and they had special instructions. Defendant had driven for him continually for the past four years, and there had been no complaint against him. The Chairman intimated that the magistrates by a majority considered the case proved, and inflicted a penalty of £3 and costs. Mr. Clark gave notice of appeal.

CYCLISTS V. MOTORISTS.

At Colchester Lieut. D. W. G. Leigh-Pemberton has been charged with driving a motor-car in a dangerous manner, and also for not keeping the car on the left side of the road, at Colchester. Mr. H. W. Jones prosecuted on behalf of the Cyclists' Touring Club; and Mr. F. S. Collidge defended.

It was stated that as Mr. H. M. Velton, of West Ealing, was cycling from Colchester to Harwich defendant's car came out suddenly from behind a van and knocked him down, smashing his bicycle and causing him personal injuries.

The Bench considered that the right of way in this case belonged to the cyclists, and that the car should not have passed the van when it did. They fined defendant £5 and costs in the first case and dismissed the second.

A DUAL SUMMONS.

At Rugby, Captain Wilson was summoned for driving a motor-car at a speed exceeding twenty miles an hour, at Hillmorton, on August 5th, and there was a further summons against him for not producing his licence when so requested. Defendant pleaded guilty. It was stated that the car covered a measured quarter of a mile on the road near the Rugby Polo Ground at the rate of thirty miles an hour, and that when the licence was asked for, defendant said his chauffeur had left it in the pocket of another coat. It was now stated that, after all, the licence was in a pocket on the car. For exceeding the speed limit defendant was fined £5 and costs 17s. 10d., and on the second summons he was merely ordered to pay the costs.

AVOIDING ENDORSEMENT.

At the Rolleston Petty Sessions, Percival Platt, a chauffeur, was summoned for driving a motor-car at a speed dangerous to the public on

the highway at Reppe, on the 7th ult. Mr. S. R. Rhodes, of Wolverhampton, defended, and made a strong defence, coming into close discussion with Col. Edis, who was on the bench, with regard to the value of speed indicators in connection with gauging the speed of motor vehicles. After a short consultation the magistrates retired and decided to fine the defendant £1 and costs. Mr. Rhodes thereupon asked them to increase the fine so that he could appeal; or dismiss the case on payment of costs and allow the defendant to contribute a guinea to some local charity. After a short consultation the magistrates decided upon the latter course, specifying that the motorist must contribute a guinea to the funds of the Yarmouth Hospital. He thus avoids the endorsement of his licence.

BIG BATCHES.

Several batches of motorists have, during the past week, been summoned for exceeding the speed limit and for driving to the common danger at Mortlake, Barnet, Kingston, Leeds, Guildford, Arundel, Steyning, Elgin, Chelmsford, Newcastle, Cambridge, Croydon, Doncaster (forty-seven fines imposed aggregating £127), Woking, Grantham (thirteen cases producing £64), Ripon, Raglan and Perth.

POLICE "CONTROLS."

A POLICE quarter of a mile trap at Clifton-with-Salwick, near Kirkham, resulted in four motorists being fined the other day.

ROAD REPORTS.

DINGWALL.—A correspondent writes that in the floods a few weeks ago the bridge at Strathory, three miles south of Aulnamain Inn, was carried away, and to go from Dingwall to Lairg, Sutherlandshire, it is necessary to go round by Tain, an extra thirteen miles.

ETON.—The highway expenses of the Eton Rural District Council have nearly doubled within the past five years, and the Council has appointed a special committee, consisting of some of its members who own motor-cars, as well as some who do not, with a view to consider the steps to be taken towards a reduction in the cost of the maintenance of the roads.

HERTFORD.—The Local Government Board have issued an order limiting the speed of motor-cars through the streets of Hertford to ten miles an hour. A similar order applies to the thoroughfares through Hoddesdon and the parish of Hertingfordbury. The new order comes into operation on Monday next.

SHEPPERTON-ON-THAMES.—Objections have been lodged to the proposal to fix a ten-mile speed limit from Halliford Green to Ferry Lane, in the parish of Shepperton-on-Thames, and the L.G.B. have directed an inquiry to be held on the subject.

HAYWARDS HEATH.—Haywards Heath is to be added to the Mid-Sussex towns which favour the tar painting of road surfaces as the best antidote to the dust nuisance. While surrounding authorities have



A Public Motor-Car Service in Russia.

The first public motor-car service in Russia has lately been started in Moscow, where two Laurin-Klement ten-seated vehicles are now running between the Petrowski Park and Glebowa. The above illustration depicts the scene on the inauguration of the service, the Governor of the Province being on board the car.

A MEASURED quarter of a mile on Harlow Hill, near Harrogate, is being used by the police to catch speedy motorists.

POLICE officers are stationed at Gamston (Nottinghamshire) on the outlook for those who travel quickly.

THE trap in the Ewell Road, Ewell, has been in frequent operation of late.

A QUARTER-OF-A-MILE on the roadway outside Cambridge has been measured off for the trapping of speedy motorists.

THE Woking "control" has been frequently in operation during the last few days.

A POLICE-TRAP at the foot of Tillybaccart Hill, in the Coupar-Angus district, is proving profitable to the Forfarshire exchequer.

MESSRS. JOHN BARKER AND CO., LTD., of Kensington, W., have recently introduced a new non-skid tyre, known as Barker's All-British, which appears to be well worthy of the attention of motorists.

THE Imperia car, the British agency for which has been taken up by Mr. C. E. Whittaker, will make its first appearance in England at Brooklands to-day (Saturday).

previously adopted tar, Haywards Heath has preferred the calcium chloride treatment, but next year tar is to be substituted throughout the town.

CALNE.—The county surveyor of Wiltshire has informed the Calne Rural District Council that the length of the Bath road between Calne and the Marlborough boundary is very uneven on the surface. He suggests that the depressions which he has noticed should be patched with tarred stone without delay in the interests of the traffic in the district.

ISLE OF WIGHT.—An increase of 1½d. in the pound, levied by the guardians of the Isle of Wight, is attributed by the chairman to the development of motor traffic in the island.

FELIXSTOWE.—The East Suffolk County Council has applied for a ten mile limit for various roads in the urban district of Felixstowe and Walton.

MESSRS. WILFRID FOULIS, LTD., 122, George Street, Edinburgh, the Scottish agents for Porthos cars, ask us to state that the failure of Messrs. Colin Defries, Ltd., the British concessionaires, has in no way affected the French works.

FORTHCOMING EVENTS.

OCTOBER.

- 3rd (Sat.).—Brooklands A.R.C. meeting.
 4th (Sun.).—Gailon Hill Climb.
 10th (Sat.).—Walthamstow Motor Club run to Hunsdon.
 Auto Cycle Union's Council Meeting at Leamington.
 11th (Sun.).—First International Road Congress and Exhibition opens at Paris.
 International long distance balloon race, starting from Berlin.
 14th (W.).—Incorporated Institution of Automobile Engineers. Presidential address at the Institution of Mechanical Engineers, by Mr. Dugald Clerk, F.R.S.
 15th (Th.).—Mr. Knight's Paper at the R.A.C. on "Valveless Engines." Cycle and Motor Trades Benevolent Fund Banquet.
 17th (Sat.).—Auto Cycle Union quarterly trial—Uxbridge to Banbury and back.
 24th (Sat.).—Motor Parade and Gymkhana of the Blackpool and Fylde District M.C. at the Agricultural Show Ground, Blackpool.

NOVEMBER.

- 6th (F.).—Invitation Smoking Concert of the Stanley Cycling Club at the Queen's Hall, London, W.
 13th-21st.—Olympia Motor Show, London.
 14th (Sat.).—Thirty-third Annual Dinner of the Stanley Cycling Club, Hotel Metropole, London, S.W.
 20th-28th.—Stanley Show at the Royal Agricultural Hall, London, N.
 26th (Th.).—400-mile International Grand Prize Race of the Automobile Club of America.
 28th (Sat.).—Opening of the Paris Motor Car Exhibition.

DECEMBER.

- 23rd (W.).—Speed and reliability trials at Nagpur, Central Provinces.

LIGHTING-UP TIMES—LONDON.

| | | | |
|---------------|----------|----------|-----------|
| Oct. 3rd—6.33 | 5th—6.29 | 7th—6.24 | 9th—6.19 |
| 4th—6.31 | 6th—6.26 | 8th—6.22 | 10th—6.17 |

To find the approximate lighting-up time in October for Birmingham 6 minutes should be added to the above times, 2 for York, 8 for Manchester, and 14 for Glasgow.

CASES DISMISSED.

AT ABERGELE, on the 24th ult., Major Tayleur, of the Shropshire Yeomanry, was recharged, after the Bench had disagreed, for dangerously driving a motor-car, it being alleged that he covered 348 yards in 20 seconds, the time being by an ordinary lever watch. The Bench, on hearing that the police did not stop defendant, dismissed the case, adding that the police should always stop cars which they considered were being driven dangerously. Inspector Tippet replied that all depended on circumstances. The police were governed by the Act of Parliament. Col. Mellor, the presiding magistrate, remarked that common sense as well as Act of Parliament had to be considered, and held that defendant did not drive dangerously.

AT EASTBOURNE, last week, Louis Russell, of Station Road, Bexhill, pleaded not guilty to driving a motor-car in Seaside Road at a speed and in a manner dangerous to the public on September 4th. P.C. Reader Gray stated that while on duty near the Albion Hotel about 11 p.m. he saw a red car—A.P. 939—going in the direction of the Leaf Hall at a very fast pace and on the wrong side of the road. On September 14th he went to Bexhill and identified the defendant as the man who was driving the car. In answer to the chairman, Mr. Cruttenden said the defence was practically one of "mistaken identity." The defendant stated he had held a licence to drive a motor-car for the past ten years. He detailed his movements during the two days previous to September 4th, on the evening of which he was at Bexhill. About half-past nine he went to his home after transacting some business and then left to go to the Constitutional Club. Defendant's evidence was corroborated by his wife and a man named William Ranford, who was on the club premises at the same time as defendant—about 9.30 to 10.45. Other witnesses for the defence were present, but the chairman remarked that it was evidently a case of mistaken identity and the charge would be dismissed. Mr. Cruttenden, on behalf of Mr. Russell, then applied for costs. After a short deliberation the chairman stated that although he was very sorry for the defendant for the trouble and expense he had been put to, they could not grant costs.

THE decision of the directors of Humber, Ltd., to close the Beeston Works and concentrate the whole of the manufacturing operations at Coventry has led to the entire re-organisation of the clerical staff, which will now be under one roof, and naturally necessitates the company dispensing with the services of a number of good and reliable clerks. The secretary of Humber, Ltd., asks us to mention that should any of our readers require typists, bookkeepers, &c., he will be glad to recommend some of those who are leaving the firm through no fault of their own.

AUTOMOBILE ACCIDENTS.

WILLIAM JONES, who lived at Ynysboeth, Glamorgan, was walking home with his wife late on Saturday night from Mountain Ash when he was run down by a motor-car belonging to Messrs. Nuth Brothers, of Penrhiwceiber. Mr. Nuth and the chauffeur, Frederic Tuck, took him to a surgery, but he was killed instantaneously. It is stated that the car was proceeding at a moderate speed, and the accident happened as Jones was crossing the road near his house.

SHORTLY before midnight on Thursday week Captain Blockley, of Wellington, was riding home on his motor-bicycle from Allscott, through Wrockwardine to Wellington, when near the town he encountered three horses on the road. One lashed out, kicking the cyclist off his machine, the handle bars of which were broken and the lamp smashed. This is another instance in which the horse was to blame.

AN accident occurred on the main road between Burton Latimer and Finedon, by which a blind organ-grinder, named Hull, had a leg broken. The organ, drawn by a donkey which was led by another man, was proceeding up a steep hill, outside the village, when a motor-car coming down the hill caught the axle of the organ and smashed it to atoms. Hull, who was walking behind the organ, was flung on the grass at the side of the road. He was removed to Kettering Hospital. The occupants of the car rendered every possible help to the unfortunate organ-grinder.

WHAT was called a motor-car accident at Stretford on Saturday was investigated by the Manchester coroner on Monday. A boy had been knocked down by a car, and after hearing the evidence the coroner said most of the street accidents were caused by people running from behind hurries into the roadway, and it behooved drivers to be particularly careful when passing stationary vehicles. They should slow down, and see if they could see anybody about to cross the roadway. The jury returned a verdict of "Accidental death," and exonerated the motor driver.

AT an inquest at Bolton, on Monday, into the death of a cyclist who had collided with a car belonging to Mr. J. A. Bright, M.P., a verdict of "Accidental death" was recorded, the coroner observing that no blame attached to the driver.

JUDGE EMDEN received a scalp wound on Tuesday evening as the result of a collision between two motor-cars on Farnborough Hill, between Sevenoaks and Bromley. The judge was being driven home to Bromley, when at the cross-roads his car came into collision with another motor-car going in the direction of Orpington.

A WARNING TO HORSE DRIVERS.

WILLIAM GEARD, of Shepherd's Bush, was summoned at Brentford, last week, for obstruction at Northolt Road, Ealing; and, on a second summons, for abusing Mr. John L. Granville Sharpe, an Oxford undergraduate. According to the evidence, Mr. Sharp was motoring in Northolt Road, and the defendant and others were driving brickcarts. As Mr. Sharpe's car passed the defendant's cart the latter drew in, causing a collision. When spoken to, the defendant used foul language. About £3 damage was done to the motor-car. The defendant denied using abusive language, and alleged reckless driving on the part of the complainant. A fine of 10s. was imposed for obstruction, and 7s. 6d. for the abuse, and a guinea costs.

BUSINESS NEWS.

WE learn that Mr. Thornton, of Messrs. Perry, Thornton and Schreiber, Ltd., 117, 118, 119, Long Acre, London, W.C., has just returned from America, where he has been making arrangements with the Ford Factory for the supply of new models for the English market for 1909. While the two and three seated cars will be the same as at present, a five-seated touring car and a landaulet are also to be introduced. These will be fitted with a four-cylinder engine of 20-h.p. having a bore and stroke of 3½ in. by 4 in.

THE Radio Welding and Motor Engineering Company, whose new works are in Oldridge Road, Balham, S.W., have installed a large and up-to-date plant for the Radio process of fused welding of all kinds of metals, motor-cylinders, crank cases and parts. The firm have discovered a new flux, which, combined with the above process, is claimed to give far better results than any other system. In addition to the welding department they have a special plant for the thorough overhauling and re-magnetising of all makes of magnetos, and for the repair of coils and accumulators.

THE London, Bath and Bristol Motors, Limited, is the name of a new concern which has just been formed, with a capital of £25,000, to acquire freehold premises in the rear of the Royal Hotel, College Green, Bristol; freehold premises at Bath known as Nos. 7, 8, 9, 10, and 10A, James Street, W.; workshops known as Kears Motor Garage, Nelson Street, Bristol, together with the plant, machinery, tools, and stock-in-trade in connection with the business now carried on upon the premises by Mr. F. Hudson Smith. It is intended to erect a garage in the rear of the Royal Hotel, Bristol, upon the site above referred to. Arrangements have been made with Messrs. Spiers and Pond, Ltd., whereby the garage in Bath has been appointed the official one of the Empire Hotel. Negotiations are also in progress for the acquisition of a garage in the West End of London.

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COMMENTS.



THE Congress which will assemble at Paris on Monday to consider—quoting from the official programme—"the fitting up of roads, suiting them to the new means of locomotion," has international importance in view of the common problem with regard to road traffic now affecting all nations alike. The fact that France can present the delegates from other countries with such an excellent object lesson as is given in its highway system makes the selection of Paris the most suitable point that could have been suggested for the first International Congress of this character. In this country the maintenance of the highway has been largely a haphazard matter, and we would commend the advocacy of a National Road Department which is made in our columns by the Hon. Arthur Stanley for the consideration of British authorities who may not be represented at the International Congress. Practically every European country will have delegates, and not the least important section of the programme is that of the excursions arranged to visit the various specimens of main roads near the French capital. Among the British associations that are sending delegations are the R.A.C., the M.U., the Roads Improvement Association, the County Councils Association, and the organisations of the road surveyors of the United Kingdom. A mass of valuable information has been collated for the edification of the delegates, and it is to be hoped that they will return to their respective countries with a clear and definite proposal to place before their Governments. We would suggest that, for example, the various representatives of the half-dozen English associations that are sending spokesmen should meet and arrive at some definite proposal which all could advocate, so as to secure its practical realisation in the minimum time. Apparently everything tends at present in the direction indicated by Mr. Stanley, and it would be a great step forward if the various organisations could come to a decision along similar lines, and strongly urge the proposal for the development of a great national Department which should allocate the funds.

The Late Sir George Livesey.

SIR GEORGE LIVESLEY, whose death took place on Sunday morning at his residence at Reigate, was a keen motorist, and recognised not only the saving of time made possible by the motor-car but also the commercial possibilities of the heavy motor vehicle. In Saturday's parade on the Thames Embankment one of the lorries of the South Metropolitan Gas Company, Ltd., of which he was chairman, was a participant, the driver securing a second prize for the condition in which it was kept. Sir George had a strong personality, and in the course of sixty years' service with the gas company had done much for modern industry, while his advocacy of the automobile in his later years proved the alertness of his mind and assisted the movement in a very material degree. He had for some years been a vice-president and a life member of the Motor Union, and was also one of the oldest subscribers of the *M.C.J.*; in fact, in a letter we received from him a few weeks before his death,

Sir George wrote, "I am a constant reader of the *M.C.J.*, and am glad to bear my testimony to its excellence in every way as to general motoring news and information, and to the character of the correspondence and the very useful hints that are a prominent feature."

Motor Horns not Musical.

APPARENTLY the authorities of the Sheffield Musical Festival are not inclined to recognise the motor horn as an instrument likely to add to the harmony of their proceedings. Three years ago, when the Festival was then in progress, "some of the most beautiful effects at the close of the concerts were ruined by motor horns," and the danger of disturbance this year, according to Mr. T. Walter Hall, the chairman of the Festival Committee, "is infinitely greater owing to the increasing number of motor-cars." Hence the appeal to owners and drivers of such vehicles not to sound their horns and sirens in the neighbourhood of the Albert Hall when the Festival is in progress. The same advice might also be tendered for application outside churches and chapels on Sundays.

"Whereabouts" in London.

AT length it has dawned upon the London County Council that an authoritative and up-to-date map of the Metropolis would be useful to the citizens of London, and this is, we understand, in preparation at Spring Gardens. Hitherto there have been few satisfactory street maps of the Capital, and not long ago the chairman of an important committee of the Westminster City Council obtained from a peripatetic vendor of literature outside the office in the Charing Cross Road, W.C., the best map of Westminster he had seen. But municipal authorities should not be dependent on such wayward examples of private enterprise, and the location of streets and roads on official maps should be seriously taken in hand, possibly in conjunction with the Ordnance Survey, although that is a point we would not press too closely. Mr. G. S. C. Swinton suggests that this should be a "locomotion" map "to show everybody how to find their way everywhere." His idea is that London should be divided into squares of a quarter of a mile, so that it should be possible by means of the numbered divisions to easily locate any particular point or place.

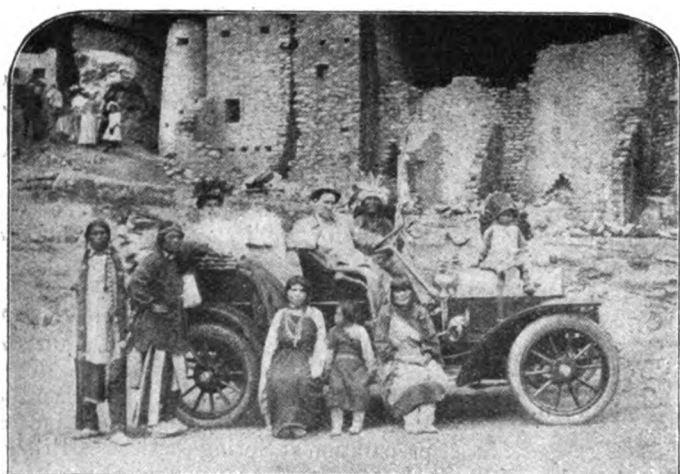
Suppressing the Inconsiderate Driver.

THE scheme for dealing with Inconsiderate Driving which has been prepared by the Royal Automobile Club has been well received by the county clubs, several of which have now come to a definite decision with regard to the proposals outlined in the scheme. In order to put the proposals effectively into operation in its own county the Westmorland Automobile Club has divided its sphere of operations into six divisions and has appointed three members living in each section to carry out the necessary work. The North-Eastern A.A., which is really a federation of motorists on the north-east coast, has expressed sympathy with the efforts, as have also the Essex County A.C. and the automobile clubs of Huddersfield, Kent, Cambridgeshire, Lancashire, Norfolk, and Northamptonshire, as

well as the Midland organisation. Recently two or three motorists have obtained an unenviable notoriety on account of the number of times they have appeared before the magistrates, and possibly the names of a few others may occur to the R.A.C. These will afford material for demonstrating to the public the real desire on the part of motorists to show how thoroughly they are out of sympathy with those who take little heed of other users of the road. The time has come when the expulsion of some of the inveterate offenders from the ranks of the clubs and associations would have a good effect on public opinion generally.

The Rule of the Road.

HAVING regard to the law relating to the proper side on which to pass tramcars and to recent contrary decisions on the matter, the Legal Committee of the R.A.C. have sought to find a satisfactory case which might be taken on appeal to the High Court, in order that a definite decision on the legal point might be obtained. Such a case has now arisen, and the committee have agreed to contribute ten guineas towards the cost of the appeal.



Touring in Colorado.—At the Cliff Dwellers' Ruins, Manitou.

Inquiry at Newhaven.

ON the 1st inst. Mr. F. J. Willis, on behalf of the Local Government Board, held an inquiry at Newhaven into the application of the East Sussex County Council for a speed limit of eight miles per hour for motor-cars passing along the Brighton to Eastbourne main road running through the urban district of Newhaven. Mr. E. D. Dean opposed on behalf of the R.A.C. and Mr. Rees Jeffreys for the Motor Union. In support of the application Mr. Edward Knightley submitted a record of the traffic at two spots in the High Street on September 26th and 27th from 8 a.m. to 8 p.m. This was as follows:—

| | Oxley's Corner. | | Swing Bridge. | |
|--------------------|-----------------|-------------|---------------|-------------|
| | Sept. 26th. | Sept. 27th. | Sept. 26th. | Sept. 27th. |
| Pedestrians ... | 8,180 | 3,680 | 6,354 | 3,568 |
| Motor-cars ... | 30 | 39 | 27 | 33 |
| Motor-cycles ... | 3 | 5 | 3 | 5 |
| Cycles ... | 351 | 125 | 386 | 149 |
| Perambulators ... | 225 | 29 | 135 | 38 |
| Other vehicles ... | 425 | 29 | 414 | 33 |

P.-s. Vine, who thought that a motor speed limit was necessary, acknowledged that on the whole motor-car traffic through Newhaven had been conducted in a satisfactory manner. P.-s. Waghorn, whose name is "familiar in our mouths as household words," expressed the view that cars from the Continent, conducted through the town by foreign chauffeurs, were often driven recklessly. Mr. Jeffreys was prepared to agree that one of the corners suggested was dangerous. Mr. Dean, who urged that

the speed limit would not help the matter at all, did not object to one of ten miles an hour from the top of the hill to the river. The inspector is now considering the evidence and his report will be issued in due course.

The Rural View.

ON Monday an important conference of representatives of various district councils in the counties of Essex, Cambridge, Hertford and Suffolk was held at Saffron Walden, when resolutions were adopted advocating that the sequel to the conviction of reckless driving of motor-cars should be the suspension of the licence for not less than three months. It was also resolved that applicants for motor-car licences should give evidence of ability to drive, and that owners should have their vehicles taxed on a sliding scale according to horse-power. This triple resolution is, of course, to be sent to the Government, and will doubtless have some support among those who represent agricultural constituencies where the bucolic mind has not yet grasped the national advantages of the automobile. We record these resolutions as indicating the kind of suggestions that are likely to be frequently heard, both in and out of Parliament, during the next few weeks.

An Urban Conference.

RURAL authorities having thus conferred, those representing city and urban communities about London are now arranging for similar gatherings. Invitations have been issued for a conference of a private character to be held at the Mansion House (London), on Monday next, to consider the latest legislative steps to be taken with regard to motor traffic in the City. Should, as is very likely, it be determined to promote such legislation, Mr. A. J. Balfour, as senior member for the City of London, would be asked to take charge of the measure. On the 27th inst. a further conference on the same subject will be held at the Mansion House at the invitation of the Road Union. This will endeavour to form a Committee to organise public opinion against privileges being extended to motorists, and generally to voice the anti-motoring attitude.

The Minister and the Motor.

WE had thought it was generally agreed that the addition of a motor-car to the equipment of the minister was accepted by all reasonable persons as essentially in keeping with modern ideas. So many Bishops have lately been presented with automobiles, and the Rev. R. J. Campbell having attended the King's Garden Party in a motor-car, should have been sufficient to have satisfied Churchman and Nonconformist alike—without mentioning General Booth's motor-car reliability trials. The presentation of a motor-car to the Rev. Dr. Campbell Morgan, of Westminster Chapel, by a member of his congregation has revived the controversy, and some of the papers have been asking whether the motor-car is consistent with ministerial dignity. Seeing that it enables the owner to visit a large number of persons in a shorter space of time, and thus adds to the efficiency of the service rendered, we will dismiss the subject with an affirmative reply.

The L.G.B. Circular.

THE moderate and sensible letter which the Local Government Board have issued to the county and other authorities throughout the country seems to have somewhat surprised many of the anti-motorists and people like Lord Willoughby de Broke, who regards the document as very unsatisfactory indeed. He objects to a suggestion that the ratepayers should adapt the roads to the new traffic which has come upon them, and declares that "no amount of good advice from Prince Francis of Teck or Mr. John Burns can ever dispel the very unpleasant fact that any motor-car driven at a speed

over ten miles an hour is bound to inflict severe discomfort to all other users of the road." Lord Willoughby de Broke hardly appreciates the position when he writes in this strain, for it must be recognised that automobile traffic is likely to be of service to the national prosperity, and its benefits are not merely of an individual character.

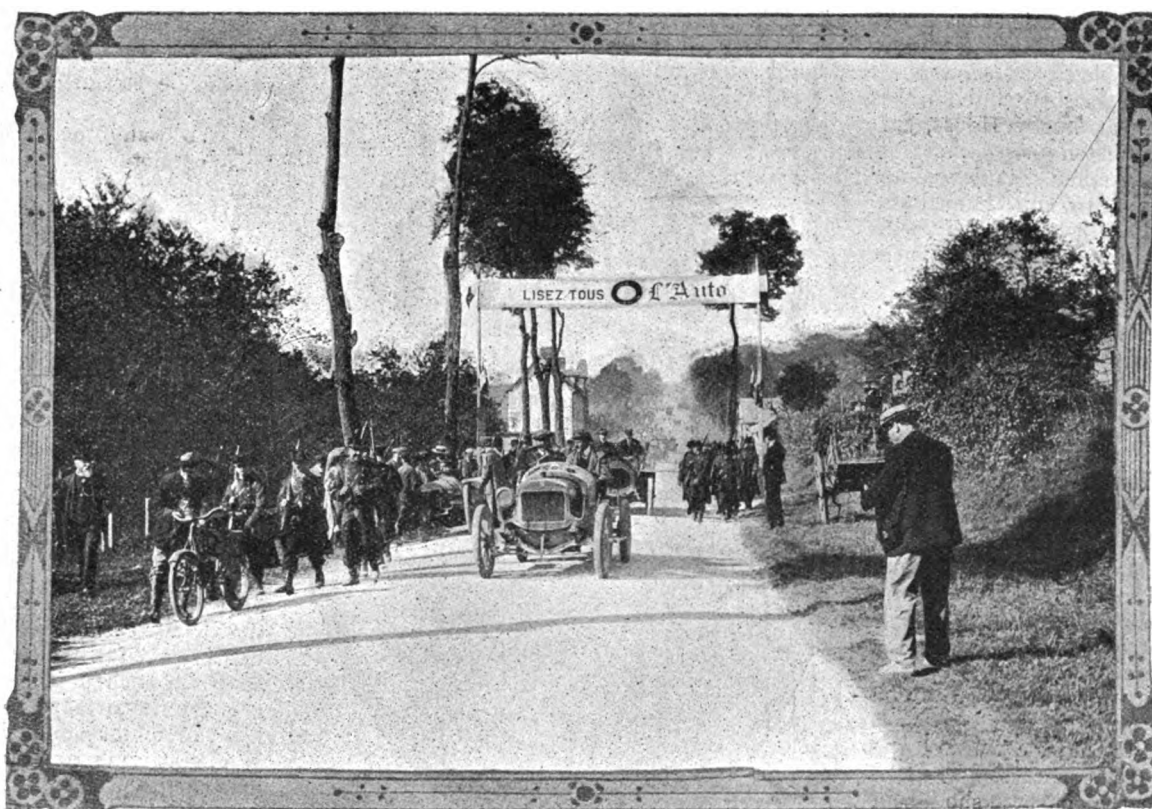
New Police Methods.

THE police are apparently discarding stop watches in several places, and resorting to other means of estimating the speed of motor-cars. We are informed that on the Great North Road at Retford a few days ago the comparative rate of travelling of a trotting horse and a motor-car was the evidence upon which the police relied, and a Norfolk constable has just informed the local Bench that he had no stop watch, but counted the seconds by the seconds hand of an ordinary watch. Such methods as these are not calculated to inspire

of all these persons. So long as he had anything to do with the court he should always hold that automobiles were bound to give way to everybody else in whatever circumstances. Possibly the best way to deal with the question of motor traffic in the future will be for the authorities to provide Mr. Gainsford with a red flag, and allow him to precede motor-cars on the highway, and so regulate the speed at which such vehicles should travel in country districts.

Endorsement.

A CORRESPONDENT writes with regard to the endorsement of the licences of motorists for any offences. As we show in our Correspondence columns, a licence must be endorsed for any offence—even of the most trivial character—unless it is the first or second summons under Section IX., i.e., relating to exceeding the speed limit.



The Gallien Hill Climb.—The Scene near the Starting Point.

motorists with any greater confidence in the accuracy of police evidence than they have had hitherto.

No Rights on the Road.

THE Spilsby (Lincs.) Petty Sessions has a chairman, Mr. W. D. Gainsford, who is a barrister, and apparently an anti-motorist. Last week, when convicting one who had driven a motor-car in an alleged dangerous fashion, he made what he was pleased to term a few remarks. Firstly, motor-car owners were to remember that they had no common law right to be on the road at all. Surely, however, Mr. Gainsford does not wish us to think that their proper place is on the ordinary pathway now devoted to pedestrians; for, if they are not to travel on the road, where, in the present state of affairs, are they to journey at all. Then he wanted his hearers to remember that foot passengers had the first right, persons on horseback the second, and those who were driving had the third right; the right to motor-cars was only so long as they respected the rights

Dust Trials.

WITH regard to the Dust Trials to be held by the R.A.C. next year, we understand these will take place in the beginning of June on a track half the length of that employed this year, viz., 100 ft. The dust conditions are to be less severe than heretofore, either by mixing coarser grit with the limestone dust or by lessening the thickness of the layer. There will be two classes for amateurs' cars open to all members and associates of the club.

Special Show Numbers of the M.C.J.

REPLYING to several correspondents, the Special Show Issues of the M.C.J. will be those dated November 14th, 21st, and 28th, the three numbers containing a full report of the innovations in design and novelties in accessories, and forming a permanent record of automobile progress.

THE HON. ARTHUR STANLEY'S VIEWS ON THE MOTORING OUTLOOK.

IN view of the opening of Parliament next week and the avalanche of questions regarding motoring men and motoring ways with which the Government is certain to be met by representatives of the Orkneys and other parts of Great Britain, we recently sought an interview with one of the best friends of the automobile in the Houses of Parliament. The Hon. Arthur Stanley, M.V.O., M.P. for a Lancashire county constituency, has seen much diplomatic service, is well regarded at Westminster, and has rendered notable service to the motor movement. The Royal Automobile Club has known few chairmen—Mr. Roger Wallace, K.C., Col. H. C. Holden, the Hon. Arthur Stanley, Mr. C. D. Rose, M.P., and Prince Francis of Teck is the full list—and it does not reflect on the others to say that Mr. Stanley's reign in Piccadilly was marked by an influence on public opinion which proved highly valuable to the industry and sport. His cautious and, we believe, correct attitude when motoring questions have been before Parliament has greatly impressed both motorists and Parliamentarians, and we are pleased to be able to set before our readers his views on the present outlook, as recently stated in the course of a chat at Derby House, St. James' Square, London.

The Hon. Arthur Stanley does not look forward to any immediate legislation, and believes that it will be to the advantage of all concerned to let well alone. In common with those who have followed the Parliamentary position most closely, he does not see any good that could accrue from hasty legislation in a session of Parliament that is wellnigh overloaded with Government measures. More than this, Mr. Stanley regards the existing Act as a very fair one, although, of course, some of the consequences of endorsement of licences for merely technical offences may seem somewhat hard. They, however, could easily be avoided if magistrates universally tempered the administration of the law with common sense.

More important than legislative enactments as to the motor-car itself is the question of the maintenance of the main roads of the country. The taxation levied for that purpose should, in some form or other, go to a Central Department, and be specially allocated by that branch of the State for the development of a really efficient road service. Such is the view of Mr. Stanley with regard to the great main roads; local roads might well be left to the minor authorities, at least for a generation; but there is an immediate necessity for the highways of the country to be brought under one system of control, as is the case with the French roads. The advantages of a centralised Department in this connection are obvious, for by no other means can adequate supervision be ensured.

With regard to the driving of motor-cars, many motorists are doubtless lulled into a belief that they are not exceeding the legal limit, when, as a matter of fact, they may be travelling beyond it. When a man's machine is going well, and the engine is running smoothly, he scarcely realises his pace—a fact which is responsible for many of the conflicts of evidence that have occurred in police courts. Then, too, the raising of dust often gives the public an idea that the car is travelling quicker than it actually is. Thus misconceptions arise which seem difficult to allay. Mr. Stanley's views as to inconsiderate driving were first expressed nearly four years ago, when, at the Easter of 1905, in

his capacity of chairman of the A.C.G.B.I., he addressed a letter to the *M.C.J.*, in which offences of that character were thus set forth:—

- (a) The driving of a motor vehicle in overtaking or passing other vehicles, cyclists, or pedestrians at such an immoderate speed as to cause unnecessary inconvenience or vexation by dust or mud.
- (b) The overtaking and passing of another vehicle when the latter is proceeding cautiously down hill, or is approaching a corner, traffic, &c.
- (c) The passing of another vehicle so as to drive it or others off the road, or cause them unnecessary inconvenience.

The public, we were reminded, should give heed to the improvement that is taking place, not only in the cars that are upon the road, but also in the skill of the drivers. The motor-buses in London afford an illustration of this fact. Vehicles that were allowed on the road two years ago would not be tolerated for a month in these days. In a very little time the skill of the driver and the efficiency of the mechanism will combine in securing a very different state of things in London traffic. What is true of the 'bus is equally so of the car. Only a few years ago it was almost impossible to take a journey along a country road without seeing a motor car *en panne*; now an automobile stranded on the highway is a *rara avis*.

We would emphasize the advisability of motorists seconding the efforts of their organisations in maintaining the credit of the whole movement by consideration to others and by raising the minimum of dust. Often thoughtless drivers passing through a town may prejudice the whole neighbourhood against local motorists innocent of such practices. Hence the importance of the influence that the individual motorist can wield—especially at such a juncture as the present. With regard to the suggestion of a National Road Department, this should receive universal support. Motorists generally feel keenly on the subject, and for the International Road Congress at Paris next week Mr. Ballin Hinde—one of the delegates of the Motor Union—has prepared a paper in which he will advocate such a plan as a matter of primary importance in the development of motor traffic in this country. It is gratifying to us to know that the movement is thus growing, and that its progress in the House of Commons will be closely watched by Mr. Stanley, whose diplomatic service to the motoring community is being recognised—both in and out of Parliament.



The Hon. Arthur Stanley, M.V.O., M.P.

From a

recent snapshot.

THE Emperor of Austria, who took his first ride on a motor-car in company with King Edward a few weeks ago, has now definitely joined the ranks of motorists, he having announced his intention of making use of automobiles during his visits to Vienna and Budapest.

LORD CARRINGTON has promised to attend a conference of the Scottish Chamber of Agriculture at Edinburgh next week. Amongst the resolutions to be discussed is the following relating to motor traffic:—"That steps should be taken without delay to mitigate the inconvenience, discomfort, danger, and loss resulting to the public in general, and agriculturists in particular, in connection with the use of the highways by motorists, and that contributions should be provided from the Imperial Exchequer towards the maintenance of highways, so as to relieve ratepayers in the country districts of part of the increasing burden arising from motor traffic, most of which comes from the towns."

Should the Tourist Trophy Race be Repeated?

THE EFFECT OF THE "FOUR-INCH" RACE—LONG v. SHORT STROKE ENGINES—SUGGESTED
NEW REGULATIONS.



SOME two months ago the leading members of the motor industry expressed their views, through the medium of the columns of the *M.C.J.*, with regard to the R.A.C. 2,000 Mile Trial, the consensus of opinion being distinctly against a repetition of the event in 1909. As for our own opinion, this has frequently been expressed, but it may be briefly repeated. It is that the automobile industry, while it has in the past undoubtedly benefited from the reliability trials and even races that have been held, has now reached a stage when—to put it mildly—the advantage to be gained from such contests is not commensurate with the great amount of time, labour and financial outlay they involve. The fact that several important motor manufacturing concerns held aloof from the much-discussed Four-Inch Race lately held in the Isle of Man, coupled with rumours to the effect that many of those who did compete had decided not to participate in future events, led us to endeavour to ascertain how far the views of the trade coincide with our own—in other words, whether they desire the Tourist Trophy Race to be held in 1909. The questions we set before manufacturers were as follows:—

Do you think the result of the Four-Inch Race will have any effect on the general design of touring cars?

What are your views on the long v. short stroke engine question?

Are you in favour, or otherwise, of the Tourist Trophy Race being repeated in 1909?

Should the race be again held, under what regulations should it, in your opinion, be run—under the old twenty-five miles to the gallon rule, under the cylinder bore restriction, or under new conditions entirely?

Below we print a first instalment of the replies we have received, from which it will be seen that only in two instances is a continuation of the annual race desired. As we hope to publish a further series of letters from makers in our next issue, we defer for the moment any criticism of the various suggestions made with regard to future contests.

A COMPETING FIRM'S OPINION.

Sir John I. Thornycroft, as managing director of the concern bearing his name, "does not think that the result of the Four-Inch Race will have any material effect on the general design of touring cars. The race has undoubtedly caused makers to increase the power obtained from a given size cylinder, but this is not the only feature of importance in touring car engines. We have entered in all the Isle of Man Races so far, and while we have not been fortunate enough to win, our cars have always shown good results. This year both our vehicles which started finished the race, the leader taking fifth place. We think it is of interest to note that these were standard chassis, fitted with rather larger engines. We do not think there will be any advantage to the industry by repeating the race another year, we ourselves having voted against the race this year at the meeting of the Society of Motor Manufacturers and Traders."

THE RACE NO BENEFIT TO THE INDUSTRY.

Mr. T. Blackwood Murray, of the Albion Motor Car Company, Ltd., is another automobile engineer well qualified to express an opinion on the matter, who does not think a repetition of the race next year would be a benefit to the industry. He continues: "We do not think the Tourists' Trophy Race this year will have any appreciable effect upon the design of touring cars. It essentially developed an engine having a long stroke and large valves capable of running at an extremely high speed, and this necessarily inclined towards a

freak and not what is wanted for everyday work. We are of opinion that the stroke of the engine should only be slightly greater than the bore to get the smoothest running engines, which, after all, is really what is desired. Even if the race is again held, we see a very grave difficulty in laying down any limitation which will not have the undesirable effect of developing freak vehicles, which, except that they give some very interesting data to the engineer, are not of much assistance in forwarding the evolution of the ultimate vehicle."

IN FAVOUR OF A "THREE-INCH" RACE.

Mr. T. C. Pullinger, who as head of the Beeston Works of the Humber Company is well known, thinks that "undoubtedly the Four-Inch Race will materially affect the design of touring cars in the future; it certainly will as regards our own." As regards the question of stroke, he remarks, "In all my engine designing I have always taken what I considered a normal stroke, and this has been very satisfactory. What I mean by normal stroke is, the bore multiplied by 1.5. I should very much like to see the Tourist Trophy Race repeated next year but with a smaller engine; I have already suggested three inches as being the maximum. The regulation under which the race should be held, if held at all, are very difficult to discuss in public. There are so many arguments for speed alone, and so many against complicated restrictions, that I think I should favour purely a speed contest with a maximum cylinder capacity and a minimum and maximum weight. I think the weight this year was too light."

AGAINST RELIABILITY TRIALS OR RACES.

Mr. Lisle, of the Star Engineering Company, is emphatically against either a reliability trial or race. He writes: "We are fully of the opinion that a 2,000 Mile Trial is not at all necessary, neither is any reliability trial or race in any form whatever necessary for the motor-car trade of this country, they swallowing up too much time and money. The result of the Four-Inch Race will not, in our opinion, make any very great alteration to the general design of touring cars; in a few cases where firms have been building engines with equal bore and stroke, or a lesser stroke than bore, they may think it advisable to alter. We ourselves have always advocated a longer stroke than bore to the extent of about 25 per cent. and have obtained good results. Should the race be held, we should think under the same regulations as this year would be preferable to twenty-five miles to the gallon of petrol, but to reduce the cylinder bore from 4 in. down to 3½ in."

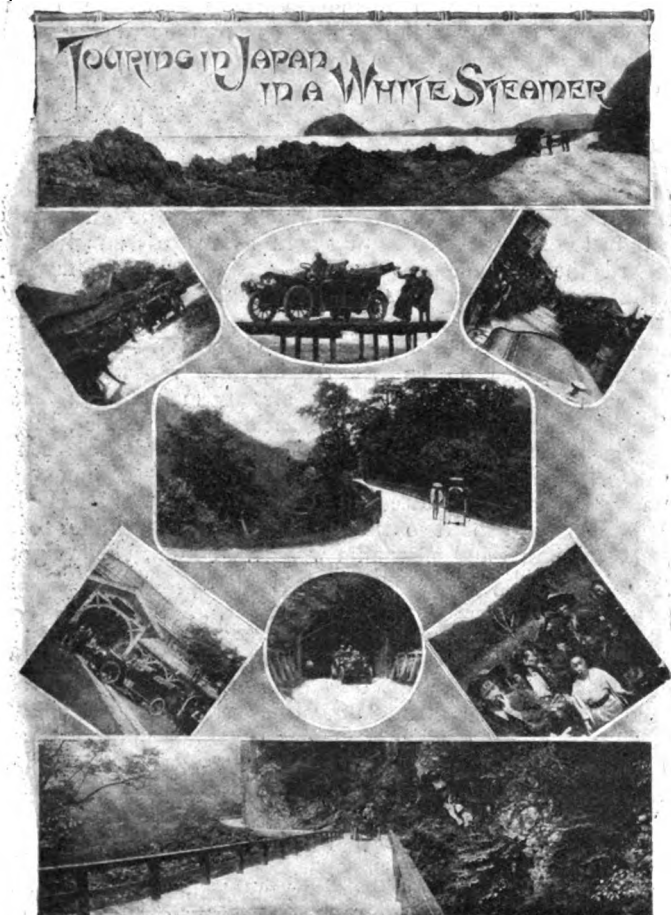
A SHORTER RACE SUGGESTED.

Mr. E. A. Rosenheim, of the New Arrol-Johnston Car Company, Ltd., is in favour of the race being repeated, and "certainly thinks that the Four-Inch Race will have an effect on the general design of cars, and that this race will kill the big car. It has, moreover, tended to increase piston speeds and improve valve design and various other parts too numerous to mention. We are of opinion that a comparatively short stroke is more desirable for a touring car than a long stroke engine for numerous reasons. The long stroke may possibly be of advantage for racing purposes, but is not desirable for a touring car on account of vibration, &c. If the race is held in 1909, in our opinion not only should the cylinder bore be restricted, but also the length of the stroke—that is to say, a given cylinder capacity should be laid down together with a minimum weight, as we think this would tend to the development of the petrol engine. We are of opinion that this year's race was somewhat too long, and think

that seven or eight laps would amply meet the case in future contests."

HIGH SPEED NOT TO THE INTEREST OF THE MOTOR TRADE.

Mr. Raymond Dennis, of Messrs. Dennis Bros., Ltd., writes that "we are not in favour of holding a 2,000 Mile Trial next year, nor are we in favour of any Tourist Trophy Race, as we think that anything done to encourage high speed is against the general interest of the motor-car trade, and greatly retards its advancement and popularity amongst the general public. We do not think that the Four-Inch Race has any or very little effect on the general design of touring cars, as it is usual with the manufacturers to endeavour to improve their models each year, in the



TOURING IN JAPAN.

Scenes on a Tour Through Japan made on a White Steam Car by Mr. and Mrs. J. R. Wood, of Australia.

hope of being ahead of their competitors, and with a view of placing the best, most suitable, and up-to-date touring car on the market. With regard to our views *re* the long *versus* short stroke engine, we are of opinion that it is not advisable to have too long a stroke, otherwise our own experience has shown us that the engine transmits more vibration to the car."

MR. J. E. VINCENT, in the current issue of the "Cornhill Magazine," writes on "The Moderate Motorist"—a title that almost recalls the day of the motorist of moderate means—and contrives to spread himself agreeably and characteristically over a dozen pages of one of the most literary of present day magazines. He advises motorists to be cautious—as he himself is cautious; and we are interested in his recognition of the conciliatory work of the M.U. Incidentally, he advocates the use of glass wind screens, by which observation can be cultivated without the discomfort of having to face a gale of wind in order to enjoy the scenery.

SOME CURRENT TOPICS.

1909 a Small Car Year.

Evidence is not wanting that the 1909 season will see much greater attention given to the requirements of the motorist of moderate means than ever before. It is too early yet to give definite information as to what British makers are preparing in this connection for the forthcoming show, but the announcement this week of the introduction of a 10-h.p. two-cylinder car by a firm which has for some time been associated with powerful six-cylinder vehicles is a striking indication of the trend of trade. One has not far to seek to find that a similar tendency is making itself evident in France—it is sufficiently demonstrated by the fact that such an old-established concern as the Panhard Company are bringing out an 8-h.p. car, the Brasier Company a 12-h.p., the C.G.V. firm an 8-10-h.p., and Messrs. Renault Freres an 8-h.p.—all fitted with double-cylinder engines. Although the automobile trade since its inauguration a dozen years ago has seen many remarkable changes, the coming year will be just as fruitful in the way of striking developments as its predecessors, and with manufacturers both at home and abroad realising that there is still a large section of the public to be supplied with motor vehicles which shall not only be reasonable in price but economical in their cost of operation and upkeep, a considerable impetus to the motor movement may reasonably be anticipated.

An American View of British Cars.

It is always useful, even if the criticism does not form pleasant reading, to have the views of competitors with regard to the merits or otherwise of British productions. Mr. T. B. Jeffery, of the firm of that name which manufactures the Rambler cars in Kenosha, Wis., U.S.A., who has recently returned home from a three months' combined business and pleasure trip in the United Kingdom and Germany, considers that "some good cars are built abroad, but they do not build them as well as we do to sell for a price within reach of the average man. They are very heavy, little effort being made to reduce the weight, and prices are high." With the object of gaining experience Mr. Jeffery hired cars of various makes when he wished to make local trips on several occasions during his stay on this side of the Atlantic, and describes an incident which occurred during one of his runs in this country which is not without its lesson. While riding in a high-priced and high-powered car he noticed a tin mine a short distance from the main road; a rather rough track ran to the mine, and when he asked to be taken up the slight grade to a point where he could view the operations, the chauffeur told him that the car could not negotiate the climb, because the rocks in the road would tear the lower portion of the car to pieces. Upon investigation he found that the clearance was so small that this danger was really imminent.

The Abuse of the Brakes.

There are many drivers of motor-cars who have not yet realised that when their vehicles are to be brought to a stop it is unnecessarily hard upon the mechanism to drive up with full power to the stopping point and then to apply both brakes suddenly. It is far better to disengage the clutch some little distance before the stopping point is reached, when the car will slow down, but little braking effect being necessary to stop it exactly at the desired point. Only the other day, when passing through Trafalgar Square, I saw a taxi-cab driver put on his brakes so quickly that not only did he skid his back wheels for some little distance, but apparently jerked one of them clear of the road, for the differential gear got to work and turned one of the wheels in the reverse direction. It is not difficult to imagine that if this practice is persisted in there will be plenty of work for the cab company's repairing department. Time was when no particular care was required in handling brakes, because, even when applied to their full capacity, the effect upon the car was not instantly evidenced. On modern cars, however, with powerful metal-to-metal brakes, much more skill must be exercised or the entire transmission gear of the car will be strained beyond its normal capacity, while tyres will be ruined at an astounding rate. *Verb. sap.*

ARCANUM.

GOSSIP FROM PARIS.

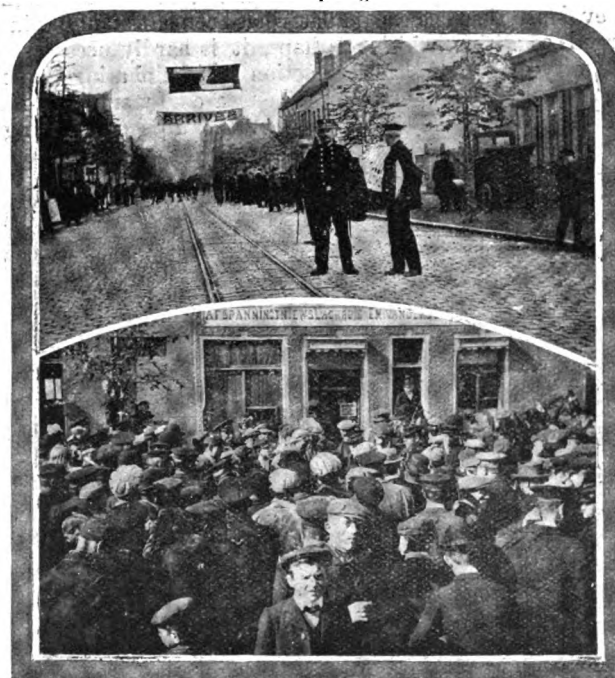
THERE is absolutely no doubt about the exports of French automobiles having fallen off in an alarming fashion during the first two thirds of the present year. The official statistics show there was a difference of about £520,000. But the deficit is not, perhaps, so great as might have been expected from the exports in the months of January and February, when the decline was proportionately much larger. "Is there any probability, or even a possibility, that the exports in the last third of 1908 will make up for the deficit in the first eight months?" was a question I put to a competent authority in the matter. The reply was a categorical "No." In explanation he added, "If some foreign countries are not getting ahead of us, there are several that are at least making good, yes, first-class automobiles, and an Englishman, for instance, likes a British car, the same as the Germans and Italians prefer to buy vehicles made in their respective countries. In case of accident they can get them repaired by the makers. We must not complain of that, especially as we have plenty to do at home."

My informant is one of those men who have always regretted the French motor manufacturers in reality neglected their own country's needs to supply the demands of foreign customers. Whether they were wrong in doing so may be questioned; but, in any case, they are right in now seeking to develop automobilism in France to compensate for the decrease in their foreign trade. Have their efforts been successful? So far as my information goes, and it is derived from very good sources, the demand for horseless vehicles for use in France has been greater than most of the manufacturers had dared to hope. At the beginning of the year, and even during the summer, pessimism prevailed. The heavy falling off of the exports was regarded by some people as the signal for the decline of the French automobile industry. Fortunately those fears were greatly exaggerated and the "crisis" does not seem likely to prove so fatal as it was imagined. The all-important question for the manufacturers was whether it was possible to develop the demand at home sufficiently to keep the factories going and to ensure their continued prosperity. Well, that question is already pretty clearly answered in the affirmative. The makers have had to study the wants of the French buyers and to bring down their prices, while the intermediaries have had to content themselves with a very small commission. That being done, the demands for useful cars for every-day work, and not only for pleasure and touring, have surpassed all expectation. It will not be possible to appreciate exactly the extent of this development till the official statistics of the taxation of cars are issued at the beginning of next year, but the increase will most surely be found to be far greater than it was in 1907.

I DO not know whether the "lady" who recently obtained the licence from the Prefect of Police to drive a motor-taxicab is satisfied, but the women who preceded her in obtaining the necessary licence to drive a "moteur à crottin" or horse drawn cab have no reason to complain. The first who succeeded in breaking the tradition that none but men could mount the box was Madame Duffaut, and she has been the first to abdicate her elevated position. The "ladies" who followed her example in adopting the calling of "cochere" are, however, getting more numerous every day. Many of them went to Enghien and other suburban towns, where they have been earning a good living during the summer months, but there are still a dozen or more in Paris. Madame Charnier, who is one of them, declares she was never happier in all her life than she is now; she loves the liberty her calling gives her and is more than satisfied with the money she makes. Even during the dead season, when Paris is called "empty," she earns from 8s. to 10s. a day, and in the season she can count on carrying home every night from 10s. to 12s. Then the "cochers," who used to look askant at her and crack bad jokes at her expense, are now quite gallant, often allowing her to place her cab at the head of the stand long before her turn. She has won their hearts by offering them pinches of snuff and

by accepting a pinch herself out of their traditional "queue-de-rat" boxes.

THE Paris Omnibus Company have been complaining bitterly of the bad solid rubber tyres supplied to them for their motor-buses. Great pieces were torn out of them, it was supposed by the tramway rails. But the mystery was that the tyres wore out quickly only on one route—that of Clichy, Odeon, Montparnasse. No sooner were new tyres put on the wheels than they became dilapidated. The tyre company would not admit that the fault lay with them, and the Omnibus Company threatened legal proceedings. There will be legal proceedings, but not of the description contemplated. By chance an employee of the Omnibus Company noticed a band of boys standing by one of the buses which had stopped to take up passengers at a bureau. While the conductor was occupied in calling out the numbers held by the little crowd of people, one of the lads, armed with a sharp knife, cut a big piece of rubber off one of the tyres. The miscreant was



A Race Meeting at Ostend.

The above illustrations are reproduced from snapshots taken on the occasion of the recent 250 miles race organised by the Ostend Automobile Club. The upper picture depicts the pave over which the cars had to travel for a great part of the course, while the lower one shows the scene on the arrival of Morane on an Imperia car.

Photo by]

[Mr. C. E. Whittaker.

arrested and has confessed that he and a few other boys made a lot of pocket-money by selling the rubber to a dealer, who will also be put on trial for receiving stolen goods.

MARNEY.

IN connection with the Grand Prix race, which is to be held on November 26th next, the Automobile Club of America has chartered the large steamer "City of Savannah" to convey members from New York to the scene of the race. The entire lower deck of the vessel is to be converted into a floating garage, with accommodation for thirty cars.

So rapid has been the progress made with flying machines during the past few months that it does not seem improbable that the various automobile associations will soon find new outlets for their energies, prominent among them being the provision of horizontally-fixed sign-boards, to notify those who make use of the aerial highway as to their whereabouts. A start in this direction has already been made in America, the owner of a large factory at Columbus, Ohio, having, for the benefit of aeronauts, had the name of the town painted in big letters on the roof of the building.

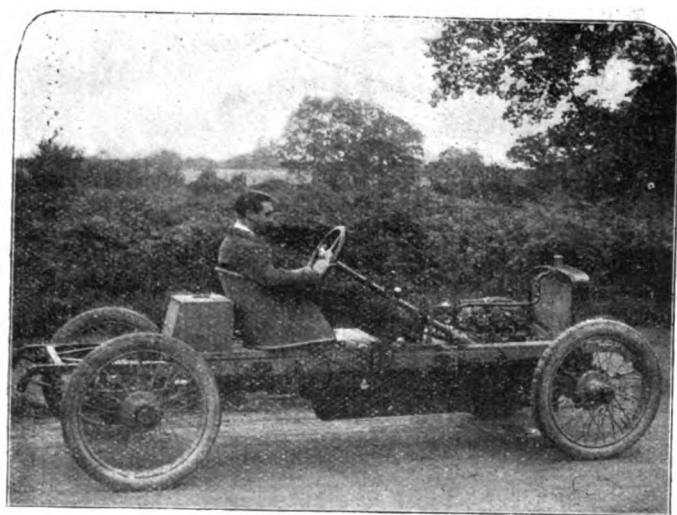
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THE ELEMENTS OF ELECTRICITY FOR MOTORISTS.

BY H. WAYMOUTH PRANCE, A.I.E.E., A.M.I.A.E.

(Concluded from page 669.)

THE chief points for a motorist to remember in connection with his accumulators are that the cells should be filled with a solution of one part by volume of pure concentrated sulphuric acid to $4\frac{1}{2}$ parts of distilled water, that the plates should always be kept covered with the liquid (water being added to make up for evaporation, dilute acid as above being added to replace any liquid which is spilled), that the accumulator should give a pressure of about 4.5 volts when fully charged, and that the pressure should not be allowed to drop below 3.8 volts, tested directly after the accumulator has been supplying current for some little time and before it has had an opportunity to recuperate. The formation of a white paste upon the plates, known as sulphating, is evidence that the accumulator has been left standing in an uncharged condition, which, perhaps, it is hardly necessary to state, is very deleterious to their action. If sulphating has not been going on long the plates may be cleared by subjecting the accumulator to a prolonged charging, afterwards discharging it



Mr. Gerald Herbert at the wheel of the Singer standard 12-14-h.p. Car which recently attained a speed equal to 59.06 miles per hour on Brooklands Track.

through a four-volt lamp, repeating this several times until the sulphate has disappeared.

Dry batteries are sometimes used in place of accumulators; they have the advantage that there is nothing in them to spill and that they do not need such careful handling, but, on the other hand, they are more expensive. They cannot be re-charged and are of no further use when exhausted. In purchasing a set of dry cells notice should be taken that they are in a fresh condition, and when tested with an ammeter give a current of from 12 to 16 amperes.

The function of the ignition coil is to transform the low pressure current of the accumulator or dry battery into a very high pressure current, thus enabling it to jump the gap at the points of the sparking plug and produce an intensely hot spark which fires the gas in the cylinder. There are two types of ignition coil in use, known as the trembler and the non-trembler, or plain, coil. Briefly, the action of a coil is as follows: the primary current from the accumulator passes through a coil of insulated wire wound upon a core of iron wires. This sets up a magnetic field in the surrounding space. Over the above-mentioned coil of wire is wound another of very fine wire, and in this latter coil is induced, by virtue of the magnetic field, a secondary current of very high pressure whenever the current in the primary coil is interrupted

or started. In the case of the trembler coil this interruption is maintained by means of a thin blade of metal, which, acted upon magnetically by the core of the coil, vibrates, and so alternately makes and breaks the primary circuit many times a second during the completion of the circuit through the contact maker. With the non-trembler coil the high-tension current is induced by the direct interruption of the primary current by means of a "make-and-break" mechanism actuated by the half-speed shaft of the engine.

As mentioned above, the high tension, high pressure, or secondary current, as it is variously named, is at such a pressure that it will overcome the resistance of the air, or, in the case when the engine is working, of the compressed gas, and will jump across the gap between the points of the sparking plug; it will, in fact, pass through anything that is not a very good insulator, so that care must be taken not to touch the bare wire when the coil is in operation, otherwise a severe shock will be experienced; no shock can, however, be obtained from the current passing through the low tension wires.

The question may now be asked, how is electricity generated, and how do we get it in order to charge our accumulators? These questions will be of twofold interest to the motorist, as the principle of the generation of electricity explains the working of the magneto ignition apparatus with which so many cars are now equipped. For the sake of explanation we may take for granted the fact that when a magneto field is cut through by a conductor, such as a wire, forming a closed circuit, a current of electricity is set up in the conductor. This is exactly what happens in a dynamo or in a magneto generator. The latter is merely a specially wound dynamo having permanent magnets instead of electro magnets to produce the magnetic field, this field being cut by the wires wound upon the revolving armature.

There are many various designs of magneto generators in use, a description of which is outside the sphere of this article, but if the above few lines upon the principle of the dynamical generation of electricity be borne in mind, the reader should not have great difficulty in following the details of the various types of magneto to be met with.

Thus we have briefly considered the elements of electricity from a motorist's point of view—facts which the motorist *must* know—and I will close with the reminder to the expert motorist that these notes are not intended to teach him anything which he did not know before, and with the repetition of my observation at the commencement, that "popular and not scientific terms and explanations are employed throughout."

A MOTOR-CAR driver has been sentenced to fourteen days' hard labour at Steyning Petty Sessions for being drunk while in charge of a motor-car. In addition his licence has been suspended, and he has been fined £10 and costs for reckless driving on the same occasion.

THREE meritorious performances made by private owners of Talbot cars in hill-climbing competitions have been brought to our notice. The first is that of Miss E. A. Southam, who, driving her 12-16-h.p. Talbot in the Mid-Staffordshire A.C. hill climb, won the silver challenge cup and gold medal. Secondly, Mr. H. A. Lloyd Jones, driving his 12-16-h.p. Talbot at the Pembrokeshire A.C. hill climb, came out first on formula; whilst, thirdly, Mr. E. Wilson on his 12-16-h.p. Talbot secured first prize in Class 2 of the Sheffield and District A.C. hill climb, with another 12-16-h.p. Talbot second.

THE presence of Prince Francis of Teck at the Four-Inch Race gave the event an official recognition that was much appreciated by the islanders as well as by the motorists. Among other incidental features of interest that may have been observed by H.S.H., who believes that every driver of a motor-car should have a speedometer, was the almost universal fitting of such instruments. The Coventry Humber, Vinot, Westinghouse, Darracq, and Deasy cars were provided with the Smith speedometers, illustrated in a recent issue, one of the S.C.A.T.'s had a Jones, and the Calthorpe and Piccard favoured the O.S. type.

RYE AND WINCHELSEA.

FALLEN are the glories, greatness and grandeur of ancient Rye and Winchelsea, but even in their present loneliness and decay they have a picturesqueness and charm not possessed by many other towns in Sussex. Ages ago their ships rode proudly in the Channel, their navy exceeded that of London, their strategical position gave them importance and significance to the governing powers. Both have been in the wars, and both have suffered from natural forces. Rye and Winchelsea live in their past; their present is confined to a little fishing and a few visitors in search of the picturesque.

Although not possessing architectural treasures of the first importance, and not being able to vie with such counties as Worcestershire in the wealth of its ecclesiastical ruins, Sussex contains many churches and one or two abbeys worthy of note. Along its coast the merry thousands of holiday-seekers play—a popularity much due to its nearness to the great capital. Brighton, Hastings, and the other resorts by the sea on the Sussex shore, are known as modern creations, their houses

a row of lancet windows, with a gallery that, in the olden days, enabled religious processions to pass within its walls. In the transepts are fragments of a Norman arcade, and the special glory of the church consists in the clock, which is probably the oldest public clock in the kingdom still at work. Tradition usually ascribed the presentation of the clock, with its great pendulum, eighteen feet long, still swinging in full view of the congregation, to Queen Elizabeth, but some of the church records, dated 1560–1562, prove conclusively that the town paid for the clock through its churchwardens. Away in the tower are eight bells, dating from 1775, each bearing curious and interesting inscriptions. From the tower a fine view of the surrounding country can be obtained, its height adding to the eminence of the site, and thus assisting the eye to range over the acres of marshland—on one side leading to the sea, which once approached nearer the church, and on the other forming connection with the Sussex Downs. Calm, peaceful and quiet is the scene now presented, with the Rother winding its course between the fields, but imagination can quickly wander along the military road leading to Winchelsea, and conjure up the sights that made



By permission of

Mermaid Street, Rye, with the Oldest House in the town on the right.

[The Homeland Association.]

bearing the unmistakable impress of the last few years, and most of what was ancient and remarkable destroyed to make house-room for the pleasure-seeker. But away in one little corner, easily reached by road from Hastings, is a spot full of memories, and not entirely divested of architectural beauties.

Proudly located on the top of a hill, Rye is a notable feature in the landscape, its red tiled roofs congregated around the conspicuous tower of its ancient church, relieving the scenery from any thought of monotony. That bright speck reminds one of the peaceful little hamlets of Belgium and the Low Countries, where folk cluster around the holy fane and live a life quite apart from the greater world beyond. Whether we approach by car from the land side or see the town from the sea the impression is the same.

The most prominent feature of the town, the cruciform Church of St. Nicholas, naturally claims early attention. Built towards the close of the twelfth century, the incursions of the French played havoc with much of the splendour which led Stowe to describe it as "a church of wonderful beauty." Twice, at least, it was almost destroyed, but, thanks to the pride of the good people of Rye, they invariably replaced what they could of its beauty. On one side of the nave is

these two towns so renowned in the mediæval age. What excitement must have prevailed below this spot when Edward the Confessor granted Rye and Winchelsea to the abbots and monks of Fécamp, and we can imagine the crowd of anxious men who assembled on the site in December, 1067, when William the Conqueror landed at Winchelsea and marched up the high road to Battle. They were exciting days, and may all be recalled from the ancient tower of Rye Church.

A fine relic of Norman days is the Ypres Tower. This is the remains of a castle built in the reign of Stephen by William of Ypres, Earl of Kent, who intended it as a watch tower. Edward III. erected the fine old gate with its portcullis, now known as the Landgate, which, with the church, the Ypres Castle and the old Carmelite Church, are the only buildings now remaining to tell of the days before 1448, when the town was rebuilt, and never again disturbed by the invasion of marauding foreigners.

(To be concluded).

ON Tuesday last Mr. Wilbur Wright established a new record with his aeroplane, he making a flight lasting 1 h. 4 m. 26 sec., with a passenger on board.

CONTINENTAL NOTES.

The Gaillon Hill Climb.

The annual hill-climbing competition over the flying kilometre, organised by the "Auto," was held at Gaillon on Sunday last, the event attracting close upon eighty entries. The record for the climb stands to the credit of Mr. A. Lee Guinness, who in 1906 drove the 200-h.p. eight-cylinder Darracq over the course in 25 sec., and, although some good performances were recorded, this was not beaten. The best time of the day (26 1-5 sec., equal to 86½ miles per hour) was made by Bablot on a Grand Prix Brasier, Alezy on a Clement-Bayard six-cylinder vehicle being second in 26 2-5 sec., and De Brou third on a Mors in 32 2-5 sec. Some good runs were made by the touring cars, which were divided into categories on a cylinder bore basis. A Vauxhall car—the only British vehicle at the meeting—proved the winner in the 86 to 95 mm. four-cylinder class, Mr. P. C. Kidner covering the kilometre in 51 2-5 sec.

A Trial of Light Industrial Motor Vehicles.

Under the auspices of the "Auto" and "Le Poids Lourd," a ten days' trial of light industrial motor vehicles commenced in the Paris district on the 1st inst. and will extend to the 10th. The competition was open for (a) town carriages; (b) four-seated



One of the Petrol Motor Lorries used in the recent Military Manœuvres in Belgium.

motor-cabs; (c) small motor-cabs; (d) motor carrier-cycles; (e) vans up to 4 cwt. capacity; (f) ditto from 4 cwt. to 12 cwt.; and (g) ditto from 12 cwt. to 24 cwt. Relatively little interest has, however, been shown in the event, as only thirteen entries were received, of which only eleven started, these comprising two De Dions (a hotel 'bus and 20 cwt. van) three Unics (a hotel 'bus, a cab and a 20 cwt. van), two Cottereaus (a cab and a van), a Vinot cab, two Clement-Bayards (a cab and a van), and a Demeester 4 cwt. van. The programme consists of six daily runs of about 120 kilometres, a kilometre hill climb, and a 300 metres speed trial. The awards will be made on the formula $\frac{T+C}{P \times D}$ where T is the total running time, C the cost of the fuel consumed, P the useful load carried, and D the distance covered in kilometres.

British Motorists in France.

Among the recent British visitors to France, with their cars, are the Duke of Marlborough (45-h.p. Wolseley), Mr. and Mrs. Jameson (30-h.p. Enfield), Mrs. and Miss Joseph (60-h.p. Daimler), Mr. Thomas H. McKittrick (60-h.p. Clement-Bayard), Prince Duleep Singh (40-h.p. Daimler), Mr. and Mrs. George Duncan (24-h.p. De Dietrich), Mr. and Mrs. Talbot Hassel (75-h.p. Itala), and Mr. Leonard Elger (40-h.p. Mercedes).

Aeronautical News.

On Friday, the 2nd inst., Henry Farman made a flight of forty-four minutes' duration at Chalons, while on Saturday

Wilbur Wright made three flights in his aeroplane, including one with a passenger, which lasted 55 min. 32 1-5 sec., thus establishing another new record.—The Lebaudy steerable balloon, which has been enlarged and reconstructed, made a flight over Paris on Monday at a height of about one thousand feet. The French Government has now three aerial warships in service.—It is announced from Berlin that an engineer, named Milden, has invented a new aeroplane which requires a motor of only from 3 to 4-h.p., and which can be built at an extremely low cost.

An Industrial Vehicle Trial in Italy.

An international competition of motor-omnibuses and other commercial vehicles was held at Piacenza, Italy, from the 18th to the 22nd ult. The competitors were divided into the following categories: (1) Vehicles carrying net loads up to 900 kilos; (2) ditto from 901 to 1,500 kilos; (3) ditto from 1,501 to 2,000 kilos; (4) ditto from 2,001 to 3,000 kilos; (5) ditto over 3,000 kilos; (6) motor-buses to carry from six to ten passengers; (7) ditto over ten passengers; and (8) road trains. The vehicles were subjected to several practical trials of reliability and efficiency on the road, over a distance of about 600 kil. The Piacenza-Bobbio Passo del Penice-Voghera-Piacenza circuit (162 kil.) was covered twice on two different days, once in one direction, and another time in the opposite direction. A further run of about 120 kil. was made over a flat country, also on two different days, while the programme included a test of the fuel and water consumption at maximum speed on a level road. Altogether twenty-four entries were received, these including five Fiats, two Italas, five S.P.A.s, a Fides, a Savoia, a Soller, three Saurers, a Berna, three Gaggenaus, a Yorkshire steam wagon, and a St. Pancras steam lorry. Of these twenty-one went successfully through the whole trials, the awards being as follows:—Class 1, Fiat; Class 2, S.P.A. (1), Itala (2), Fiat (3); Class 4, Gaggenau (1), Saurer (2), Spa (3); Class 5, Saurer (1), Berna (2), Soller (3); Class 6, S.P.A. (1), Gaggenau (2), Fiat (3), Itala (4), Fides (5), S.P.A. (6). Class 7, Saurer (1), S.P.A. (2), Itala (3); Class 8, St. Pancras steam wagon, Gold Medal of the Florence Chamber of Commerce, (2) Yorkshire steam wagon, the Turin Automobile Club's plaque.

The Panhard 1909 Models.

It is announced that for the 1909 season the Panhard Company will manufacture nine models. One of the principal novelties will be an 8-h.p. two-cylinder live axle car; of four-cylinder vehicles, there will be six types of respectively 10, 15, 18, 25, 35, and 50-h.p., the three larger models being chain driven; in addition there will be two six-cylinder vehicles—one of 30-h.p. and one of 65-h.p.

German Motor-car Imports and Exports.

A very quiet state of affairs continues to prevail as regards the imports of motor-cars into Germany. The arrivals of pleasure and industrial motor vehicles and chassis into the country during the eight months ending August last only attained a value of £502,183, as compared with £692,162 in the corresponding eight months of 1907. During the same periods the value of the similar exports from Germany declined from £477,640 to £469,465.

Miscellaneous Items.

It is reported that the sporting committee of the A.C.F. is in favour of fixing 140 mm. as the bore of the cylinders for next year's Grand Prix racing cars.—A new delivery company is reported to be in course of formation in Dresden; only motor vehicles are to be employed by the concern.—Seven motor wagons are being used in the Danish military manœuvres. They include a Halley, an Armstrong-Whitworth, a Fiat and four German vehicles.—A number of motor-vans have just been put in service in Madrid for the transport of meat from the abattoirs to the meat market.—In the recent military manœuvres in France, a special motor refrigerator van was used by the Commissariat Department for the transport of fresh meat.—The annual hill-climbing competition at Chateau Thierry, France, is to be held on the 18th inst.

THE SOCIAL WHIRL.

KING EDWARD, accompanied by Lord Althorp and Lord Redesdale, drove through Braemar on Monday in a motor-car to Mar Lodge, where he spent the afternoon with the Princess Royal and the Duke of Fife, returning through the village before lighting-up time.

ON Sunday motorists took full advantage of the bright sunny weather, and hundreds of motor-cars were seen on all the main roads. I took a run on the Ripley road, and, pulling up at the Talbot at Cobham, counted between thirty and forty cars, whose owners had been similarly attracted to the road by the fine weather. Away on Hindhead quite a motor reunion was in progress. About sixty cars were there at one time, and at the Moorlands Hotel so great was the crush for lunch that numbered tickets had to be distributed to secure seats at the tables in order of arrival. It was also a busy day at The Hut at Wisley, where more than 260 teas were served during the afternoon. Such incidents prove the value of the motorist to the trade of the country, and should demonstrate the folly of the policy of driving owners of cars to other roads and highways.

VISCOUNT GOSCHEN is at present arranging for the erection of special caution signs on the London-Hastings road, near its crossing the road to Rye in the centre of the village of Flimwell. At the suggestion of Mr. R. A. McCall, K.C., the Walmer District Council is applying to the M.U. for five "concealed turning" signs for erection at the approaches to a dangerous cross road formed by the Dover and Granville roads.

I LEARN from Mr. R. J. Meeredy's excellent contemporary that Mr. and Mrs. J. L. Wanklyn entertained Mr. Robert Dillon, Mr. and Miss Moore-Brabazon, Mr. and Mrs. James Little, and Mr. John Neat at Aasleigh House, Leenane, co. Galway, for the visit of the Atlantic Fleet under Admiral Sir Assheton Curzon-Howe, K.C.B. Mr. Wanklyn was M.P. for the Central Division of Bradford from 1895 to 1906, when his recreations were shooting, fishing and golfing. Lately he has added motoring to his other accomplishments, and both Mr. Wanklyn and his wife are keen lovers of the delights of the car.

THE committee of the Lancashire A.C. were fortunate in holding their business meeting the other day at Oaklands, Farington, near Leyland. This is the residence of Mr. J. W. Baxter, the manager of the Leyland Rubber Company, whose hospitality to the motorists of the County Palatine is much appreciated.

ON Thursday of last week a function of interest to motorists took place in the parish of Bleadon, near Weston-super-Mare, when the Bleadon toll gate, on the road from Weston to Bridgewater, was formally removed by the chairman (Mr. Petherham, J.P.) of the Axbridge Rural District Council, and the hitherto private road opened to the public. The gate having been taken off its hinges, Mr. Petherham, with whom was Mr. R. B. Graves Knyfton, J.P. (hon. secretary Somerset A.C.) drove through.

THE Hon. Alexander Kerr and Mrs. Kerr, of Portland, U.S.A., who recently became Lord and Lady of the Manors of Kingshall, Brendall, Mascoties, and Rousehall, after touring through Suffolk in an automobile visiting their estates, have gone on the Continent, where they expect to remain some time.

MR. PHILIP ASHBROOKE, of 8, Argyll Mansions, Chelsea, S.W., writes to a morning contemporary with regard to motor-omnibuses, and adds that he will be "only too glad to offer sleeping (?) accommodation to a representative of the powers that be for one night, so that he might judge what a succession of motors changing gear as they round a corner really means to a tired Londoner trying to obtain rest."

ACCORDING to a statement made at the last meeting of the Steyning West Rural Council, so heavy was the motor traffic, on the occasion of the Goodwood races, between Worthing and Goodwood that it has been estimated that it will cost £2,000 to repair the roads.

LOLLIUS.

HERE AND THERE.

MR. H. PROSSER is about to open a new motor depot at 98 Hope Street, Glasgow.

THE late Rev. Thomas Skarratt, of Kemsing, Kent, left a sum of £200 to his chauffeur.

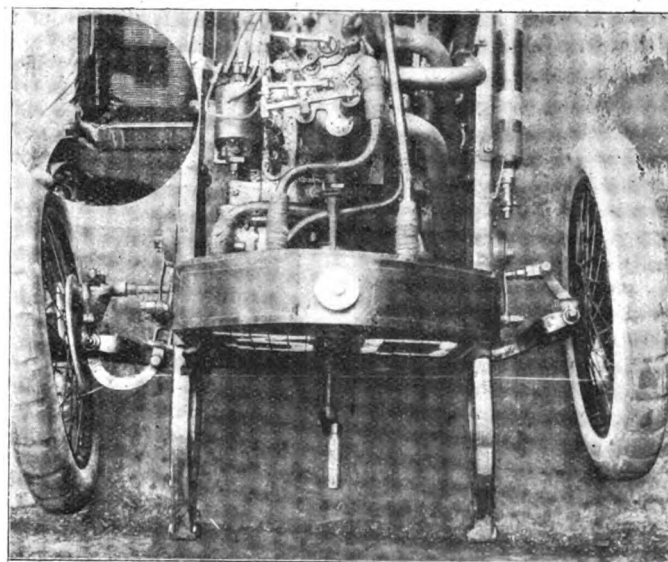
ALDERMAN DAVIES has been suggesting to the Chester Town Council that they should erect enamelled motor warning signs, as is done in Flintshire.

IN St. Mary's Street, Bridgwater, Messrs. Real, Medland and Wills, Ltd., have a large garage for motor vehicles and have eight cars available for hire.

SEVERAL new designs of "valveless" engines for motor-cars are already in hand, one or more of which are expected to be ready for the forthcoming Olympia show.

A MOTORIST summoned for placing a motor-car on the green-sward on the side of the towing path at Walton-on-Thames, after the vehicle had broken down, has been fined 10s. at the Kingston Police Court.

THE photograph reproduced herewith illustrates one of the most remarkable incidents of the "Four-Inch" race. During the first round, at a spot near Glen Helen, the Darracq racer driven by Mr. A. Rawlinson sustained a side-slip, skidded into the bank, and turned completely over. Not only was the radiator so punctured that Mr. Rawlinson had to plug up a gap



with a large cork, but the impact crippled his front axle so severely that its near-side end was pushed several inches to the rear. The plan view of the car shows a wire stretched from wheel to wheel, to make clear the serious extent of the damage. After this mishap, however, Mr. Rawlinson managed to drive over 325 miles to the finish and secure seventh place.

MESSRS. REID AND EVANS, whose garage in the New North Road at Exeter is well known to our Devonshire readers, have a well-equipped repair department and mechanics qualified to deal with every type of car.

MR. T. S. ADCOCK is now in occupation of the Corn Exchange Motor Garage, East Street, Chichester. He has accommodation for a large number of motor vehicles, and also stocks all requirements for motorists who may be passing that way.

LAST week we reported the death of a mechanic who received injuries while working beneath a motor-car belonging to Scarfoglio. At the inquest the evidence was to the effect that death was due to shock from burns, and the jury returned a verdict of "Accidental death."

FROM the Star Engineering Company, Wolverhampton, comes a copy of the new catalogue of commercial motor vehicles they have just issued. This gives full particulars of the Star 9-h.p., 15-h.p. and 20-h.p. delivery vans and of the 9-h.p. and 15-h.p. cabs to which the firm are now devoting attention.

A LARGE new garage has lately been opened by Messrs. Smith and Milroy, in Wellington Street, St. Mary Cray, Kent.

A MOTION is coming before the Marylebone Borough Council in favour of a maximum speed of twelve miles an hour for motor vehicles within the county area of London.

THE chief constable of Cheshire is criticising the practise of cyclists who neglect to giving audible warning of their approach, and the police are being instructed to take action against delinquents.

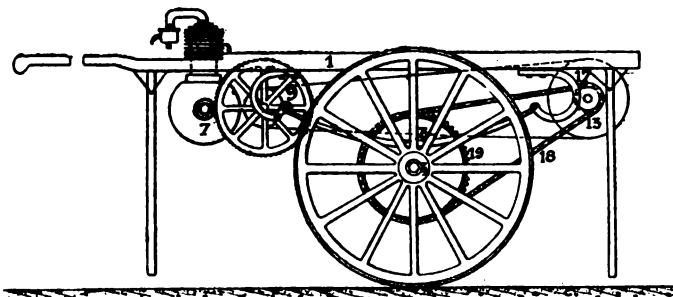
ON October 1st, at Brooklands, driving a Dunlop-tyred Mercedes, Mr. Dario Resta attained a speed of 102.496 miles per hour, lowering Mr. Newton's Napier record by .296 miles per hour.

A DOZEN American and foreign motor-cars took part in a 24-hour race on Brighton Beach track, near New York, on Saturday last. A 50-h.p. Simplex car was declared the winner after covering 1,177 miles.

THE "Scarlet Runner," by Mr. and Mrs. Williamson, published by Messrs. Methuen and Co., is proving one of the novels of the season, its motoring interest, as depicted in a recent issue, being particularly strong.

THE Godalming Rural Council has passed a resolution suggesting to the Surrey County Council that they should take steps to secure a special road tax upon motor-cars to meet the increased burden on the ratepayers for road maintenance.

MR. HENRY F. MENCE, Surveyor to the St. Albans Rural District Council, informs us that the steep hill leading from the railway bridge at Radlett towards Shenley is about 330 yards long, the average gradient being 1 in 10 and the steepest 1 in 9½.



A Motor Car's Barrow.

[See page 649 issue of September 26th.]

WHEN the entry list, at single fees, for the Automobile Club of America's Grand Prix race closed last week, it was found to contain the names of twenty-five cars—viz., three Fiat, three Benz, two Mercedes, a Lorraine-Dietrich, a Renault, two Clement-Bayards, and thirteen American vehicles.

TWO mischievous lads at Reigate had a narrow escape on Monday. Finding a motor-car unattended, they took possession of it and started for a ride. They had not gone far when the youthful chauffeur lost control of the car, which dashed into a wall and was considerably damaged. The boys escaped with a few cuts.

THE Executive Committee of the Winnipeg Industrial Exhibition Association has decided to continue for another year the Light Agricultural Motor Competition which was held at the recent exhibition. It is the intention to widen the scope of machines that are able to enter the competition by making more classes.

THE Maison Lemoine, of Paris, has recently devised a new arrangement of front wheel hubs whereby, should the axle arm or other part break, the wheel would not leave the axle-tree. The cap which carries the axle arm is formed with a shoulder against which abuts a ring detachably secured on an extension of the wheel hub.

THE report of the Commissioner of Police of the Metropolis which was issued on Monday relates only to the year 1907, but, in view of the increase in the number of vehicles which took place during that twelve months, it is of considerable interest. Elsewhere we have tabulated the various classes of accidents in which vehicles were concerned.

A COMPANY has just been formed in Strasburg to introduce a service of motor taxi-cabs in that town.

MISS E. K. LAWRENCE, of Homelea, Reigate, is inviting motorists to let her have their discarded fur and leather coats for the use of some of the missionary workers in North-Western Canada.

It is announced from Indianapolis, U.S.A., that one of the Pope Motor Car Company's Pope-Waverley electric victorias recently completed a run of 142 miles on one charge of the battery.

A TEST prosecution instituted by the Hammersmith Borough Council against the London United Electric Tramways Company, as to the latter's obligations for the proper repair of roads in the borough along which the tramway system is worked, is now before the courts.

IN connection with the Electrical Exhibition at Manchester the L. and N.W. Railway Company are issuing cheap tickets for the journey from Euston to Manchester by the midnight trains on Fridays the 16th and 30th and by the 10 a.m. and 4.5 p.m. trains on Saturdays the 17th and 31st.

THE Park Motor Company, of 216, Tottenham Court Road, London, have done good business during the last few days in connection with the hiring of cars, the fine weather of last week again attracting people to the country. The 45-h.p. Mercedes is a conspicuous feature of their hiring business. The firm have several Mercedes, Peugeot and other well-known types of vehicles for sale, and those who propose to enter the ranks of motorists during the present year will find the Park Motor Company well able to advise.

A SPECIAL 40-h.p. petrol demonstration van has recently been completed by Messrs. D. J. Smith and Co., Compton Street, Goswell Road, E.C., to the order of the Emigration Bureau of the Canadian Government. The vehicle is fitted with a special body, the sides having windows behind which specimens of Canadian produce are displayed. The car is at present making a tour of the United Kingdom, it being accompanied by a lecturer, who is employed to make known the advantages of the Dominion to intending settlers.

THE dinner given last week to Mr. Frank Shorland to celebrate his appointment as general manager of Clement-Talbot, Ltd., was a festive occasion which gave his friends an opportunity of testifying not only their regard but also their number. Mr. Albert Eadie was in the chair, Messrs. Harvey Du Cros, Harold Bowden, C. Jarrott, A. W. Gamage, and others being among the 140 present. An illuminated address, together with a service of silver, was presented to Mr. Shorland, who carries with him to his new sphere of operations the goodwill of all who have known him in connection with the cycle industry.

CALLING in at the depot of the London and Paris Exchange Motor Agency, Ltd., in Shaftesbury Avenue, W.C., the other day, we found Mr. Frank Morris, the manager, just back from a business trip to France, where he had purchased from the liquidator of the Orel Company the complete stock of Orel light cars and spare parts. The vehicles, which are well known in France, are of thoroughly sound and reliable manufacture, good hill climbers, economical and easy to run, and of 1908 design and construction, the specification comprising long wheel base, gate change control, gear-driven pumps, push pedals, expanding brakes, artillery wheels, fitted with Dunlop 700 by 85 mm. heavy car section non-slipping tyres, &c. As will be seen from the announcement elsewhere in the present issue, the company have decided to put the cars on the market, whilst the stock lasts, at about half the original price. They consist of two different models, one being fitted with a 7.9-h.p. single-cylinder engine and the other with a 10.12-h.p. double-cylinder motor; as for the complete cars, there are various styles to choose from, including two-seaters, the same with front glass and hood, and also a four-seated vehicle, the rear portion of which is convertible to a light parcels delivery van or luggage carrier. The machines are being supplied complete with lamps and tools ready for the road, and, as they are quite new, are worthy of the attention of prospective motorists of moderate means.

MOTURING ACCESSORIES.

The Bowden Exhaust Cut-Out.

Time was when an exhaust cut-out was regarded as the badge of the scorchers, a position, no doubt, largely due to the sole claim then put forward on its behalf—namely, that it increased the power of the engine, and, consequently, the speed of the car. Of late, however, more justice has been done this fitment, and it is now generally conceded that it has far greater claims for patronage than that of mere speed alone. Perhaps one of the most valuable features of the exhaust cut-out is that it enables an engine test to be taken while travelling, the fact of a cylinder missing being easily discovered if the cut-out is opened for a few seconds. Another good use for the device is that of signalling one's approach when overtaking a noisy car in front, or when nearing a cross road. There are times when the horn is utterly useless, and the value of the cut-out as a warning giver is at such times inestimable. Of course it is important that such an attachment should not be used inadvisably or when likely to cause inconvenience or discomfort to others, and care should be taken that the fitment is absolutely silent when not in use. In this matter of silence special attention has been given in the Bowden exhaust cut-out to make it perfectly gas tight, thus ensuring its absolute noiselessness when not in operation. The accompanying illustration shows the external appearance of the Bowden cut-out, E being an aperture for the ingress of the gases, which discharge through the outlet at B. When not in operation the outlet is hermetically closed by a mushroom-headed valve, the stem of which projects into the extension C. A strong spring encircles the valve stem inside D and holds the valve firmly on its seat. At H is seen emerging the Bowden wire mechanism which operates the valve.

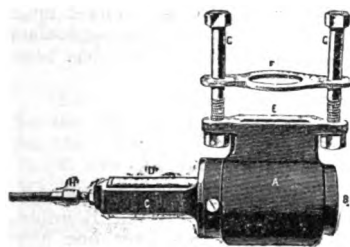


Fig. 1.

When calling recently at the Panhard-Levassor works of Messrs. W. and G. Du Cros, Ltd., in Acton Vale, we had an opportunity of examining the Summer's safety wind screen, illustrated in our issue of the 5th ult. This fitment is so constructed that both the upper and lower sections of the wind shields are adjustable to any desired angle, and their inclination may be altered immediately by either driver or passenger of the car to which the screen is fitted, while travelling at top speed. All that is necessary to the setting of the screen in any position is the manipulation of one fly-nut. The upper section may be given such a "rake" as to obviate the possibility of any reflection or glare, and at the same time neutralises wind-eddies or air-currents so effectively as to render the wearing of goggles quite unnecessary. A single hinge-pin serves for all movements, so that the possibilities of any squeak or rattle are absolutely minimised. The Summers screen is so attached as to impose a minimum strain on the dash. All stresses are taken by stays hinged to the main frame of the car, although stay rods can be bracketed to the dash if desired. This would appear to be a very simple, rigid, and efficient wind shield. We have only to add that its price is gratifyingly reasonable, and that it can be fitted to cars of any size or make, to convince motorists of the advantage of investigating its merits.

An Acton Vale Speciality.

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Pocket Voltmeter.

We illustrate in Fig. 2 a new pocket voltmeter placed upon the market by Messrs. Alfred Dunhill, Ltd. It is an extremely practical

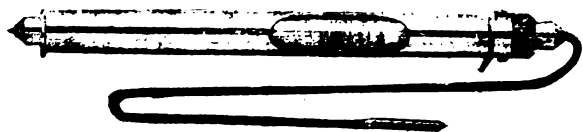


Fig. 2.

type, compactly made, and accurate in use. It can be instantly read and is not likely to get out of order.

The Rotax Speed and Mileage Recorder.

Having so recently as in our issue of April 25th illustrated and described the Rotax speed indicator, it now but remains to say that a season's experience by many users of the road has amply justified the

good opinion we then expressed of this very ingenious recorder. It is placed upon the market by the Rotax Motor Company, of 43 and 45, Great Eastern Street, London, E.C., and provides the motorist not only with an opportunity of knowing his speed by means of the dial, but also records the variations of the run from the time of starting to the finish. This is done on a tape, the records being made automatically by a steel point which scores a line on perforated paper, enabling the motorist to see at what speed he was travelling at any particular hour. The device comprises a timepiece, a mileage indicator, a trip recorder, and a speed recorder; and is absolutely positive in its action, every part being gear driven. The Rotax Company have such confidence in their indicator that they guarantee it for twelve months—a guarantee that has not yet been questioned by any who have had the advantage of the device on their cars.

The "Tom Thumb" Tool Wallet.

Messrs. Avery and Roberts, Ltd., of 64, Stanley Street, Liverpool, who make a speciality of the manufacture of motor tools, have had numerous inquiries during the past season for a small motor kit to hold the various tools that are in almost daily use. They have therefore brought out the "Tom Thumb" wallet illustrated in Fig. 3. As will be seen, it is a neat and compact arrangement, the dimensions being 4½ in. by 5 in. The wallet, which is made of hide, contains a dozen British-

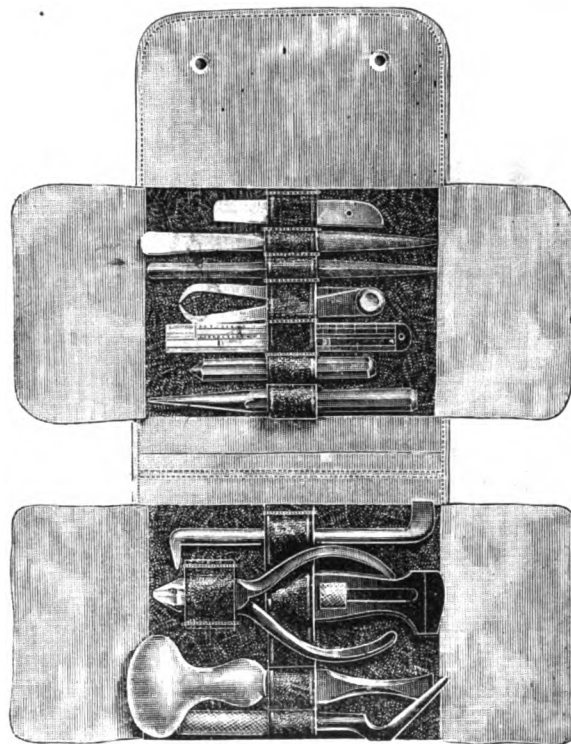


Fig. 3.

made tools, viz., a contact file for platinum points, a half-round motor-file, a three square file, a pair of callipers, a steel rule with tapping and spanner sizes, a cotter punch, a milled centre punch, a round-the-corner screwdriver, for getting at screws in awkward positions, a pair of combination motor pliers, a miniature spanner for all small and delicate adjustments, a motor turn-screw, and a split pin extractor. Small tools of this class have a bad habit of not being at hand when wanted—a difficulty that should be overcome by means of the new kit, which has been put on the market at a moderate price.

Leather Reviver.

Many of the cars which, at the beginning of the season, presented a spick and span appearance require a renewal their pristine newness. Outwardly this can be secured by the use of the specialities of Messrs. A. F. Harding and Company, Ltd., of the Stepney Polish Works, London, E. Their leather reviver is prepared for renovating the lining of cars, and is made in all colours, providing motorists with an efficient and economical means for keeping up the good looks of the bodies of their cars. In this connection, too, mention may be made of the firm's varnish reviver for restoring the varnished carriage work. Messrs. A. F. Harding and Company, Ltd., will be glad to hear from motorists interested in keeping their leather work in good condition.

Correspondence.

(Letters to the Editor should be addressed to the offices, 37-38, Charing Cross Road, London, W.C.)

NEW AEROPLANE CLUB.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—Owing to your courtesy in having published my last letter in your journal I have received so many letters that I have not yet had sufficient time to answer more than half, and I should be glad if your readers, who have so kindly written and offered their help, &c. (or enclosed subscriptions in advance), will kindly accept this, my explanation and apology, if they have not received an acknowledgment of their letters. Each letter received at this office is being carefully filed and answered in rotation. There is a very large number of applicants, and the club is certain to be formed. As soon as the date is fixed, each member will be notified as to the date, time and place. I am doing everything in my power to make the club a success, and have got some very influential people interested in my scheme, and all I ask for the present is that each member will do his utmost to persuade his friends to join. "Unity is strength," and without the co-operation of other members it is impossible for me to make the club as successful as I should like it to be.

The work which has already been done towards making the club successful is as follows:—Free rooms have been offered at three places in Piccadilly, also in Long Acre; also the Metropole at Brighton have offered a large room on the ground floor for the use of the members,

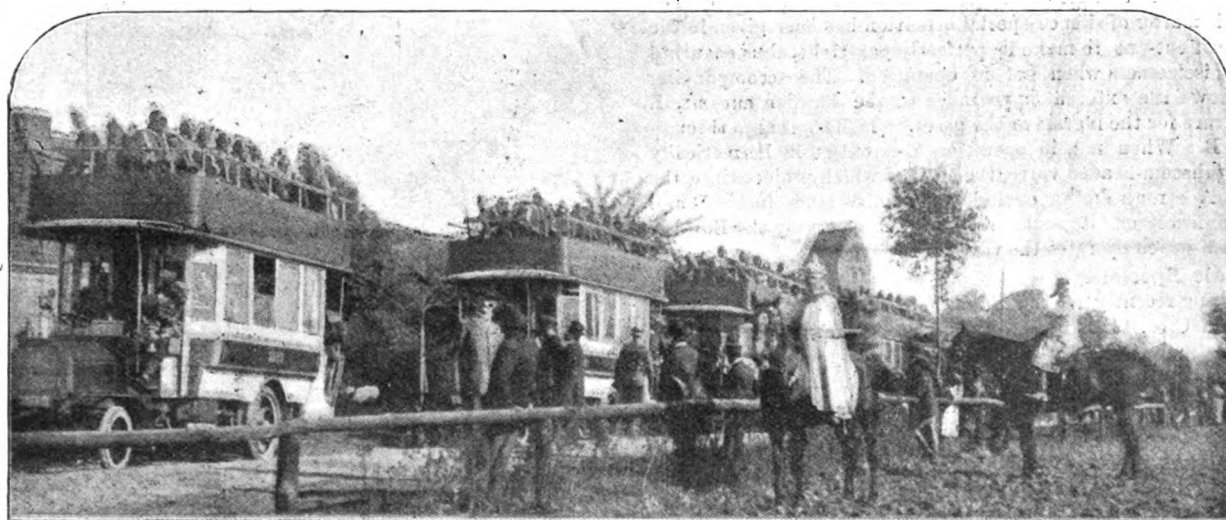
limit of speed fixed under this Act—(c) if the person convicted holds any licence under this Act, shall cause particulars of the conviction, and of any order of the court made under this section, to be endorsed upon any licence held by him, and shall also cause a copy of those particulars to be sent to the council by whom any licence so endorsed has been granted.]

A HOTEL KEEPER'S COMPLAINT.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—A large motor-car with three gentlemen and a lady pulled into my private road at the side of my house, the Crown Hotel, Romford, on the afternoon of the 28th ult., and, after staying over one hour executing repairs, came through the bars to the lavatory at the back of the saloon, and, after using washbasins, walked out and drove off without spending one penny.

This sort of thing from motorists is most frequent. They pull up, fill their engines from private stand-pipes, and drive off, and in other ways make conveniences of licensed houses without asking permission and without even saying "Thank you." I should like to direct public attention to this paltry conduct. I have no other redress, for when



Motor Vehicles for Military Purposes.

In the recent military manoeuvres in Germany a number of motor-buses, as depicted above, were used for the rapid conveyance of soldiers between distant points.

free of cost. I am endeavouring to arrange with firms to supply a suitable eight-cylinder light aeroplane engine to the members of the club at a small hiring fee; the exact dimensions of the engine to be given to any interested member, so that the plane can be built to take the engine without alterations. I am also negotiating to get a large piece of ground suitable for testing the aeroplanes of members, and to build sheds in which they can be kept. If any members know of a suitable piece of ground (it must be some twenty or thirty acres in size, and must be level and hard enough to allow the aeroplanes to get speed sufficient to allow them to rise), will they kindly correspond with me at 22, St. John's Hill, S. W. ?—Yours truly,

W. G. WINDHAM, CAPT.

THE ENDORSEMENT OF LICENCES.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—I had an argument with a legal friend of mine, who said that for any offence by motorists under the 1903 Motor Car Act the magistrates were entitled (on conviction) to endorse the motorist's licence. I said they could only do so for certain offences. I have mislaid the Act, but no doubt you will kindly say who is right. I see your paper every week and take it in. Thanking you in anticipation.—Yours truly,

W. A.

[The endorsement of licences is governed by Section IV. of the Motor Car Act, 1903, the first clause of which is to the following effect:—"Any court before whom a person is convicted of an offence under this Act, or of any offence in connection with the driving of a motor-car, other than a first or second offence, consisting solely of exceeding any

motorists arrive and walk into my house I cannot order them out, not knowing but they may require refreshment.—Yours truly,

ARTHUR POND.

HILLS AND THEIR GRADIENTS.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—In your last issue I miss two hills which I have ascended, namely the Peak Hill, on the Sidmouth and Exmouth road via Otterton. This hill is a mile long, and, according to the contour book, has an average of one in seven, which I have every reason to believe correct.

The other hill is on the main road from Whitby to Malton, viz, the Blue Bank, about four miles long, from Sleights Station. The contour book gives the average as one in ten, but many parts are quite one in four.—Yours truly,

T. N. MULLER.

EXCESSIVE FUEL CONSUMPTION.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—I shall be glad if you will kindly let me know through the *M.C.J.* the reason why an old 9-h.p. Daimler (1904) car uses one gallon of petrol to ten miles. The petrol is pressure fed, the gauge registering 6 lb. Do you think there is too much pressure on the petrol?—Yours truly,

WALES.

[A 9-h.p. Daimler of the date mentioned should do about 50 per cent. better than ten miles on a gallon if it has pneumatic tyres and is in good order. Six pounds pressure is certainly too much unless the level of the

petrol in the float chamber has been tampered with, and in any case it is likely to lead to excessive consumption. Four pounds pressure on the petrol is ample, and we advise the regulating valve to be so set as to prevent any more being registered.

If the engine is in apple-pie order as regards compression and valve timing, &c., there may be a loss of power somewhere in the transmission that would help to account for too much fuel being needed for a given mileage—worn chains, for instance, or perhaps one or both of them may be too tight.]

THE DISADVANTAGE OF DUSTLESS ROADS.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—With dustless roads a new danger has arisen. This is found in the pedestrian who forsakes the rough and pebble-covered footpath for the "new" motor road, and I for one do not blame him, especially in hot weather, when crunching along on dust and shingle must be most trying. In cases, as is often found, where only the crown of the road has been tarred, the danger is increased, as he does not like to take to the dusty gutters to make room for his enemy. In some cases only two strips, each about a foot wide, and representing the wheel tracks, are tarred, and the other night, on such a road, I narrowly missed a family of tramps, who, on coming round a corner, I found marching in two single files, each on a tarred strip. I feel that surveyors should let this matter have their attention.—Yours truly,

A. DUCKHAM.

WARNING TO MOTORISTS IN DEVON.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—Motorists approaching Totnes by the Newton and Torquay roads would be wise to drive well within the limit on the more open parts of these roads. Great care is necessary in passing through the tortuous and narrow street of the town, as it is used as a playground for the more youthful inhabitants, and a resting-place for all sorts and conditions of wheel traffic—mostly unattended.

They would do well to note also that local drivers of horse drawn vehicles move according to their own fancy, without any reference to the regulations of the Highway Act. The fact that the police force of the borough is engaged elsewhere makes no difference whatever.—Yours truly,

TRAVELLER.

A MAGNETO TROUBLE.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—I have lately been having much trouble with my Gianoli magneto. I can only at times get a spark at No. 4 at the distributor. The magneto has been down, a new screw and trembler fitted, also new carbon brushes and screw at distributor. I can get a good spark on 1, 2, and 3, but when I switch over to the accumulators I can get a good spark at No. 4 as well. I should feel obliged if you or any of your readers could assist me in this matter.—Yours truly,

S. M. T.

[It is somewhat difficult to suggest what is the cause of the trouble from the above description, as the spark only misses on No. 4 of distributor when magneto is in action. It is possibly due to the four-cornered cam underneath the high tension collector of the distributor, one of the corners of which may have worn sufficiently not to spark with the magneto and yet do so with the battery. for one of the features of the Gianoli system is the automatic voltage controller, which prevents a current beyond a certain strength being used, no matter how fast the machine may be driven. It might prove on careful testing that the distributor is not firing accurately on any of the four points, caused by improper adjustment of the automatic make and break at the end of the armature.]

THE FUNCTION OF THE TORQUE ROD.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—I should be glad if you would give me an explanation of the object of what is known in live axle cars as the torque rod. Frequently I see a reference to this part of a motor vehicle, but, being a new recruit to the ranks of motoring, I am ignorant of its function. The information would, I am sure, also be useful to other readers of the *M.C.J.* besides.—Yours truly,

S. R. A.

[The object of a torque rod applied to a rear live axle is to stay it from the strains of driving as follows:—When the propeller shaft turns the small driving bevel pinion and the car is in forward gear there is a tendency for the axle casing to rotate upwards in front, caused by the reaction of the small pinion trying to climb up the large driven bevel. When the reverse gear is in operation the axle casing tends to dip downwards in front. In both cases the torque rod prevents this happening and keeps the axle casing continually presented in suitable alignment with the cardan transmission or universally jointed propeller shaft. The torque rod should be so fixed as to allow for lateral and rocking motion of the axle, and also, in the case of rear springs being fixed without shackles at one end, to permit of longitudinal movement. When the rear springs are shackled at either end two radius rods are employed in

addition to a torqueroed, but the duty of radius rods is merely to keep the axle from longitudinal movement and to transmit the drive to the frame.]

BROKEN CYLINDER.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—I should be obliged if you or some reader of the *M.C.J.* could inform me the probable cause of my cylinders breaking. I have had two cylinder heads broken within twelve months; the car is a 6-h.p. single-cylinder of French construction; in both cases they broke just above the flange that bolts them on to the crank chamber; the fractures were irregular. I may add that the four bolts that hold the heads to crank chamber were screwed tight down. Would a back fire do this mischief?—Yours truly,

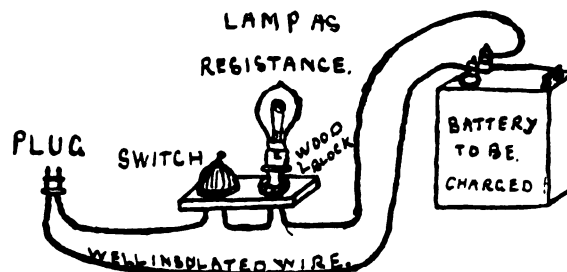
R. C. A.

[The only probable cause of this trouble we can suggest is that the top of the crank case has by some means become out of truth, and does not present a flat face for the cylinder to bolt down on. This, in combination with the explosions and the bolts being tight, would in all probability cause the trouble. A back fire would not in any way do this.]

CHARGING ACCUMULATORS.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—With reference to the answer to "Doncaster" in your issue of the 19th ult. re charging a fifteen ampere-hour accumulator, might I suggest that the plan recommended would be very uneconomical, as, except the other nine lamps were removed while the charging was in progress, a lot of light would be wasted, unless the charging was done during lighting hours, which is not always convenient. I am presuming that "Doncaster" has a storage battery in connection with his



PORTABLE CHARGING BOARD TO CONNECT UP TO WALL SOCKET.

lighting plant; but, even if he has not, I think the accompanying sketch will show an easier and more economical way of charging the battery from one of the wall sockets than from one of the lamps.—Yours truly,

INVERNESS.

ABOUT BRAKES.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—I am the owner and driver of a 15-h.p. Coventry Humber. The hand brake, consisting of ordinary strap, leather lined, on back wheels, is not nearly so effective as it ought to be. I should be very glad if some of your readers could suggest some means of improving this. To produce anything like a stopping force, it requires a pull on the lever which it is evident the gear was never designed to take.—Yours truly,

CAUTIOUS.

[We would recommend "Cautious" to have his brakes re-lined. The special lining known as Frood's "Ferodo," which is obtainable from Messrs. G. T. Riches and Co., Store Street, W.C., or any motor-car agent, will be found well adapted for the purpose.]

A CORRESPONDENT writes asking for the names of the manufacturers or the agents in this country for the "Lusen" coil.

THE O.T.A.V. VOITURETTE.—"Welland" writes asking owners of O.T.A.V. 5½-h.p. two-seated cars to give their experience of the same.

THE 20-H.P. ROVER.—"E.F.D." writes asking whether those readers of the *M.C.J.* owning Rover 20-h.p. cars would give their opinion and experience of these vehicles.

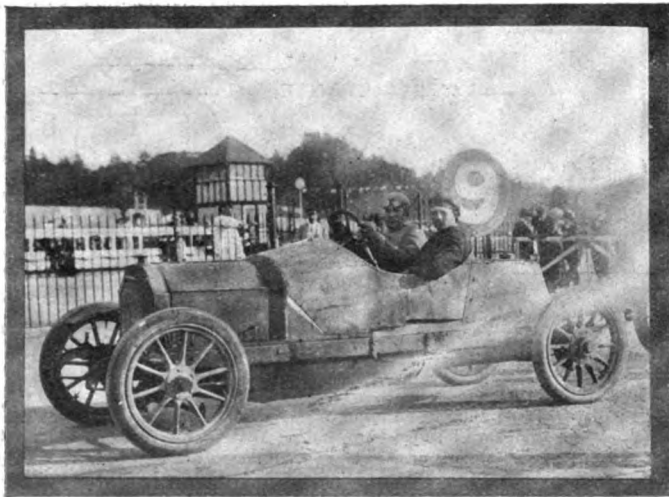
SEVERAL correspondents have written drawing our attention to the shocking condition of the roadway in Portland Place, W. The road is so full of holes that passengers, not merely in motor-cars, but also in horse-drawn vehicles, are subjected to severe jolting.

REPLYING TO "B. D." the Fors carriage lighting battery is supplied by Messrs. Richard Pape, Ltd., of the Albion House, New Oxford Street, London, W.C., who are also supplying ignition batteries on the same principle for use on motor-cars. These were recently favourably reported upon in our columns.

RACING AT BROOKLANDS.

ALTHOUGH beautiful weather prevailed for the final meeting of the year at Brooklands on Saturday last the attendance of the public was very meagre. The races were, however, carried through very successfully, a feature of the various events being the preponderance of amateur drivers as compared with the trade or professional element that has been hitherto noticeable. The first item on the programme was the Large October Sweepstakes for cars of between 35-h.p. and 59-h.p. R.A.C. rating, over a distance of about 7½ miles. There were only three entrants—W. Jochems, a prominent member of the Dutch Automobile Club and a regular competitor at the Ostend Automobile Meeting, on a 48-6-h.p. Mercedes; O. S. Thompson with his familiar 36-1-h.p. Austin "Pobble," and H. G. Nalder with his 35-7-h.p. Berliet "Grayling." The result was a victory for Jochems, he winning by about a hundred yards at a speed of 67½ miles per hour, Nalder being second and Thompson third.

Seven drivers turned out in the first heat of the Fifth All-comers Handicap (about 5½ miles), the vehicles ranging from the 59-6-h.p. Mercedes driven by D. Resta (scratch), to a new 5-h.p. car known as the "Varsity," lately put on the market by Messrs. R. Lascelles and Co., and which had 5 min. 28 sec. start. Resta pulled up splendidly, but only succeeded in getting home second, the first place falling to H. P. Martin's 38-1-h.p. M.A.B. A. E. Robson, 27-9-h.p. Nagant-Hobson, and the Hon L. Bruce, 48-6-h.p. De Dietrich, also qualified for the final. The new 27-9-h.p. Imperia car, which is being introduced into this country by Mr. C. E. Whittaker, made its debut in the second heat, in which there were nine competitors. An expert driver from the works had been brought over to drive the Imperia, but, owing to his not being registered with the R.A.C., he was not allowed to take the wheel, Mr. Graham White taking his place at a few minutes' notice. He having had no experience whatever of the car, it was hardly to be expected that it would



Racing at Brooklands.—The Imperia Car, which made its first appearance on the track on Saturday.

take the leading place. The reason that it only finished sixth was, however, not due to any want of ability on the part of the driver, but to the fact that, as was subsequently discovered, only three cylinders were running, the ignition wire on the fourth having become detached. The speedy qualities of Jochems' Mercedes were again evidenced, this car finishing first about 100 yards in front of O. S. Thompson's Austin, R. Fedden's 18-8-h.p. Straker-Squire being third and L. Artrex's 25-6-h.p. Beeston-Humber fourth. Eight cars, the first four in each heat, turned out for the final, the winner of the sweepstakes being Jochems (48-6-h.p. Mercedes), 1 min. 32 sec. start, who covered the 5½ miles at an average speed of 70 miles an hour. R. Fedden (18-8-h.p. Straker-Squire), 2 min. 32 sec., was second; O. S. Thompson (36-1-h.p. Austin), 1 min. 30 sec., third; L. Artrex (25-6-h.p. Beeston-Humber), 1 min. 56 sec., fourth. Resta, who was on the scratch mark, was unable to catch up the others, he finishing sixth.

Considerable interest was shown in the 5½ mile Motor-cycle Handicap, in which there were no less than twenty-six competitors, including most of the leading riders of the country. There were four men on the scratch mark, while the handicap allowance ranged up to 2 min. 50 sec. An excellent race ensued, though G. Gibson and R. O. Clark soon established a lead and were never overtaken, notwithstanding that the back-markers made great efforts to overtake the field. The result was—G. Gibson, 3½-h.p. Triumph, 2 min. 20 sec. start, first; R. O. Clark, 5-h.p. F.N., 2 min. 20 sec., second; and H. Shanks, 2½-h.p. Chater-Lea, 2 min., third. The winner's speed averaged 53 miles per hour.

The final event of the day was the Autumn Handicap, for cars entered and driven by private members of the B.A.R.C. Five vehicles faced the starter, these being Clement Hobson's 48-6-h.p. Brasier, scratch, O. S. Thompson's Austin, 26 sec., C. A. Bird's 34-5-h.p. Mercedes, 40 sec., A. van Hoboken's 35-7-h.p. Mercedes, 1 min. 13 sec., and Ralph

Creyke's 8-9-h.p. Sizaire, 2 min. 34 sec. A. van Hoboken was the first to complete the 5½ miles, he winning by about 200 yards at an average speed of 49 miles per hour. C. A. Bird was second and O. S. Thompson third.

VEHICLES AND ACCIDENTS IN LONDON.

FROM the report of the Chief Commissioner of Police for 1907 issued on Monday we learn that during that year 16,475 licences were issued by Scotland Yard for public carriages. Compared with 1906, they were as follows:—

| | 1907. | 1906. |
|--------------------------|-------|-------|
| Hansom cabs ... | 5,952 | 6,650 |
| Four-wheeled cabs ... | 3,866 | 3,844 |
| Motor-cabs ... | 723 | 96 |
| Horse-drawn 'buses ... | 2,557 | 2,964 |
| Motor-'buses ... | 1,205 | 783 |
| Horse-drawn tramcars ... | 404 | 905 |
| Mechanical tramcars ... | 1,768 | 1,396 |

The rapid growth in the number of motor vehicles immensely increased the work of inspection. During the year 8,508 reports were made against motor-'buses declaring them to be unfit, the principal defects being the following: Unduly noisy, 4,862; defective steering gear, 362; defective brakes, 936; oil or grease overflow, 2,105.

With regard to accidents in the streets the number in which persons were killed was as follows:—

| 1907. | 1906. | 1905. |
|-------|-------|-------|
| 273 | 212 | 172 |

The casualties for 1907 are thus classified:—

| | |
|-------------------------------------|----|
| Motor-omnibuses ... | 35 |
| Mechanical tramcars ... | 22 |
| Motor-cab ... | 1 |
| Uncovered motor-cars ... | 41 |
| Covered motor-cars ... | 21 |
| Motor-cycles ... | 4 |
| Horse-drawn cabs ... | 8 |
| Horse-'buses ... | 14 |
| Uncovered carts drawn by horses ... | 88 |
| Covered carts drawn by horses ... | 33 |
| Private carriages ... | 2 |

So far as accidents in which persons were injured in the streets were concerned these were as follows:—

| 1907. | 1906. | 1905. |
|--------|--------|--------|
| 16,772 | 14,060 | 11,688 |

the analysis for last year being as follows:—

| | |
|--------------------------------------|-------|
| Mechanical tramcars ... | 2,119 |
| Motor-'buses ... | 1,108 |
| Uncovered motor vehicles ... | 1,075 |
| Covered motor vehicles ... | 483 |
| Motor-cycles ... | 274 |
| Horsed cabs ... | 1,136 |
| Horsed tramcars ... | 212 |
| Horsed 'buses ... | 460 |
| Uncovered vans drawn by horses ... | 2,822 |
| Covered vehicles drawn by horses ... | 1,465 |
| Broughams ... | 532 |
| Led horses ... | 76 |
| Ridden horses ... | 110 |

AUTOMOBILE INSTRUCTION.

THE Borough Polytechnic Institute, at 103, Borough Road, London, S.E., is commencing its petrol motor classes in association with the Engineering Trades Department, of which Mr. C. T. Millis, M.I.M.E., is the head as well as being the Principal of the Institute. One course is intended for those who are connected with the industry as drivers, repairers, &c., and arrangements will be made for students to receive demonstrations upon and inspect a typical car. The second course is arranged for motor engineers, draftsmen, and designers, and it is intended to carry out the complete calculations and design of a modern high power touring car chassis, with reference to engines and running gear. Messrs. G. Draycott, A. Marsden and W. Hill are the responsible teachers, and those of our readers in South London desirous of adding to their knowledge of automobile matters will be interested in the syllabus, which can be had on application at the Institute.

MESSRS. J. B. FERGUSON, LTD., have established a class in motor-car construction at their establishment in Chichester Street, Belfast. A 14-16-h.p. Argyll chassis is being used for the purpose of instruction, and evening lectures as well as daytime workshop instruction are being given.

THE London agency for the B.S.A. cars is in the hands of the Hyde Park Garage, 1A, Lancaster Gate, W., and the Belle Isle Co., Ltd., York Road, N.

THE Aster Engineering Company, Ltd., are removing the whole of their business from 4, Princes Street, Hanover Square, London, W., to new offices, situated at their works, Wembley, Middlesex.

CLUBS AND ASSOCIATIONS.

ROYAL.

THE following gentlemen have been appointed as delegates of the R.A.C. at the Road Congress which opens at Paris on the 11th inst.:—The Hon. Arthur Stanley, M.V.O., M.P., Lord Montagu of Beaulieu, Mr. W. Worby Beaumont, the Hon. C. S. Rolls, Lieut.-Col. R. E. B. Crompton, C.B., and Mr. Vere Ker-Seymer.

His Excellency the Marquis di San Giuliano, Italian Ambassador, has been elected an honorary member of the club during his residence in Great Britain.

One hundred names were added to the membership roll of the Club on Wednesday of last week. Among those elected were Sir Charles T. Dyke Acland, Bt., Lord Curzon, Sir William Eden, Bt., the Hon. F. Hamilton-Russell, D.L., J.P., Sir Hubert E. H. Jerningham, K.C.M.G., the Hon. Gilbert Johnstone, the Hon. H. Lygon, Count Alexander zu Munster, Brigadier-General Sir Henry Rawlinson, C.B., C.V.O., Bt., Sir Clifton Robinson, and the Hon. A. Dudley Ryder.

The following gentlemen have been appointed by the R.A.C. to be its representatives at the International Conference of Recognised Automobile Clubs, which is to be held on the 19th inst. at Paris:—Col. H. C. L. Holden, R.A., F.R.S., Capt. F. E. Dyke Acland, and Mr. Mervyn O'Gorman.

The Committee of the R.A.C. has reported that the garage of the Motor Supply Company, Ltd., in Brick Street, London, W., will prove a convenience to Associates of that organisation.

THE MOTOR UNION.

ON the 30th ult. the total number of individual members of the M.U. stood at 5,843, as against 4,437 on the same date last year, an increase of 1,406, or nearly thirty-two per cent.

It is proposed to hold the annual dinner of the Union on the 18th prox., at the Great Central Hotel, London.

AUTOMOBILE ASSOCIATION.

THE A.A. is offering a reward of £10 for information leading to the conviction of a man who, on Sunday afternoon, threw a piece of stick at a passing motorist near the Royal Huts Hotel, at Hindhead, seriously injuring a lady in a car.

MANCHESTER AND DISTRICT MOTOR TRADES ASSOCIATION, LIMITED.

AN open meeting of the manufacturers and traders of Manchester and district was held at the Albion Hotel, Manchester, on the 29th ult., to consider the pressure brought by various bond-signers who, by reason of having signed the bond of the S.M.M. and T., Ltd., are thus debarred from exhibiting at the forthcoming show at Belle Vue. In the unavoidable absence of Mr. C. Davies, the president of the association, Mr. F. Bullock, vice-president, took the chair. All present were, in turn, invited to express their opinions on the matter, and it was ultimately moved, seconded and carried *nem. con.*, that the society be approached for them to permit their bond-signers to exhibit at the Manchester Motor Car Show, to be held at Belle Vue, February 19th-27th next, and that a deputation be elected to wait upon the S.M.M. and T., Ltd., in London, with a view of securing the said sanction.

SHEFFIELD.

THE results of the hill-climbing competition on the 19th ult. work out as follow, on the R.A.C. formula:—

CLASS 1.

| No. | Name. | Car. | Order of Merit. |
|-----|---------------------|-----------------|-----------------|
| 1 | Mr. L. Slater | 8-h.p. Jackson | 779 |
| 2 | Mr. W. Watts | 8-h.p. De Dion | 560 |
| 3 | Mr. A. W. Blackwell | 8-h.p. Rover | 519 |
| 4 | Mr. H. Beesley | 6-h.p. Wolseley | 470 |

CLASS 2.

| | | | |
|---|-------------------|---------------------------|-----|
| 1 | Mr. E. Wilson | 12-16-h.p. Clement-Talbot | 740 |
| 2 | Mr. G. D. Flather | 12-16-h.p. Clement-Talbot | 702 |
| 3 | Mr. H. D. Orr | 16-20-h.p. Sunbeam | 592 |
| 4 | Mr. H. Warriner | 10-h.p. Allday | 481 |
| 5 | Mr. H. Beesley | 6-h.p. Wolseley | 406 |

CLASS 3.

| | | | |
|---|--------------------|---------------------------|-----|
| 1 | Mr. A. Farnell | 30-h.p. Daimler | 809 |
| 2 | Mr. E. Wilson | 12-16-h.p. Clement-Talbot | 745 |
| 3 | Mr. G. D. Flather | 12-16-h.p. Clement-Talbot | 728 |
| 4 | Mr. F. W. Huband | 14-h.p. Allday | 618 |
| 5 | Mr. H. Burgon | 15-20-h.p. Clement-Talbot | 603 |
| 6 | Mr. B. Shaw | 20-h.p. Rover | 526 |
| 7 | Mr. J. Barber | 20-h.p. Belsize | 497 |
| 8 | Mr. H. Warriner | 10-h.p. Allday | 483 |
| 9 | Mr. J. H. Pickford | 20-h.p. Rover | 430 |

In Class 1, Mr. Slater takes the Single Cylinder Challenge Cup, presented by Mr. Harvey Foster, and the club medal. In Class 2, Mr.

E. Wilson takes the first prize, given by Mr. E. F. Coupe. Mr. G. D. Flather the second prize, given by Mr. Albert Davidson; and Mr. Orr the third, given by Mr. Ben. Hind. In Class 3, Mr. Farnell takes the Challenge Cup presented by Mr. Harvey Foster, and the club medal.

The committee have taken up several cases where complaints had been made of inconsiderate driving, with beneficial results; and to facilitate such cases being dealt with have appointed an Inconsiderate Driving Committee, consisting of Messrs. P. J. Benson, G. D. Flather, and E. W. Hatfield, with power to deal with such cases as they arise.

SOCIETY OF ENGINEERS.

MR. H. CONRADI read a paper on "The History of Mechanical Traction on Tramways and Roads" before this Society on Monday, in the course of which he mentioned that the origin of the tramways, about 200 years ago, consisted in the laying of straight and parallel pieces of timber from the colliery to the river, for the conveyance of coal. The idea of mechanical traction on common roads was, however, not abandoned, and after a first trial in 1769, energetically revived between the years of 1803 to 1836, and periodically continued till about 1872. This revived tramway traction; first by horse and then by mechanical power. The author mentioned that in competition with tramway traction, on account of the permanent way construction, along the ordinary roads, mechanical traction on common roads was again thought of, seeming to be preferable, requiring no rails along the roads. It made rapid development, as now seen in the production of petrol, steam, and electric motor omnibuses and private carriages.



In the illustrations given above the right hand picture depicts the Daimler Cricket Club (this year's champions of the Coventry and District Cricket League, Division II.). The left hand picture shows a 48-h.p. Daimler Car with Mr. E. M. C. Instone (President of the Club) at the wheel, and seated beside him, holding the cup, is Mr. T. E. Shadbolt, the President and Founder of the Coventry and District League. The 50-Guinea League Challenge Cup won by the Daimler Club during the past summer will be easily identified at the top of the picture.

Photos by)

(Messrs. Jackson and Sons.)

SOCIETY OF MOTOR MANUFACTURERS AND TRADERS.

THE Tyre and Accessories Committee recently met with Mr. A. Brampton in the chair, when proposals in connection with standard ratings for accumulators were considered. It was resolved to circulate copies amongst members interested for comment and to hold another meeting on Monday, October 12th, to consider the matter further in the light of replies to the circular.

Further correspondence on the subject of rim standardisation was reported, and it was resolved to let the whole matter lie on the table.

MANCHESTER MOTOR.

ON Saturday a fuel consumption test was carried out by the Manchester Motor Club over a course of about twenty-five miles, chiefly in Cheshire. The two best results were as follows:—1, E. J. Chambers, 16-h.p. Bell, 43 car-miles and 60 ton-miles; 2, E. J. New, 18-h.p. Siddley, 28.9 car-miles and 63.6 ton-miles. Other competitors included: P. A. G. Bell, 20-h.p. Bell; J. T. Ward, 8-h.p. Rover; and H. Brady, 8-h.p. De Dion.

NORTH YORKSHIRE.

MR. H. A. WATSON presided at the meeting of the committee of the North Yorkshire A.C. last week, when, on the motion of Lord Der-

more, it was resolved to draw the attention of the Rural District Council to the state of the roads from Scarborough to Robin Hood Bay.

The secretaries also reported that in consequence of their recent communication to the local Education Committee the attention of children in the schools had been called to the reprehensible practice of throwing stones at motorists.

NOTTINGHAMSHIRE.

THOSE who have followed the course of automobile progress in Nottinghamshire will regret to learn of the death of Mr. G. H. Kirk, who was practically the founder of the county automobile club, he having convened the first meeting.

VICTORIA.

OWING to the large increase in work of the Automobile Club of Victoria, six sub-committees have been appointed to assist the general committee.

A hundred white enamelled motor danger signs have just been landed by the club, which will be given free to the councils that will erect the same.

On the 9th prox. the club will hold a hill-climb and picnic, and a tourist car trial from Melbourne to Sydney, via the south coast of New South Wales, is under consideration.

During the past three months 150 new members have been elected, making a total of 346 out of the 700 motorists in the State.

The Victorian Section of the Australian Volunteer Automobile Corps has been formed, with Capt. H. Tarrant as commanding officer.

MR. A. DUCKHAM has been invited by the Derby and District A.C. to lecture to the members on "Oils and their uses."



Touring in Holland.—The Hoogesliuis, Amsterdam.

As announced last week, the Aero Club Institute has been formed under the auspices of the Aero Club. Application for membership should be made to the secretary, Aero Club, 166, Piccadilly, London, W.

AMONGST the latest members elected at the Motor Club are H. H. Prince Jitendra Narayan of Cooch Behar, as a town member, Lieutenant Rasch, secretary of the German Motor Yacht Club, and Mr. H. M. Bauer, chief engineer of the same club, as honorary members.

COMPANY NEWS.

MESSRS. J. KEELE (LTD.) has been registered as a limited liability company with a capital of £10,000 in £1 shares. Offices, 72, New Bond Street, W.

THE London and Westminster Motor-Cab Company, Ltd., has been registered with a capital of £1,000, and offices at Madeira Hill, Streatham.

THE Peterborough City Garage Company, Ltd., has been registered with offices at 31, Cowgate, Peterborough, and a capital of £2,000 in £1 shares.

HAVING met with such striking success with their llo lubricants in the south of England, Messrs. Easton and Melville, Ltd., are now commencing a campaign in the north. Mr. Richard Starley is acting as their representative in Coventry, while Mr. Edgar E. Trevor is looking after their interests in Glasgow. The company, whose address is 85, Shaftesbury Avenue, W., are prepared to appoint other agents in the principal northern towns where they are not already represented.

COMMERCIAL MOTOR VEHICLE PARADES.

LONDON.

FORTY-NINE commercial motor-cars took part in the parade of the Commercial Motor Users' Association on the Thames Embankment, London, on Saturday. Of these, however, only thirty-four were formally entered for the competition, and they alone were considered in the judging. Each of the drivers had beforehand undergone a verbal examination, and the object of Saturday's parade was to enable the judges to examine the condition of the machines, and to make their final adjudication as follows:—

First prize (£5) for steam cars: Westminster City Council's Thornycroft.

First prize (£5) for petrol cars: General Post Office's Maudslay.

Second prizes (£2 each): Seabrooke and Sons' Foden; South Metropolitan Gas Company's Milnes-Daimler; the Westminster City Council's Thornycroft and Leyland.

Third prizes (£1 each): Allen and Hanbury's Yorkshire and Thornycroft; General Post Office's Wallis and Stevens' tractor; Mann, Crossman and Paulin's Leyland; J. M. Patrick's Straker; E. W. Rudd and Co.'s Coulthard; South Metropolitan Gas Company's Simms and Milnes-Daimler; Wall Paper Manufacturers' Thornycroft. An extra prize of £1 was given for Hamilton and Co.'s Clarkson van.

The competition is organised annually to encourage drivers to take a personal interest in the driving and condition of their cars, and the prizes are awarded to them.

GLASGOW.

On Monday the parade of commercial motor vehicles organised by the Commercial Vehicle Department of the Scottish A.C. took place. Sixty entries had been received, the vehicles including the following makes—Adams, Halley, Albion, Milnes-Daimler, Argyll, Mass, Humber, St. Vincent, Daimler, Dennis, Arrol-Johnston, Sunbeam, Belhaven, Darracq-Serpollet, Foden, Stewart-Thornycroft, and Alley and MacLellan. The vehicles were drawn up in Blythswood Square early in the afternoon and then paraded by way of Sauchiehall Street, West George Street, Buchanan Street, Albert Bridge, Eglinton Street, Jamaica Street, Broomielaw, Bothwell Street, back again to the square.

First prizes were awarded to the drivers of Messrs. R. D. Waddell's Milnes-Daimler; Mr. A. Kennedy's Arrol-Johnston lorry; the United Co-operative Baking Society's Albion lorry and the Scottish Co-operative Wholesale Society's Alley and MacLellan steam lorry.

Second prizes were won by the drivers of Messrs. Stewart and McDonald's Albion van; Messrs. Arthur and Co.'s Albion van; the United Co-operative Baking Society's Halley lorry, and Messrs. G. and J. Weir's Darracq-Serpollet steam lorry.

Third prizes were obtained by the drivers of Messrs. Cooper and Co.'s Albion van, and Mr. J. Gibson's Halley wagonette.

ROAD REPORTS.

SHEPPERTON.—Mr. F. J. Willis, an inspector of the L.G.B., at Shepperton Schools, on Saturday, inquired into an application by the Middlesex County Council to limit the speed of motor-cars under the Motor Car Act, 1908, to ten miles per hour on a stretch of road three-quarters of a mile in length at Shepperton, from Halliford Green to Ferry Lane.

BUCKINGHAM.—The Buckinghamshire county surveyor (Mr. R. J. Thomas), writing on the subject of road tarring and its effects on trees, says:—"I have not heard a single complaint of injury to trees or plants by tarred roads, although we have been using this method during the past five years—increasingly every year—for enabling macadam roads to withstand steel-studded motor tyres, and, as a secondary and less expensive object, for reducing dust."

BARNESLEY.—Between June 23rd and September 1st of the present year Mr. J. H. Taylor, the Borough Surveyor of Barnesley, tar sprayed about two miles in length of roads at a cost of £117. "The effect of tar-spraying the roads saved a considerable quantity of street watering, the estimated cost thus saved being £24 18s. 8d., leaving the nett expenditure £92 16s. 4d., or £46 9s. 2d. per mile of road treated. The effect upon the roads has been good. The improvement of the roads has been well worth the expenditure. Not only has it reduced to a large extent the dust, but, in my judgment, it has improved the surface of the roads treated, and will cause them to wear as macadamised roads fully one-sixth longer than they otherwise would have done."

HAMPTON WICK.—The Hampton Wick District Council has referred to their Highways Committee a proposal to limit the speed of motor-cars in the Hampton Court Road to ten miles an hour.

ORDERS have already been placed for the 1909 model Sheffield-Simplex, among them being one for the Hon. D. Farrar, of Otterburn, near the Northern Border, and one for Major A. E. Bingham, of Retford.

THE Woven Glass Accumulator Company inform us that the former agency for their manufactures has been cancelled, and that they have opened a branch office and warehouse at Dreadnought Works, Phillips Street, Aston Manor, Birmingham, where all business will in future be conducted.

CASES AGAINST MOTORISTS.

SEQUELS TO ACCIDENTS.

Mr. John Pearson, an engineer, of King's Road, Brighton, was charged before Mr. Curtis Bennett at Bow Street (London) Police Court, on the 1st inst., with manslaughter and with failing to produce his motor licence when requested to do so by a police officer. It was stated that on the Wednesday afternoon Mr. Pearson was driving his car in Parliament Street when he knocked down a man eighty-four years of age named James Talbot. With the assistance of a police-constable Pearson put the injured man into his car and drove him to Westminster Hospital. Talbot was there found to be suffering from an injury to his head, and he died the same evening. The case was adjourned, bail being fixed at one surety in £100, which was at once forthcoming.

At Marlborough Street, on the 1st, Cecil Jarrett, 21, a motor-car driver, of Norwich, surrendered to his recognizances before Mr. Plowden to answer the remanded charge of having caused the death of Minnie Miell by knocking her down with a motor-car. Mr. Chamberlain, solicitor, informed the magistrate that an inquest had been held on the woman, and a verdict of "Accidental death" was returned. In the circumstances the Commissioner of Police felt it would be useless to proceed with the case. Mr. Plowden ordered the defendant to be discharged.

£85 IN FINES.

At Camberley, on the 1st inst., Thomas Sopwith, of Cadogan Gardens, London, was fined £2 5s. for an offence under the Motor Car Act. It was stated that he has recently paid in fines and costs over £85 in connection with similar offences.

WHILE THE EMPLOYER'S IN CHURCH.

The story of a stolen Sunday morning ride by Arthur Parsons, chauffeur, who was at one time in the employment of Mr. Benjamin Womersley, of Huby, near Harrogate, was related before Judge Bompas in the Otley County Court the other day. Mr. Womersley, who is a local preacher, was due to take the service at the Burley-in-Wharfedale Wesleyan Chapel on Sunday, January 19th. He drove over from Huby to Burley in his 10-h.p. car, taking Parsons with him. On arriving, he went to the chapel, and gave Parsons 1s. to put up the car at the hotel opposite. Parsons, however, had previously written to a friend at Keighley to meet him at Ilkley. After Mr. Womersley was in the chapel, Parsons drove the car to Ilkley, and gave three men a lift on the way. His friend, however, was not there, and he returned at once. On the way back, he collided with the car of Dr. Bronner, who was driving to Ilkley. A claim was consequently put in by Dr. Bronner against Mr. Womersley. The first claim was for £51 2s. 6d., made up of £46 2s. 6d. for damages to the car and £5 for hire. This was met by the insurance company with whom Mr. Womersley was insured. The claim last week was for £50 for depreciation of car. The whole case turned upon the point as to whether or not the chauffeur was in the employ of the defendant at the time of the accident. It was contended that he was only engaged for a month, and that he received notice on the previous day to leave the following week. Parsons had no authority to go to Ilkley, but was instructed to wait at Burley until 1.30, when his master would be ready to return. His Honour said the drive to Ilkley was entirely beyond the scope of the chauffeur's employment, and therefore the master could not be held to be liable. Judgment was given for the defendant.

BATCHES.

On Saturday penalties to the amount of £81 were inflicted on motorists at Guildford; six convictions were recorded at Morpeth on the previous day. Other places where batches of motorists have lately been dealt with include Newmarket, Bromley, Feltham, Richmond, Wetherby, Cambridge, Christchurch, Forfar (15 motorists fined £24), Tamworth (3), Rugby (4), Liverpool (5), Petworth, and Epsom (5).

A SIXPENNY FINE.

At the Petworth Petty Sessions, John Hare, who did not appear, was represented by Mr. E. H. Staffurth on summonses against him for exceeding the speed limit at Coldwaltham on September 28th, and also for failing to produce his licence.—P.S. Marsh said the speed was 26 miles an hour, and when defendant was asked for his licence he told him he had left it at home. He was fined £3 on the first case, while on the second there was some difference of opinion as to a conviction. It was eventually decided to impose a fine of 6d. and endorse the licence.

WARRANT ISSUED.

At the Oxford City Court on Tuesday a warrant was issued for the arrest of the Earl of Berkeley, of Boar Hill, Wootton, Berks. It was stated that the defendant was summoned on June 26th for having driven a motor-car to the danger of the public. The Earl did not answer the summons, and though several adjournments had taken place the defendant had failed to attend the court.

THE trademark "Made like a Gun" will be very much to the fore during 1909, as the Enfield Autocar Company, Ltd., under their new management, are arranging a very progressive programme for next season. In addition to their standard 18-24-h.p. model, they will market a 10-12-h.p. "Popular" and a 30-35-h.p. car to meet the demand for a high-powered touring carriage. The standard vehicle will have embodied in it several new features, which are likely to attract considerable attention at the forthcoming show.

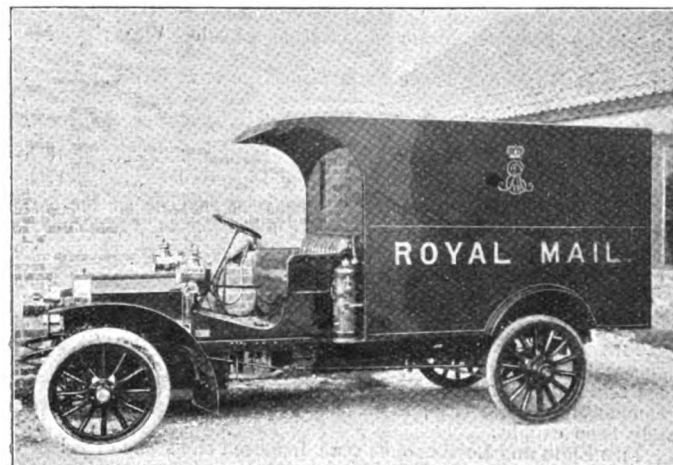
AUTOMOBILE ACCIDENTS.

THE fog which hung over London on the morning of the 1st inst. was responsible for several mishaps in which motor-cars were involved. A chauffeur in the employ of the Darracq Company was killed in a collision between a motor landaulet and a motor-omnibus at the Railway Bridge at Barnes, whilst Mr. A. Rawlinson had a marvellous escape. In the north of London, at Barnet, two motor-cars collided and were completely wrecked, the drivers and passengers all being thrown into the road and sustaining injuries.

At Mortlake on Saturday Dr. Michael Taylor opened an inquest concerning the death of George Charles, the chauffeur, of Edith Grove, Chelsea, who was killed in the collision which occurred at Barnes Common railway bridge on Thursday week. The Coroner said he was unable to proceed with the enquiry because Mr. Rawlinson, the owner of the car, who was sitting inside it, was now in bed from the effects of the injuries he received. A doctor said he would be able to attend in about a week. It was advisable that Mr. Rawlinson should be present when the two men who were on the omnibus gave evidence. They were the only persons who saw the collision. The inquiry was adjourned to Monday next.

As Sir Thomas Lipton was driving on the 1st inst. in his motor-car at Palmer's Green, London, N., on his way from his residence at Southgate to town, a collision occurred between his car and a bicycle ridden by Mr. Walter Cole, who was thrown to the ground. Sir Thomas, who was himself driving, rendered what assistance he could. A medical examination showed that one of Mr. Cole's ribs was broken.

As Mr. Luke White, M.P., and Sir Alfred Gelder were returning home late on Friday of last week in an automobile from a political meeting at Brigg, the car ran into the supports of a telegraph pole near New Holland, owing to the dense fog which prevailed at the time. The car was overturned, and the occupants were thrown out and much shaken. Mr. White and Sir Alfred Gelder stayed overnight at the Yarborough Arms Hotel, New Holland, and crossed the Humber to Hull on the following morning.



The Bridgwater Motor Co., Ltd., have arranged a two years' contract with the General Post Office, to deliver the mails between Bridgwater and Burnham by motor vehicle, and have had the 15-h.p. Mail Van, illustrated above, specially built for the work by the Argyll Company.

THE fatal motor-car accident which occurred at Old Trafford last week was the subject of an inquest held by the Manchester coroner. Miss Beguin, seventy years of age, waited on the kerbstone at the corner of Chorlton Street and Chester Road for a tramcar, and stepped into the carriage way presumably to stop an approaching car, but, finding it was not the vehicle she required, allowed it to pass. She made her way back to the kerbstone, and at that time the motor-car, containing the Mayor of Salford, the Mayoress, the chauffeur, and three others approached, travelling at about five or six miles an hour. When the motor-car reached Miss Beguin she stepped in front of it and was knocked down. She was so severely injured that death took place on the way to the Infirmary. After hearing evidence the jury considered it was an accident, and in returning a verdict of "Accidental death," exonerated the chauffeur from all blame.

THE Crypto Electrical Company, 155 and 157, Bermondsey Street, London, S.E., have a space at the Manchester Electrical Exhibition which opened on Saturday last. They are exhibiting their well-known alternating to continuous current transformer and continuous rotary converters. Also a complete range of alternating to continuous current motors and dynamos. The display is of special interest to owners of motor garages and others interested in the charging of accumulators.

FORTHCOMING EVENTS.

OCTOBER.

- 10th (Sat.).—Walthamstow Motor Club run to Hunsdon.
Auto Cycle Union's Council Meeting at Leamington.
- 11th (Sun.).—First International Road Congress and Exhibition opens at Paris.
International long distance balloon race, starting from Berlin.
- 14th (W.).—Incorporated Institution of Automobile Engineers. Presidential address at the Institution of Mechanical Engineers, by Mr. Dugald Clerk, F.R.S.
- 15th (Th.).—Mr. Knight's Paper at the R.A.C. on "Valveless Engines." Cycle and Motor Trades Benevolent Fund Banquet.
- 17th (Sat.).—Auto Cycle Union quarterly trial—Uxbridge to Banbury and back.
- 24th (Sat.).—Motor Parade and Gymkhana of the Blackpool and Fylde District M.C. at the Agricultural Show Ground, Blackpool.

NOVEMBER.

- 6th (F.).—Invitation Smoking Concert of the Stanley Cycling Club at the Queen's Hall, London, W.
- 13th-21st.—Olympia Motor Show, London.
- 14th (Sat.).—Thirty-third Annual Dinner of the Stanley Cycling Club, Hotel Metropole, London, S.W.
- 18th (Wed.).—Annual Dinner of the Motor Union.
- 20th-28th.—Stanley Show at the Royal Agricultural Hall, London, N.
- 26th (Th.).—400-mile International Grand Prize Race of the Automobile Club of America.
- 28th (Sat.).—Opening of the Paris Motor Car Exhibition.

DECEMBER.

- 23rd (W.).—Speed and reliability trials at Nagpur, Central Provinces.

JANUARY, 1909.

- 22nd-30th.—Scottish Motor Exhibition at the Waverley Market, Edinburgh.
- 26th.—Scottish Motor Trade Association Dinner at Edinburgh.

LIGHTING-UP TIMES—LONDON.

| | | | | | | |
|----------------|----|-----------|-----|----------|-----|----------|
| Oct. 10th—6.17 | .. | 12th—6.13 | ... | 14th—6.8 | ... | 16th—6.4 |
| " 11th—6.15 | .. | 13th—6.10 | ... | 15th—6.6 | ... | 17th—6.2 |

To find the approximate lighting-up time in October for Birmingham 6 minutes should be added to the above times, 2 for York, 8 for Manchester, and 14 for Glasgow.

POLICE "CONTROLS."

THE police have established a trap in the Watling Street, near Tamworth.

CLARENCE STREET, Kingston, has a ten mile limit with an accompanying police trap, in which some well-known motorists have lately been caught.

THE Elgin and Lossiemouth road has been the scene of police trapping operations on several days recently.

THROUGH the village of Harston, near Cambridge, motorists are being timed almost daily.

ON the Paignton road, between Longcombe and Berry Pomeroy, is a measured half-mile utilised by the police for catching speedy drivers.

AT Bromley (Kent) Common and in the main road at Sidcup motor controls have been established and are in frequent working order.

THE Epsom police trap has been fully employed at the week end.

TRAPS have been established on the highways between Forfar and Brechin; Kirriemuir and Cortachy; Arbroath and Forfar; between the fourth and third milestones from Brechin; and between Kirriemuir and Glenisla, all leading to Forfar Sheriff Court, where fifteen motorists have just been fined an aggregate of £24.

PUBLIC SERVICES.

THE Llandaff and Dinas Powis Council have given licences for the motor-buses from Cardiff to Llandaff to run through their territory.

MOTOR taxicabs have been placed on the streets of Glasgow by the Provincial Motor Cab Company, Ltd.

MR. F. F. WELLINGTON is turning his attention and abilities to the benefit of some English motor manufacturers, and we shall probably be able to shortly announce his new position.

MESSRS. FRISWELL, LTD., write:—"To save any misunderstanding, we beg to inform you that although the Societe anonyme des Automobiles Peugeot have opened a depot in London on their own account, and in future will do their wholesale business direct with the English and colonial agents, our position will in no way be altered, and we shall in future supply Peugeot cars and hold in stock, ready for immediate delivery, all the latest model cars produced by the Peugeot Company."

BUSINESS NEWS.

CHENARD-WALKER (England) have opened a new depot at 34, Shaftesbury Avenue, London, W.C., where examples of the new 8-9-h.p. single-cylinder car can be inspected.

MESSRS. EASTON AND MELVILLE, LTD., 85, Shaftesbury Avenue, W.C., have just completed some very exhaustive tests with a view to finding a suitable lubricant for gear-boxes, and, under the name of Gear Ilo, are introducing a special preparation which is claimed to possess all the advantages of oil and grease without their disadvantages. It is most economical in use, and preserves the gears, while the fact that the price comes out somewhat lower than that of a good grease is another point in its favour.

ON Wednesday and Thursday an auction sale of the plant and machinery of the Iden Motor Company, Ltd., at Coventry, was conducted by order of the liquidator.

THE Darracq team in the "Four-inch" race used Pratt's motor spirit, as did six out of the first eight cars that completed the ninth round.

IN addition to making fastest time of the day at the Sheffield A.C. Hill Climb, Mr. Albert Farnell's 30-h.p. Daimler secured the Harvey-Foster Challenge Cup and the Club Gold Medal.

THE winding up of the Brooklands season proved victorious for Shell motor spirit; all the motor vehicle events were won on the same.

OF the cars that finished the Four-Inch Race all save one used Vacuum Mobiloids. These well-lubricated cars included the Darracq team and the vehicle that made the fastest lap of the day.

IN conversation with Mr. Bignall, of the Acre Rubber Company, Ltd., last week, we gathered that his company's material and methods are still meeting with the satisfaction of clients. As an instance, it may be mentioned that the manager of the Aylesbury Motor Company, writing on the 21st ult., stated "The cover (810 by 90) you retreaded for us some time ago has now run about 5,000 miles, and we hope the tyre will last some considerable time yet. The outside has very few cuts in it."

ALL the cars that finished the Four-Inch race were fitted with Rudge-Whitworth wheels, and of the twenty-seven cars that had Dunlop tyres they obtained the first seven positions, as well as the ninth.

A POOR earth connection in the primary circuit of an accumulator system of ignition is often the cause of trouble. The connection should be well made in a place where it will be free from grease and oil and so securely fastened that it will not jar loose, as a connection which is partially loose and sometimes making a good contact and at other times practically none will cause a most erratic action in the engine.

ALTHOUGH motorists frequently blame the makers for the bad working of their acetylene head lights, the fault is more often due to careless cleaning and charging. When a lamp gives trouble the owner should make sure that he is following the correct instructions as to its method of working and that all parts of the generator have been thoroughly cleaned. If, after these points have been carefully attended to, the apparatus does not work properly, the advice of the makers should be sought.

TO CORRESPONDENTS.

All communications intended for insertion in this Journal or relating to Editorial matters should be addressed to THE EDITORIAL DEPARTMENT, MOTOR-CAR JOURNAL, 27-33, Charing Cross Road, London, W.C., and must be written on one side of the paper only. Letters must in all cases be accompanied by the name and address of the writer, as no notice will be taken of anonymous communications.

To insure insertion communications and contributions must be in the Editor's hands by Tuesday forenoon of the week in which the same are intended to appear. Disappointment may be caused by non-compliance with this rule, and to avoid this earlier receipt, if possible, is necessary.

Photographers, both professional and amateur, are invited to send photographs of current events or of motoring scenes and incidents. The fee, if any, required for reproduction should be stated in each case, otherwise no liability will be accepted.

The Editors cannot undertake to return MSS. or drawings, although every effort will be made to do so in the case of rejected communications. Where such are regarded as of value, correspondents are requested to retain copies.

The Editors do not hold themselves responsible for the opinions expressed by their correspondents, or for statements and facts which do not appear in the editorial columns.

The Editors and Publishers beg also to state that they will accept no responsibility for unsolicited contributions, even if used, unless payment for same is directly specified in forwarding, and the terms arranged before publication.

THE Motor-Car Journal.

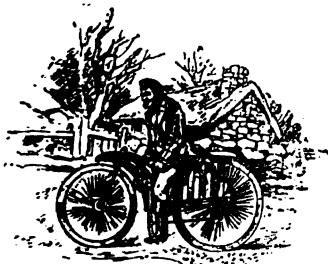
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COMMENTS.



END EAVOURS are being made by the leading associations concerned with motoring and with cycling to bring about a good feeling between the two sections of users of the roads. Each has probably its grievance against the other; but it would be well if something could be done to present an united front on the road question and kindred matters which concern both motorists and cyclists. The latter can do something to

win the respect of the former by keeping well to the proper side of the road and by being content with a reasonable width of the highway when journeying on club runs. Most cyclists have apparently realised the danger of "hanging on" to motor-cars, but an official warning from the central cycling organisation should occasionally be issued.

Rounding Corners.

FOLLOWING the verdict of the jury which inquired into the death of the chauffeur whose car collided with a motor-bus in the fog near Barnes Common a few days ago, the jury added a rider suggesting that a speed limit of twelve miles per hour should be enforced on all motor-cars within a dozen miles of Charing Cross. Further, they recommended that the District Council should widen the narrow road in which the accident occurred. With this latter clause we are far more in accord than with the earlier suggestion. It has been proved over and over again that speed in itself is not necessarily a risk, and that a limitation to twelve miles an hour would by no means eliminate the dangers of the roadway. Much can be done to add to the safety of the highways if the District Councils would have a systematic and thorough inspection of the various corners within their area, with a view to rendering them safer to both pedestrians and drivers alike. Although this is not so urgent in urban and rural districts, there are many places where the advice could be usefully followed.

The Valveless Engine.

THE paper by Mr. C. Y. Knight on the Valveless Engine, which was read to an interested audience at the Royal Automobile Club on Thursday, is an important contribution to automobile literature. Mr. Dugald Clerk, F.R.S., who recently saw the engine at the Daimler works at Coventry, was in the chair, and introduced the author to the representative gathering. Mr. Knight told how he had obtained practically all the technical works on internal combustion engines as well as copies of all the patents issued in America covering such motors and their valve gear. These he studied in order to steer clear of beaten paths. Two years were spent in connection with the problem before any idea worthy of his consideration occurred to him. The story of the introduction to the Daimler Company is interesting. A mutual friend of both Mr. Manville and Mr. Knight told the former about the latter's engine. Mr. Manville asked for a catalogue, which was sent in the ordinary routine

way. This seemed to interest the recipients; and now Mr. Knight has publicly declared his obligations to Mr. Manville for "discovering" him, and to the Daimler Company for giving the facilities needed for refining what he termed "a diamond in the rough." Occasion was taken of the opportunity of the reading of the paper to announce a six-cylinder Daimler, which will be under test upon the road within a few weeks. The first consignment will be sent to enthusiasts in the United States.

The Inconsiderate Driver.

THE scheme of the Royal Automobile Club for dealing with inconsiderate drivers, in connection with which we would emphasise the view given by the Hon. Arthur Stanley, M.P., in our columns last week, is now getting into shape. An appeal may again be made to the Club to exercise its influence not merely by passing resolutions at committee meetings, but by the expulsion from membership of those whose heedless disregard of the rights of users of the road brings the whole motoring community into disrespect. The time for vague declarations has gone by, and motorists generally are hoping that the Club will now proceed to take action against known offenders when such steps are necessary.

Doctors' Cars.

ALTHOUGH there is not likely to be any fresh legislation with regard to motoring during the present Parliamentary year, an assurance conveyed in these columns some weeks ago, confirmed by Mr. Arthur Stanley, and subsequently given by some of our contemporaries, there is one little matter we do not propose to allow to be obscured. Nowadays doctors are becoming so dependent upon the motor-car in their professional work that the time has come when automobiles owned by those who minister to the sick and suffering might well be placed in a different category to those solely engaged in pleasure work. It is evidently only a matter of equity that such distinction should be made, and although we have not heard lately of the Committee of Medical Men that was prominent at the time of the Royal Commission, it is to be hoped that it is still organised on lines that may make effective protest in case of need. Accepting, then, the principle that doctors' cars should have special treatment, what should be the detailed scheme of taxation for such vehicles as compared with those in ordinary use?

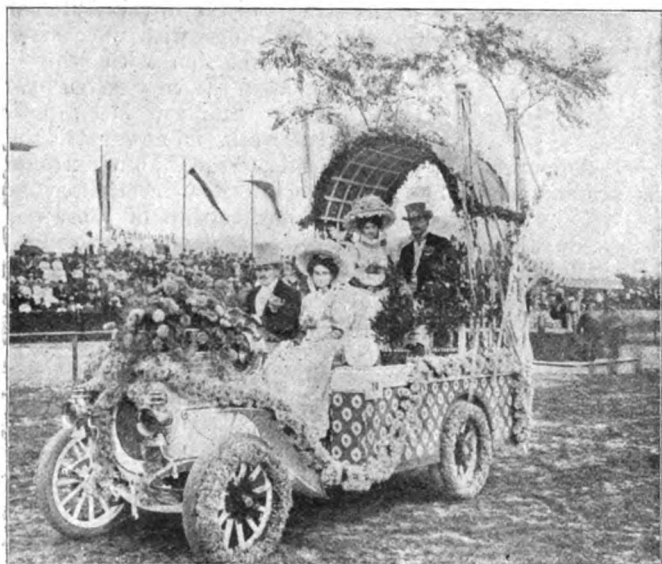
Pavement Posts.

AN accident which has occurred in Cornhill—one of the generally crowded streets of London—owing to the presence of a pavement post near the kerb, suggests the desirability of securing something like uniformity in connection with these posts. As was pointed out at the inquest, some of these are flush with the kerb, while others are further into the pavement. The question of the adoption of these posts, as well as of centre standards and other such like devices in the streets of London, is one that deserves the earnest attention of the Corporation and of the City authorities. We are glad to notice that in Cannon Street the experiment has been continued in connection with the electric lamps in the centre of the road

way, these being suspended from wires on the buildings instead of from posts located in the roadway, thus obviating the presence of posts in the centre of the road.

The Proposed Main Road.

MUCH attention has been given to the suggestion emanating from the Salvation Army headquarters with regard to making a new main road through a large portion of the country in order to find work for the unemployed. The idea is one that is already finding much commendation; but it has some disadvantages in the fact that we require a roadway constructed with a view to meet the new traffic. Work that is intended to mitigate the horrors of unsocial conditions is not always the most sound; and we have in mind some schemes of public improvement similarly initiated that have proved anything but satisfactory after a few years. Therefore we trust that should anything be done with the proposal there will be a sufficiency of skilled labour to secure that the roadway shall be a permanent as well as a useful addition to the good roads of the country.



One of the Cars which took part in the recent flower fete organised by the Wurttemberg Automobile Club.

Trial Runs.

A QUESTION of interest both to buyers and sellers of motor vehicles has been heard in the Liverpool County Court, when a well-known firm of automobile dealers sued a gentleman for the cost of hiring a car on what was said to have been a trial run. The defendant had, through a second party, made known his intention of purchasing a car, and after a trial run from Liverpool to Blackpool and back had expressed himself as very well satisfied with the vehicle. He refused, however to purchase the car, and was subsequently sent a bill for the cost of the hire, which he declined to pay, hence the action. Judge Shand held that the plaintiff had failed to satisfy him that an arrangement had been made that the hire of the motor-car was to be paid for if it was not purchased by the defendant, therefore he gave judgment in favour of the latter. This question of trial runs is one that has considerably exercised the mind of the trade, and although it is not so great a business as in the earlier days, when the charm of novelty was associated with the motor-car ride, there are still people who, under the guise of prospective purchasers, secure free rides at considerable expense to the motor trade. The advisability of having some clearly defined arrangement is instanced in the case to which we have referred.

Speedometers.

FOLLOWING upon a letter of complaint which had been sent by the Scottish Automobile Club with regard to the speed of one of their vehicles in a village outside of Glasgow, one of the leading agency firms in the West of Scotland have arranged to fit speed indicators to every one of their vehicles used for service demonstration and hire purposes. They are exhibiting placards in their workshop to the effect that any excess of speed beyond the rates laid down and applicable to particular places which are constantly traversed by their cars will entail instant dismissal. The Scottish Club are directing the attention of other agents to this very commendable arrangement, and we would suggest its adoption by motor traders in other parts of the country beyond the sphere of influence of the Scottish A.C.

Bath's Leisurely Pace.

THE bath-chairs of Bath are still to be allowed to pursue their slow progress across the highway without having their speed accelerated by the competition of motor-cabs. There is a leisurely air about some parts of the old town, despite the excellent system of motor-buses and trams, and this has narrowly escaped destruction. Application was made to the Town Council that four taxi-cabs should be licensed to ply for hire in the city for three months. The hackney cab proprietors, like the silversmiths of Ephesus, arose in public meeting and appointed a deputation to go along to the Guildhall and raise their voices in protest against the proposed innovation. Their spokesman was able to say that taxi-cabs were not wanted; that the visitors protested against the present pace of traffic in Bath; what they would do if it was quickened by motor-cars—well, he couldn't tell. He made the declaration that "there was too much machinery already running in the streets." That settled the matter in a few minutes. The matter was deferred for six months—when the hackney cab proprietors will again appear, and probably they will say the same things again.

The Cost of Roads.

IN connection with the International Road Congress which has been held at Paris during the past week, the following computation by Lord Montagu as to the cost of British roads is of interest. The average cost of the 27,556 miles of main roads in Great Britain last year was £73 per mile, or an amount equal to £2,011,588 for the total mileage. It is calculated also that there are about 117,000 miles of good secondary roads, which have to be kept in order by district councils, urban and rural. If we take the cost of these at the low figure of £30 per mile, the expense of upkeep amounted to £3,510,000. If these two figures are added together, £5,521,588 is the total annual cost of the best and second best roads in Great Britain.

A Councillor's Protest.

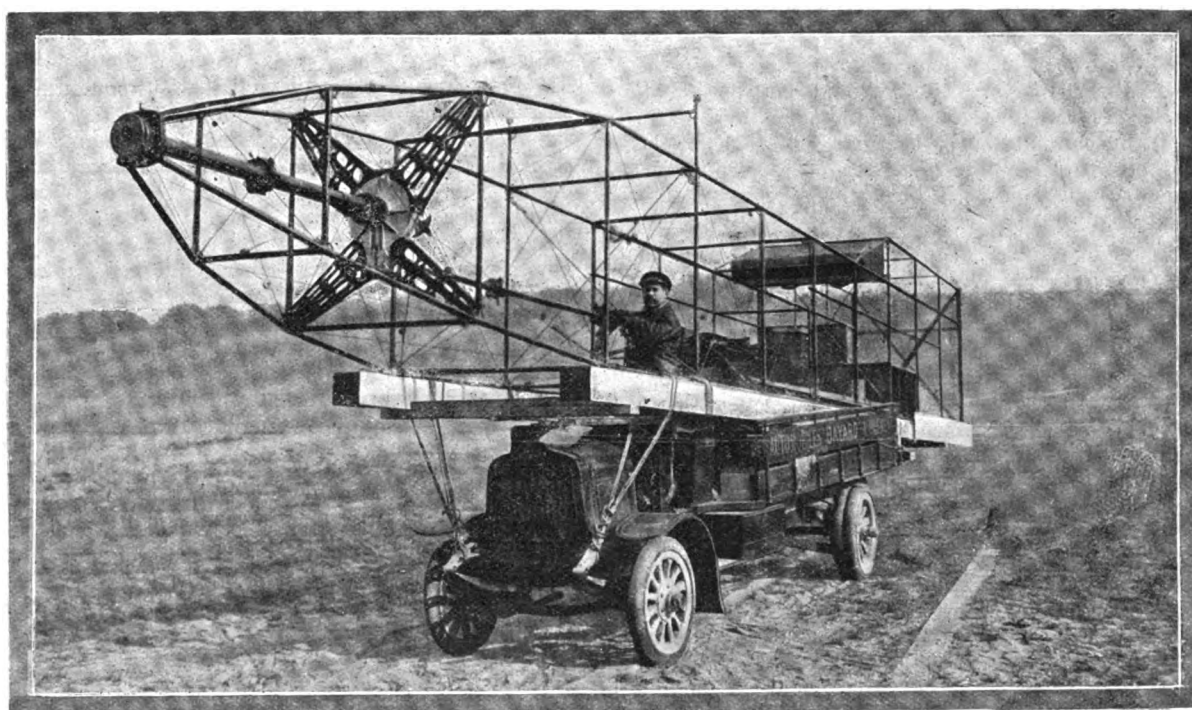
At the Wimbledon Town Council, Councillor Edward Alphonsus Purcell tendered his resignation because of a recent conviction for negligent motor driving. He said in a letter he had been a most considerate user of the roads and careful of the rights of others, but, he added, "I am now branded as a road hog and my licence endorsed for an offence of which I am not guilty. As a ratepayer, I must protest against the police acting as prosecuting counsel for any corporate body. As a result of these proceedings I am practically deprived of my right in the civil courts, although I believe I have a good case. I must protest against my time and that of other people being taken up by being summoned before a Bench of magistrates, some of whom are physically unfit to deal with the cases that come before them. As a result of this, I am mulcted in two days' costs for a case that ought to be finished in less than half an hour." Several members having expressed regret at the action of Councillor Purcell, the Council decided to accept the

resignation, and the clerk was ordered to arrange for the necessary election.

Motor-car Imports and Exports.

A NOTABLE increase took place during September in the importation of foreign motor-cars and parts into this country. Of complete cars 270 were imported during the month, of the value of £104,705. The number of chassis imported was 333, valued at £113,192, while parts were responsible for £149,661, giving a combined total for September of £367,558, as against £277,391 in the corresponding month of last year. The gross imports of cars (3,300 in number), chassis (2,546), and parts during the first nine months of the current year amounted, however, to only £3,356,154, as contrasted with £3,610,826 in the corresponding period a year ago. Turning now to the section relating to the exports of British automobile productions, these again show a slight decrease—from, in the aggregate, £136,748 in September, 1907, to £110,788 last month. Altogether 205 complete cars (£69,701)

correctly points out that at the present moment the roads are in a transition state. Many counties have steam rollers at work, and in Co. Down, Antrim and Armagh there are some splendid roads in which those who own motor-cars will delight. The author is also hopeful of Co. Dublin, Tipperary, Limerick, Waterford, Cavan and Monaghan, the roads in which are improving rapidly. Co. Fermanagh has also some excellent roads, and those of Kerry, Donegal and Connemara are naturally of good quality. At the same time it is only right to point out that in these counties the average main road is very bumpy wherever there is heavy traffic—a fact that the cyclist has got over by using the footpath, to which delight the constabulary usually give no opposition. For those who contemplate spending any time in Ireland four special routes are planned out, saving the time in which the visitor can do the same. The gradients of the ordinary roads seldom exceed one in six, while, should the motorist wish to find in Ireland something like the Devil's Elbow or Amulree Hill, he will have plenty of danger at Glengesh Hill, in Donegal, with its double twist and gradient of one in seven. The mountain road from Killarney to Waterville,



The Frame of the Dirigible Airship which the Clement-Bayard Company are building. The balloon will be of exceedingly novel shape, while the motive power will be supplied by a 120-h.p. four-cylinder engine.

and 57 chassis (£12,497) were despatched from this country during September, as well as parts to the extent of £28,590. The gross shipments during the nine months ending with September are returned at only £883,968, which contrasts with £935,754 in the similar period of last year.

The Roads of Ireland.

THE many events in connection with automobilism that have taken place since the memorable Gordon Bennett race in Ireland have brought that country into prominence with motorists. Their progress, however, has been hampered by the want of such Contour Road Books as have been compiled for England and Scotland. Now, however, Mr. H. R. G. Inglis has finished his survey of Ireland, in which the County Surveyors rightly gave him much assistance, and the Contour Road Book of Ireland has been published by Messrs. Gall and Inglis. The usual features of the Contour Book have been adopted, and, so far as we have tested the information with local knowledge, every endeavour to secure accuracy has been successful. Mr. Inglis

the coast road from Waterford to Dungarvan *via* Tramore, or that from Draperstown to Plumb Bridge fairly bristle with dangerous hills, all of which are notified and described in the meritorious work before us.

THE Marquis of Ripon, whose resignation from the Cabinet is announced, has been a motorist for several years, and is a vice-president of the North Yorkshire A.C.

LE SOCIETE ANONYME DES AUTOMOBILES PEUGEOT have opened a branch of their own at 46, Knightsbridge, London, S.W., for wholesale and retail business in the highly-reputed Peugeot cars.

THANKS to the kind invitation of Dr. and Mrs. Cropper, of Mount Ballan, Chepstow, a very pleasant time was recently spent by some fifty poor cripples of Newport, Monmouthshire. The cripples were taken by train to Portskewett, whence they were conveyed in motor-cars and brakes to Mount Ballan. Cars were kindly lent by Mr. C. D. Phillips, Major Watts, Mr. Alexander Simpson, and the Monmouth Motor and Cycle Company.

Should the Tourist Trophy Race be Repeated?

THE EFFECT OF THE "FOUR-INCH" RACE—LONG v. SHORT STROKE ENGINES—SUGGESTED NEW REGULATIONS.



TO the various views with regard to the future of the Tourist Trophy Race given in our last issue we are now able to add those of a number of other well-known members of the motor trade. So far as our Symposium has gone there does not appear to be quite the same unanimity with regard to the discontinuance of the Tourist Trophy contest as exists in connection with the 2,000 Miles Trial, the majority of our correspondents being in favour of a repetition of the event. All are, however, apparently agreed that some revision or modification of the rules is desirable, the opinions in this direction being somewhat varied in character.

A SPORTING EVENT FOR PRIVATELY-OWNED CARS SUGGESTED.

Mr. Percy Richardson, the managing director of the Sheffield-Simplex Motor Works, Ltd., "would not be at all surprised to find the Four-Inch Race making itself evident in the design of touring cars, inasmuch that longer strokes to the engine will be adopted than heretofore, so as to get a more powerful engine under the same length of bonnet. Whether this is going to be a healthy alteration or not it is very difficult to say, and practice only will prove it; but I should be inclined to think that it will not be entirely developing in the line of the requirements of the majority of motor users, as it will complicate the question of the balance and niceness of running, resulting, I think, in sacrificing these very essential points to that of securing maximum power from a small sized bore. I am not in favour of either a very long stroke or a very short one, but rather a medium length enabling perfect balance, smoothness of running, with quick acceleration to be obtained. In engines of the size of the "Sheffield-Simplex," having $4\frac{1}{2}$ in. bore, I have found that the same stroke, viz., $4\frac{1}{2}$ in., is a very good combination.

As a sporting event for privately-owned cars only, and financed privately, I would like to see the Tourist Trophy race made an annual event. It greatly depreciates it holding it as purely a commercial affair. Should the Tourist Trophy race be held again, I think the regulations ought to be such that both the bore and the stroke of the engine should be fixed, and also the maximum weight of the car, and that the size of the engine should be such as to prevent the possibility of exceptionally excessive and dangerous speeds. When all is said and done, it is not pure speed in motor racing that makes it so exciting, but more a question of comparison between the speeds and the driving of the various cars, and my contention is, that if all the cars were compelled to be practically the same as regards the general determining facts, viz., the size of the engine and the weight of the car, it would then be brought down to a true sporting basis, and the result would rely on the quality of the car and the driver equally."

MR. JARROTT FAVOURS A THREE-INCH RACE.

Mr. C. Jarrott is another well-known member of the motor trade who does not "think the result of the Four-Inch Race will have a very great effect on the general design of touring cars, but I do think the manufacturers, in preparing the cars for that event, have learned some very valuable lessons, the result of which will be seen in touring models next year. My views on the long v. short stroke engine question are that extremes in either direction are bad. An excessively short stroke engine is inefficient, and an abnormally long stroke engine—although it may be powerful—is nevertheless hardly suitable in the hands of an ordinary user. I am not in favour of the Tourist Trophy Race being repeated in 1909, but I think that a race similar to that held this year, but confined to an engine having a 3-in. bore,

and with a maximum and minimum stroke fixed, would be very beneficial. If the race is run, I think the formula to be adopted for the engine size should be that recently suggested by the Society of Motor Manufacturers and Traders."

PREFERS SPEED AS THE ONLY FACTOR IN A RACE.

Mr. E. W. Lewis, of the Deasy Motor Car Manufacturing Company, Ltd., writes that he is "quite in favour of the Four-Inch race being held another year, as I consider that it has done more good than any other competition ever held by the R.A.C. The regulations were delightfully short, and the manufacturers' organisers had practically nothing to do compared with the amount of work necessitated by such an event as the 2,000 Miles Trial. There has been a great deal of discussion on the subject of long v. short stroke engines, but the effect of the race has helped to teach us very little on that subject. The long stroke engines undoubtedly give more power over the short stroke, but to my own knowledge an engine with a medium stroke is out and away the best. I think the manufacturers taking part in this year's race learned a great deal more about chassis construction than engine design, as a lot of those engines that had abnormal strokes and valves apparently gave no more power than the engine fitted with a normal stroke, say of $5\frac{1}{2}$ in., and the valves just over a third of the cylinder diameter. Taking the race on the whole, I should be extremely pleased to see it repeated, and I think a competition where speed is the only factor has more effect on the design of a car than a contest where particular stress is laid upon one point, such as petrol consumption. The speed race tends to improve the whole mechanism of the car, as every portion bears upon the result, whereas in the case of a petrol consumption trial the whole of the energy of the manufacturer is expended upon reducing the consumption, which, as a matter of fact, is of very small consequence when it is reduced as far as half miles, which is frequently done, and at the same time sacrifices a sweetly running engine. You will gather from the above views that I am entirely in favour of a repetition of this year's race being carried out in 1909."

THE RACE UNNECESSARY.

Mr. J. D. Siddeley, the general manager of the Wolseley Tool and Motor Car Company, Ltd., writes that "the views of this company in regard to trials, certainly for the coming year, are to the effect that such events are unnecessary; they lead to the expenditure of very large sums of money, the return from which is exceedingly doubtful." As regards the questions of the long v. short stroke engine and the probable effect of the Four-Inch Race on the general design of touring cars, Mr. Siddeley has sent us a copy of a letter he recently sent to the "Times" Engineering Supplement, in which he remarks that "there has been at all times during the history of the light internal combustion engine a conflict between designers on the question of length of stroke, and up to within a comparatively recent date the question had simply resolved itself into the following:—The longer the stroke the slower the speed of the engine; thus, with the piston speed remaining the same, the power output was fairly constant. To-day, however, designers have learnt that excessively light reciprocating parts can be utilized in the internal-combustion engine so long as wear is an entirely secondary consideration; therefore by designing a motor on these lines greater piston speeds are immediately possible, with a consequent increase in power, so much so that, whereas formerly it was only possible with a short-stroke engine to run at 2,000 r.p.m., it is now possible to run a long stroke engine at the same number of revolutions, it being also necessary, in order to gain this effect, to increase the diameters of

the valves to a very extreme degree. This development is, of course, extremely interesting, but it logically follows that, whereas it is possible to obtain 46-h.p. out of an engine of four cylinders, 4 in. bore by $4\frac{1}{2}$ in. stroke, when the stroke is extended to 6 in., $6\frac{1}{8}$ in., or $7\frac{1}{8}$ in., with the same number of revolutions, the power must naturally be very largely increased, such increases being, to all intents and purposes, almost proportional to the length of stroke. It follows that with the increased power the car itself cannot be light, and, in the writer's opinion, this power has not been obtained in the best manner. A more normally proportioned engine would be better in every respect, and when considering the best form in which to obtain power in a car, regard should be had to durability, comfort, smoothness of running, and general handiness.

"The length of stroke affects the comfort, for it can almost be accepted as a truism that, within certain reasonable limits, the shorter the stroke the greater the comfort, provided always that the motor is sufficiently powerful for the purpose for which the car is required; and it should not be forgotten that very high piston speeds, with very large valves, tend to increase the noise. As regards smoothness of running, there is no question that practical experience with the reasonably short-stroke motor has proved that it is far more comfortable and pleasanter to control than the long-stroke variety. Then, again, the powerful small-bore, long-stroke motor, with very high piston speeds, is quite out of the question, for in order to obtain high speed the carburettor must be adjusted in such a way that it is practically impossible to run the engine at the reasonable speed required for the ordinary motor; in fact, the normal number of revolutions of a motor as used to-day is more in the neighbourhood of 600 than 1,000. It will thus be seen that, whilst certain facts have been brought to light by this race, and whatever temporary effect it may have in unsettling the minds of the public on the question of the type of motor best suited for their purposes, the knowledge gained is not likely to have any serious bearing upon the design of the ordinary motor-car, which to-day rests upon a reasonably solid foundation, based upon considerable experience and the outcome of many experiments."

AGAINST ROAD RACING OF ANY KIND.

Another firm of motor-car builders, who, however, do not wish their name mentioned, have written us to the effect that they are certainly not in favour of the race being held again next year; in fact, they are against road racing of any kind. They do not think that the Four-Inch Race will have any beneficial effect on the motor trade, nor very much on the general design of touring cars. "Many will be going in for four-inch bore engines after such publicity being given, and they will be greatly disappointed that they do not get anything like the horse-power they heard talk of in the race."

The "Morning Post" publishes an article which is declared to be a declaration of the policy of the Unionist Party, in which the following reference appears with regard to automobilism:—"Motor vehicles should contribute by taxation more largely to the revenue. The sums derived from this source should be allocated to the maintenance of the roads. At the same time the experimental legislation now in force as regards the speed limit &c., should be revised in the light of experience, in the interests both of motorists and of the public."

THE BOYNE CYCLE COMPANY, of 38, Shop Street, Drogheda, have lately extended their plant, and are now in a position to undertake all classes of motor repairs. In connection with the inspection pit they have built, a useful arrangement has been adopted by means of which the employment of any light therein, with its consequent danger, is obviated. The pit is fitted with plate-glass side wings, which can be lifted up to any angle and reflect the light from above on any part under the car, even at night time, as the gas jets of the workshop are so arranged that the wings take up artificial as well as day light. They are made narrow, so when fully extended they do not seriously reduce the capacity of the pit.

CONTINENTAL NOTES.

The International Road Congress.

The first international Road Congress, convened under the auspices of the French Ministry of Public Works for the purpose of obtaining an exchange of views on the part of the most competent authorities in different countries concerning the best means of adapting roads to the conditions of modern traffic, was opened on Monday morning at the Sorbonne, Paris, by M. Barthou, Minister of Public Works. The response to the invitation of the French Government has exceeded all expectations, applications for seats at the Congress numbering over 2,250, of which 300 were from Great Britain. In his inaugural address M. Barthou said he felt the urgent necessity of dealing with this subject, and he pointed to the appropriateness of discussing it in a country which had taken the lead in the motor industry, and possessed a system of incomparable roads. Referring humorously to the progress of aerial locomotion, the Minister remarked that, pending its universal application, terrestrial highways required that care should be taken of them, and therefore he cordially welcomed the Congress. In presence of the immense increase of wear and tear of roads due to the introduction of motor vehicles, all the resources of science were needed to prevent their deterioration. The dust problem, too, must be seriously faced; there would be universal gratitude awaiting the labours of the congress if they resulted in the discovery of a practical solution.



The Road Mender.—Facsimile of the card issued in connection with the International Road Congress.

The delegates of the various nations responded, and Mr. H. P. Boulnois, of the Local Government Board, in speaking for his British colleagues, anticipated valuable lessons from French road-making. Alluding to the problems to be considered, he said that a traction-engine required a paved causeway, a bicycle a track like a billiard table, and a motor-car a road all to itself. It was easy to make a dustless road; but the question was how much would it cost? Later in the morning the exhibition of road materials which has been organised in the Tuileries Gardens was opened. The display comprises all kinds of appliances and materials connected with the construction and maintenance of roads, as well as specimens of pieces of roadway treated in various ways which have withstood heavy traffic for several years without appreciable damage.

Aeronautical News.

During the past week Wilbur Wright has made a number of flights with passengers on board at the Auvours camp, near Le Mans. Among those who went up with him on the 8th inst. were Major Baden-Powell, Mr. Frank Butler, Mr. Griffith Brewer, and the Hon. C. S. Rolls. His longest flight to date with a passenger was made on Saturday, when his machine remained in the air for 1 hour 9 min.—The Managing Committee of the Aero Club of France at its last meeting decided to award to the brothers Orville and Wilbur Wright its grand gold medal for the year 1908.—The "Auto" has just offered a prize of £480 to the first aviateur to fly from the experimental ground at Issy-les-Moulineaux across Paris to the Place Bastille.—The municipal authorities of Nice have voted a sum of £400 as

a prize in the Grand Prix d'Aviation which is to be held during the forthcoming season.—An international competition of flying machines is to be organised in connection with the electrical exhibition which is to be held at Brescia, Italy, in September next year.

British Motorists in France.

Recent British visitors to France with their cars include Mr. Powell (40-h.p. Daimler); Mr. Bradford (18-h.p. Daimler); Lord and Lady Haversham (20-h.p. C.G.V.); Mr. Messel (45-h.p. Charron); Lady Cunard and Mr. and Mrs. A. M. Huntingdon (75-h.p. Mercedes); Mr. and Mrs. Mitchell (30 h.p. Daimler); Mr. B. Trockmorton (45-h.p. Mercedes); Mr. Hugh Agnew (24-h.p. Sultan); Sir Henry Norman (40 h.p. Berliet); and Mr. and Mrs. Meissel (35-h.p. C.G.V.)

The 1909 Grand Prix Races.

The Sports Committee of the A.C.F. has submitted its proposal for the rules to govern next year's Grand Prix Race. The restriction proposed is 140 mm. as against 155 mm. this year, and the suggested weight is 900 kilos as compared with 1,100

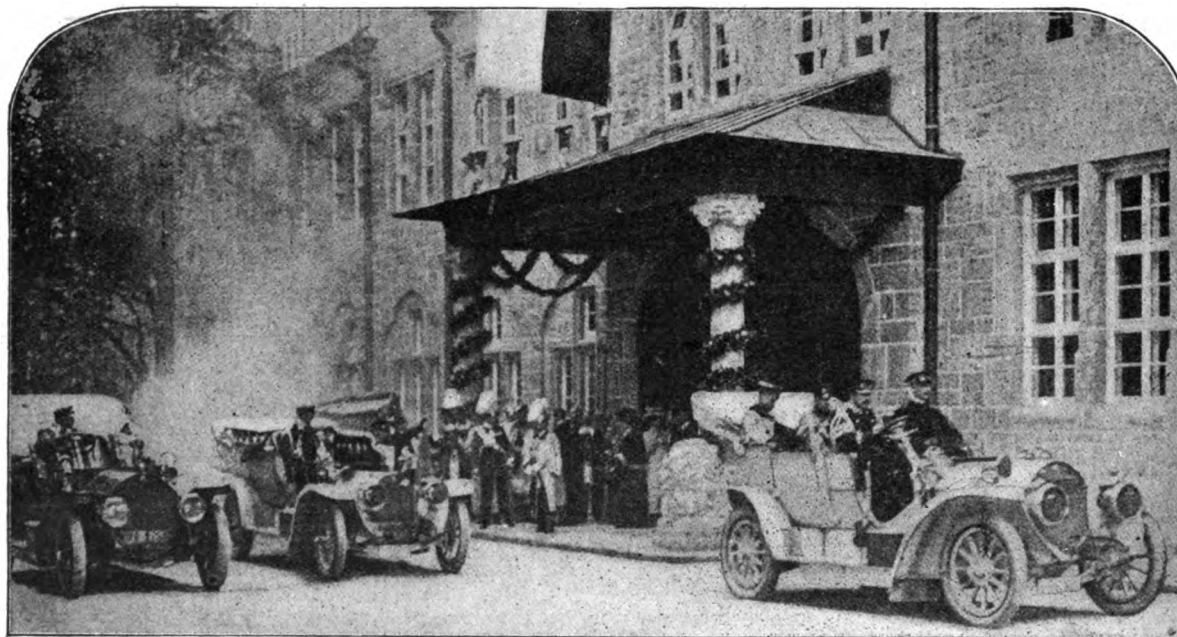
the road, forming a paste with the road material which composes it. The paste, being impermeable to water, is quite hard, and, according to the inventor, resists disintegration for a long period. It is reported that the District Administration of Bridges and Highways intends to apply this method of tarring to some of the most frequented portions of the roads in the neighbourhood.

Motor Vehicles for Tropical Countries.

The German Daimler Company have just completed at their works at Marienfelde, near Berlin, a number of five-ton petrol lorries for use in German East Africa. A feature of the vehicles is that in addition to a radiator of unusually large size the dashboard is made in the form of an extra water tank, experience with automobiles in tropical countries having proved the necessity of an extra supply of water for cooling purposes.

A French Motor-Racing Track.

The Automobile Club of France recently appointed a committee to examine the question of constructing a special motor-



The Visit of the Grand Duke of Sachsen-Weimar to the new University at Jena, Germany.

kilos. The matter will be finally settled at the conference of delegates of national automobile clubs, which is to be held in Paris on the 19th inst., when a lengthy discussion is expected to take place. The question of allowing detachable wheels to be used has not yet been settled. For the 1909 Grand Prix des Voiturettes little change is proposed, single-cylinder cars remaining, as before, at 110 mm. bore, two-cylinders being increased from 78 to 80 mm., and four-cylinders from 62 to 65 mm.

Motor Vehicles for Postal Work.

A notable extension of the employment of motor vehicles in connection with postal work is to take place in Nuremberg, Germany, at the beginning of December next, when three 16-h.p. and six 28-h.p. vans are to be put in service for the transport of letters and parcels between the various sorting offices and the railway station.

Dust Laying Experiments in France.

A number of interesting experiments in dust laying have recently been made in the suburbs of Toulouse by M. Francon. The new process consists in applying several layers of liquid tar upon the road and immediately afterwards applying fire to them. Under the action of the heat the tar penetrates the surface of

the racing track. The committee, of which the president is the Marquis De Dion, has visited several possible places, but seems to be most satisfied with some land near the military camp of Ruchard, on the banks of the river Vienne, near its junction with the river Loire, where a track can be constructed 20 or 30 kilometres long, with straight runs of 8 to 10 kilometres. The track would not be difficult to construct, since there are natural embankments at the ends, which would need little alteration.

Miscellaneous Items.

The authorities of the municipal central electric lighting station in Copenhagen have lately acquired a 5-ton petrol motor tip-wagon, which is to be used for the transport of coal from the docks to the generating station.—Twenty-nine entries have so far been received for the trials of industrial motor vehicles which the Austrian Automobile Club is holding from the 20th to the 31st inst.—The German Sea Fishery Union, in conjunction with the German Society of Motor Manufacturers, is organising a competition of motors suitable for fishing boats. Full particulars can be obtained from the Deutsche Seefischerei Verein, Berlin, N.W., 6.—So far about thirty entries have been received for the Chateau Thierry hill-climbing competition, which is to be held on Sunday next.

GOSSIP FROM PARIS.

THE Anjou circuit is not yet officially designated for next year's A.C.F. Grand Prix, but there is little doubt about its being chosen. All the Communes through which it passes are unanimous in supporting the idea, and the Sporting Committee of the French Club shows a marked preference for it over all the numerous other proposals it has examined. The race at which the French hope to take their revenge for their repeated defeats is at the present moment occupying the minds of all the leading motor manufacturers, who are warmly discussing the regulations the A.C.F. will suggest to the International Congress of Automobile Clubs to be held in Paris on Monday. One maker whose cars will participate in the great international competition is not quite satisfied with them. Explaining why, he told me he considered the proposed bore of 140 mm. was still too large. He also regretted nothing was said about detachable rims and wheels, this being an important question which must be settled. Then, again, he feared the suggested minimum weight of 900 kilogrammes might be lowered by the Congress to perhaps 800 kilogrammes, which would be almost tantamount to granting the makers complete liberty. Many people here share my friend's opinion concerning the 140 mm. bore, because, with the reduction of the weight, the racing cars will be able to reach and perhaps exceed the speed of last year's cars, which wrought such havoc with the tyres. However, for some unknown reason the French delegates at the Congress are said to have received the mandate to refuse any further reduction in the bore. The Sporting Committee of the A.C.F. should be less authoritative, especially as every one remembers that it was the French Club which at the Ostend Congress insisted on fixing the bore at 160 mm. and obtained the adoption of 155 mm. for this year's race at Dieppe against the German proposal to establish it at 135 mm. It has, by now proposing 140 m.m. bore, already acknowledged it is not infallible.

THE organisers of congresses and conferences have a predilection for Paris. If two or three are not sitting at the same time in the Ville Lumière, they follow one another so closely that the grand amphitheatre of the Sorbonne is almost always occupied by one of them. They are all no doubt useful, but the International Road Congress held this week bids fair to be one of the most practical that has assembled here for a long time. It was on the initiative of M. Barthou, Minister of Public Works, that it was convoked. The beautiful macadam roads of France having proved incapable of bearing the wear and tear of the intense motor-car traffic, it was necessary to do something, and the Minister did not know what. The Congress has proposed various remedies for the present deplorable state of things existing not only in France but throughout Europe and in the New World. Some of them seem to promise excellent results in so far as the establishment of good roads and the diminution if not the removal of the dust nuisance are concerned. But those acceptable technical solutions are all costly, and the French are inquiring where the money is to come from. Since 1850, when the macadam roads were generalised in the country after the creation of the railways, which relieved the roads of so much heavy traffic, the annual expenditure for the repair of the State roads was cut down to a minimum. The macadam roads being cheap, the budgetary provision for them was, however, sufficient till the motor-cars commenced using them. Now they are in a most dilapidated state, especially in the vicinity of the great cities. If M. Barthou had not himself consulted the Congress with a view to the adoption of its suggestions there would be but little hope of any immediate improvement in France, on account of the financial difficulty. But it is to be hoped that what a high official of the Ministry of Public Works said to me is true. Alluding to M. Barthou's intentions, he quoted the French proverb "Celui qui veut la fin veut moyens." The means must, however, not be the further taxation of self-propelled vehicles.

To the joy of French aviators, M. René Quinton's National Aerial League is prospering beyond all expectation. I do not

know exactly how many adhesions it has already received, but the subscriptions have been sufficiently numerous to enable it to create a prize of 20,000 fr. (£800). It has also received donations of twenty-one bank notes of 1,000 fr. (£40) each, constituting a prize destined to bear the name of the donor. The conditions of the competitions have not yet been fixed, but at the first sitting of the directing committee of the League, held a few days ago, the technical committee was appointed. It comprises almost all the most competent authorities on matters concerning aerostation and aviation. This committee will assemble shortly to decide the feats to be accomplished to win these prizes. The league had previously named by acclamation M. René Quinton, president; Messrs. Archdeacon, Deutsch de la Meurthe, and Painlevé, member of the Institute, vice-presidents; Comte Celigny, secretary general; and M. G. Franchelli, treasurer.

WILBUR WRIGHT has gone on from triumph to triumph, and has every reason to be satisfied with the ovations he has received from the dense crowds of people who assembled to witness his



M. Leon Bollee, one of the pioneers of the French motor industry, and who is now interesting himself in the development of flying machines.

From a Caricature Sketch

[in the "Auto."]

flights. Last Saturday, especially when he broke all his own previous records for distance, time, and weight—he had with him on board the aeroplane M. Painlevé, member of the Institute—his performance was watched with thrilling interest by some 20,000 persons, comprising all the notabilities of aviation and aerostation and their patrons as well as the members of the Lazare Weiler scientific commission, who recognised the aviator had more than fulfilled the conditions of his contract. After Wilbur Wright's previous achievements it was not a surprise. Nevertheless his epoch-making officially-controlled flight, commenced in bright daylight and concluded in the darkness of night, sent such a thrill of enthusiastic admiration through the dense crowd, that some people, and among them many of those best able to appreciate the difficulties overcome and the importance of the result, were so choked with emotion that for a moment they could not join in the frantic acclamations of the excited multitude. On alighting from his seat beside Wilbur Wright, M. Painlevé exclaimed, "The conquest of the air is indeed achieved."

THAT was a recognised fact before, but this last demonstration banished the very last doubt still lingering in the minds of a few sceptics who, like St. Thomas, demanded to see and to touch before they would believe. As I said just a month ago in the *M.C.J.*, there is no longer any question as to whether aviation is practical or not. Man has made wings for himself, and it would be rash to attempt to predict a limit to the use he will make of them.

MARNEY.

THE SOCIAL WHIRL.



I REMEMBER Mr. F. H. Butler in the old days of the A.C.G.B.I., when we met for discussions in the room at Whitehall Court, S.W., and toured round Salisbury Plain and Stonehenge in search of automobile experience in the early holidays of every year. Those were the days when the motoring world was a comparatively small one, and was possessed of a sociability that has been dispelled as its ramifications have widened. From 1897 to 1902 Mr. Butler was hon. treasurer of the Automobile Club, and, in addition to motoring, took delight in skating, sailing and other forms of sport. Latterly he has gone upwards, and has made 120 balloon ascents, his latest adventure having been to accompany Mr. Wilbur Wright on his aeroplane. When asked for the sensation of flying as it occurred to him, he says "It is like gliding over sparkling water where you can see the bottom; turning corners and tipping the wings is like skating on the outside edge." Mr. Butler believes that there is practically no limit to the navigation of the air now that so much progress has been made, and suggests that the Trinity House may have to erect lighthouses on land to mark the way for aeroplanes at night. Now that the day of the lower priced motor-car is imminent, it is interesting to have Mr. Butler's prophecy that in ten years' time we shall be able to have practical aeroplanes for about £100.

THE King brought his stay at Balmoral to an end on Saturday. His Majesty travelled by motor-car from the Castle to Ballater, whence he trained for London. Early on Tuesday morning the King motored to Newmarket for the October Race Meeting. On the way a delay of half an hour occurred at Hatfield. Repairs having been effected, the journey was continued.

THE Prince of Wales concluded his visit to the Duke of Richmond and Gordon, at Gordon Castle, on Saturday afternoon. The Prince left by special train from Fochabers Highland Railway Station. Just as the Royal train left, a favourite dog of the Prince's appeared on the platform from the waiting-room. A motor-car was at once requisitioned and in this the terrier was taken to Orbliston Junction, and the news was wired that the animal would rejoin the party there. With the Princess the Prince is now enjoying a stay with the Earl and Countess of Shaftesbury at St. Giles's, Cranborne, Dorset. Motoring is entering largely into the delights of the visit, and on Tuesday Her Royal Highness, with her hostess, and the Countess of Mar and Kellie, Lady Katharine Coke, and Captain H. Campbell, motored to Winchester, where they were shown over the college, and lunched with the headmaster and Mrs. Burge.

THE Duchess of Bedford motored from Badminton to Clifton on Saturday, to open an exhibition of pictures in the Bristol Fine Arts Academy.

MR. WILLIE JAMES, with whom the King is to stay at West Dean Park, Chichester, is an enthusiastic motorist, and is the president of the Sussex County A.C. One of his first cars was a 12-h.p. Panhard, and subsequent possessions have included more than three Maudslays vehicles.

MR. FREDERIC COLEMAN, the European representative of the White steam cars, left by the "Mauretania" on Saturday for New York.

THE Irish Automobile Club continues to gain the support of the leaders of Irish sport and society. Recent additions to its membership include the Earl and Countess of Listowel and Lady Maurice Fitzgerald. Lady Fitzgerald is the daughter of Mr. H. L. Bischoffsheim, whose system of ambulances for London is well known.

LOLLIUS.

RYE AND WINCHELSEA.

(Concluded from page 685.)

A PART from the public buildings, Rye still retains many of those pleasant lanes and narrow walks which are the delight of those in search of the picturesque, and the confusion of others on business bent. But, unfortunately, modernity has found its way to the place, and in recent years a beautiful block of half-timbered houses, which rose gable after gable at the corner of West Street, was pulled down. A modern bank building now stands upon the site, and the residents are already forgetting the splendid group that once gave such a pleasure to the visitor. Further along West Street, however, several old houses still remain, one of them having a wonderful oak door, richly carved to represent the entwining white and red roses, by which many citizens showed their approbation of the union of Henry VII. with Elizabeth of York, which ended the long civil strife that had troubled England for years. In the Old Mermaid Inn, too, is a chimney-piece of Caen stone similarly embellished. Mermaid Street was once the principal thoroughfare in the town, and was then considerably steeper than now. Even in John Wesley's day it must have been more difficult of ascent, for in his diary he describes it as "near as steep as the ridge of a house." Those who motor should go with care, consideration and caution. In this street still stands a seventeenth century half-timbered house called the Hospital, because of its accommodation for the wounded in the days of the French war.

Leaving Rye, with its many other pleasant places, a scamper across the fields in the direction of Winchelsea brings us to Camber Castle, built by Henry VIII. and dismantled in 1642, since when grass has grown over its apartments, and sheep now graze within its walls. Winchelsea, which has contrived to maintain its old-world features far more successfully than neighbouring Rye, possesses a civic mace which dates from the days of the Tudors, and is thought to be the oldest in the kingdom. Originally the town was on the sea coast—three miles beyond the site of the present one. Here William the Conqueror landed on his return from Normandy to take part in the siege of Exeter. At that time it was of great importance, but a series of inundations in the thirteenth century rendered its existence somewhat uncertain. The direct way from Rye is by the military road, the surface of which is delightful to the man who goes by automobile.

In the days of its greatest opulence the town possessed three churches, two of which no longer remain to proclaim the religious activities of the people. The church of St. Giles stood within the walls on a spot within easy range of the rectory, while St. Leonard's, which also is no more, occupied a site outside the boundary to the north-west. Fortunately, the most important of these three sacred edifices has not been wholly sacrificed, and some portions attest its ancient character. It was situated nearly in the centre, and dedicated to St. Thomas, the Archbishop of the neighbouring county. It has been described "amongst the noblest specimens of the Decorated Curvilinear period—1315-1360—in the kingdom." Both at Rye and Winchelsea the oak was a popular subject for decorative treatment in the ancient days, for Sussex supplied much of the oak that was used in the "Wooden Walls of Old England"—vessels with which the inhabitants of all these coast towns were most familiar.

Looking out from the churchyard we see an ideal square, the grass peeping up into the roadway, and the broad space around indicating the prosperity that must have existed in the days of yore. On the west side of the churchyard is the ash under which Wesley is said to have preached his last open-air sermon. Even then, a century ago, he described it as the "poor skeleton of ancient Winchelsea," a description that will probably remain true for ages.

Of the house occupied by the Franciscans nothing remains, it having been pulled down in 1819, but the ruined chapel helps to tell of the extent of the original structure, and about the town are three old gates similar to those of Rye. Of these the

most ancient is the Strand Gate, which dates from the days of Edward I., and from whence the sea can still be seen. At that corner of the town I have seen Miss Ellen Terry in her pretty little cottage, where, amid the ancient glories of Sussex, she rested from the fatigue of her work.

Having exhausted the ancient buildings of Rye and Winchelsea, and remembered that the interior of the parish church of the former town was restored by Street in 1881-2, there is plenty of architectural interest in that corner of Sussex, but restoration has robbed the village churches of whatever beauties they were given by their original designers. Within a mile of Rye is Playden, with its Early English church, and a little further distant is Iden, with a church in the Perpendicular style. Within easy distance, too, is Peasmarsh, the proud possessor of an Early English church with a Norman chancel arch. From Winchelsea, as from Rye, small villages can be easily reached, and useful hours spent in studying the work of church builders of earlier days. Icklesham has a noteworthy pile, dating from the twelfth or thirteenth century, and, like so many others, restored. Two miles from Winchelsea, too, is Pett—a long, straggling village, whose church is of the

church has another distinction in the iron slab on the north aisle, bearing the date of the fourteenth century, and being one of the earliest authentic examples of Sussex foundry work—a branch of industry which has long quitted this county, washed by the sea and crowned with the noted Downs.

Ere leaving this part of the county it had better be said that a stay therein can form an agreeable combination of study and recreation. For, in Hastings, the county possesses not only an ancient seaside town, but a convenient centre for visiting the many fine ruins round about. Within easy reach is Battle Abbey, with its magnificent gateway; Normanhurst, the splendid seat of Lord Brassey; the picturesque ruins of the castles at Bodiam and Hurstmonceux, to say nothing of the ruins of the monastic house at Bagham, the Roman villa at Bignor, and the two or three ancient camps which remind us of the days when Sussex—"sleepy Sussex," as local tradition unwarrantably reminds us—was a county of wealth, industry, and importance. The note of battle frequently was sounded across its broad acres, and the many fine old remains of strong castles and fortified mansions almost vie in number with those of religious houses and holy cells. By the motor-car all these structures are accessible,



By permission of

The Ancient Parish Church of Winchelsea.

(The Hemelund Association.)

Decorated order, and was erected as recently as 1864. Throughout all these villages there are few domestic buildings worthy attention—and their rustic appearance with modern primness and brick fronts fails to equal the interest that attaches to a ramble in ancient Rye, where a local chronicler has not inappropriately observed, "nothing more recent than the cavalier's cloak and hat and ruffles should be seen."

But, perhaps, the most interesting of all these village churches, which can be easily reached from our headquarters or from the greater and more prosperous town of Hastings, is that which affords a sanctuary for the people of Etchingham. This must rank with Rye, Winchelsea (which Champneys said was "an almost ideal gem of uniform character and exquisitely studied detail"), Steyning, Bosham, and Boxgrove, these being the principal churches, from the architectural point of view, in all Sussex, excluding, of course, the cathedral at Chichester. In olden days the church at Etchingham was surrounded by a moat supplied, I believe, from the Rother, which joins the sea at Rye.

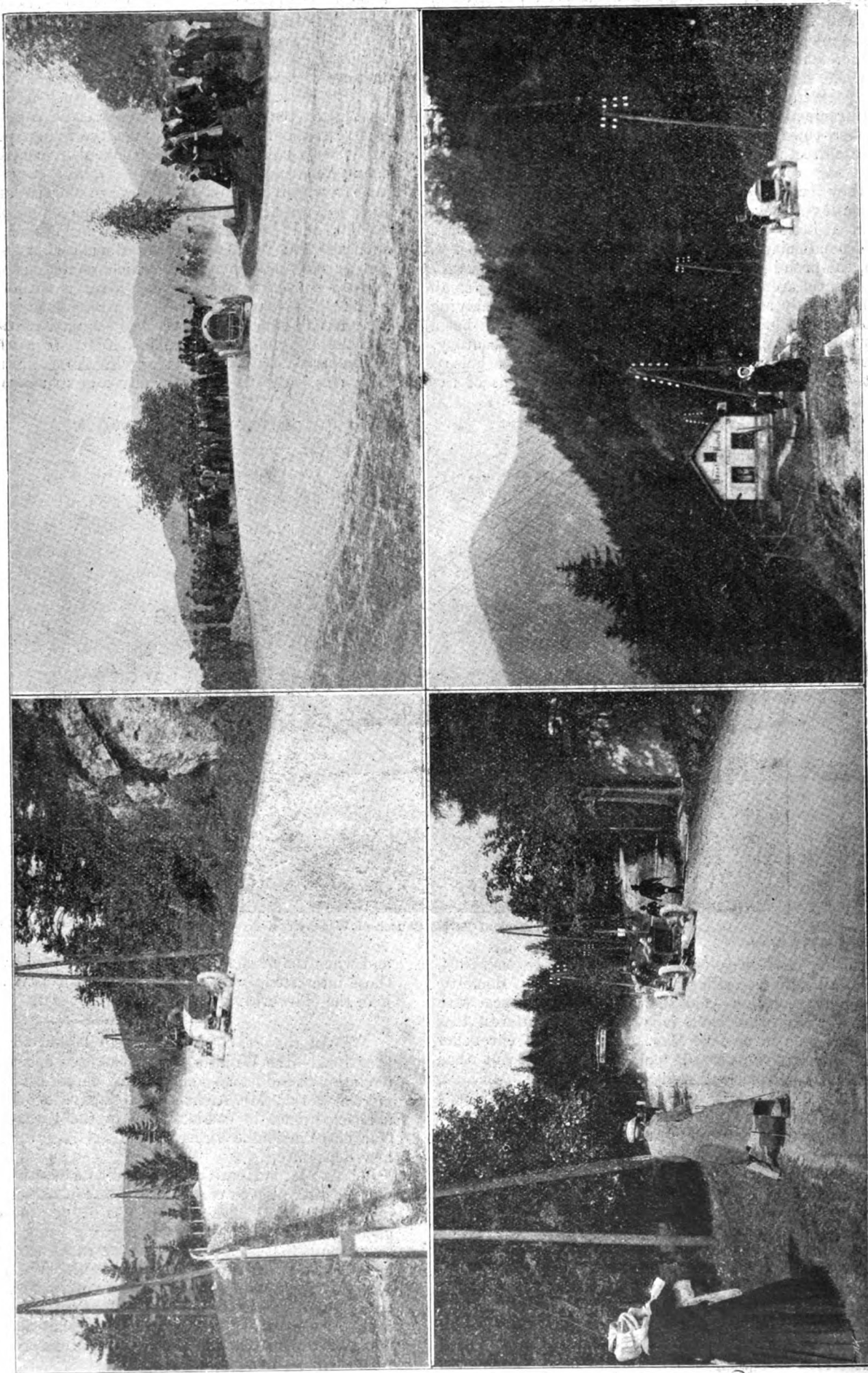
About two miles nearer the popular town of Hastings, and a pleasant walk from the village last named, is Burwash. Here is a very early Norman tower with the balustered windows, popularly described as Anglo-Saxon. But to many visitors the

and when the most noted places of the North have been explored those interested in the architecture of the past will find some of it in the old-world nooks of the Sussex coast. W. H. B.

NEAR the St. George's Cross, Glasgow—viz., at 432, New City Road—the Windsor garage has been opened for the accommodation of industrial vehicles and motor-cars engaged in commercial work. Mr. Alexander Kennedy, who has had considerable experience in connection with the garage at the Botanic Gardens, Vinicombe Street, Hillhead, Glasgow, is organising this new departure.

THE Motor House have issued an attractive catalogue of a new clearance list in connection with their accessories and clothing department. The terms of sale include the despatch of the goods on approval against cash, the firm being willing to return the amount that is paid provided the goods are returned to them in the same condition as originally sent. We understand that only a limited number of the many articles enumerated in the Catalogue are available in stock, so that early application is necessary to secure an opportunity of acquiring accessories, &c., on more than usually economical terms from the Motor House, Euston Road, London, N.W.

The Semmering Hill Climb.



The Annual Hill-Climbing Competition up the Semmering organised by the Austrian Automobile Club attracted a large number of entries. The snapshots reproduced above show some of the competing vehicles making the ascent.
(*Alignment Automobile Setting.*)

A CASE in which fraud in connection with the disposal of motor tyres is alleged is now being dealt with at the Bow Street (London) Police Court.

THE conference of provincial clubs with regard to affiliation with the central motoring authorities is to be held at Birmingham on the 24th inst.

THE Bishop of Newcastle (Dr. Strahan) has been presented with a motor-car by the High Sheriff of the county of Northumberland on behalf of 360 subscribers in his diocese.

THE world's motor-cycle record for one hour has been broken by Mr. C. R. Collier, who at Brooklands, on the 8th inst., covered 70 miles 105 yards in sixty minutes, using Pratt's motor spirit.

THE Dewsbury Motor Garage, at 42, Northgate, Dewsbury, has repair works in Trinity Yard, in the same town, which are open day and night for the convenience of motorists in that part of Yorkshire.

THE General Purposes Committee of the Guildford, Godalming, and Woking Joint Hospital has recommended that body to drop the proposal to purchase a motor ambulance, owing to the cost involved.

THE motor depot located opposite the tramway headquarters in Walcot Street, Bath, is now known by the name of Griffith's Motor Garage. Facilities for motor instruction and in driving cars are also provided.

MESSRS. T. R. BYE AND CO., of the Brixton Carriage Works, 56, Railton Road, Brixton, are, we learn, bringing out an entirely new design of Cape hood. The firm have for some years made a speciality of this class of fitment for motor vehicles, the moderate price of the same having secured for them many clients.

DURING her stay of eight weeks in England Mrs. J. Pierpont Morgan and her suite had the use of some very smart motor landaulet cars, which were placed at her disposal by the Motor Supply Company, Ltd., Piccadilly, W. She toured through the English Lake District and Scotland, and expressed her satisfaction with the running of the cars.

THE Coventry Motor Fittings Company, Coventry, have just completed the construction of a specially designed radiator to be fitted to a motor plough. The joints of the radiator are riveted throughout and the tubes have a worm and nut at each end so as to withstand the excessive vibration when travelling over rough roads. The two-cylinder engine, which will develop about 25-h.p., is being supplied by Messrs. Johnson, Hurley and Martin.

THE motor "Parkway" on Long Island, U.S.A., was successfully inaugurated on Saturday last. The course was to have been opened with the Vanderbilt Cup eliminating trials, but as these were unnecessary a sweepstakes race was substituted. There were various classes, the cars being required to make a specified number of laps of the Vanderbilt Cup circuit of twenty-four miles, the high-powered vehicles being allotted ten circuits. The winner was H. H. Lytle, driving an Isotta-Fraschini, who covered the distance at an average speed of sixty-seven miles an hour. Louis Strang, winner of the Briarcliffe Trophy, was second on a Renault.

WHEN in Leicester recently we had a short trial run on one of the latest Clyde 12-14-h.p. cars built by Messrs. G. H. Wait and Co., and were much impressed with its sweet and silent running. The feature of the vehicles lies in the transmission, which gives a direct drive on each of the three speeds. The motor, which is located at right angles to the usual position, is connected by a silent chain with a short countershaft just forward of the back axle. The change-gear pinions are always in mesh, one set being mounted on the countershaft and the other on the live axle, the requisite pair of wheels being made to transmit the power by means of dog clutches. The gear appears to be very efficient and quiet in operation. The Clyde cars, which range from 8-10-h.p. to 16-20-h.p., have an excellent reputation in the Midlands, and now that a London agency is being arranged they should rapidly increase in popularity in the South.

HERE AND THERE.

THE Derby County Council has rejected Lord Scarsdale's proposal to erect a number of motor warning signs within its territory.

LOCAL feeling is reported to be growing at Tunbridge Wells against motorists from a distance, who are alleged to drive through the town at a speed beyond the legal limit.

AMONGST recent purchasers of Imperia cars is Miss Cecilia Loftus, the well-known variety artiste, who has just ordered a 30-h.p. model from Messrs. C. E. Whittaker, Ltd., the British agents.

MR. W. C. HAWKES, A.M.I.C.E., the Borough Engineer of Dover, informs us that the gradient of the steepest portion of the Dover Castle Hill, on the Dover to Deal road, is 1 in 8.9, and the average gradient 1 in 10.

A NOVEL combination of advertising and delivery van has lately been introduced by the Novelty Parcel Van Syndicate, Ltd., of 41, Coleman Street, E.C. As will be seen from the accompanying illustration, the feature of the van is that the body is provided with a number of panels on all its sides, which are adapted to receive a series of advertisements. The latter are preferably of the size of a double-crown bill, but can be arranged to any size and are posted on revolving screens, which work at the rate of three revolutions per minute, rendering them quite



intelligible to pedestrians and others whose attention it is desired to attract. The advertisements are illuminated at night by electric lamps; the rollers and screens to which they are attached do not occupy more than about five inches on each side of the van, and are worked from one of the engine shafts, the absorption of power being extremely small. The announcements on the hood sideboards and end panels do not revolve, but are illuminated at night. In the standard size up to eighty advertisements per side can be carried in the eight windows, which measure 2 ft. 6 in. by 1 ft. 10 in. The cost of illuminating a standard-sized vehicle is about 3s. per eight hours. The standard vans are of the "Thames" type, with a capacity of two tons of merchandise, and may be either hired or purchased. They are peculiarly adapted to the requirements of carriers or parcel delivery companies, as the vehicle can be made in any form, from the small van suitable for the delivery of drapers' merchandise, or for the conveyance of a grand piano, to the requirements of railway and general parcel deliverers.

THE Irish Automobile Club, which has done much to develop automobilism in the Emerald Isle, is not satisfied with the action of the Society of Motor Manufacturers and Traders in attempting to veto the motor exhibitions in Scotland and Ireland. Now that the Society has given way so far as Northern Britain is concerned, many prominent Irish motorists are expressing the view that no invidious distinction should be made between Ireland and Scotland, and are advocating that the Society should withdraw its ban so far as Dublin is concerned.

THE London Fire Brigade has just put into service a petrol motor escape.

THE Cuban Automobile Association of Havana proposes to hold an automobile road race over a 21-mile circuit on the Island of Cuba in February next.

CAPT. W. G. WINDHAM informs us that the first general meeting of the new Aeroplane Club will be held at Claridge's Hotel, Brook Street, London, W., at 3 p.m. on the 6th prox.

MESSRS. "VALVELESS," LTD., have made application to the Technical Department of the R.A.C. for a long-distance trial (1,000 miles) of a 25-h.p. "Valveless" car. This will begin on Monday next.

THE Carmarthenshire County Council is offering a reward of £200 for information leading to the conviction of the driver of a motor-car who is alleged to have recently killed one of their road labourers and driven away.

THE district commissioners of Washington, U.S.A., have issued an order requiring motor "sightseeing" companies to refund on request the fare paid by any passenger whenever the motor vehicles fail to leave the designated starting-point within at least ten minutes after the time announced for departure, and to refund the fare if the trip be not completed.

MR. A. E. BENNETT, A.M.I.E.E. and A.M.I.A.E., the late official examiner to the R.A.C., is now practising on his own account at 25, Thrale Road, Streatham Park, S.W., as a motor

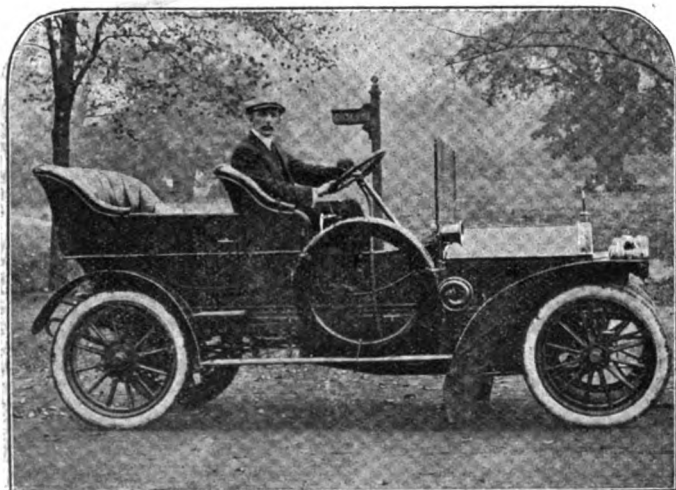


Photo by]

[Robinson, Streatham.

driving specialist, special attention being devoted to the coaching of intending motorists and motor drivers for the R.A.C. examination. The accompanying illustration shows Mr. Bennett at the wheel of the 12-16-h.p. Star car he uses for tuition purposes.

THE Bridges and Highways Committee of the Derbyshire County Council have had a discussion on the surveyor's motor-car. According to Councillor Trueman the purchase price was £600, and £200 a year has since been expended upon the running repairs.

NORTHERN motorists are familiar with the historic battlefield of Neville's Cross, near Durham, which is on the main road between Newcastle-on-Tyne and York. Mr. Thomas Phillipson has now added to the features of this interesting district by opening a garage and motor repair shop at Neville's Cross.

THE U.S. Office of Public Roads has just issued a pamphlet by Mr. R. Hubbard dealing with the subject of "Dust Preventives." In a preface by Mr. Allerton S. Cushman it is stated that the problem of dust prevention and road preservation is not isolated, but is clearly connected with all other problems pertaining to the construction, maintenance, and use of roads in general, and the author's aim has been to bring out these interrelations. The pamphlet contains a number of very clear half-tone illustrations, showing the effect of automobile traffic and ordinary traffic on ordinary macadam roads, and the methods of application of various dust preventives.

UP to the present 1,250 drivers' badges have been issued by the R.A.C.

MR. F. J. WILLIS, the L.G.B. inspector, will hold a public inquiry on the 24th inst. into the application to limit the speed of motor-cars passing through Barnet.

PARIS has now got a perambulating motor scissor grinding machine, the owner having fitted up a 2-h.p. motor to save him the trouble of working the usual treadles.

THE Winslow Rural District Council have advised a local correspondent who drew attention to the tar-paving of the streets to communicate with the County Surveyor on the subject.

A TEST of the utility of motor-cars for military purposes will be made by the U.S. War Department during the forthcoming manoeuvres of the regular army at Atascadero, California.

ON Wednesday week the Dundee Corporation took delivery of an Argyll fire tender, and the event was made the occasion for a visit to the Alexandria works by a number of the firemasters of leading towns in the West of Scotland.

MR. LIONEL PHILLIPS, the president of the Transvaal Chamber of Mines, and a leading authority in all that concerns the gold-mining industry, has acquired a 42-h.p. Daimler car through Messrs. Carr Bros. and Ash, of Johannesburg.

A MAN grotesquely attired and describing himself as the "Empire Scout," has been amusing himself lately by stopping motor-cars on the Grand Parade at Eastbourne. On Saturday he was ordered by the magistrates to be sent to an asylum.

So great is the interest in the forthcoming Grand Prize race which is being promoted by the Automobile Club of America, and which will be run on November 26th, that a grand stand with a seating capacity of 16,000 is being erected at the starting point.

ON Monday a meeting of representatives of City men was held at the Mansion House (London) under the presidency of the Lord Mayor, when a deputation was appointed to wait on the Corporation urging it to introduce legislation to suppress the alleged motor nuisances in the streets of the City of London. This will wait upon the Court of Common Council next week.

WE learn that Mr. F. J. Meeklenburg has taken over the garage at Skindlo's Hotel, Maidenhead, which has hitherto been run by Mr. A. E. Major, of Reading. The new proprietor is in a position to meet and supply all demands of motorists using the Bath road—viz., repairs, hire, vulcanising, charging, and supplying drivers and mechanics. The garage will be open day and night.

A SOMEWHAT novel experiment in road-making is being tried in the city of Newton, Massachusetts, under the direction of the U.S. Office of Public Roads. The new road is half a mile long, the foundation being as for macadam, but the top finish is a compound of pulverised stone and the thick, sweet, black refuse from sugar refineries known as molasses, which, it is stated, can be bought cheaper than gas tar.

THE Automobile Club of Australia recently held a petrol consumption test over a course from Sydney to Windsor, a distance of 69 miles. Altogether there were eleven entries, and two prizes were offered in connection with the competition. The principal prize consisted of a gold medal to be awarded to the car which, taking the weight, horse power, &c., into consideration, used the least quantity of petrol. This was won by Mr. E. G. B. Gerard on his 15-h.p. Talbot car, which used only one gallon seven and a-half pints of petrol, the distance covered per gallon being 35.6 miles—an excellent accomplishment for a vehicle of such power.

MESSRS. A. W. GAMAGE's sale opened on Tuesday last, and will continue during next week. Included in the large selection of stocks which are now offered is that of a West End motor clothing manufacturer, in which leather and fur-lined motor overcoats have a conspicuous place. In addition to the selection of motor garments the extensive range of goods on exhibition by the firm at their Holborn establishment also includes a number of motor accessories, which they are disposing of at prices which should tempt many motorists to replenish their stock of spares without delay. Lamps, tyres, sparking plugs, tools and other accessories have a place in the stocks, and a selection of accumulators, &c.

A "WASH" FOR MOTOR VEHICLES.

A VERY useful idea has lately been put into practice at the traffic department of the Barnsley British Co-operative Society, which now has no less than eight automobiles in service—three 5-ton Foden steam wagons, a Mann 2-ton steam lorry, two Arrol-Johnston 12-15-h.p. petrol

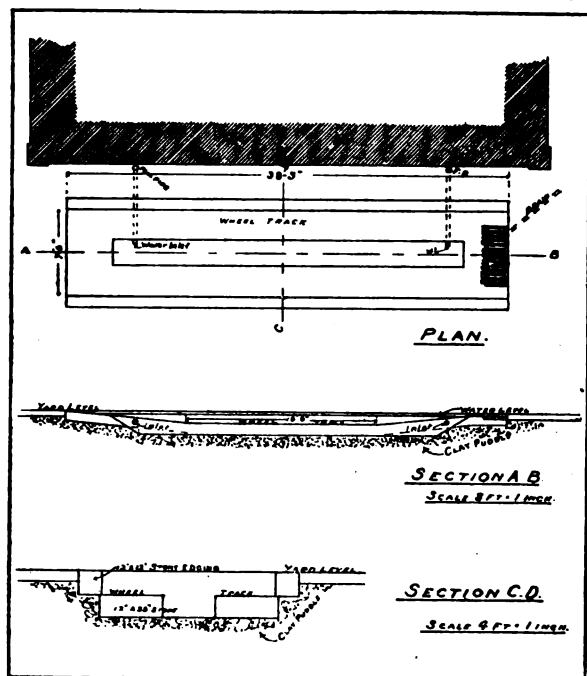


Fig. 1.—Details of "Wash."

vehicles, and two Dennis 35-h.p. machines. The owners take a pride in sending out their vehicles in a spick and span condition, and as they usually arrive home in a muddy state much time was taken up in cleaning the body and underparts of the chassis,

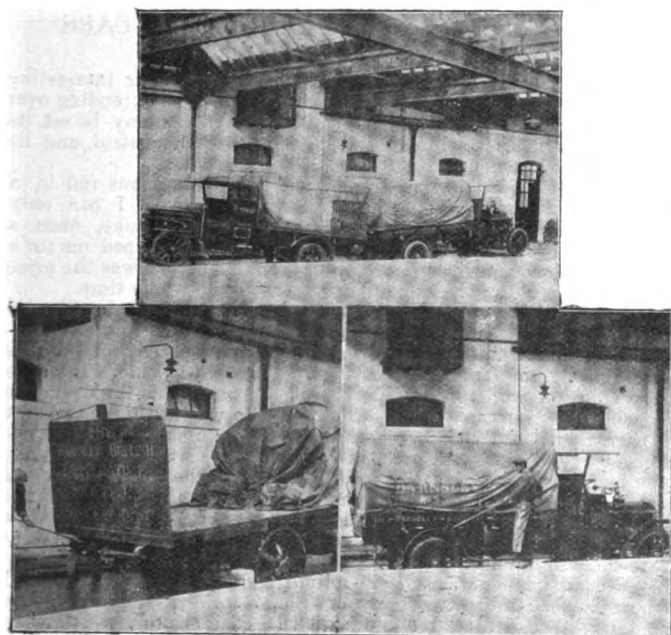


Fig. 2.—Vehicles in the "Wash."

until the utility of a permanent "wash" occurred to Mr. Elliott, the president of the society. Constructional details of the "wash" are given in Fig. 1, while in Fig. 2 are depicted some of the vehicles in the same, undergoing the cleaning operation. As will be seen, the pit is 7 ft. 6 in. inside width, and 38 ft. 3 in.

long, comprising a short incline at each end and a 16 ft. 6 in. level portion, enabling, if necessary, two vehicles to be washed at the same time. The wash is fed by surface water from the roof of the large covered yard, so that the cost of water is nil; a large overflow is provided to allow any excess to pass into the drain in wet weather. As the vans or lorries arrive in the yard after a day's running they are driven into the wash, when a man goes over them with a mop or brush to remove the mud; the machines are then put in motion, run up the incline and finished off with a hose pipe, the mud and dirt being left in the bottom of the wash, whence it is from time to time cleaned with a scraper. The arrangement, which takes up very little space, being constructed alongside the wall but with just enough room for a man to get round the vehicle, has enabled the cleaning operation to be effected in much less time than under the old system, and is highly appreciated by the drivers, who are encouraged to keep their vehicles clean and smart.

SOME USEFUL NOTES.

WHEN a sparking plug is being placed in the combustion chamber the points are very liable to be knocked out of adjustment by accidental contact with the cylinder-wall, especially when the operation is being performed at night. The resulting misfires, or the entire refusal of the motor to start, often seem quite inexplicable.

IN re-packing the gland of a water circulating pump use plenty of graphite with the packing. The spindle is seldom sufficiently lubricated, and the graphite will go a long way towards remedying this. Glycerine in the cooling water, as a frost preventative in cold weather, seems incidentally to considerably assist in lubricating the pump spindle. We have noticed it has been less frequently necessary to take up the packing during the winter in a car where it was employed.

THE following hints on fitting the Bowden wire mechanism, which have been issued by the E. M. Bowden's Patents Syndicate, Ltd., may be found useful by those motorists on whose cars the mechanism is in any way made use of. It is important that the inner member of the mechanism should be soldered before it is cut, as it is composed of a number of fine strands, which are liable to become untwisted unless this precaution is taken. With the smaller sizes, a pair of pliers or a spoke-cutting machine will suffice for cutting, but larger sizes will require a file or a cold chisel to sever the strands. The brass nipple supplied for the purpose should be carefully attached to the end of the inner member. A good method of effecting this is as follows:—The wire should be passed through the nipple, the end then being nipped flat for about $\frac{1}{8}$ in. This will prevent it drawing out again during the process of soldering. The nipple should then be held in the vice and carefully soldered, using a non-corrosive soldering fluid (on no account should killed spirit be used), care being taken that the soldered joint extends the full length of the nipple. Burr over the end of the wire, and finish off with a blob of solder. It will then be found impossible to remove the nipple by any fair means. When a single-pull lever is used it is necessary to have a spring at the opposite end of the wire to which the lever is fixed, in order to insure prompt recovery. This spring may be made to either pull the inner member back through the outer member, after pressure has been relieved from the operating lever, or it may be inserted between the stop holding the outer member and the end of the inner member, in which case, of course, it will be in compression. In the latter case it will generally be found that the simplest method of fixing is to fit the device up minus the spring, and to wind the spring on afterwards, as one puts a key on a split ring. Care should be taken that the inner member, on leaving the stop in which the outer member terminates, should be kept in an absolutely straight line, as, should it be otherwise, it will rub on the edge of the stop, and be gradually worn away in consequence. The inner member should be thoroughly smeared with motor grease or vaseline before being passed through the outer member.

Correspondence.

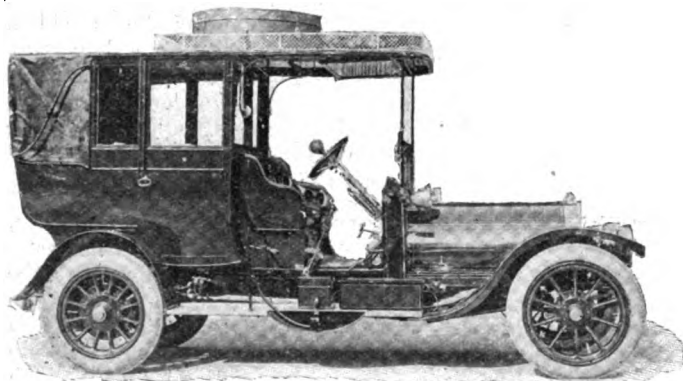
[Letters to the Editor should be addressed to the offices, 27-33, Charing Cross Road, London, W.C.]

A FLIGHT IN THE WRIGHT AEROPLANE.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—From the day I first met the brothers Wright, in the year 1896, I never had the slightest doubt as to the genuineness of their accomplishments or the correctness of their statements. I will therefore say nothing as to the wonderful capacity of their machines, which has been established for several years; suffice it to say that, after experience with every form of locomotion, including cycle and motor racing, a voyage in a dirigible balloon of the French army, and over 130 trips in an ordinary balloon, there is nothing so fascinating or exhilarating as flying. It gives one an entirely new sense of life.

Since the earliest flights in America, some years ago, I have followed the systematic progress of the Brothers Wright with great enthusiasm, and have of recent months been a frequent trespasser at the Camp d'Auvours, near Le Mans, France, where I have had the honour of many interesting talks on our pet subject with Mr. Wilbur Wright and his courteous associate, Mr. Hart Berg, but I never expected the privilege of an actual flight with one of the great brothers. However, the happy moment—I may say of my life—came while watching, in the early morning of last Thursday, some preparations and adjustments of the machine, when Mr. Wright suddenly turned, and, with his pleasant smile and quiet voice, said to me, "Mr. Rolls, I guess I'll take you up this morning!" Naturally my feelings would be difficult to describe. I had spent long periods in vain, to see a flight, once waiting there a week without seeing the machine emerge from its shed, owing to con-



The Limousine-Landaulet recently supplied by the Sheffield-Simplex Motor Works, Ltd., to the Rt. Hon. the Earl of Mar and Kellie, of Alloa, N.B.

The chassis is of the Sheffield-Simplex standard 45-h.p. six-cylinder type, having an engine of $4\frac{1}{2}$ in. bore by $4\frac{1}{2}$ in. stroke (48-h.p. R.A.C. rating). The body, which was built by Hamshaw, of Leicester, is luxuriously fitted up, there being seating accommodation for seven persons. The Earl writes very enthusiastically of his new car, stating that even when fully loaded it has been driven over the hilly and winding road between Alloa and Kinross on top speed.

tinuous bad weather; but patience was now rewarded, and I was to have more than I had hoped for, viz., an actual flight.

Accordingly, when all was ready, I took my seat on the flyer, taking care to fasten my cap, for the motor was running well and we expected to attain some high speeds. The roar of the engine commenced, the starting weights were released, and off we went with a bound—but not a worse one than when starting on a switchback. Before reaching the end of the rail we had left it and were in the air—we were now flying. Once clear of the ground the feeling of security was perfect, and I was able to watch with great interest the movements of the operating levers. We tore along at forty miles an hour and soon came to the first corner. Here a point of interest to motorists was demonstrated, viz., that, no matter at what speed a curve is taken, the machine "adjusts its own banking," so to speak; at the will of the operator it tilts up gracefully when taking a turn, and is therefore equivalent to a motor-car tilting up the road in front of it, so that it is always "banked" to just the correct angle to suit the speed at which a curve is taken, all liability to skid outwards being thus avoided. Those accustomed to motor racing on road or track will appreciate the effect of this, which is that taking a curve on a flying machine will, instead of being more dangerous, be actually safer than on an automobile.

On this occasion our flight was more than usually interesting by reason of some strong side gusts that attacked the flyer on certain parts of the course, and we were flying at what Mr. Wright told me was the most difficult altitude, viz., just below the tops of the trees. The prevalence of these and other "undulations" of the atmosphere rendered very close attention necessary to the two levers controlling the equilibrium and altitude; I noticed that both these were

kept constantly on the "juggle" with slight movement. One has been accustomed to consider the atmosphere as a mass of air, decreasing in density with its altitude, but otherwise uniform; experience on a power-driven flyer, however, shows that, far from this being the case, the atmosphere near the earth's surface—even in what we call calm weather—is made up of spiral movements of varying diameter, sometimes vertical and sometimes horizontal, undulations of all sorts—little hills and valleys and "streams" of air—in fact, one might call it a new "world" conquered by man. A world of "scenery" of great variation, which, though invisible to the eye, is none the less felt by the operator of a flying machine.

To maintain equilibrium and steering control, while battling with these complex movements of the air, has been the great problem which for centuries has baffled human ingenuity, and which is now solved by the Wright Brothers after years of systematic study and experiment. Moreover, it is my belief that the Wright flyer is the only type of machine controllable against side winds and spiral currents; these can, of course, be avoided to a large extent by flying at high altitudes, but the disturbing currents near the ground have got to be encountered before landing. Sometimes we flew above the trees, sometimes we flew three feet off the ground, entirely at the will of the operator, who thus showed the most perfect control over his machine that anyone could imagine. The side gusts and varying currents which we encountered at times caused gentle dipping motions, not unlike a switchback, but always under complete control.

Our speed in the early morning caused tears to roll down our cheeks, but with goggles on one would have no difficulty in reading a map, making notes, or taking photographs, &c. After a flight of several miles a descent was begun for landing (for a moment the thought of a bag of ballast instinctively came to my mind); at the right moment the engine was stopped, and we came to ground so gently that I found it impossible to tell exactly when the runners first touched the surface. On landing we skimmed along the surface rather like a toboggan, coming to a standstill a few yards from our starting point. The sensation of flight was novel and delightful, and the fact of accomplishing what several eminent scientists have "proved" impossible gave also an added satisfaction. With regard to the "art" of flying, Mr. Wright and his machine seem to work together as one unit. The management of a machine of this kind in breezy weather, however, is not at all easy; at the same time, it can only require patience and careful practice before any intelligent man possessed of coolness and good judgment can learn it.—Yours truly,

CHAS. S. ROLLS.

TWO-CYLINDER ENGINES FOR MOTOR-CARS.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—Seeing the article on two-cycle engines in your interesting paper, I should like to give you my experience of same extending over the last seven years. You say against its advantages may be set its reputed unreliability, its unresponsiveness to throttle control, and its relatively low fuel economy.

My first motor was a 5-h.p. Lozier, and for five seasons ran in a 26 ft. launch without a single mechanical breakdown. I can only remember three stoppages; once a vapourizer spring broke, once a leaf got into the water intake, and once a foul plug stopped me for a few minutes. The whole cost of renewals for this period was the price of one new piston ring; the same plug was used the whole time.

At the end of the fifth season, as a Lozier man was in Chester looking to some other engines, I got him to look at mine to see if anything wanted doing, and he said everything was in perfect order, and absolutely no sign of play in the bearings. This boat got more than the ordinary share of work, as my partner, being a man of independent means, whenever I wasn't using it he was. It was with great regret that I parted with her, and the reasons were these: firstly, you could not advance or retard the spark; secondly, the throttle was unsatisfactory, and you had to go more or less at full speed all the time, which was dangerous on a crowded river. The man who bought the engine put her into a sea-going cruiser, and I heard that she went to the Isle of Man and up the Menai Straits without a single hitch; all this shows that at any rate she was reliable.

My second engine was a twin-cylinder Ajax 5-h.p., with which I have now finished the second season. She is quite as reliable as the other; I have had a little trouble with the commutator, which wore slightly, causing missing, but a new one replaced by the makers free made that all right. The throttle control is absolutely perfect; I never once touch my spark after once starting, the throttle controlling her from about three miles up to full speed, which is about eight miles. If I wish to go very slow I simply switch off one cylinder, turn off petrol (having two carburettors) and amble along at one or two miles an hour. I have never tried how far I can go on one gallon of petrol, but, as far as I can guess, the distance is about ten or twelve miles.

I saw in a motor journal the other day about a certain Motor Car Club dinner, where Mr. So and So gave a humorous sketch on how

start a two-cycle motor, which caused roars of laughter. I wish this gentleman had been with me last week to have seen a chauffeur trying to start a 14-20-h.p. four-cylinder car; he would have been able at the next dinner to have given another sketch on how to start a four-cycle motor. I should think this man took at least a quarter of an hour before he could get the engine to start up. I will guarantee to start my Ajax after standing for a week at the second turn of the handle, which is more than I can do with my car.

I hope this letter is not too long for you to publish in full, as one seldom sees anything about two-cycle motors, and perhaps others will give their experiences.—Yours truly,

A. A. EVANS.

THE O.T.A.V. VOITURETTE.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—In reply to your enquirer "Welland" as to the 5½-h.p. O.T.A.V. voiturette, I am pleased to give the opinion that he asks for, as I have been an owner of one of these little cars for the last three months, and have driven it quite a lot in and around London. I find that it takes nearly all the reasonable hills on its top speed, and on the Maidstone road, which I consider quite a difficult one, I have driven from London to

to open a fund for the assistance of the family. I therefore appeal with confidence to your readers for subscriptions to such fund, which I trust will to some small extent relieve the pecuniary anxiety occasioned by this remarkable accident.—Yours truly,

G. LAWRENCE,
Mayor of Bromley.

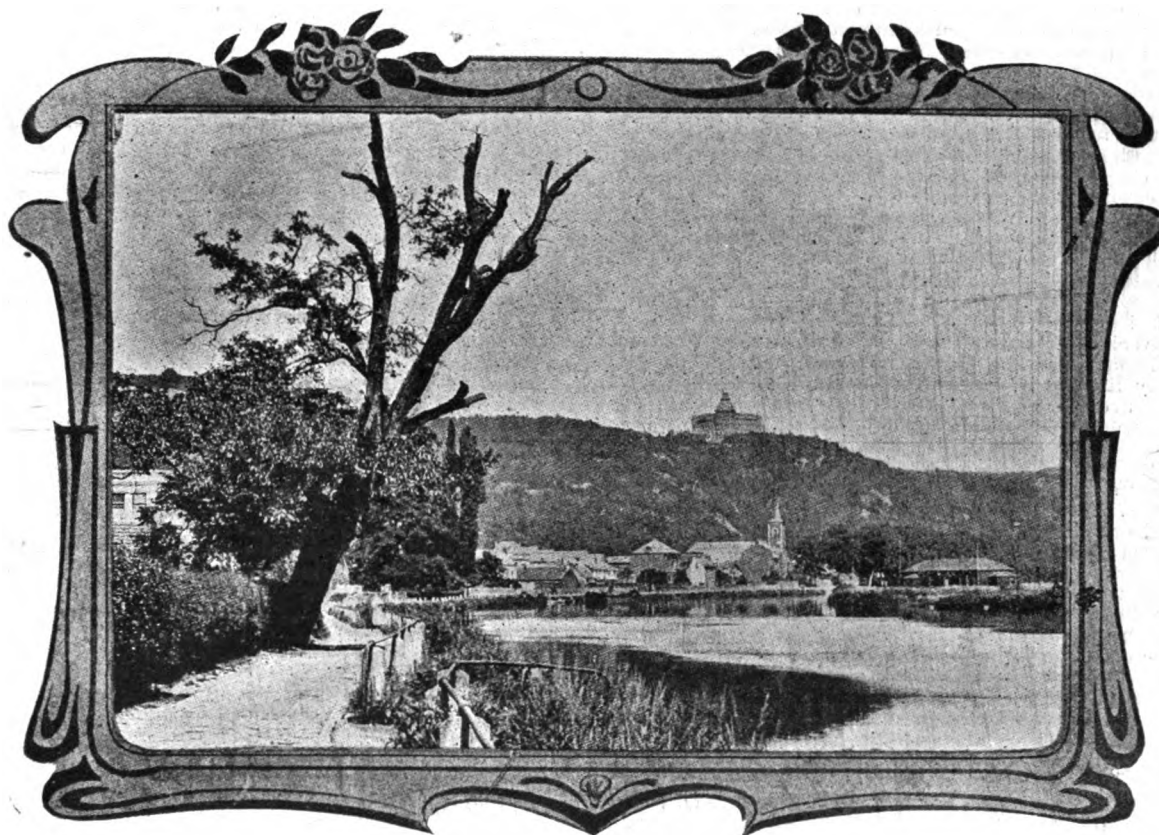
KNOCKING IN THE ENGINE.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—I venture to invoke your aid in the following trouble. There is a perceptible hammering taking place somewhere in the engine of my car which I have so far been unable to locate. It is not due to the ignition being too far advanced, for it is present when the spark is retarded. I took the advice of a fellow motorist and cleaned out the cylinder with paraffin to loosen the piston rings in case they were sticking, but the hammering still continues.—Yours truly,

J. BATEMAN.

[Our correspondent's trouble may be due to many things; a loose bearing may in all probability be the cause, or premature firing may be occasioned by the cylinder heads being foul or carbonized. The only remedy for this is to remove the cylinders and thoroughly clean the heads;



Touring in Belgium.—The Citadel of Namur from the suburb of La Plante.

Maldstone at an average speed of over twenty miles per hour, and with only one change of speed on the ascent out of Farningham. I find the engine keeps very cool, is not greedy for lubricating oil, and I should think my petrol consumption is about thirty miles to the gallon all round. As to tyres, so far I have not had a puncture, but this may, of course, be luck. The only fault I have to find is that there is a certain amount of vibration if one attempts to drive the car at over twenty-five miles per hour.—Yours truly,

T. W. JAMESON.

A DESERVING CASE.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—Your readers are of course aware of the burning of Signor Scarfoglio's car, which occurred at Bromley, Kent, on the 25th ult., while the petrol tank was being emptied prior to the vehicle being placed on rail for Folkestone, and I am sure that all sympathise with him on the destruction of his car on the completion of the memorable journey from New York to Paris.

What, however, is more lamentable is the fact (which perhaps is not known) that the accident caused the death of a young Bromley motor mechanic named William Maynard, who was engaged in emptying the tank, and when the vapour took fire was so terribly burnt that he succumbed to the shock from the burns received. Maynard had a widowed mother partially dependent upon him, and I have been requested

at the same time it will be possible to see if all the bearings are in good condition.]

FRONT TYRES.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—Frequently I hear motorists say that as soon as a certain tyre has "done a bit more" on the back, they will put it on the front, therefore is it a matter for wonder that we hear of so many accidents resulting from burst front tyres? I am very careful of my neck, and therefore always put my best tyres in the front, and when they begin to look doubtful they go on to the back, to be driven there as long as they will last. I wish that motorists in general would be equally cautious, not only for their own sakes, but also to reduce the opportunities which the motorphobes so love for screeching against motors.—Yours truly,

A. DUCKHAM.

Will the firm whose registered mark for motor-cars is "A. A. P." communicate in confidence with the Secretary of the Automobile Association, Princes Buildings, Coventry Street, London, W.?

MR. H. WHITE, cycle and motor engineer, Adela Avenue, West Barnes Lane, New Malden, S.W., writes that he has had a motor wheel hub cap brought to him which was found near West Barnes Lane, New Malden, about three weeks ago. Mr. White writes that the cap appears like one from a commercial motor vehicle, and that the owner can have same on application.

THE VALVELESS ENGINE.*

By CHARLES Y. KNIGHT.

THE present high speed internal combustion motor, with its phenomenal speed and power, is the result of evolution rather than revolution or invention, and few individuals, since the days of Gottlieb Daimler, can lay claim to any great amount of credit for the efficiency of the present type. Prior to entering into a technical discussion of the new valveless motor, I feel that those who have been indulgent enough to give up valuable time for the purpose of hearing more about it than has been exploited in the press are entitled to something of the history of its origin and development. We did not bring to the Daimler Company an untried proposition; we brought a practical, although not refined product—a motor which had already stood the test of public use for two years and came through with clean records. The only feature regarding which we made no representations to the Daimler management was the matter of power as compared with the other type. The end I had in view of accomplishment seven years ago, when I first began thinking of the possibility of improving the existing type of motor, was principally the elimination of the annoying clatter of the poppet valves.

Before deciding to discard the time-tried mushroom valve, I devised many schemes for subduing the clatter of the cam against the tappet. But I soon perceived that efforts in this direction could afford but temporary relief at best. In order to ensure the valve seating, there must always be clearance between the cam and the tappet, and clearance meant a hammer blow when the valve was lifted. I then considered a plan to open and close ports at the top of the cylinder, the same as is done at the bottom in the two-stroke motor, using an additional inverted piston at the top, reciprocating this inverted piston $1\frac{1}{2}$ inches, and using sliding cut-offs on either side of the cylinder to time the closing of the exhaust and the opening of the intake.

Then the idea came to me, "Why not a cylinder within a cylinder? Instead of moving all the heavy walls of a water jacket why not employ cast iron liners the full length of the cylinder and move them up and down over the inverted piston, using a wide ring at the bottom of the latter to entirely cover the ports at the time of compression and explosion?" The extension of the sleeves down into the base chamber, where they could be very conveniently connected to an eccentric shaft, would make their operation simple. Devising the exact motions required of the sleeves to properly time the openings and closings of the ports was a more nerve racking undertaking than endeavouring to solve the Fifteen Puzzle, made more so by the fact that my first three years' models and all we are running in America to-day have, in addition to the inlet and exhaust ports at the top, a Clerk port at the bottom to be uncovered by the piston upon its power stroke, the timing of which must be taken care of in the motion.

The proof of the pudding is the eating of it—not the chewing of the string. Regardless of the doubts of those who have not taken the trouble to study the question, a new motor has been evolved which has withstood every test of time and of the sceptical experts, and has found conservative, hard-headed engineers and boards of directors who are willing to stake their reputation that it is undisputably superior in every respect to the type which has hitherto been practically accepted as the only successful four-stroke design. Experimental work began upon this motor five years ago last August. The first model was $3\frac{1}{2}$ in. by 4 in. single-cylinder horizontal. It was operated successfully through the use of but one sleeve, but the gear necessary to give it the proper motion was too complicated to be quiet, and this construction later gave way to two sleeves driven from an eccentric shaft. During the summer of 1904 a four-cylinder engine, $3\frac{1}{2}$ in. bore by 4 in. stroke, was built and put into a Panhard type car which I had driven for two years. This motor is running to-day in the self-same vehicle. We designed and constructed our first experimental car in the spring of 1905, this being equipped with a four-cylinder 4 in. by $4\frac{1}{2}$ in. motor with practically no change in the design. This car is also in service to-day. I can conscientiously say that during the two seasons which I drove this first motor after its first testing out I never was obliged once to stop on the road because of motor difficulties. My partner, Mr. Kilbourne, drove his car, the first model of the 4 in. by $4\frac{1}{2}$ in., 15,000 miles the first season, and about 8,000 the second. The motor-car was new to him, but only twice during that time did he ever require assistance upon the road, and in neither case was the fault with the motor. Late in 1905 we put in a plant and began the manufacture of cars.

We restricted our efforts to seven cars the first year, one for a demonstrator and six for the market. This was in 1906, and every one of these six are running to-day, with no portion of the motor peculiar to our design replaced or worn out. The mechanical success of our 1906 cars encouraged us to lay down fifty for 1907.

I have told you we have perfected a motor along new lines. The question now arises "What advantages over the standard motor have you shown those concerns which have taken up the idea?" In answer to this hypothetical question, I answer:—First, we have demonstrated absolute silence—the genuine absence of sound when under load. Second, we claim extraordinary smoothness of operation. The sensation of riding in a car propelled by one of these motors is distinctly different from that experienced in a vehicle where eight hammers in form of valve tappets are continuously pounding away to produce a tremor or vibra-

tion which is felt throughout the entire car. As speed increases, the difference between the new type and the old becomes even more marked. Third, we claim greater flexibility. Given a fly-wheel of average weight and regardless of compression, one can do almost as he pleases with these motors. From four and five miles an hour up to sixty without change of gear is not difficult with the standard 38-h.p. Starting on the direct drive from a standstill is not confined to level stretches, and is possible on fairly moderate grades. In short, we believe the flexibility of this motor approaches so closely that of steam as to leave very little to be desired. Our fourth claim we feel also may be misplaced, and might well come well forward. That is for reliability. We believe the motor to be as near fool-proof as any piece of power-producing mechanism that has ever been devised. But "What," someone asks, "will happen to this motor if it is not properly lubricated, or if the weather gets cold, and your oil is bad and gums up and sticks, and you try to start it, or if the water runs out, or in case of a thousand and one possibilities of neglect?" And in turn I ask, "What would happen to your poppet valve motor if subjected to this same sort of abuse?" Fifth, we claim greater fuel efficiency under normal conditions than of the "Otto" type. Upon the bench we produce one horse power for an hour with from '54 to '64 pints petrol, according to compression pressure. Sixth, we claim much greater working endurance. The tendency to lose power on the brake under continuous load, which is so frequently the case with other types of motors in time, is not characteristic of this engine. There are no valves or valve seats to warp, heat or break, or springs to weaken under continuous heavy work. One of our 114 by 140 mm. motors, under a test in a Continental establishment, has been under full load upon an electric brake nine hours a day for more than fifty days at speeds ranging from 800 to 1,650 revolutions per minute, and it is as steady under power as a clock, never varying in power or speed from the opening of the day until its close. Seventh, we claim great power and speed. The Daimler Company have settled upon a compression which gives slightly over 57-h.p. at 1,200 revolutions per minute, for the 38-h.p. R.A.C. rating. This motor is capable of being accelerated up to 2,500 revolutions per minute, or throttled to less than 160 revolutions per minute. This compression was chosen, not because it might not safely be exceeded and more power thus secured, but because its chassis was designed for about that amount of power. Up to 100 lbs. gauge compression the motor is as silent and flexible as at 75 lbs. The only disadvantage we have found in the high compressions is the possible necessity of more frequent cleaning of the carbon from the piston heads and combustion chamber. But as this, with our construction, is a job of not over an hour for four cylinders, because of the use of detachable heads, the problem of carbon is never serious.

We have driven motors of this type with compression ranging from 45 lb. to 95 lb., and tested them upon the bench to as high as 114 lb. gauge. We have come to the conclusion that for the general public which wants a car with "ginger" in it, the 75 lb. compression is about right. With this compression a fairly intelligent driver should easily do twenty miles to the gallon of petrol and run 450 miles to the gallon of lubricating oil.

Every designer of multiple internal combustion motors understands that smooth running depends upon perfect explosive as well as mechanical balance and not over-heavy reciprocating parts. Proper explosive balance cannot be acquired except with even compression pressures throughout the various cylinders, and such evenness is not possible when the volume of combustion spaces are unequal. In the new motor every inch of the surface of the explosion chamber is machined to dimension. This makes explosive balance a certainty. These machined and polished walls have also the advantage of presenting no projecting particles upon which carbon can burn and become sufficiently phosphorescent to prematurely fire the charge. In the matter of gas passage, the design affords an almost unlimited choice of capacity. We can, if desired, make the openings equal to the area of the entire bore of the cylinder. It is merely a matter of eccentric stroke. We have, therefore, no problems in the filling and scavenging of our cylinders.

(To be concluded.)

MESSRS. BARLOW AND CHIDLAW, LTD., of the Pendleton Gear Works, Manchester, are making a speciality of the production of accurately cut gear wheels for automobile purposes.

THE Atlas Re-linent Road Wheels, Ltd., Manchester, who are specialists in the manufacture of steel road wheels for all classes of vehicles, are issuing their illustrated catalogue in French, German, Spanish, and other languages.

THE Daimler Company have received an order from the Roseleigh Motor Company, of Glasgow, for a 58-h.p. car required for shipment to Mr. J. M. Neil, Koko Factory, Benin River, via Forcados, Southern Nigeria, W.C. Africa. A description of the new Daimler engine is now being distributed by the Daimler Company, and copies will be forwarded to all readers of the M.C.J. on application to the Daimler Motor Company (1904), Ltd., Coventry.

MESSRS. ILLSTON AND ROBSON, of Herbert Road, Small Heath, Birmingham, are making a neat form of ball joint for use in connection with car uretor and ignition control levers, &c.

MESSRS. MACDONALD AND SON offered more than seventy motor-cars for sale by auction at their mart in Annandale Street, Edinburgh, last week.

*Abstract of paper read to the members of the R.A.C. on the 15th inst.

SOME PROBLEMS OF THE MOTOR-CAR.*

By DUGALD CLERK, F.R.S., M.Inst.C.E.

I PROPOSE to deal broadly only with several points which appear to me to be of fundamental importance; we have solved many problems which seemed, even so late as 1901, to present a rigid barrier to progress. In that year it will be remembered that the Automobile Club held its 600 miles reliability trial, starting from the Glasgow Exhibition; as I acted as one of the judges there I had ample opportunity of becoming acquainted with the condition of the cars during and after the week's run. Most of the cars showed signs of wear, and some severe wear, within the short period of a week. Brakes, too, gave much difficulty, especially in holding against running backwards down hill. Clutches were troublesome, and noise and vibration was often distressing. Engines were ill-balanced and noisy; control was often accomplished by advancing and retarding the spark, and automatic inlet valves were common. The Automobile Club trials of 1903, at the Crystal Palace, showed greatly improved results, and again acting on the judging committee, I had the opportunity of inspecting over 100 cars, after the wear of 1,000 miles' run.

Ever since 1903 marvellous progress has been made, and most of the difficulties of the engine, clutch, change-gear and transmission have been met with such success that the flexible and smooth-running car of to-day appears to many to present no further problems for the energy of the automobile engineer. To others the present cars appear to embody only partial solutions of many problems.

The clutch, for example, even in its best form, is a contrivance which should be abhorrent to the soul of the mechanic. When we consider the number of foot tons of energy which may be stored up in the moving parts of the engine and the large resisting mass of, say, a heavy landaulet, it is surprising that unduly dropping in of the clutch by a careless driver does not more frequently result in serious damage. The clutch is, however, undoubtedly responsible for much of the wear of motor mechanism. It has long seemed to me possible to design a pneumatic clutch connecting the engine and the driven shaft, so that no violent shocks could reach the transmitting mechanism. Such a clutch would consist essentially of two or more cylinders mounted on the end of the driven shaft and rotating with it, and a crank on the end of the engine shaft connected to two or more pistons working in the rotating cylinders. The pistons would compress the air in the cylinders until the necessary driving torque was communicated to the driven shaft, when pistons and cylinders would rotate without further relative movement. To declutch it would only be necessary to open a valve controlling the cylinders, when the engine would be at once freed from the car. Such a contrivance would be easily adjustable to apply any desired torque without shock. No severe starting shock could reach the transmission gear because of the elastic air connection.

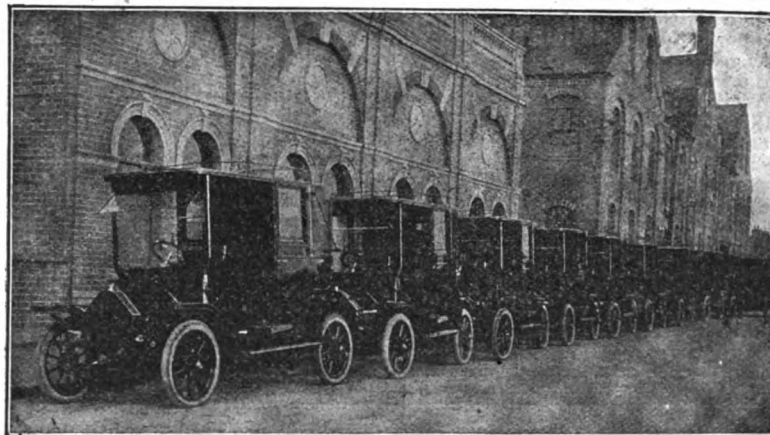
Change-speed gear also seems to be a very inferior mechanical device for varying the effort made possible to the road wheel. This has been much felt by motor-car designers, and perhaps more mechanical ingenuity has been expended by them on various methods of getting a wide range of intensity of wheel effort with changing gear than on any other part of car mechanism. Efforts on one mode of development have been devoted to varying the ratio of revolutions between engine and driving wheels by mechanism which avoids the use of toothed wheels, which have to be slipped in and out of gear with each other, and many ingenious inventions have been produced. For example, epicycle gears, in which the driving and driven wheels for the various speeds are always in mesh, in which each set is called into operation by brake devices; reciprocating pawls, operating ratchet wheels, where provision is made for varying the angle of pawl reciprocation; disc friction gear, in which a friction driving-wheel is moved over the surface of a driven disc; conical pulleys, with shifting driving-belt; and hydraulic gear, in which a pump is driven by the engine, and the liquid from the pump actuates a hydraulic motor. The system of gear-changing by sliding toothed wheels, notwithstanding its apparent mechanical crudity, has proved to be the principal survivor in the struggle, and its efficiency of action has certainly been greatly improved.

Other efforts have been directed to the improvement of the petrol engine itself, with the object of dispensing with change of gear ratio as much as possible, and accordingly this mode of development has produced the moderately high-power car of to-day, with its direct drive, live axle and highly flexible engine. Such cars travel over quite a hilly country at varying speeds, within wide limits, without changing gear. Success in this direction requires an engine capable of giving the maximum torque required by the road wheels on steep hills while geared on the direct drive, and, of course, it involves a powerful engine which runs at a very light load at customary speed on the level. For the greater part of its running, the engine will be only developing about one-fourth of its maximum power in order that the full power may be available for hill-climbing, without requiring change of gear. The necessity of carrying about this heavy and powerful engine, for but a small use of

its full power, has been justly recognised as a disadvantage, and many methods have been devised for temporarily increasing the driving torque to be obtained from a small engine. Such methods include: the petrol-electric car, in which an accumulator supplies an electric motor, giving power to the driving shaft when the resistance to motion increases sufficiently and the electric motor acts as a dynamo and charges the accumulator when the engine is running under conditions of lighter load, and proposed air-reservoir cars, having pumps to fill up the reservoir, which, in turn, assist the engine when required.

Other inventors seek to increase torque by providing air pumps supplying the air and petrol charge to the engine under a pressure above that of the atmosphere. They, however, require a heavier engine to withstand the higher maximum pressures of explosion; and although the cylinder dimensions remain small in reality, the weight of the motor, to provide the same margin of safety, requires to be increased as much as it would be by using larger cylinders. So far attempts to increase the torque of a small power light engine have failed; it is very desirable, however, to persevere, as it appears probable that a much better type of car is possible, and many advantages to the public would follow success.

I have made experiments with super-compression devices of different kinds, which convince me that it is possible to arrange for the increase of the mean pressure upon the piston at the slower speeds of rotation by about 50 per cent. without increase of maximum explosion pressure. To do this it is necessary not only to increase the charge supply pressure as proposed by Daimler, but also to increase the volume of the compression space. By the simultaneous increase of charge pressure and compression space volume, torque is greatly increased, although, of course, expansion is diminished, and the theoretical economy is somewhat reduced. Such an increase of mean pressure as I have suggested would enable cars of moderate power to dispense almost entirely with change of



The above illustration, which depicts a consignment of Humber Cabs to one of the London cab companies, demonstrates the increasing popularity of this type of vehicle.

speed gear. If the pumping arrangements could be operated by a small separate petrol motor nicely balanced and always running, the main engine could be arranged to act as a compressed air engine only when in traffic or on hills at slow speed. The added engine and pumps increase the complication, but it seems to me possible to reduce total weight by the reduction of main engine dimensions and the simplification of gear-box arrangement. A car which could be stopped and started in traffic without the need of the clutch and could stop on a steep hill in the same way, with the certainty of starting smoothly, would combine the advantage of both steam and petrol engines.

The steam car has taught the petrol vehicle designer many lessons, and a closer possible approximation to the valuable points of extreme flexibility and silence is still desirable, so that the good points of both steam and petrol may be found in the best petrol cars. The latter has the advantage of greater power for a given weight and smaller fuel consumption for equal powers. It is also simpler in construction and more easily kept in running order. It is much more accessible for repair and adjustment. The steam car has the advantage of extreme flexibility and entire control of the engine in traffic, so that it can be started from rest, stopped and made to move very slowly or at speed by merely admitting steam or cutting it off.

The flexibility of a steam engine differs considerably from that of a petrol motor, and a short consideration of what is meant by flexibility may be useful. As a power producer the horse must be considered as a motor of ideal flexibility; the horse can develop his 33,000 foot pounds per minute, either by a small pull exercised through a long distance in the time, or a heavy pull through a short distance. He can either give a light or heavy pull, and develop the same total power either by motion at a higher or lower velocity. The petrol motor cannot do this; within wide limits of speed no substantial variation of mean pressure on the piston follows change from high speed to low speed. Assume a petrol

*Abstract of Presidential Address read on the 14th Inst. at the Incorporated Institution of Automobile Engineers.

engine to be running at 1,000 revolutions per minute under a mean effective pressure of 90 lb. per square inch, developing an indicated power of, say, 40-h.p.; then if the speed be dropped to 500 revolutions per minute, the mean pressure of 90 lb. will remain practically unchanged; if the valves are properly proportioned there will be little change in mean pressure. The engine at half speed will then indicate only 20-h.p. To comply with ideal flexibility, 40-i.h.p. should be developed, and to do this 180 lbs. mean pressure would be required. In the sense of ideal flexibility the petrol motor is conspicuously deficient.

Assume, now, a steam engine of either the simple or compound type, to be supplied from a steam boiler capable of supplying steam at a given pressure and rate. The steam engine may consume the whole of its supply either at a high or low speed; take the same speed variation as supposed in the petrol engine, 1,000 and 500 revolutions per minute. At the high speed, a given point of cut-off will utilize the whole steam supply, and give, say, 40-h.p. at 90 lbs. mean pressure. At the low speed, 500 revolutions, the cut-off must be later to use the whole steam generated, and then the steam weight used per revolution will be doubled; the mean pressure will not be doubled, but it will be greatly increased. Say that it rises from 90 lbs. to 150 lbs. per square inch, then the i.h.p. at half speed will be 33½. The steam engine thus possesses considerable flexibility, although it has not the ideal flexibility assumed to exist in the horse.

True flexibility in a motor requires the property of producing maximum power at both high and low speeds, and this property is to some extent present in the steam engine, and almost absent in the gas or petrol engine. What is commonly called flexibility in a petrol motor is in reality controllability, which is a different thing.

The steam engine could be more closely followed in this matter by supplying the petrol motor with a constant or even an increasing weight of charge as the speed of rotation falls in the manner which I have already suggested. Recent improvements in the petrol engine, such as very large inlet and exhaust valves and very light pistons and moving connections, have made it possible to greatly increase the total power to be obtained from cylinders of given dimensions by permitting of longer strokes and higher speeds of rotation, while keeping up the weight of charge dealt with per stroke.

While even better results may be desired on the two points—clutch connection and true flexibility—another important matter requires persevering attention. I refer to the exhaust products discharged into the air of our streets: the rapidly increasing use of private and public motor-cars in cities raises the study of the carburettor to a position of national importance. It has been clearly proved that the products discharged from an engine when the mixture of petrol and air is properly proportioned is innocuous in its chemical nature; combustion is almost complete; but when proportion is incorrect, and vaporising action imperfect, the products are noxious. Carburettors at present proportion correctly at two or at most three points of load and speed; at intermediate points some deviation occurs. The problem of proportioning accurately and automatically for all speeds and loads is one of difficulty, and existing devices provide an imperfect solution. Methods of carburettor control which depend entirely on engine speed cannot produce accurate results, because the motor may run at the same speed under quite different conditions of throttle opening. What is really required, as I have already pointed out, is some method of controlling depending solely on the charge volume which passes the jet.

ROAD REPORTS.

GODSTONE.—Mr. J. George-Powell, surveyor to the Godstone Rural District Council, who, during the ten years he has been in the district, has paid special attention to the surface of the highways, has been appointed county surveyor of Wiltshire.

HAYWARDS HEATH.—The Urban Council has decided to tar spray, at the commencement of next season, the roads of the district for a length of 4½ miles.

FINCHLEY.—A line of tramways which has just been begun by the Middlesex County Council will run from the Great North Road at Tally Ho Corner by the Finchley road to Cricklewood. The total length is about six miles, and as the main road along which the line will pass is an important avenue for motor traffic out of London, it is now being widened and repaved by the Middlesex County Council.

EAST SUSSEX.—Repairs on the main road between Handcross and Slaugham, Dale Hill and Sayers Common, and Muddleswood and Hurst are being carried out—a fact to be noted by motorists touring in that part of East Sussex.

ILKLEY.—The Ilkley District Council has decided to recommend that the County Council should make application for the limitation of the speed of motor-cars within a mile radius of Brook Street, Ilkley, to eight miles per hour.

SETTLE.—Recently the West Riding of Yorkshire County Council agreed to bear two-thirds of the cost of tarsepaving certain main roads, provided one-third was borne by the local authorities in whose district the roads so treated were situated. One of the district councils coming within the agreement was the Settle Rural, and the payment by them of the one-third cost has been surcharged by the Local Government Board on the ground that tarsepaving does not amount to an improvement within the statutory provisions in that behalf. In view of all the circumstances of the case, the committee have supported the Settle Rural Council's appeal against the surcharge.

CLUBS AND ASSOCIATIONS.

ROYAL.

ARRANGEMENTS are now being made with the Royal Automobile Club of Spain by which the R.A.C. will be in a position to issue Spanish Custom papers to members visiting that country.

By arrangement with Messrs. George Philip and Sons, a special road map of England and Wales is being prepared. The map is to be on the scale of two miles to the inch. It will embody many useful features, and the markings of the roads will be extremely clear. Twenty sheets will complete the map.

THE MOTOR UNION.

THE October meeting of the General Committee of the M.U. will be held on Wednesday next. The clubs which have this year contributed to the Legal and Legislative Defence Fund are as follows:—Wiltshire, North Yorkshire, South Devon, Lincolnshire, South Wales and Monmouth, West Essex, Cheshire, and Cambs. and Isle of Ely. Among the latest individual subscribers is the Earl of Mexborough.

The M.U. has instructed its local solicitor at Birmingham to institute police court proceedings at Oswestry against the driver of a car who is alleged to have struck the wife of a member with a whip while she was riding in a motor-car.

The Union, together with the Lincolnshire A.C., were represented before the Board of Trade by Mr. Moresby White in opposition to the Mid-Lincolnshire Light Railway Order. The amendments will be communicated by the Board to the Light Railway Commissioners for their consideration of future Orders.

Additional appointments as hon. local correspondents of the Union have been made as follows:—Mr. A. G. Chaplin (Hertford); Mr. J. E. Birtless (Stockton Heath); Dr. C. Jephcott (Chester); Dr. L. Hill (Haltwhistle); and Mr. Lawson Turnbull (Aberdeen).

The New Forest Automobile Club and Hants Motor Union, which has a membership of 180, has decided to have a postal ballot on the question of future association with the R.A.C. and the Motor Union.

AUTOMOBILE ASSOCIATION.

THE membership of the Automobile Association on October 1st stood at 7,838, as compared with 4,464 the same day last year, representing an increase in income of over £7,000 per annum.

Early last month publicity was given to the report of a motor tragedy at Albenga, near Genoa. An engineer was said to have shot two occupants of a car that was alleged to have run over his little son. Thanks to investigations made in the district by a correspondent of the A.A., it is now established beyond doubt that the story is an invention. The Mayor of Albenga writes that nothing is known of the matter.

ROADS IMPROVEMENT ASSOCIATION.

IN connection with the dust prevention experiments carried out under the auspices of the Roads Improvement Association, the medals awarded by the Judges' Committee have just been presented:—A gold one to Mr. T. Aitken for his pneumatic tar sprayer; a silver medal to Tarspra, Ltd., for the 700-gallon Tarspra Thornycroft motor-van (being part of the first and second prizes respectively in the competition for the best tar spreading machine); and a gold medal to Messrs. R. S. Clare and Co., Ltd., of Liverpool, for Clare's patent tar compo, this medal being part of the first prize in the competition for the best preparation of tar for road purposes.

AUTO CYCLE UNION.

ON Saturday the Auto Cycle Union held a Council meeting at Leamington, when representatives of more than thirty motor-cycling clubs were present and a scheme for interesting individual members in the work of the Union was discussed. At the dinner in the evening the Mayor of Leamington presided, and the thanks of the Auto Cycle Union for the welcome given by the local authorities to the motor-cyclists were voiced by Mr. F. Straight, the secretary and other speakers.

The quarterly trial (under the A.C.U.'s open competition rules) is being held to-day (Saturday), starting at 9 a.m. from the Chequers Hotel, Uxbridge. The course will be about 125 miles in length, and will extend over a route from Uxbridge, Beaconsfield, High Wycombe, Dashwood Hill, Wheatley, Islip to Banbury, returning via Bicester, Aylesbury, Berkhamsted, Cheam, Amersham, and Beaconsfield to Uxbridge.

MOTOR CYCLE UNION OF IRELAND.

A NUMBER of speed tests under the auspices of the Dublin centre of the Motor Cycle Union of Ireland were held at the Velvet Strand at Portmarnock on Saturday last. Three handicaps figured on the programme and also a match between the members of the Dublin and District Motor Cycle Club. N. E. Drury on a 5½-h.p. twin-cylinder J.A.P. was the scratch man in the open events, but he was asked to give away too much, and both of the events were won by C. B. Franklin, who was riding the 3½-h.p. single-cylindered J.A.P. which he rode in the Tourist

Trophy race in the Isle of Man. In both races he had easy victories. The four miles race for the J. B. Dunlop cup, presented by the president of the Union, was won by R. Walshe, and his second successive victory makes the trophy his own property.

THE CYCLE AND MOTOR TRADES BENEVOLENT FUND.

ON Thursday the third annual banquet of this Fund was held at the Hotel Cecil, London, Mr. Albert Eadie presiding. Originally it was to have taken place in the Victoria Hall, but so large was the number of guests expected that the venue was changed to the Grand Hall of the hotel.

Mr. Frank Shorland presided at the monthly meeting of the Executive Committee for the current month, when the hon. treasurer reported a balance of £525 to the credit of the current account at the bank. Thirteen subscribers and two members were elected and cheques were drawn for the pecuniary relief of six applicants.

SOUTHERN.

THE results of the club hill-climb, which took place on September 26th last, reached us on Monday morning, as follows:—Car class up to 20-h.p., C. J. Newey, 10-h.p. De Dion; Class 3, tri-cars, side-cars and

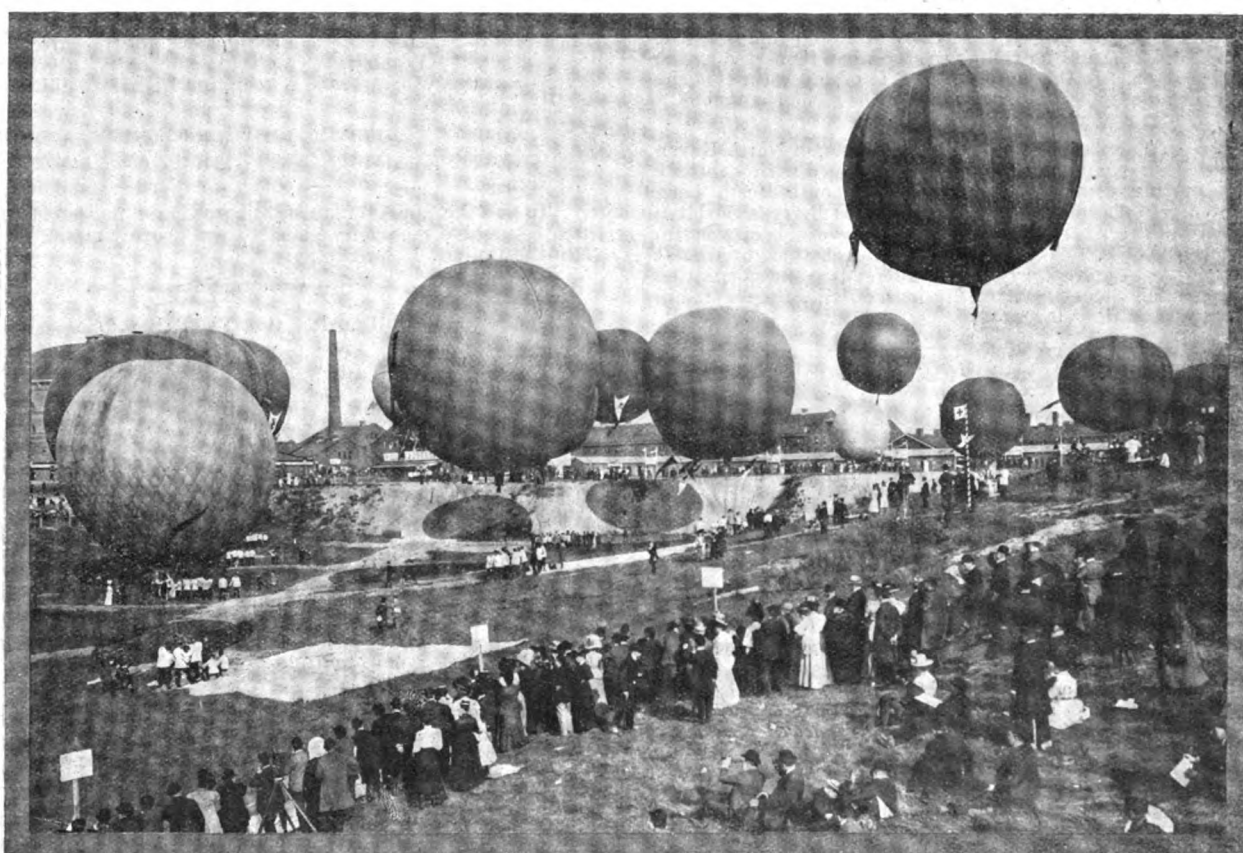
and others, is having satisfactory results, and is being favourably reported on from various parts of the country. A considerable number of cases are being dealt with.

CASES AGAINST MOTORISTS.

DISMISSALS.

Dr. A. E. Porter, medical officer of health to the Reigate Rural District Council, was alleged at the Reigate Police Court, on Saturday, to have driven his car at over thirty miles an hour. The police were cross-examined as to the correctness of their time-keeping. For the defence it was contended that the speed never exceeded twenty miles an hour. A stipendiary magistrate, who travelled in Dr. Porter's car, said he had never seen a speedometer at work before, and as they drove along the roads he watched it carefully, and it never registered more than twenty miles an hour. The summons was dismissed.

Before Judge Owen at the Cardiff County Court Mr. B. W. de Vires, marine engineer, of Cardiff, summoned Mr. Benjamin J. Dav, electrical engineer, also of Cardiff, for £15 damages claimed by plaintiff and his daughter, who alleged that they had been run down by defendant's motor-car on the Cowbridge road on September 11th. Mr. A. Parsons (instructed by Mr. F. C. Shackell) defended. Defendant's



The International Balloon Races at Berlin.—A view of the balloons preparing for the ascent on Saturday last.

quad-cars, H. F. Harding, 14-h.p. Etna; Class 4, twin-cylinder motor-cycles, E. K. Davies, 5-h.p. Peugeot. The results in the single-cylinder motor-cycle class will be given at a later date.

SCOTTISH.

DURING the last few weeks a considerable number of warning posts and direction posts have been erected by the Scottish A.C. Among others the posts are located in Falkirk, Yoker, Uplawmoor Station, and at various places in Inverness-shire. Notice posts have been located in Lossiemouth, Bathgate, Dumbarton, Haddington, Beattock Summit, and on the Duke of Portland's estate.

In one or two cases the magistrates of police burghs, who have been considering the question of application for restricted speeds within their areas, have been in communication with the Club, and it is anticipated that they will accept warning posts at the entrances to the burghs in lieu of the proposed applications. Several other authorities have agreed to conferences with representatives of the Club before proceeding further with applications for ten mile limits.

The action which the Club are presently taking with regard to inconsiderate driving and excessive speed of cars, and which is involving daily consideration of numerous reports from the Club's special agents

evidence was that he drove very slowly out of the entrance of Highmead, and was positive that his car did not go within ten yards of the complainants. The judge gave judgment for the defendant. "I thank you, sir," said plaintiff as he left the box.

THE VALUE OF THE BADGE.

Some time has been spent on a recent day at Midhurst Petty Sessions in hearing cases against motorists for exceeding the speed limit. Ronald Edmond Maud, of Coventry, was summoned for exceeding the speed limit at Rogate, on September 12th, but did not appear. The Chairman of the Bench said he had received a rather remarkable letter from the defendant, who pleaded guilty. He stated that it was very unfortunate, as he had taken his A.A. badge off. Otherwise he would have been warned by a scout at the commencement of the "trap." A fine of 40s. and costs was imposed.

WITHDRAWAL OF A WARRANT.

The warrant issued at Oxford on Tuesday week for the arrest of the Earl of Berkeley in connection with a summons under the Motor Car Act has been withdrawn.

ACCIDENTAL DEATH.

In the Westminster Coroner's Court on Saturday, Mr. R. Henslowe Wellington concluded his inquiry concerning the death of James Talbot,

who was knocked down and fatally injured by a motor-car in Whitehall on September 30th. Mr. John Heeketh Pearson, a motor engineer, of King's Road, Brighton, has been remanded on bail from Bow Street Police Court in connection with the matter. Eye-witnesses of the accident gave varying estimates of the speed of the car. Mr. Pearson said that he was driving down Whitehall, going at about the same speed as the horse-drawn vehicles. Talbot crossed the road and took no notice of the siren. The witness let the clutch out and turned slightly to the right, thus missing him, but the back of the car caught him, through the motor skidding badly. The jury returned a verdict of accidental death.

EXCEEDING LEGAL LIMIT.

Lord Robert Innes-Ker was fined £5 and costs at Richmond on Monday for driving a motor-car above the legal limit along the Sheen road. At Epsom on the same day Mr. D'Arcy Baker was fined £25 and £1 3s. costs for exceeding the legal limit and for failing to produce his licence when demanded at Banstead on September 20th.

BATCHES.

Several cases against motorists have recently been heard at Wimbledon (4), Tadcaster (3), Rugby (10), Midhurst (6), Selby (8), Croyden (5), Newcastle-on-Tyne (5), Feigate (3), Bromley, Harrogate, Dundee.

THE "DANGER" SPEED AT NEWMARKET.

At Newmarket, on Tuesday, C. A. Branteen, a Cambridge undergraduate, was fined £10 and costs and his licence suspended for three months. He was charged with driving a motor-car at a speed which, considering the local circumstances, was regarded as dangerous to the public, on August 3rd, and also for failing to stop when requested by the Hon. George Lambton. In the first case Mr. Lambton estimated the speed at five or six miles an hour. He withdrew the second summons.

COMMITTED FOR TRIAL.

At Kingston, on Tuesday, Edward Bowring Toms, of North Haven Point, Parkstone, Dorset, appeared, on remand, charged with wantonly and furiously driving a motor-car on the Portsmouth Road, Long Ditton, on September 3rd, and knocking down Alfred Berry, a Surbiton carman, 22 years of age, thereby causing him grievous bodily harm. The Chairman (Mr. W. Y. Cockburn) said the Bench thought that it was a case that ought to go to a jury, and the defendant was committed for trial at the ensuing Surrey Quarter Sessions. Bail was accepted in £100 and one surety in a like amount.

PUBLIC SERVICES.

APPLICATION for the licence of a motor-taxicab has been refused by the Corporation of Dublin.

A SERVICE of motor-taxicabs is about to be established for Edinburgh, Aberdeen, and other towns in Scotland, by the Caledonian Motor Company, Ltd., which has acquired the business of the Caledonian Motor-car and Cycle Company, Ltd., of Aberdeen.

CONSIDERABLE interest was taken in Hull one day last week by the appearance of the first motor-taxicab that has been seen in the streets of the Eastern seaport.

THE Watch Committee of the Hove Town Council have asked the London Electrobuses Company to renew their application for the licensing of six electrobuses in three months, in order that the local company may be able to introduce other than petrol-buses in the meantime.

BOTH at Brighton and London considerable disaffection has been voiced during the last few days among some of the motor cabmen.

AUTOMOBILE ACCIDENTS.

IN driving home in his motor-car, after paying a visit to Westerham on Sunday afternoon, Sir W. Hart Dyke met with an accident, his car coming into collision at Polhill, Sevenoaks, with another car belonging to a gentleman at Sidcup. The occupants of both vehicles were thrown into the roadway, the driver of the Sidcup car having his leg fractured. With the exception of a severe shaking and some bruises, Sir William Hart Dyke was uninjured.

A MOTOR-CAR accident occurred on the London road, about twelve miles from King's Lynn, on Saturday night. In rounding a bend the vehicle struck a gatepost, and was wrecked. The chauffeur, named Willis, was precipitated through the glass screen. His injuries were dressed at the West Norfolk and Lynn Hospital, whither he was conveyed.

ON Monday afternoon Mr. J. L. Perrin, of Bristol, was struck by a motor-car while cycling on Clifton Downs and killed instantaneously.

AT Mortlake Coroner's Court on Tuesday, Dr. Taylor resumed the inquiry into the death of George Charles, a chauffeur, who was killed in a collision near Barnes Common railway bridge. At the time of the accident he was driving his employer, Mr. Alfred Rawlinson, the managing director of the Darracq Company, who was returning from London in a motor-brougham. The circumstances have previously been reported and the jury returned a verdict of "Accidental death," exonerating the driver of the motor-bus. They added a rider that, considering the increase in the number of accidents caused by motor-driving within twelve miles of Charing Cross, the speed of motor-vehicles should be reduced to twelve miles an hour, and that a copy of this rider should be sent to the Local Government Board and the Home Secretary. They recommend that the District Council should widen the narrow road in which this accident occurred.

FORTHCOMING EVENTS.

OCTOBER.

- 17th (Sat.).—Auto Cycle Union quarterly trial—Uxbridge, to Pantbury and back.
- 24th (Sat.).—Motor Parade and Gymkhana of the Blackpool and Fylde District M.C. at the Agricultural Show Ground, Blackpool.
- 24th (Sat.).—Conference of provincial clubs at Birmingham to consider the question of affiliation with the central motoring organizations.

NOVEMBER.

- 6th (F.).—Invitation Smoking Concert of the Stanley Cycling Club at the Queen's Hall, London, W.
- 13th-21st.—Olympia Motor Show, London.
- 14th (Sat.).—Thirty-third Annual Dinner of the Stanley Cycling Club Hotel Metropole, London, S. W.
- 18th (Wed.).—Annual Dinner of the Motor Union.
- 20th-28th.—Stanley Show at the Royal Agricultural Hall, London, N.
- 26th (Th.).—400-mile International Grand Prize Race of the Automobile Club of America.
- 28th (Sat.).—Opening of the Paris Motor Car Exhibition.

DECEMBER.

- 23rd (W.).—Speed and reliability trials at Nagpur, Central Provinces.
- JANUARY, 1909.
- 22nd-30th.—Scottish Motor Exhibition at the Waverley Market, Edinburgh.
- 26th.—Scottish Motor Trade Association Dinner at Edinburgh.

LIGHTING-UP TIMES—LONDON.

| | | | |
|---------------|-----------|-----------|-----------|
| Oct. 17th—6.2 | 19th—5.58 | 21st—5.54 | 23rd—5.50 |
| " 18th—6.0 | 20th—5.56 | 22nd—5.52 | 24th—5.48 |

To find the approximate lighting-up time in October for Birmingham 6 minutes should be added to the above times, 2 for York, 8 for Manchester, and 14 for Glasgow.

POLICE "CONTROLS."

A TRAP at Fryston Park Corner, near Selby, is in frequent operation, as is also that at Long Marston, near Tadcaster.

AT Bramham, near Wetherby, is a motor-trap, in which several strangers have lately been caught.

MOTORISTS are being timed over a measured quarter of a mile at Compass, Launceston.

POLICE-TRAPS are a familiar feature of the landscape at Trumpington, near Cambridge.

THERE is a police trap—profitable to the county—at Rayleigh, in Essex.

THE Stretford (near Manchester) District Council has drawn the attention of the local police to the speed at which motor vehicles are driven through their district.

BUSINESS NEWS.

THE LOW ACCESSORIES AND IGNITION COMPANY, LTD., has been registered with a capital of £500.

MR. J. SMALLWOOD, of the Salisbury Garage, Friary Lane, Salisbury, has bought a 26-h.p. Metallurgique with which he proposes to give trial runs to intending purchasers in his neighbourhood.

MR. J. KEELE writes us from 72, New Bond Street, W., stating that he has converted his business into a private limited company under the title of J. Keele, Ltd., with a capital of £10,000. Mr. Keele has been appointed as managing director of the new company.

A MILITARY gentleman has written to Mors, Ltd., stating that he has now driven his 17-h.p. Mors car over 15,000 miles. He has just had the engine overhauled and reports that there is not the slightest sign of any shake in the bearings.

HUMBER, LTD., give notice that as from the 5th inst. their registered address is Stoke, Coventry. We understand that the removal from Beeston is now complete, and that Mr. T. C. Pullinger has joined Mr. W. Phillips in the management of the new works erected in Coventry, and has taken with him the principal heads of departments and some hundreds of the most highly skilled mechanics who have assisted in making the Beeston productions so celebrated throughout the world.

THE business of the late Motor Delivery Company, Ltd., has been purchased from the liquidators by Messrs. Pickfords, Ltd., and will in future be carried on under the style of the Motor Contract Company, the office being at 143, Strand, W.C. The company is prepared to enter into contracts for the supply and maintenance of motor vehicles by the year or other periods, as may be agreed, relieving the hirers from all capital outlay and from worry and responsibility in connection with the running of automobiles in their service. The principal work undertaken by the company at present is the supply on contract of travellers' broughams and light delivery vans, a recent contract of interest being entered into with Mudie's Select Library for the delivery of books to their customers within a radius of thirty or forty miles of the London area.

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COMMENTS.



THE annual protests against the presence of automobiles at the Hunt with which we have been favoured for many years have not come to hand this season. Horses as well as the huntsmen have become accustomed to the motor-car, and while motorists continue to observe caution when driving near the scene of the Meet protests are not likely to come along. It is recognised that the social pleasures of the hunt are enhanced by the presence of the motor-car, and covered vehicles as well as open cars are now frequently seen near the leading meets of the country. In fact, their presence scarcely causes comment nowadays.

A "Short" Trap.

ALTHOUGH in the south of England it is regarded as an act of treachery to doubt the words of the police or to suggest that they cannot always measure accurately, the fact has been proved in Perthshire that some police traps which have been reported as a mile in length have been considerably short of that distance. According to a correspondent in the "Glasgow Evening Times" it has been ascertained that several of the "miles" in the Highland district of Perthshire used by the police as traps have been found to be considerably under an actual mile. A local chauffeur, recently reported for exceeding the speed limit on the mile between Newton of Logierait and Knockintober, warned the police that the mile chosen for their trap was a short one, as he had implicit confidence in the accuracy of his speedometer. Before proceeding further the mile in question was specially measured by the Highland district road surveyor, and it was found on chain measurement to be 218 yards short, which cancelled cases against several motorists timed on this stretch.

The Roadway of the Future.

Now that the British delegates are returning from the Road Congress in Paris, their impressions are getting abroad. From one of the leading surveyors in Scotland we learn that the general view as to tar being the only substance likely to lead to a mitigation of the dust nuisance is in accordance with the experience north of the Tweed. The best results are obtained in Scotland by incorporating the tar into the structure of the roadway. Mr. R. Drummond, who is the president of the Road Surveyors' Association of Scotland, was accompanied by Mr. A. Stevenson, and submitted to the Congress a useful analysis of what is being done in his country, as well as his views as to the future. With regard to the latter point, he said the road of the future must be at least sixty feet wide (carriageway forty feet and two ten feet footpaths). The foundation must be strong and composed of concrete or equally hard material. The drainage must be carefully attended to. The surface hard and absolutely uniform in camber, at curves the road where possible to be banked on the outside to reduce the risk of accidents to a minimum. It was impracticable to construct special tracks on account of the diverse conditions of traffic. In certain localities, where the population is small,

special tracks might be formed, but the expense of such tracks would be a serious impediment to their adoption. In this country it has been found on roads carrying heavy traffic, particularly in winter, the only solution of the difficulty is to pave the road with hard setts on a concrete foundation. The construction of a road to give a surface sufficient to stand the combined wear and tear of the modern self-propelled machine with that of the horse-drawn vehicle should have a finished surface hard enough or tough enough to withstand the suction of the rubber tyre and the grinding action of the iron-shod one. In the case of the heavy motor or steam tractor, the question of the size of the wheels plays an important part in the damage caused to the roads. We are glad to find a road surveyor recognising, instead of denouncing, motor traffic.

A National Question.

At the Congress one of the most useful papers—from the point of view of those who recognise that the subject is too vast to be dealt with in piecemeal fashion—was that of Mr. Ballin Hinde, whose associations with the Motor Union as well as with the Midland Club are well known. After showing the anomalies that arise from the present want of system and neglect of uniformity, he went on to refer to present inequalities, of which a trio may be given here: (1) At present the roads of a district are probably most used by non-residents, who "wear" the surfaces but do not contribute towards the up-keep. (2) Experiments cannot be undertaken, even by a county authority, with any sense of financial equity to the ratepayer. (3) Owing to the absence of suitable road-making materials in many districts, the cost of constructing highways varies to a great degree. Many authorities have declared in favour of a national State Department; but Mr. Hinde has rendered the further service of planning out a scheme of work which should be helpful in showing to the Government the need for such an innovation.

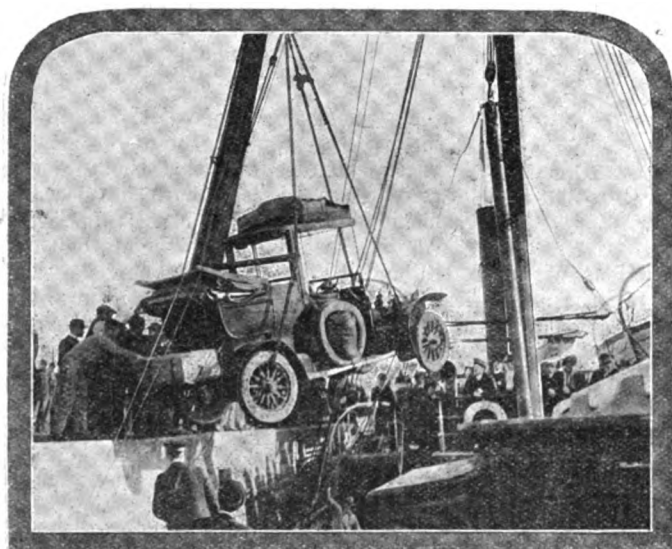
A Sevenfold Plan of Work.

THE sevenfold nature of the work to be done is thus set forth by the vice-president of the Motor Union: "(a) The establishment of a bureau of information concerning the practice of other countries with regard to the construction of roads; (b) The collection of data with reference to new road material, the compilation of records as to the behaviour of various types of road, and the classification of material in order of utility for special conditions; (c) The organisation of a department for providing machinery and equipment for districts where—as in Ireland—steam rolling and other modern methods have had to be disregarded on the score of expense; (d) Working in conjunction with the Ordnance Survey a road plan of the country should be prepared, with the view of straightening roads that at present are tediously zigzag in form, securing short distances instead of roundabout courses between important towns, and advising with regard to proposed new roads and highways; (e) Undertake the maintenance of all main roads, and so secure a desired uniformity in surface and construction; (f) The encouragement of experiments likely to serve the national purpose; (g) A general liberty of action.

with regard to subjects coming within the category of roads." This programme can scarcely be improved upon, and Mr. Ballin Hinde's proposals for the work to be undertaken by the State Department will doubtless prove the basis of any draft that may be submitted to Parliament.

The Valveless Engine.

ELSEWHERE we conclude the paper which Mr. C. Y. Knight read last week on the engine which has attracted much attention since its adoption by the Daimler Company was notified. Mr. Dugald Clerk was able to give his personal testimony that the engine was very much quieter than any ordinary petrol motor, whilst the car pulled wonderfully well at a very slow speed. Mr. G. H. Baillie, Mr. J. S. Critchley, Dr. Hele-Shaw, Mr. William Watson and others have already expressed their views, and in our next issue we shall be able to give the opinions of other experts with regard to this innovation. Mr. Knight is extremely desirous that his new departure in motor engineering should be fully discussed, and doubtless some of our readers may take advantage of the Correspondence columns to set forth their views.



Shipping a Motor-Car at Brest.

The new cross Channel route recently inaugurated between Plymouth and Brest by the Great Western Railway Company brings another very interesting part of France within reach of touring motorists. At both the ports named excellent arrangements have been made for quickly getting cars on to the steamer.

The King's Highway.

FROM the St. Bride's Press, Ltd., comes a work on the "King's Highway," by Mr. Reginald Ryves, who is in the Public Works Department of the Madras Presidency. In the course of a score of concisely written chapters, he refers to the want of uniformity in British road maintenance as compared with the system that prevails in most of the countries of the continent. Then follows a chapter on the widths of roads, and some diagrams showing how the system of "eased corners" might mitigate the dangers of the cross roads as we know them in England and Wales. The work also deals with the various materials used in road construction, and an effective chapter is given as to the effects of trees on roads, in which the mitigation of the dust nuisance by the help of forestry is urged. One or two photographs illustrate how trees may afford a valuable kind of protection to the surface of the highway, and by helping to keep the roads dry prevent that disintegration which occurs during frosty weather. Mr. Ryves points out that the most obvious virtue of trees is that they retard the development of dust in summer, and declares that it is wrong to allege that

they make roads damp, and must, therefore, be regarded as enemies to be kept back as far as possible. The point is one which has not been closely followed as yet, and the way in which Mr. Ryves introduces the subject should lead to its consideration by experts in this country.

The Benevolent Fund.

AT the third annual dinner of the Cycle and Motor Trades Benevolent Fund, a large representation of the motor industry gave the hope that ere long there may be that financial response from the motor trade which the chairman asked to place the fund on an impregnable financial basis. More than £900 has been raised as a result of the appeal by the chairman, Mr. Albert Eadie, and the Hon. Sec., Mr. A. J. Wilson. The fund is open to all associated with the motor trade, and has already proved its helpfulness in time of need. It is the only benevolent organisation in the industry, is not confined to any section or locality, and we would urge its claims upon all our readers concerned with the business side of motoring. *Bis dat qui cito dat.*

Tar and Horses.

SOME of the drivers of horse vehicles on those roads of Sussex which have been treated with tar are complaining that those thoroughfares are now in a condition of slipperiness which is dangerous for horses. The long spell of summer weather which has been enjoyed this year has solidified the tarred roads to a great degree of hardness. When a slight frost or moisture settles upon the surface it is said that a condition of greasiness is produced which is most dangerous to horse traffic. Some of the local authorities are suggesting that under such conditions these should be covered with grit or sand, as is the case with the streets of London.

A Census of Accidents.

SEVERAL M.P.s, notably Sir Francis Channing and Mr. Mackarness, have been questioning the Prime Minister with regard to the injury to life and property caused by alleged abuses of motor traffic. Replying to several questions, Mr. Asquith has referred M.P.s to the recent circular of the Local Government Board, and assured them that should this not lead to a more systematic enforcement of the law further action may be considered. In this connection we may mention that the Home Office has instructed the police throughout the country to prepare a census of the number of accidents in which motor-cars are concerned from May last to December in the present year. This will probably influence for good or ill the course of motor-car legislation during the coming year or two, and individuals should do what they can to secure that the figures are not raised beyond the normal rate by disregard of the ordinary courtesies of the road.

No Confidence.

AT the last meeting of the Guildford Rural District Council complaints were received from the parishes of Send and Ripley to the effect that nothing had been done by the County Council in regard to the application for a ten mile speed limit for motor-cars passing through Ripley. A member of the County Council who was present said that there were 150 similar cases before that body, which had selected ten which they regarded as the most urgent to report to the Local Government Board with a view to enquiries being made. Ultimately it was resolved to request the Parish Councils of the two villages concerned to forward their application direct to the authorities at Whitehall, "the District Council having no confidence in any action the County Council may take." Unluckily for the success of the move the Act distinctly says that the County Council will be the recommending medium, and the Local Government Board

is not likely to attempt to override either the Act of Parliament or the province of the County Council.

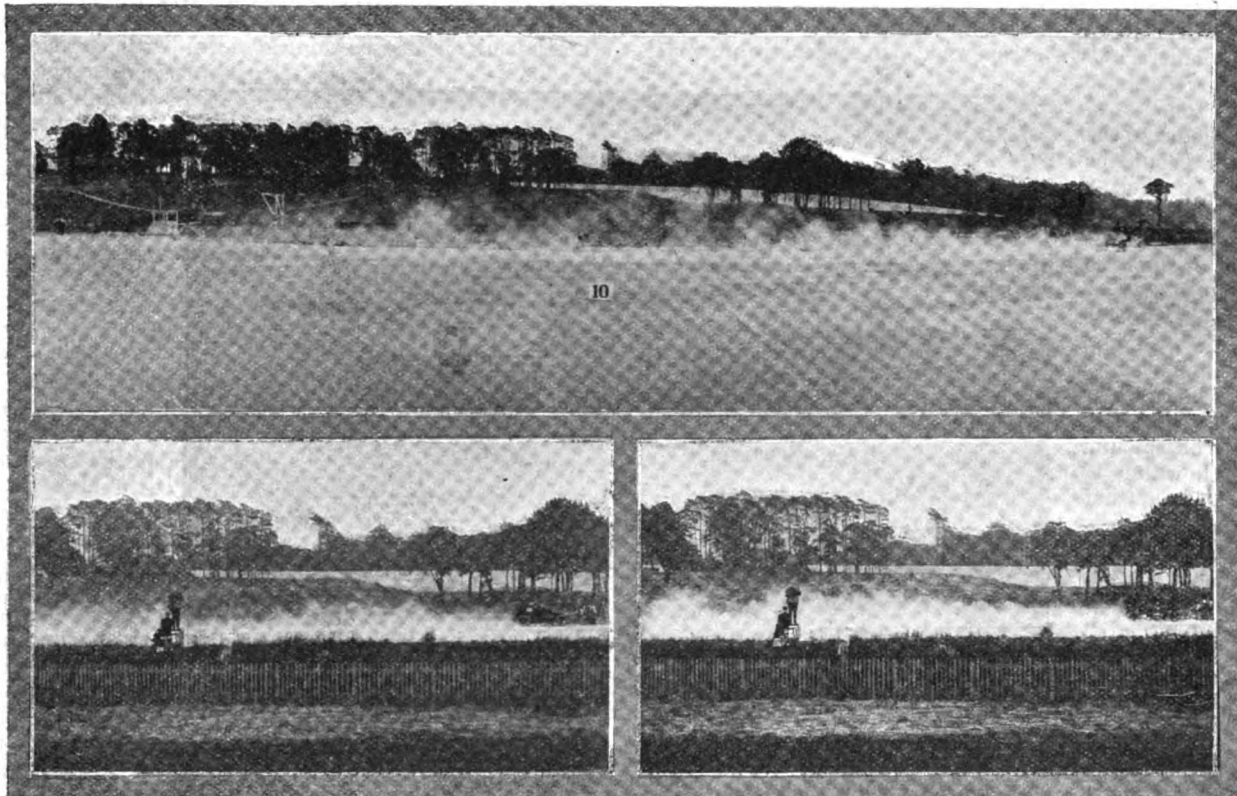
Irish Ways.

THINGS are very different in Ireland to what they are in this country, judging from two impressions which have recently been given us. Lecturing at the Exhibition of the Royal Photographic Society, Mr. Arthur Marshall has been saying that the chief troubles to motorists arise from the fowls which fly alongside the car, the ducks which squat down on the roadway in order that vehicles shall pass over them, and the pigs which lie in the centre of the highway and refuse to budge. The only way, according to Mr. Marshall, to deal with the latter is to turn the car round and let the exhaust waft them out of harm's way. There are, however, legal compensations for the motorist which, perhaps, amply make up for any trouble which he is caused by the

the offence was committed. This is an interesting legal point, which perhaps may be useful knowledge to some of our readers in the Emerald Isle.

Teaching the Young.

SOME lads who have been amusing themselves by placing on the road at Tarring "certain sharp substances, to wit, nails, in such a position as to be likely to cause damage to property," have been admonished by the Worthing Bench, whilst we trust parental discipline will in future deter them from a repetition of their recent escapade. They had taken some nails from a building and placed them on the roadway at regular intervals, with the points upwards, over a space of eight or nine feet of the roadway. Then when a motor-car came "something went off bang," and the lads made away as quickly as possible. A constable who gave evidence had collected two packets of nails



The B.A.C. Dust Trials.

The B.A.C. have sent us a series of photos taken on the occasion of the recent Dust Trials on Brooklands Track. Three of the pictures are reproduced above. The upper one depicts the 22.5-h.p. Buick car, entered by Mr. F. Eason, travelling at a speed of twenty miles per hour; this vehicle secured the first prize in the Makers' Section. The lower illustration on the left shows Mr. H. Gordon Sharp's 18.06-h.p. Reo (second prize) covering the dust-covered portion at thirty miles per hour. The third photo, which is given by way of comparison, shows the cloud raised by one of the worst dust-raising cars in the test.

natural obstinacy of the porcine monsters which frequent Irish roadways. A K.C. of the Irish Bar sends us an interesting example of the humour of the situation so far as the prosecution of motorists as well as of other persons is concerned. If a person commits any offence punishable under the Summary Jurisdiction Acts, the only persons who can try the case are the justices of the Petty Sessions of the county in which the offence has taken place. These, however, can only issue, and have served, a summons upon a defendant residing in their county, or in that immediately adjoining. Thus if an offence be committed at Bray, in Co. Wicklow, the case must be heard at Bray. Should the offender live either in Co. Dublin, Co. Wicklow, or Co. Wexford, he could be brought to justice because he lives either in the county where the justices deciding the summons have jurisdiction or in an adjoining one. Should, however, he live in another district or in England, he can scarcely be made amenable for the case, for it would be impossible, practically speaking, to serve him with a summons in that county where

from the road, and we trust the police will be as keen after such delinquents as they are with those who indulge in less reprehensible practices.

Mr. R. W. COAN has lately extended his well-known aluminium foundry in the Goswell Road, London, E.C., while a site for future development has also been acquired.

THE British military aeroplane was taken out by Mr. S. F. Cody, who is mainly responsible for its construction, and met with an accident at Farnborough on Friday last week. The machine succeeded in leaving the ground, but, in endeavouring to avoid some trees, Mr. Cody turned the aeroplane too sharply, with the result that the left wing went up and the right dipped down, and after fluttering a few moments in the air the apparatus fell to the ground, hopelessly smashing one wing and breaking the other in half. Mr. Cody, who stuck to his seat, was unhurt, while the engine, a 50-h.p. eight-cylinder Antoinette, was but slightly damaged.

MOTORIZING IN WINTER. SOME SEASONABLE TIPS.

THE season of cold weather being again at hand, it is opportune to recall to the minds of motorists the special difficulties which attend motoring during this period of the year, and the precautions necessary. A good deal of damage is done to cars in the winter months, when a sudden frost may be experienced with but little warning, owing to neglect of these precautions; and perhaps mishaps may be prevented by giving a timely hint, especially to novices.

Should a frost occur, and the car is housed in a cold stable, the cooling water will freeze in the jacket, the pipes and the radiator, if it has not previously been emptied out, and, as water expands in freezing, it will probably crack or burst these. The damage is particularly heavy if a cylinder is affected. Either the jacket wall or the cylinder wall may be cracked; if the former, there are a number of methods—some chemical, some mechanical—by which the damage may be repaired; but if the latter, a repair is almost impossible, and the whole cylinder or cylinders must be renewed. In order to prevent

such an occurrence, the addition of some anti-freezing compound to the cooling water should be resorted to. An efficient method is to add glycerine in the proportion of about one part to every five of water. Calcium chloride is also a good specific against freezing, and by many is thought to be superior to glycerine. Probably the chloride of calcium will cause the water to withstand a somewhat lower temperature without freezing, but if it is impure it may cause corrosion in the water tanks or piping. It should, therefore, be obtained as chemically pure as possible. Various suggestions have been made to neutralize the presence of any acid in commercial chloride of

calcium by the addition of some suitable alkali, such as potash, soda, or lime. Whether their effect would in time be detrimental in any way to the circulating system we are not prepared to say definitely, but it is reasonable to state that they counteract the action of any acids present, and probably without deleterious effects. A good solution density is obtained by using 5 pounds of hydrated calcium chloride crystals to 1 gallon of water. This solution will not freeze above zero Fahrenheit. A proportion of 8 pounds to the gallon is recommended by one authority, but in most cases the weaker solution is preferable, as there is less danger of too much water being allowed to evaporate and of trouble caused by crystals forming in the pipes and preventing circulation. Fresh water should be added frequently to keep the system filled and the solution at its normal density.

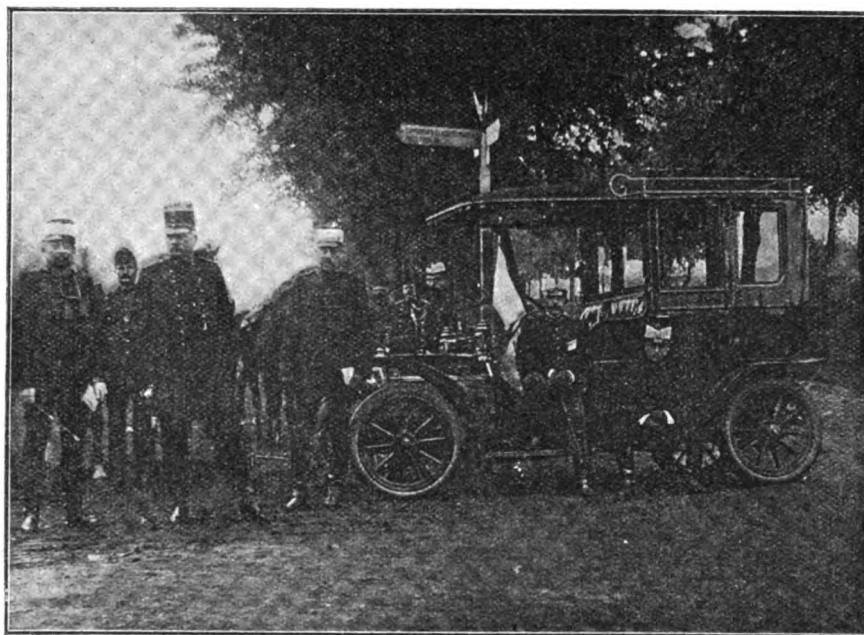
If no non-freezing compound is employed the only alternative is to carefully empty the cooling water out of the system before locking up the car. If this is the method resorted to it is not sufficient—especially with the older types of cars—to open the drain cock and trust to luck that all the water will drain out, as many cars have been built in which there are pockets in the cooling system which cannot be perfectly drained. The circuit should therefore be carefully inspected to see whether all the

water can flow to the drain opening, otherwise the pipes must be taken off. Pockets are particularly liable to occur in the pump, with the result that the latter will freeze tight, and some part of it will be broken when it is next attempted to start the motor. It is therefore well before starting an engine after a period of considerable cold to ascertain whether the pump is free, by turning it by hand, if this can be done. A burst is a burst, and it will sometimes cost just as much to repair the ravages of one caused by imperfect draining of the water receptacles as one due to the neglect to take any precautions whatever. As long as a car is kept in commission through the winter it ought to be looked after properly; and there can be but one way of thinking about the matter of freezing—i.e., that an ounce of prevention is worth a pound of cure.

Other cold weather difficulties relate to the lubrication and to the carburation. Oil thickens greatly in cold weather, and will not flow readily, if it flows at all, through the feed pipes. In many modern cars the oil reservoir is so located that it is heated by the engine, and after a short period of running feeds at the same rate as in summer. Where this is not the case the lubricating oil may be thinned down with paraffin to the same

consistency as it has in warm weather. A somewhat lighter grade of oil may also be used in winter. Making this change in oil affords an excellent opportunity of giving the motor a thorough flushing out with paraffin, taking particular care that the oil feeds are well cleared, so that there will be no obstruction to the flow of the thin oil by the residue of the same lubricant.

More flooding of the carburettor is apt to be required in starting in cold than in warm weather, but this should not be carried to excess. If the mixture is over-rich it will be necessary to work off the surplus by turning the starting handle until the mixture is reduced to an explosive quality. Another cold



The F.N. Car used in the recent Dutch Military Manœuvres for the rapid conveyance of officers.

weather hint is to drain the petrol from the carburettor if it has been standing for some time, as it is apt to become "stale" and make starting difficult.

Tyres suffer severely if driven carelessly over rough, frozen roads. If there is snow on the roads it is wise to be provided with something to give the tyres a grip on slippery surfaces. If no regular anti-skidding device is fitted, it is a simple matter to keep in the tool box a supply of small chain to wrap round the tyres in case of necessity. There are, however, a number of anti-skidding attachments on the market that do not injure the tyres, and will effectually prevent slipping, while they save time and annoyance to the driver if the car is to be used extensively in the winter.

A NEW form of crime is stated to be at present receiving the attention of the Paris police. Within the last ten days no fewer than twenty-seven motor-cars—in nearly every case vehicles of expensive make and luxurious upholstery—have been seriously damaged by corrosive acids poured or thrown over them by unknown persons in the Opera Quarter, ruining the paint and seriously injuring the leather work and the tyres. The liquid appears to have been thrown from a window, but so far the police have been unable to discover the perpetrators of the outrage.

Some Novelties at the Coming Paris Salon.



BY OUR PARIS CORRESPONDENT.

ALTHOUGH the time has gone when the Paris Salon de l'Automobile might be expected to contain inventions calculated to revolutionise the motor industry, the eleventh annual show, which will open its doors in the Grand Palais in the Champs Elysées on November 28th, will offer more than usual interest. The exhibition, which will remain open till December 13th, will be followed in the same building from December 24th to 30th by the display of machinery, heavy industrial and commercial vehicles, &c., which has till now been contained in the annexe installed last year on the Esplanade des Invalides. It was impossible to utilise that space this year on account of the works connected with the construction of the Metropolitan Railway; moreover, the exhibitors, and especially those showing articles connected with navigation, aerostation and aviation, pleaded hard for admission into the Grand Palais. Relegated to the annexe, they considered they were not given a fair chance to interest the public, who could not be induced to cross the bridge leading to the Place des Invalides.

And it is incontestable that Classes 20 (navigation) and 21 (aerostation and aviation) should attract universal attention. Indeed, if the automobile manufacturers have only most useful and important improvements to present to the public this year, the others will contain revolutionising novelties. In the navigation class will be found, among other things, the Diésel and other internal combustion motors, with which such remarkable achievements have been made recently that the A.C.F. has thought right to organise a special technical commission to study the whole question of navigation while the Salon remains open. The Diésel motor has already been adopted by the French Government for some of its submarine craft. One of the little vessels fitted with it made the extraordinary voyage from Cherbourg to Brest, then back to Cherbourg, on to Dunkirk and back to Cherbourg. As is fairly generally known, very powerful motors of that system are now constructed, some developing as much as 6,000-h.p. The importance of this fact is very great, as it may lead to the adoption of internal combustion motors not only for the mercantile fleet but by the Navy.

However, "A tout seigneur tout honneur." Therefore, before speaking of the light motors and new aviation industry, I will indicate some of the novelties which will be exhibited by the leading French motor manufacturers. Messrs. Panhard's great innovation is their 8-h.p. two-cylinder live axle chassis to be sold at £240; it is destined to compete with the Renault taxi-cab chassis. Another new model to be shown by Panhard is a 30-h.p. six-cylinder chain driven chassis, price £660. This firm has just reduced the price of its 15-h.p. chassis from £460 to £440, its 25-h.p. from £600 to £560, and its 35-h.p. from £720 to £680. Having purchased the patent rights of the Henriot change-speed gear, Messrs. Panhard have been experimenting and testing it in every way with the intention of applying it to all their models, old and new. It had been expected that some of the chassis exhibited in the Salon would be furnished with this new change-speed gear, but I am now informed that the firm have abandoned the idea of showing it, as they have not yet had sufficient time to test it sufficiently to enable them to decide definitely whether they will adopt it for their chassis or not.

Messrs. Renault have established light models with the respective horse-power of 35-45-h.p. and 20-30-h.p. These chassis are of their normal type, but with all the parts lightened and with a special change-speed gear and a more inclined steering wheel. The speed is thus increased, while the wear and tear of the tyres is diminished. This firm will also exhibit a new voiturette; the engine has two cylinders with a bore of 75 mm., and a stroke of 120 mm. and is fitted with magneto ignition. The car has a

double bucket seat, and is built to stand rough work with small expense of petrol and tyres; its price is fixed at £200. The 50-60-h.p. six-cylinder chassis, costing about £1,000, will also be shown at the Salon, and deserves attention, as it is as perfect as it can be made. Messrs. Renault have created another new type of chassis, a four-cylinder 12-16-h.p., but I am not sure whether it will be included in their exhibit in the Grand Palais. Its price has not yet been definitively fixed; but it will be about £400 or £420. The Delaunay-Belleville Company will exhibit one new model, a 30-h.p. six-cylinder live axle chassis. It is most silent and well suspended and will cost £700.

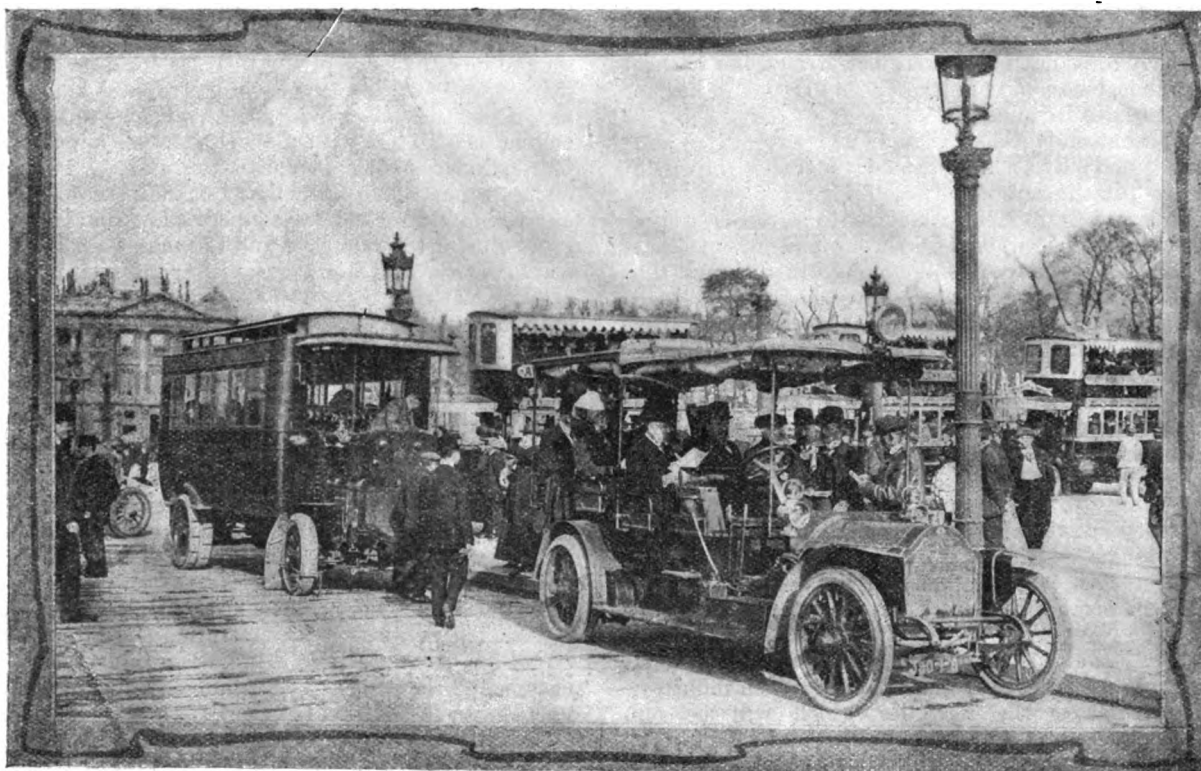
Messrs. De Dion-Bouton and Co.'s show will be very interesting. It will comprise a reliable single-cylinder car with all the latest improvements, costing, with two seats, £180 and with four seats £198. The chassis is the same as that adopted for the new taxi-cabs plying in Paris for hire at the tariff of the horse-drawn vehicles. The motor is rated at 9-h.p. This firm has abandoned the two-cylinder motor, and its smallest four-cylinder engine is a 10-h.p. with the cylinders all in one casting. Other four-cylinder models comprise the 12-h.p., 18-h.p., 25-h.p. and 30-h.p. types. The new chassis manufactured by Messrs. Mors and Co. for 1909, and to be exhibited at the Salon, are a 12-h.p. four-cylinder (80 mm. bore and 120 mm. stroke) with four speeds and live axle, a 17-h.p. four-cylinder (95 mm. bore and 130 mm. stroke), with four-speeds and live axle, a 28-h.p. four-cylinder (114 mm. bore and 150 mm. stroke), four-speeds, chain drive, and a 50-h.p. six-cylinder (114 mm. bore and 150 mm. stroke), with high and low tension ignition, four speeds, chain drive, &c. I regret to be unable to state the prices of these chassis, but Mors told me they were not yet definitively fixed. Messrs. Darracq and Co. will have two new models in the Salon, a 12-14-h.p. and a 20-24-h.p., both with four-cylinder engines. The improvements introduced into these cars, and indeed into all the vehicles to be manufactured by them in 1909, will comprise the gate change-speed lever placed on the side, the adoption of a change-speed gear (four speeds) by three *trains balladeurs*, grasshopper springs, and mechanical lubrication. This firm has considerably reduced its prices. The new 12-14-h.p. costs from £232 to £276 and the new 20-24-h.p. from £370 to £418, according to the length of the chassis and the body. The Motobloc Company will exhibit two new chassis in addition to their existing models, which will also be found to have been improved for 1909. One of the new types is a 9-h.p. single-cylinder, the other a 12-h.p. with a four-cylinder engine. Both have three speeds and reverse, and live axle. The prices are, for the 9-h.p. £132, and the 12-h.p. £312.

Messrs. Clement and Co. will show a new 12-h.p. car, having a four-cylinder engine with a bore of 80 mm. and a stroke of 110 mm. The car will be supplied either as a two or four-seater, and will be very cheap. The price, however, will not be announced till the opening of the Salon. Messrs. Clement and Co.'s stand in the Grand Palais will contain the four following models: 30-h.p. six-cylinder, chain-drive; 24-h.p. four-cylinder, chain-drive; 16-h.p. four-cylinder, live axle; 12-h.p. four-cylinder, live axle.

As for the light motors for aerostation and aviation, their number is increasing every day. Among those which will be exhibited in the Salon is, of course, the Antoinette, which enabled the first aeroplanes to leave the earth. The Renault air-cooled motor, which figured in last year's Salon, will be shown again in its improved form. It has eight cylinders, giving 45-h.p., and now works with most perfect regularity. It is not yet certain, but I have been informed that Wilbur Wright's aeroplane with its motor will be exhibited. The Wright Brothers' motor is of 24-h.p., the four cylinders having a bore of 100 mm. and a stroke of 95 mm. With the flywheel it weighs 90 kilos., whereas the 50-h.p. Antoinette weighs 190 kilos. The aeroplanes which

the brothers Voisin have constructed for Messrs. Goupy, Moore-Brabazon, Florio, and de Caters are furnished with either the Antoinette, the Vivinus, or the Metallurgique motor. They all three give about 50-h.p. at 1,000 revolutions per minute, while their weight varies between 160 and 190 kilos. The Gobron motor, which weighs 130 kilos., and gives 50-h.p. at 1,000 revolutions per minute and 60-h.p. at 1,200 revolutions per minute, will be examined with keen interest by all aviators who may visit the Salon. It comprises eight cylinders placed in the form of a cross with two cylinders on each branch. The explosions take place between two pistons. This disposition, which is one of the characteristics of the ordinary Gobron motor, is claimed to suppress the strain on the cylinders and diminishes the speed of the pistons. The ignition is effected by two magnetos, so that in the case of one failing the other still furnishes the spark to half the cylinders and so would enable the aviator using the motor to descend safely. The Robert Esnault Pelterie (R.E.P.) engine has been often described and will surely attract much attention at the Salon. There will

The Salon will, of course, contain various aeroplanes and models of flying machines. Perhaps the most important display will be that of Messrs. Voisin Frères. There will be at least a model of Henry Farman's aeroplane, which is known to the world, and almost certainly another flying apparatus belonging to the same aviator and built by Voisins. It has been named the Flying Fish on account of its similarity with that inhabitant of the ocean; it is a monoplane with a series of short wings attached to a long frame. This aeroplane, weighing about 600 kilos., measures 14 metres long and has a bearing surface of 24 square metres. It is expected to realise a speed of between 85 and 90 kilometres an hour. The Voisin Frères will also show the triplanes or the models of the triplanes they have constructed for Messrs. Goupy, Moore-Brabazon, Florio, and De Caters. Delagrangé, having formed a company for the popularisation of aviation, will have a separate stand in the Grand Palais, though till now his machines have been built by the Voisin firm. Visitors will also have the opportunity to inspect



The International Road Congress.—Some of the members leaving the Place de la Concorde, Paris, for the trip to Versailles.

be various other light motors for aeroplanes exhibited in a more or less finished or unfinished condition, but the light motor being made by M. Mors, who never shows an imperfect apparatus, will not be exhibited, though that celebrated engineer assures me he will be able to commence delivery of them in February or March next. The motor, which is very light and air-cooled, gives between 60 and 70-h.p., and has the particularity of the cylinders rotating round a fixed shaft. One of the difficulties M. Mors had to contend with was the lubrication of the cylinders, as the centrifugal force of the extremely rapid rotation tended to throw off the oil. The company manufacturing the well-known Gnome motor will show a very light engine constructed on much the same principle as that of M. Mors. It is destined for use on aeroplanes, and weighs only 60 kilos., though it is said to give 50-h.p. at 1,100 revs. a minute. It is air-cooled, and, like the Mors motor, the seven cylinders in a star rotate round a fixed shaft, thus forming a flywheel. It has on several occasions been kept running more than an hour. There is no vibration, and the lubrication seems perfect. The ignition is effected by accumulators.

either the machines themselves or the models of various other aeroplanes, and amongst them those of Messrs. Bleriot, Antoinette, Pischhoff, Robert Esnault Pelterie, &c.

THE Oxford City Council has decided to apply to the L.G.B. for a speed limit of ten miles an hour for motor-cars. One motorist on the council admitted that he was once in favour of a speed limit, but after he had acquired a motor-car, "and came thoroughly to understand how quickly it might be pulled up, he felt what an ass he had previously made of himself."

THE first motor track race meeting held in Canada took place in Delorimier Park, Montreal, on the 26th and 27th ult., when Walter Christie, driving a 130-h.p. Christie, made the best time, he covering the mile in 1 min. 10 sec., this being claimed as a record for a half-mile track. C. Soules, on a 60-h.p. Stearns, was second, with 1 min. 14 sec. to his credit, and Barney Oldfield, on a 90-h.p. Stearns, third, in 1 min. 15 sec. The five mile-championship of Canada for cars of from 20-h.p. to 35-h.p. was won by L. D. Robertson on a Comet in 6 min. 44 sec.

SOME CURRENT TOPICS.

The Regulation of Traffic.

Although the methods of the London police as regards the regulation of traffic are looked upon as forming an excellent example for Paris and other large continental cities, there are one or two directions in which they could usefully extend their labours to the advantage of traffic generally. Fortunately the sight of a motor-bus *en panne* has recently not been quite so common as a year ago, but still they do occasionally break down, and are usually left standing at the point where the stoppage occurs, even when this is in the direct line of traffic. It should be the first thought of the drivers to push their vehicles either to the side or the centre of the road so as not to form an obstruction, and where this is not done, the police should insist upon it.

Another Cause of Obstruction.

Another cause of obstruction that I have lately observed in the West End is in those thoroughfares which at intervals have been provided by the authorities with islands in the centre of the road to ensure safe crossing to pedestrians, by dividing it into two stages. As these islands naturally restrict the wheeled traffic capacity of the thoroughfares at that point, it would be well if a regulation were issued rendering it illegal for any vehicle—whether automobile or horse drawn—to be allowed to stand, even near the kerb, between these islands and the pavement. Only the other day I noticed a street near the offices of the *M.C.J.* where on one side two cars were drawn up and on the other a horsed van, the island being directly between them. Not only was the advantage of the safety point to the public rendered entirely nugatory, but the capacity of the road, which normally is equal to two lines of up and down traffic, was reduced to one line in each direction.

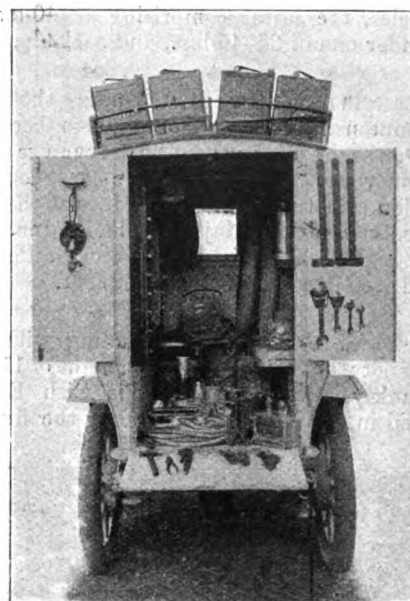
Off-Set Crank Shafts.

A year or so ago a discussion took place as to the advantage of off-set crank shafts in petrol motors, *i.e.*, engines in which the crank shaft is slightly out of line with the centre of the cylinders. While there appears to be no doubt that some benefit is obtained by off-setting, the explanations that have hitherto been given have been somewhat of a too technical character to be readily grasped by motorists. Messrs. T. B. Jeffery and Company, makers of the American Rambler cars, have, however, lately issued a popular explanation of the principle which should render the idea clear to the merest novice. It runs as follows:—"Notice a man about to mount a bicycle. He always adjusts the pedal in that position where it will receive to best advantage his full weight on the first downward stroke. The best position for the pedal is just slightly forward of the centre of the crank shaft of the bicycle. If he mounted when the pedal was immediately over the centre of the crank shaft, his weight would fall directly on the bearings and the first downward stroke would be retarded, and, therefore, weak. Now imagine the man's leg as the piston of an automobile engine; the pedal of the bicycle as the crank pin and the crank shaft of the bicycle as the crank shaft of the motor. In the ordinary engine the crank pin and piston (the pedal and the man's leg) are directly over the dead centre, and until the crank passes the turning point all effort is wasted. Thus, when the explosion occurs, the greatest force falls upon the bearings. In the Rambler engine at the instant the explosion occurs above the piston the crank pin has moved past the dead centre; the crank shaft is in a position to receive the full pressure and turns without friction. Consequently there is no side thrust of the piston, and wear on the cylinder walls is thus saved."

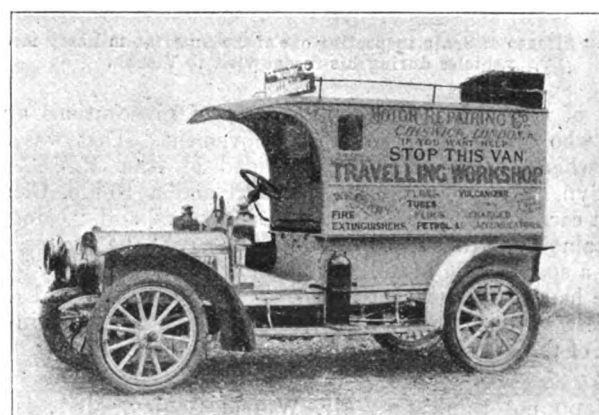
THE Homeland Association is doing really excellent service in popularising many places at home, which have been comparatively neglected. Its handbook to Rye and Winchelsea—specimens of the illustrations from which have appeared in recent issues—is typical of many others and should prove of great utility to the towns with which it deals.

A TRAVELLING MOTOR REPAIR SHOP.

"IF you want help, stop this van." So reads the notice that caught our eye on a motor vehicle which we passed on the Brighton road the other day. Desiring to ascertain the full meaning of the catchy sign, we hailed the van and found that it belongs to the Motor



Repairing Company, of 19, High Road, Chiswick, who some time ago hit upon the idea of placing a travelling motor repair shop on the road, with the view of assisting any motorists who may from one cause or another become stranded. A general view of the vehicle—which is built on an Argyll 16-20-h.p. chassis—is given below, while the upper picture shows the "workshop," which was fitted up on the company's premises, and by their own men. The outfit comprises a good stock of Barker's tyres and tubes, for which the firm are sole district agents, sparking plugs, bolts and nuts of all sizes, ignition wire, charged accumulators, springs, block and tackle for pulling cars out of ditches, towing ropes, fire extinguisher, petrol, oil, &c. The plant also includes a powerful blow lamp, for straightening damaged axles, and a couple of Harvey Frost vulcanizers



with which tyre repairs can be effected on the road. In a word, almost every article that may be required is carried on the van, and practically any repair can be undertaken on the spot, the vehicle being in charge of expert mechanics. The van is kept tuned up ready to turn out at a moment's notice, while it is on the Brighton road, as a rule, every Sunday, when it runs to a time-table, and is in telephonic communication all the way down. The Motor Repairing Company are to be congratulated on their enterprise.

THE SOCIAL WHIRL.

THE King visited Mr. and Mrs. James at West Dean Park, Sussex, on Monday, when several of His Majesty's intimate friends were invited to meet him, including Mr. A. Sassoon. Among the cars belonging to Mr. James which were utilised for the convenience and conveyance of the guests were an 18-h.p. Charron, a 10-14-h.p. Renault, a 12-h.p. Panhard, and three Maudslay vehicles, the latter comprising a 40-h.p. six-cylinder car, a four-cylinder one of 35-45-h.p., and a 12-h.p. car.

PRINCE FRANCIS OF TECK, after attending the annual dinner of the Northamptonshire A.C., consented to become a patron of the club. On the day of the event he drove over many miles of roads in the county and congratulated the surveyor, Mr. Morris, on their condition. Lord Annaly, M.F.H., was the host of the Prince, whose compliment to Major Leslie Renton, M.P., for his conduct of the Lights on Vehicles Act through Parliament was well timed, and well deserved by the recipient.

THE scheme of the R.A.C. for dealing with the inconsiderate driver is not wholly the original thought of 119, Piccadilly. Mr. J. L. Wanklyn, whose associations with Bradford were recently detailed in this column, was among the first to suggest



King Alfonso of Spain inspecting one of the Austrian military motor vehicles during his recent visit to Vienna.

a plan of campaign for the institution of prosecutions against those who discredited the motor movement. That was in the days when Mr. C. D. Rose presided at the R.A.C. Mr. Wanklyn, who has a 20-h.p. Panhard and a 16-h.p. Clement-Talbot car, is still at Leenane, in Connemara, and "being in a mountainous and unenclosed country I have," he writes, "imposed a speed limit of fifteen miles an hour upon my driver. I have had no accident with either of these two cars, and am on the best of terms with all my neighbours, but I go in daily dread of the motorist on tour."

I DO not think that Mr. Wilfrid Ashley, M.P., is quite satisfied with Mr. Haldane's assurance that sufficient funds have been provided in this year's Army Estimates for experimental work in balloon and airship construction. In 1903-04 the expenditure on balloon work was £14,600; this year it is about £1,000 less for both balloon and airship experiments.

ON Saturday a mishap befel the Bishop of Carlisle and the Dean of Carlisle (Dr. Barker) through the breakdown of the motor-car which the latter's late London parishioners recently presented to him on leaving for the North. The Bishop was due

to consecrate a new church at Plumpton, near Penrith, and the Dean had also arranged to be present, motoring to the place via Rose Castle, where he took up the Bishop. Unfortunately the car broke down in a desolate spot, and the passengers did not arrive at their destination till an hour after the time of the ceremony. On entering the pulpit the Bishop explained that he had sometimes been asked why he did not himself possess a car, and he had jocosely said, what he now found a reality, that the reason he had not had such a vehicle was that he always liked to get to the end of his journey. He had begun to melt in the matter, and it had been more than once suggested to him that the diocese might give him a car, but he had not hitherto welcomed the suggestion, though he was beginning to consider whether it might not be advisable to consent. The experience of that afternoon had stopped his melting, at any rate for the present.

MR. LEONARD BRASSEY, one of the candidates for North Northamptonshire, who is addressing meetings in the constituency, has been the victim of an amusing adventure. In motoring to Corby at night his progress was impeded by two stray horses, one of which ran to a gateway, while the other persisted in keeping in front of the car. The chauffeur alighted to drive it off the road, and while he had gone in the darkness a young lady cyclist rode up and was too nervous to pass the horse at the gate. Mr. Brassey went to her assistance and piloted her safely by. In the meantime the chauffeur returned, and, thinking his employer was in the rear part of the car, drove on to Corby. He did not discover Mr. Brassey's absence until he reached the village, when, of course, he speedily drove back. Mr. Brassey arrived late at his meeting, and his apology, when he laughingly described his adventure, caused much merriment.

WHEN the Rev. Dr. Jacobs left the Newcastle diocese for St. Albans his admirers presented him with an automobile; Dr. Straton has not long occupied the bishopric before being similarly speeded by his friends. The Bishop of Newcastle hopes the car will never be driven to the detriment of the law; at the same time, he has assured those who subscribed for the gift that the grass shall not grow under its wheels. Here are some details of the new vehicle, towards which the Duchess of Grafton, the Dowager Lady Tankerville, Lord Kinnaird, Sir C. Morison Bell, Bart., Sir T. Fowell Buxton, Mr. Martin Sutton, and 354 other persons subscribed. The chassis is by Messrs. Armstrong, Whitworth and Co., the body work by Messrs. Sir Wm. Angus and Sanderson, while its fittings include a clock presented by Mr. H. B. Hohler, a reflecting mirror given by the Rev. W. T. Moran, and a carriage mat sent by the inmates of the Newcastle Diocesan House of Refuge.

BISHOP WELLDON, who was formerly head master at Harrow School, recently spoke at a meeting at Aberdeen, deploring the existence of effeminacy among the sons of rich parents. In replying to this suggestion Dr. Wood, the head master of Harrow, is of a contrary opinion, although he agrees that luxury at the Universities is undoubtedly increasing. At either Oxford or Cambridge there is, according to Dr. Wood, a small set of rich undergraduates who keep motor-cars in addition to hunters and polo ponies. In disposing of £2,000 a year he declares that £300 is probably to be put to the expense of the undergraduate's motor-car.

THE recent reference to the number of cars frequenting hotels in country districts seems to have set some of my correspondents a-counting. At the Bull Hotel, Cambridge, for instance, fifty cars call in a week—testimony to the amount of money that is being circulated owing to the motor-car.

LOLLIUS.

THE Pacific Steam Navigation Company announce that the French Minister of Public Works has appointed the necessary officials at La Rochelle-Pallice to examine touring motor-cars arriving from England and to issue the necessary documents.

Should the Tourist Trophy Race be Repeated?

THE EFFECT OF THE "FOUR-INCH" RACE—LONG v. SHORT STROKE ENGINES—SUGGESTED
NEW REGULATIONS.

THIS week we are able to add the views of three well-known firms represented in the recent Four-Inch Race with regard to the continuance of the Tourist Trophy event. As we foreshadowed in our last issue, our symposium has shown that while a number of manufacturers are emphatically against its repetition, the majority, on the other hand, are distinctly in favour of an annual contest. Various suggestions are advanced with regard to the rules under which the race shall be held next year. Such well-known members of the trade as Mr. T. C. Pullinger and Mr. C. Jarrott, for instance, are in favour of a further restriction in the cylinder bore to three inches. Several propose a limit to the stroke as well as to the bore, while others consider the lines of the 1908 contest as fully meeting all requirements.

Although opinions are divided as to whether the Four-Inch Race will have any effect on the general design of touring-cars, it seems to be generally agreed that it gave a stimulus to motor designers, who, by paying greater attention to the question of the size of valves, valve timing, inlet and exhaust ports, &c., have been able to produce engines which, size for size, develop considerably greater power than those of a year or so ago. Another point which this increased attention brought out was that, combined with the foregoing improvements, the employment of light reciprocating parts enabled a material increase in the stroke to be effected without any corresponding reduction in the rotative speed, thus enabling a higher piston speed to be maintained with a relative advance in the power output. With such an advantage to be gained it is not surprising that certain manufacturers went to much greater extremes in the way of stroke than has previously been experienced—at least in this country. It may be pointed out, however, that the bulk of the cars which took part in the competition were equipped with motors of a normal length of stroke, those of a few vehicles being, indeed, of the maker's standard type. Excellent as were the results obtained from the long stroke engines, it was, in our opinion, the "normals" which gave the most convincing demonstration of the progress that has been made in engine design in recent months; and, having this in mind, we certainly think that any improvement in touring cars which may result from the Four-Inch Race will be more due to the all-round advance in petrol motor construction than to the adoption of extremely long strokes.

STROKE AS WELL AS BORE TO BE LIMITED.

The Calthorpe Motor Company, Ltd., write that they "are certainly in favour of the Tourist Trophy Race being held next year, subject to the same conditions, with the exception that not only the bore but the stroke should be limited. This would be fairer for all concerned, and give the public a better idea as to the merits of the winning car. As regards our idea on long v. short stroke engines, this matter has already been ventilated sufficiently in the Press. We do not believe in abnormally long stroke engines, and our performance in the Four-Inch Race, where we obtained fourth position, although being the smallest engine of all cars entered, proves best that the short stroke engine can with advantage hold its own against motors with such abnormally long stroke, which can only be classified amongst the commercially useless freaks.

As regards the lessons learnt by the Tourist Trophy Race, we think they can be put in a nutshell, namely, that in the near future we shall see the heavy high-powered touring car completely disappear from the road."

"FOUR-INCH" CARS A POPULAR TYPE.

Mr. Warwick J. Wright, on behalf of the company bearing his name, remarks, "I do not think there is any doubt that the

Four-Inch Race will have a beneficial effect on the general design of touring cars. The probability is that in the future the four-inch four-cylinder car will constitute a very popular type of engine. If constructed properly, it is quite capable of developing all the power that is required for all normal conditions. It will take a big landaulet body up all normal hills on the top gear, and, if correctly designed, be economical in tyres and petrol, &c., and there can be little doubt that the Four-Inch Race has advanced this type of engine enormously.

With regard to your second query as to the merits of long versus short strokes in engines there can be no question. The long type of stroke makes the better and the more powerful engine for a motor-car. The long stroke engine is peculiar for its picking up qualities and "getting away," and especially for pulling hard down to the very last few revolutions. A short stroke engine can never have the life and vim. When I speak of long strokes, I do not mean abnormally long "freak" strokes, as, obviously, it is possible to go to extremes in this direction as in others, and all extremes are wrong. The efficiency of the engine is not only added to from a power point of view for a given size, but also economy in petrol and lessened wear and tear of the engine are the result.

With regard to your third query as to whether another Tourist Trophy Race is advisable in 1909, yes, certainly, and if one is held, we shall enter Metallurgique cars to compete. The course in the Isle of Man is necessarily slow and a dangerous one up to a point, but all sport is dangerous. It would lose its attraction if it were not so; in fact, it is this very spirit of competition and of getting round a dangerous course at the highest possible speed that adds to the enjoyment of driving and makes the race interesting. Incidentally, there is not a tithe of the danger the Yellow Press fondly imagines.

With regard to your fourth question, as to whether a petrol limit should be employed in future, I do not favour this proposition. It seems to me that the chief charm of the recent race lay in the simplicity of the rules; a manufacturer was given a certain bore, and, for the rest, he could do just as he liked. This necessarily sets numerous people working out their own ideas, and the result is bound to be good for the industry, and the simpler the conditions are, usually the better result. There could be no doubt that this year's Four-Inch Race was a distinct success, and this was largely due to the simplicity of the rules."

IN FAVOUR OF THE RACE.

Mr. A. Rawlinson, the managing director of Messrs. Darracq and Co., Ltd., sends us a brief but emphatic letter to the effect that "We consider that the result of the 'Four-inch Race' will have a very excellent effect upon the general design of touring cars, making for an increased efficiency in power and transmission." He adds, "There can be no doubt that the experience gained by going through a very arduous trial, over a course so well calculated to try every part of the mechanism and general design of the vehicles, cannot do other than exert a most beneficial influence upon the designs of the future. For these reasons we should be distinctly in favour of a repetition of the race in 1909."

A USEFUL little novelty has just been put on the market by Messrs. A. J. Dew and Co., of 8, Hart Street, Holborn, W.C., in the shape of a starting handle holder. The device, which is made of leather and of a neat appearance, is easily attached to the frame of the car by means of the strap provided, and affords an effective means of protecting the starting handle from mud and injury.

THE CLERGY AND THE CAR.

NOW that most of the Bishops and many of the leaders of Nonconformity possess their motor-cars, the subject as to whether such ownership is likely to assist their work is being settled apart from the discussion that recently took place in the religious journals on the subject. Everyone is agreed that visitation is facilitated, while the work of travelling necessary distances is considerably relieved of many of its hardships.

We are glad to learn that there are clergymen among the members of the Motor Union who render service as occasional correspondents, and are taking up with local authorities such questions as the erection of danger posts. Since the inauguration of the touring department of the Union, clerical motorists have added to the Union's indebtedness to them by sending diaries of tours undertaken during their summer vacation. The latest contribution comes from a rector in Oxfordshire, who, as a District Councillor, is accomplishing good work in the matter of danger-posts. He describes a tour of 927 miles, through seventeen counties, between July 1st and 31st, giving the daily runs and

CONTINENTAL NOTES.

The 1909 Grand Prix Race.

The delegates of the recognised national automobile motor clubs met at the A.C.F. in Paris on Monday to decide on the rules for next year's Grand Prix. This year, it will be remembered, the bore was restricted to 155 millimetres for four-cylinder engines, and the speeds attained were such as to play havoc with the tyres. Consequently, there was a general desire for reduction, but opinions as to how much the measurement should be reduced varied considerably, for, while France had selected to 140 mm., Germany and Belgium were said to be in favour of 130 mm. As the result of the discussion, a compromise was arrived at, the maximum bore being fixed at 130 mm. An alteration was also made with regard to the weight limit. This year's rule gave 1,100 kilos. as the minimum. France was for altering this to 900 kilos., Germany and Italy to 1,000, kilos. and Belgium and America to 1,050 kilos. In this France gained her point, the minimum weight being fixed at 900 kilos. The question of allowing detachable wheels in next year's race, and other matters, were postponed until the next meeting, which will be held at the end of November.



The British Military Aeroplane being removed to its shed after the accident last week.

incidents over routes between Bristol in the west, Cromer in the east, and Winchester and Windsor in the south, and sums up the chief experiences of the tour thus:—Great lack of horn-blowing round curves; drivers take it too much for granted that the road is clear; averted two collisions only by my own carefulness; paid drivers for the most part keep to middle of road too long. These conclusions are common among considerate drivers, and every effort should be made to secure publicity for the lessons they convey.

Recently several readers of the *M.C.J.* have written us as to the value of the automobile to the clergy, and the Rev. W. A. Errington, rector of Hunsdon, Ware, who is associated with the Hertfordshire County A.C., informs us that, "Personally, I can state that I have found my 10-12-h.p. Coventry-Humber, which I have had for over two years, most useful and very helpful in the parish. Only a few weeks ago I was asked by a parishioner to take a man to the infirmary at Bishop's Stortford who had been badly crushed in an accident by a steam plough working in my glebe field opposite the Rectory. In many ways I find the motor-car aids the parish priest. I think it trash for people to talk about the motor being 'inconsistent with ministerial dignity.'"

The International Road Congress.

The proceedings of the International Road Congress in Paris were brought to an end on Saturday last, when the members left the capital for a series of excursions in the South of France. At the final meeting at the Sorbonne a large number of resolutions which were passed by the different sections were submitted to a plenary session. One of the most important results of the Congress is the establishment of a permanent international bureau, with perhaps two delegates from each country, which will enable the results of the experience of the various countries to be followed up and scientific views collated. Apart from this the Congress has drawn up a series of recommendations, in the course of which attention is drawn to the necessity of taking great care to construct good foundations. A layer of concrete from four to six inches thick is especially recommended. As for the road itself, it should be composed of homogeneous materials which are hard, tough, resisting and not slippery. The Congress considers that the use of tar, bituminous products, and deliquescent salts is effective for reducing the dust, but at present the results are far from permanent, and further experiments with these and similar compounds are invited. Tarring, properly carried out, is declared to be incontestably a remedy against dust, and to a

certain extent a preservative against the wear and tear caused by all traffic, especially by fast motor vehicles. As for the plan of mixing the tar with the road material, the Congress awaits more definite results before formally expressing an opinion. Where motor traffic is not very heavy, it is considered that the present system of road making is sufficient, if it be carried out carefully and with proper materials. Roads should have the least amount of camber compatible with an easy run off of rain water. The outside of curves should be slightly raised, and there should be no obstruction to the view at curves or at the intersection of roads. A uniform system of marking distances should be devised, and for the benefit of international automobilism a uniform system of road signals should be adopted. These should be limited to four kinds, respectively warning against obstruction, including dangerous hills, corners, level crossings—by night as well as by day—and dangerous cross-roads. It was resolved that the next Congress shall be held in Brussels in 1910.

The Chateau-Thierry Hill Climb.

The eighth annual hill-climbing competition at Chateau-Thierry, France, was held on Sunday last. The competitors, of whom there were about sixty, were timed over a distance of a kilometre from a standing start. The fastest climb of the day was that made by Joerns on an Opel car in the 121 to 130 mm. bore four-cylinder touring car class (44 1-5 sec.). Beury, on a Darracq, won the 96 to 100 mm. bore category in 50 3-5 sec., and Champoiseau, on an Imperia, the 101 to 106 mm. bore section in 56 2-5 sec.

British Motorists in France.

Recent British motoring visitors to France with their cars include Mr. Edwin Cawston, London (35-h.p. Daimler), Duchess Adeline of Bedford (35-45-h.p. Renault), Mrs. Gallard (Renault) and Mrs. Tattersall, London (50-h.p. Charron).

The Kaiser Invents a New Motor-car Brake.

Following the example of his brother, Prince Henry of Prussia, the Kaiser is reported to have invented a new hub brake specially adaptable for use on motor-cars, and which is stated to offer the greatest possible security against the risk of refusing to act.

Belgian Motor-car Imports and Exports.

The value of the foreign motor-cars and parts imported into Belgium during the eight months ending with August last amounted to only £102,696, as compared with £119,728 in the corresponding period of last year. On the other hand, there has been an increase in the exports of Belgian motor-cars and parts—from £291,144 in the first eight months of 1907 to £335,776 in the similar period of the current year.

Aeronautical News.

The municipal authorities of Bagneres de Bigorre (France) are offering a prize of £400 through the Ligue Nationale Aerienne to the first aviator to fly from Bagneres to the summit of the Pic du Midi de Bagneres, a distance of 11 kilometres.—The aeroplane which M. Voisin is building for Mr. Moore-Brabazon is being fitted with a Metallurgique four-cylinder engine, having a bore of 106 mm. The motor only weighs just over 3 cwt., and during a long shop test has developed 58.5-h.p. at a normal speed of 1,000 revs. per min.—Baron de Caters is experimenting with an aeroplane at s'Gravenweezel, near Antwerp. The apparatus is of the triplane type and is fitted with a 50-h.p. Vivinus motor.—In the course of the last of several flights on Friday last week Mr. Wilbur Wright suddenly stopped his motor when at a height variously estimated at from 60 ft. to 80 ft. The aeroplane merely gilded towards the earth and alighted with its customary absence of shock.—The Academy of Sports, following the example of the Aero Club de France, has decided to confer its gold medal on Mr. Wilbur Wright.—The Malécot airship, which is a combination of steerable balloon and aeroplane, made its first long trip from

Issy to Vincennes on the 17th inst., in the course of which it very nearly came to grief. On the return journey M. Malécot was lost in the midst of a fog, which prevented him from seeing his way. Contrary air currents caused further trouble, the propeller got out of order, and he was obliged to come down near Saint Ouen. The work of repair took about six hours, after which Issy-les-Moulineaux was safely reached after a day's exciting excursion.

An Austrian Grand Duke as Motor Designer.

One of the most interesting motor vehicles which took part in the recent military manoeuvres in Austria was that built by the Skodawerke, of Pilsen, to the designs of the Grand Duke Leopold Salvator. The feature of the lorry, which is fitted with a 40-h.p. petrol motor, is that all four wheels are driven by means of separate cardan shafts and bevel gear. During the



Motor Vehicles in the Austrian Military Manœuvres.

manœuvres it carried a load of 2 tons, and is stated to have given very satisfactory results.

Motoring in Spain.

Considerable excitement prevailed in San Sebastian the other day, when the Imperial Automobile Club of San Sebastian organised an automobile tour from that resort to Onate and back, a distance of about 150 kilometres. The King of Spain, accompanied by Queen Victoria, took part in the event, His Majesty driving his 120-h.p. Delahaye. About thirty-five cars participated in the outing.

Miscellaneous Items.

La Société des Transports d'Automobiles Normandie et Picardie is the name of a company which has just been formed in Paris (3, Rue Laffitte) with a capital of £2,800.—A Lorraine-Dietrich motor-bus has lately been put into service in the town of Arnhem, Holland.—The Hotchkiss Company have lately completed five special armoured motor-cars fitted with quick-firing guns for the Turkish Government.—Thirty-one machines are taking part in the Austrian Automobile Club's trial of industrial motor-vehicles which commenced on the 20th inst.—The programme for the 1909 motor-boat race meeting at Monaco has just been issued. The exhibition will be held on March 31st and April 1st; the launchings and trials take place from April 1st to April 3rd; and the actual races from April 4th to April 11th. There will also be a compulsory exhibition of all boats having taken prizes, this being held on the day following the last of the races.

TRIPS IN HOLLAND.

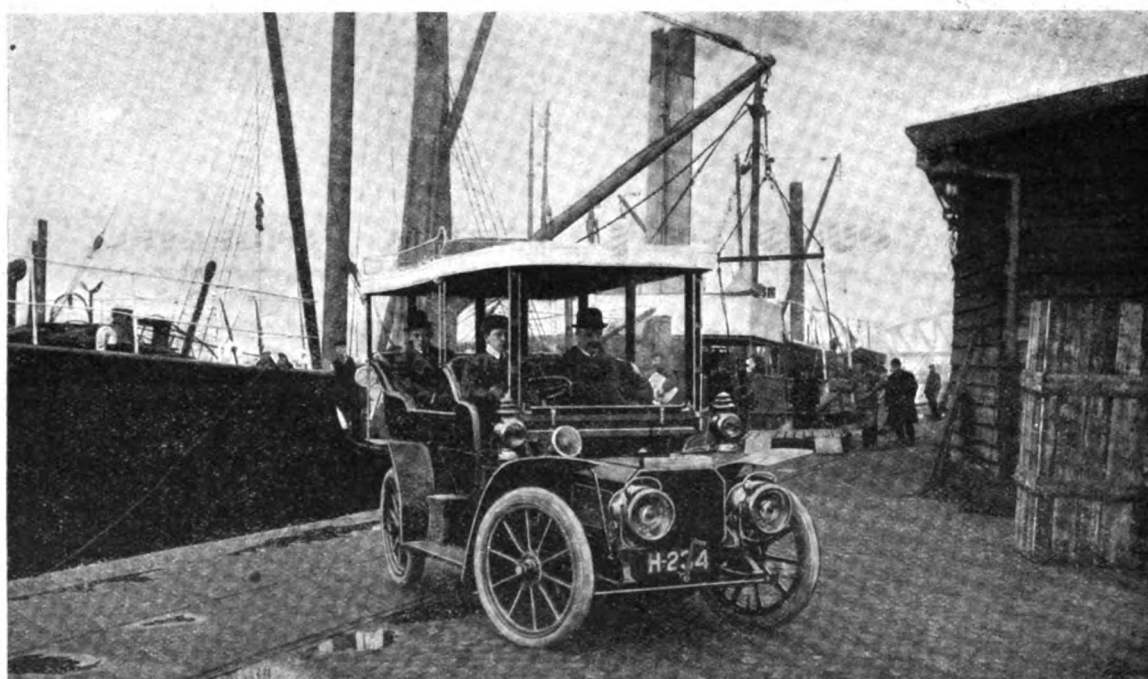
ON the suggestion of a well-known motorist who had spent some months in Holland, I recently toured in that delightful country, and can recommend the experience to those who have not hitherto ventured thither under the mistaken idea that it is only fit for those who possess motor-boats. True, canals are the national highways, but along their banks are good roads, well above the average, and generally in excellent condition. The main roads of Holland are well kept and the secondary ones are generally paved with a kind of brick known as clinkers. Road warnings and directions should be studied by the visitor. These are of Government origin, and, of course, accepted by all motorists as "things to be obeyed." The chief are speed limitation signposts, giving in white letters on a green background the specific number of kilometres per hour allowed, and notices of roads closed to motor vehicles indicated by white lettering on a red ground.

A convenient point from which to reach Holland is Hull—144 miles from Birmingham, 93 from Nottingham, 49 from Doncaster, 67 from Sheffield, 120 from Newcastle, 40 from

Now, with regard to itineraries, I suggest a few as excellent runs covering interesting country. First, there is the run of eighty miles to Amsterdam from Rotterdam. At the latter place garage accommodation can be obtained at either of the cities named above at 1s. 8d. per night. From thence the way is *via* Delft, where the Hotel Central has garage accommodation, to the Hague, with its Royal Palace and delightful resort of Scheveningen. Half-way on the journey is Haarlem, the centre of the Tulip country, and then through typical Dutch scenery the road leads to the capital of Holland. There the points of interest are many, while in the vicinity are Zaandam and Hilversum—delightfully quaint and quaintly delightful.

An interesting variation of route is to return from Amsterdam to Rotterdam by a route of forty-three miles *via* Gouda, with its old-world town hall in the market-place, and ancient church.

One of the most interesting runs is from Rotterdam to 's Hertogenbosch (fifty-eight miles) *via* the gabled houses of Dordrecht and the castles of Breda; thence to Utrecht is an afternoon's run, made longer by the halt that will be called to glance at the seventeenth century town of Zalt Bommel. Utrecht is one of the most famous towns of Holland, and its



Leaving the Quay at Rotterdam.

York, 137 from Liverpool, and 101 miles from Manchester. At their New Riverside Quay the North Eastern Railway Company have good facilities for the shipment of motor-cars, the vehicles being securely lashed to a tray and then hoisted aboard. The Hull City Garage at Hull, and the Naamlouze Vennootschap Auto Rijtuig Onderneming, 86-88, Baan, and Mr. A. J. P. Smits, 125, Noordsingel, at Rotterdam, work with the steamship service, and will take charge of a car on arrival and attend to shipping formalities at only a moderate charge.

Motorists contemplating the visit to Holland should acquaint the Hull and Netherlands Steamship Company of their intention. Those who are members of the R.A.C., M.U., the A.A., or any affiliated body, should secure the triptyque, which will simplify the formalities to be observed abroad. On arrival at Rotterdam the owner of the car must visit the Custom House, where the triptyque must be stamped, or the duty paid in cash if he is not the holder of a triptyque. The car will be landed on the arrival of the steamer, but cannot be removed until the Customs requirements have been complied with, which need not occupy more than half an hour, and then the visitor can drive away, as did those shown in the accompanying photograph as leaving the Quay at Rotterdam.

environs are attractive to those with antiquarian interests.

Away in the province of Friesland the visitor will see the dairy farming country of Holland and be charmed by the palace of the Stadtholders at Leeuwarden, while at Stavoren the roofs of many of the houses will be found at about the same level as the Zuyder Zee. From Leeuwarden the road to Rotterdam is about 150 miles, through a picturesque country. Kampen is one of the interesting places on the way, so full of antiquities that the whole town seems to be a museum, and at Amersfoot the excellent roads will give opportunities for speed that "never Surrey knew"—to quote a poet whose works remain unpublished. A few other charming spots may be mentioned. Franeker and Harlingen are not far apart, the latter being built on the site of the original city of the same name which was immersed in 1134. Zwolle, Groningen, Apeldoorn and Arnhem need but be mentioned, the latter being the centre of the Dutch Switzerland.

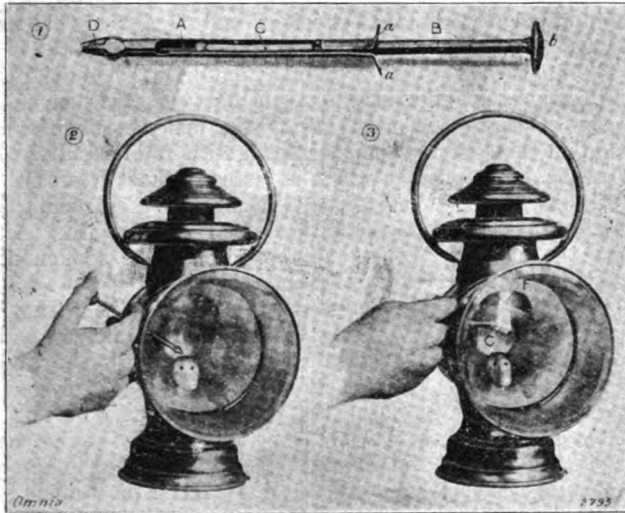
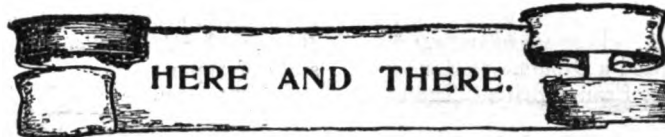
On another page is given a list of hotels and garages in the various towns named in the foregoing sketch, for which we are indebted to the Hull and Holland Steamship Service Joint Committee, and which will be found of real service to those who may take the advice of the writer and go to Holland.

A YORKSHIRE MOTORIST.

THE Shrewsbury and Chalfin Tyre Company, Ltd., were awarded a bronze medal at the Franco-British Exhibition for their patent detachable rim.

A CONFERENCE of delegates from local authorities in the Metropolitan area will be held at the Mansion House (London) on Monday next to consider the motor-car problem.

THE American Auto Supply Company, of 13, Cité de Puy, 23, Boulevard Pereire, Paris, have lately brought out the useful



little motor lamp-lighting device illustrated herewith. As will be seen, it comprises a tube A in which a large portion is cut away to allow an ordinary match to be laid. By means of the rod B the match is pushed between the jaws D, where by reason of the friction it becomes ignited. The arrangement will be found very handy, especially in windy weather, as it is only necessary to open the front glass sufficiently to allow the stem to be introduced into the lamp. As the illustration shows, the whole operation can be done by one hand, the lighter being held between two fingers at a, enabling the rod B to be pushed down by the thumb.

MR. J. PULLAR PHIBBS has opened offices at 35, Dawson Street, Dublin, for the purpose of carrying on business as a consulting motor engineer. He is prepared to supervise the overhauling of motor-cars and also the checking of repair and other accounts on behalf of owners of motor-cars.

ONE of the novelties at the exhibition held in Paris last week in conjunction with the International Road Congress was a motor-cycle street sweeper. The machine, which is of Austrian design, is somewhat on the lines of a motor-bicycle with side-car attachment, the brush and its adjuncts taking the place of the passenger's seat.

A GOOD type of motor coat recently brought to our notice is the "Nobility," made in a dark grey frieze material by the Express Rubber Co., of 11, Great Eastern Street, London, E.C. It is of excellent shape, well finished, and supplied at a price which marks a great descent from those which prevailed for motor garments in the early days.

THE exports of motor-cars and parts from the United States during the eight months ending with August last attained a value of only £800,962, as compared with £950,402 in the corresponding period of 1907. The United Kingdom headed the list with £298,293, Canada being second with £173,320 and France third with £105,264.

A NATAL correspondent writes that practically all the doctors in Durban and most of those in country districts have gone in for cars, and a large number of business men, notably agents, travellers, surveyors and architects, are finding that if they wish to keep up with the times they have to adopt automobiles to enable them to get about quickly.

DURING the eight months ending with August last foreign motor-cars and parts of a value of £360,005 were imported into the United States, as compared with £513,300 in the corresponding period of 1907.

THE Western Motor Company, having taken over the garage at Monmouth Place, Bath, propose shortly to extend the same, and to increase the facilities already possessed for the repair of vehicles as well as the stocking of accessories, &c.

A PETROL-DRIVEN fire engine by Messrs. Dennis Bros., Ltd., has been submitted for test at Bradford before the Fire Brigade Committee. At a meeting held after the demonstration it was decided to re-affirm a resolution passed a few weeks ago recommending the Town Council to purchase the same.

IN consequence of the many complaints from private residents and a petition from the local Tradesmen's Association, the Kensington Borough Council have decided to ask the Commissioner of Police to take such action as will secure a mitigation of the danger and nuisance caused by the excessive speed of motor vehicles along the High Street, Notting Hill Gate.

AT the meeting of the Cornwall Farmers' Union, at Truro, several resolutions were adopted with regard to motor-car traffic. A protest was registered against the tremendous candle-power of the lights carried by many cars at night, as it was impossible to get horses to face them. One member said it was as well to be under the searchlight of a man-o'-war as under some of the big motor-car lamps.

IF it were possible to design an indicator which would show in pounds, shillings and pence the effect on tyres of taking corners too fast, or of suddenly jamming brakes on to their fullest extent, many owners of motor-cars would be more than surprised. The expense they were incurring by such methods would come home to them with full force, and they would be less likely to attribute tyre trouble to bad luck, faulty covers, or some other cause not directly within their control, than they are at present.

MESSRS. SUTTON BROS., automobile engineers, Swansea, have recently arranged a contract with the General Post Office to deliver the mails between Swansea and Penycae, and are using the 16-h.p. Lacre van illustrated herewith in the work. The distance out and home is forty-four miles, and thirty-two calls



have to be made en route, these occupying from 20 to 30 min. For the outward journey 1 h. 50 min. is allowed, and for the return trip 1 h. 57 min. To keep to the scheduled time, the van has to attain a speed of about eighteen miles per hour.

BELIEVING that many motor-car accidents are caused by defective eyesight, the Medical Society of Marseilles has recommended to the French Government that no chauffeur be granted a driver's licence without first undergoing a test of sight similar to that required for drivers of locomotives.

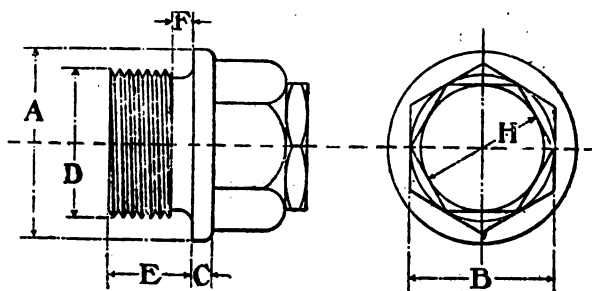
THE provision of a motor fire engine is now being considered by the authorities of Belfast.

MESSRS. S. SMITH AND SON, LTD., whose speed indicators are known to motorists, have been awarded a Diploma of Honour for their watch and clock exhibit at the Franco-British Exhibition.

AT Wishaw Mr. J. H. Thompson has facilities for the development of his motor business; in the Main Street he has showrooms for accessories, &c., and in Russell Street has plant for motor repair work.

MR. C. A. SMITH sends a copy of the Cobham time-table issued by the White Lion Hotel, of which he is the proprietor. This establishment is well-known to motorists, is two miles from the track at Brooklands, and is well arranged for the accommodation of cars as well as refreshment for those who drive the same.

THE Mechanical Branch of the American Association of Licensed Automobile Manufacturers has published the complete particulars of the A.L.A.M. standard sparking plug. The specification provides for a $\frac{7}{8}$ -in. plug eighteen threads to the inch, United States standard, in which a straight thread is used in place of the tapered pipe fitting at present in common use. In addition to the dimensions shown on the accompanying drawing the following are also mentioned. The material is to be $1\frac{1}{8}$ -in. round; the head form milled hexagonally with a short diameter of $\frac{7}{8}$ -in. The flange is to be circular, $1\frac{1}{8}$ -in. in diameter by $\frac{3}{8}$ -in. in thickness, the face to have an annular seat $\frac{1}{8}$ -in. wide, and suitable for a copper-asbestos washer. The blank for the



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|---|--|
| A.—One and one-eighth inch ($1\frac{1}{8}$ "). | E.—Not less than one-half inch (min. $\frac{1}{2}$ "). |
| B.—Seven-eighths inch ($\frac{7}{8}$ "). | F.—Not more than one-eighth inch (max. $\frac{1}{8}$ "). |
| C.—One-eighth inch ($\frac{1}{8}$ "). | (depth of recess—not over depth of thread.) |
| D.—Seven-eighths inch ($\frac{7}{8}$ "). | H.—Three-quarters inch ($\frac{3}{4}$ "). |

thread must be $\frac{7}{8}$ -in. in diameter and not less than $\frac{1}{8}$ -in. long. The recess adjacent to the flange must be not over $\frac{1}{8}$ -in. in width and of a depth not greater than that of the thread. The nut head for the packing gland is to be hexagonal in form with a short diameter of $\frac{7}{8}$ -in. As the specifications extend only to the dimensions of the plug and packing gland, it is obvious that the type of insulation to be employed as well as its form and that of the sparking terminals is left open to individual manufacturers.

MR. ROBERT W. A. BREWER, A.M.I.C.E., will read a paper before the Society of Engineers on the 2nd prox. at the Royal United Service Institute, Whitehall, S.W., upon the flow of liquid fuels through carburettor nozzles. This paper, which supplements the one of last session for which Mr. Brewer obtained the president's gold medal, will deal principally with the action of a jet tube and its effect upon the flow of liquid fuel. There are a number of tables and curves in the paper which are the results of experiments extending over some twelve months, which show very clearly and concisely the amount of petrol which flows through a jet orifice of any size between 0.9 and 1.4 mm. diameter, and through all the range of suction or negative pressures which are likely to occur in actual practice. There is also a certain amount of experimental data showing the relative behaviour of petrol and benzol under these conditions. The whole object of the paper has been to demonstrate that, by a method of simple calculation and the use of the data which have been obtained, a fairly accurate determination may be made as to the size of jet orifice which will be required for any particular size of engine or set of conditions.

THE Woking District Council is about to undertake a campaign to see that the bridges which span that length of the Basingstoke Canal within their area are brought into a proper state of repair.

THE circular which the L.G.B. recently issued to local authorities in England has been forwarded to similar bodies in Ireland by the Local Government Board of that country, together with a note expressing the hope that it will receive the earliest possible consideration by the various councils.

MR. WALTER WILLIAMS has an "all night" garage at Plymouth, from which he supplies covered cars for hire for any period, or admits any belonging to visitors. In his advertisement in the Devonshire papers he is taking advantage of a recent incident which occurred on Dartmoor, and offers "special terms to escaped convicts."

Too much care cannot be taken by motorists when driving on the hills which abound on the roads between Eastbourne and Seaford. During the past few years many accidents have occurred in this district, some of them with fatal results. The most recent disaster is one which occurred on East Dean Hill on the 25th ult., when, owing to the car running back, a young lady received injuries which have since resulted in her death. At the inquest the chauffeur concerned in the case was spoken of as doing all in his power to prevent an accident.

ON the evening of Wednesday, last week, one of the new 38-h.p. Daimler (1909 type) cars, in charge of two drivers and an independent observer, left Coventry with the intention of running as far north as Löckerbie and then south to London, if possible, without any involuntary stop of any description. In this the vehicle was entirely successful. Not only did the engine never stop running during the 650-mile journey, but, except on two occasions for the convenience of the passengers, the vehicle itself never ceased to move. The car arrived at the Royal Automobile Club shortly before Mr. C. Y. Knight commenced to read his paper on the "Valveless Engine." This achievement is of particular interest as it is the first observed performance made by the new Daimler motor.

THERE are many cars, up and down the country, the engine, transmission and body-work of which are all in excellent condition, the only fault being that they have somewhat an ancient appearance, due perhaps to the shape of the bonnet and the radiator. Owners of such vehicles will be interested to learn that Mr. Joseph R. Bramah, sheet metal worker, 16 to 24, Chapel Walk, Fargate, Sheffield, is making a special feature of modernising them by fitting new bonnets and making certain additions to the radiators so as to give them the appearance of the honeycomb type. Where full dimensions are furnished Mr. Bramah is frequently able to carry out the alterations without it being necessary to send the car to his works, but where this is possible, he much prefers it to be done. Mr. Bramah has, we understand, already had a number of cars through his hands for the modernising process, with very good results.

THE third edition of the Encyclopædia of Motoring has just been published by Messrs. Meccredy, Percy and Co., Ltd. This is an encyclopædia in the fullest sense of the word, for not only does it give every term in connection with motoring, with the French equivalent and a clear definition, but the more important sections are dealt with at such great length that any student will learn all that is necessary for him to know about the modern motor-car, its component parts, and the troubles of the roadside. A few examples will bear out this claim. To "Battery," for example, 17 pages are devoted; to "Carburettor" 17 pages; to "Change Speed Gear" 24 pages; to "Coil" 11 pages; to "Cost of Motoring" 8 pages; to "Driving" 26 pages; to "Ignition" 58 pages; to "Overhauling," 29 pages; to "Repairs and Adjustments" 127 pages. It is a veritable *vade mecum*, supplying information on every point, and the motorist who is in trouble need only look up the tables that are given to diagnose the cause and find a remedy, while in the article which forms the balance of "Repairs and Adjustments" he will receive explicit instructions as to how to remedy these troubles. The present edition differs vitally from the two which preceded it, and should add to the reputation of the author, Mr. R. J. Meccredy.

Correspondence.

[Letters to the Editor should be addressed to the offices, 27-33, Charing Cross Road, London, W.C.]

THE AUTOMOBILE ASSOCIATION.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—Many statements, more or less inaccurate, concerning the work of the Automobile Association have lately appeared in the Press. My committee, therefore, thinks it advisable that I should officially indicate the policy of our Association, in order that misunderstanding may be removed from the public mind. The Automobile Association has never wavered in its antagonism to certain methods of enforcing the speed limit; moreover, it is of opinion that in many instances this section of the Act has been exploited for the purpose of replenishing the local exchequers rather than from regard to the safety and comfort of the general public.

The Automobile Association's Committee of Public Safety has been in existence for a considerable time, and so long ago as May last it was hard at work; it cannot, then, be said that its genesis was due to an

marked improvement in the behaviour of motorists who were previously a cause of annoyance. In one instance a gentleman offered to find accommodation for the village patrol as a mark of his appreciation of the man's services.

In addition, our patrols constantly assist the police by giving evidence in court in cases of reckless behaviour witnessed by them whilst on duty. Our experience is that when accidents in which motorists are implicated occur on the roads patrolled by our men, one of the first things the police do is to appeal to A.A. patrols for assistance in tracing cars, the numbers of which, whether owned by members or non-members, are carefully recorded, together with the place, time of occurrence, colour of vehicles, &c. In future it should be extremely difficult for any motorist, so lost to every sense of humanity as to drive off without stopping to render assistance, to escape the punishment he so richly deserves, because he must almost inevitably pass some of



Touring in Holland.—A Halt for Supplies in Utrecht. A Dutch Speed Limit Sign will be seen on the right of the picture.

[De Au'o.]

anti-motorist Press campaign, conducted during the Parliamentary recess. This committee deals with cases of inconsiderate and reckless driving, a large proportion of which are reported by the association's patrols from all parts of the country. Complaints are also received from motorists themselves, many of whom are members of the association, as well as from cyclists, pedestrians, and dwellers near the main roads. In no single instance is a complaint allowed to remain uninvestigated, and it is encouraging to find that in the majority of cases frank acknowledgments on the part of car owners and promises of amendment have been the result of our representations. In other cases the committee has been called upon to point out definitely where the offender has in its opinion been to blame, and in a small minority of cases it has been deemed necessary for the Public Safety Committee to advise the General Committee that offending motorists should be expelled or prosecuted.

A corps of point duty men and timekeepers has for a long time past been engaged at a very large weekly expenditure, and it is a special source of gratification to us that letters are frequently received from prominent residents in villages where patrols have been told off to regulate traffic, thanking us for placing our men amongst them, and expressing the hope that we should continue to do so, because of the

our patrols, who will certainly take his number, and so be in a position to put the police upon his track.

I venture, on behalf of my committee, to ask the assistance of your journal in giving publicity to this letter, which is not merely an exposition of things about to be done, but a plain statement of fact as to what has been and is being carried out in the interests of public safety.—Yours truly,

W. J. BOSWORTH, Colonel.
(Chairman of the Automobile Association.)

A MAGNETO TROUBLE.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—Referring to the letter from "S. M. T." in the *M.C.J.* of October 10th regarding magneto trouble, I have had something of the same kind. After expert electricians had worked for a couple of days they found that the red fibre composition which surrounds the distributor, and which is entirely covered by some dark composition resembling vulcanite, had lost its insulating quality, and that consequently the spark was passing through the red fibre. The latter has now been re-

placed by vulcanite and the magneto is all right. Mine is a Nilmelior magneto. I have had a car for several years, and this is the most difficult trouble I ever had to overcome, and I have had a few. Trusting this may be of service to some motorists.—Yours truly,

MAGNETO.

CLEANING RADIATORS.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—I should be obliged if you or any reader of the *M.C.J.* could advise me as to the proportion of sulphuric acid that should be used with water for washing out furred-up radiators, and how long should the solution be left in the radiators, without damaging the pipes? If there is any other way of cleaning radiators than by the use of acid, I should be glad of the information.—Yours truly,

R. STEVENSON.

[We should advise our correspondent in the first place to try a very strong solution of soda water to clean the radiator, letting this stand all night. This would not have any ill effect on the metal. If this treatment is not found effective, a solution of sulphuric acid in the proportion of twenty parts water to eight of acid may be tried. As to the length of time, this depends entirely upon the amount of fur which has to be removed. If very bad, a somewhat stronger solution may be used, but this would have to be carefully watched. It will also be necessary to thoroughly wash out afterwards, the best way to do this being to allow clean water to run through for a short time.]



The Argyll Motor Fire Engine lately added to the equipment of the Dundee Fire Brigade.

The vehicle is fitted with a 50-h.p. four-cylinder engine, three speeds and reverse gear-box and worm-driven live axle. The ladder is telescopic and can stretch to a length of 36 ft. Ample accommodation is provided for 1,600 ft. of hose. The machine passed through its official tests with flying colours, negotiating Constitution Brae and other hills in the city of Dundee with ease.

CHARGING ACCUMULATORS.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—I should be obliged if you would advise me as to the best way of charging the accumulators of my car from thirty-two E.P.S. cells with smallest waste and at least cost. Could it be done by coupling two of the cells to the accumulator, or should I couple three cells and insert a small resistance? I do not wish to have a lamp in use all the time if it is not necessary.—Yours truly,

W. HOESON.

[To recharge a 4-volt accumulator from cells forming part of a lighting set, it is necessary to connect up to three cells of the large set, and put a resistance in series with the accumulator being charged. Two cells would not be sufficient, because the voltage will only balance with the small accumulator, and three cells would be too much, therefore the resistance is necessary. If a small ammeter is connected in the circuit, the amount of the resistance can be regulated to obtain the right charging current. It is advisable to charge from those cells in the large set which are used as the spare cells, these being, as a rule, under-worked, and charging from them should make no difference to the whole set when it is in use. This method of recharging is the most efficient, and there is practically no waste of voltage, and it is also very regular and certain. Care must be taken to connect the positive terminal of the 4-volt accumulator to the positive pole of the accumulators, which is usually painted red. If the connecting bolts of

the E.P.S. cells are loosened to make connections, they should be well tightened up after charging, as loose connections heat up and cause trouble.]

AN IGNITION QUERY.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—I am having trouble with my four-cylinder De Dion car. The corners of the squares of the contact breaker had worn uneven, so I took it down and made them all the same. The car does not now pull as well as it formerly did. Do you think interfering with the contact breaker has altered the time of firing? Any assistance you can give me will be greatly appreciated.—Yours truly,

DE DION.

[The car referred to by our correspondent is evidently the 1905 model De Dion of 15-h.p., the shape of the ignition cam of this type being square, but each corner is flattened, and it is these corners which actuate the rocker carrying the contact blade, thereby making contact. As "De Dion" says he has filed down these corners it is evidently the cause of the bad running of the engine, as the fact of his having filed the corners makes the flats wider, the result being that contact is not made and broken quickly enough. Under these circumstances we advise our correspondent to obtain a new cam.]

A SOLID TYRE QUERY.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—I should esteem it a favour if you could advise me on the following subject. I have charge of a 30-h.p. chain driven car fitted with Hoffman ball bearing road wheels. It is desired to gear the car down to eighteen miles an hour for a shooting brake, averaging a journey of fifteen miles per day. Is there any reason why the back wheels should not be shod with solid tyres, apart from extra wear and tear and vibration? I am fitting rubber buffers between axle and springs.—Yours truly,

W. J. BARKER.

[Solid tyres will be found eminently suitable for the purpose named, and good results may be anticipated if the speed is kept down to the limit specified, and if the section of the tyres is ample for the maximum load. The section and quality of the tyres is of the greatest importance, and we advise Mr. Barker to consult the manufacturers of the tyres he selects as to the correct width advisable. The car should be weighed, and the full number of passengers stated. Regarding the question of putting rubber buffers between the axle and springs, this should hardly be necessary if the latter are sufficiently strong, and if they are not it might perhaps be better to have an additional leaf inserted in each spring.]

CLEANING THE BODY WORK.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—I have received from time to time many valuable hints through the columns of the *M.C.J.*, but never to my knowledge have I seen anything referring to spots on the varnish of the bonnet and wings of a motor-car. I have the care of a 25-35-h.p. Italia car, and, running four months only, the bonnet and front wings look disgracefully, and no amount of labour will remove the spots. I should be glad if you can help me. I may say I have never at any time used paraffin or petrol in cleaning except underneath the car.—Yours truly,

W. J. W.

[The spots are probably due to the car having been out in the rain, or got spattered with mud before the varnish was properly painted. Many new vehicles have their appearance spoilt in this manner, and the only remedy is to have the surface flatted down and re-varnished. A newly-finished body may, with advantage, be well sponged over several times with plenty of clean cold water before it is taken out on the road. This hardens the surface of the varnish and prevents dust adhering. Spots such as "W.J.W." complains of are always difficult to deal with if mud has been allowed to dry on the surface of the bodywork, as in drying it acts by capillary attraction as a poultice and sucks the varnish, so that when the car is washed the surface is spoilt wherever mud has lain.

A simple and effective mixture to renovate varnish and remove marks that are not ineradicable is made by equal parts of raw linseed oil and malt vinegar. This mixture should be well shaken and applied by a nice soft rag, and the bodywork rubbed by it with a circular motion after the carriage has been carefully washed. A final polish should then be given with a clean dry cloth.]

ON Sunday, September 13th, a hub cap was picked up at Puckeridge. If the owner will forward a correct description of the cap to the Wheeler Cycle and Motor Works, Puckeridge, Herts, they will be pleased to send same on.

A CORRESPONDENT inquires for the names of the makers or agents for a special magneto plug, the peculiarity of which is the firing points, which, when the engine is first started, are very close together, but as the engine runs and the plug gets hot they automatically become further apart, thereby facilitating the starting of engines fitted with magneto ignition.

CLUBS AND ASSOCIATIONS.

ROYAL.

RECENTLY the scheme for association adopted by the R.A.C. has undergone some modification, the effect of which is to set forth very clearly that clubs which, in the future, associate with the Club must be associated with that body only.

MOTOR UNION.

At a meeting of the Ligue Internationale des Associations Touristes, held in Paris on the 11th inst., the M.U. was represented by Earl Russell, Mr. W. Ballin Hinde, Captain Kingston, and the Secretary.

THE M.U. issued 200 motor-car badges last month, making the total number disposed of thus far 4,600.

AUTO-CYCLE UNION.

THE last quarterly trial of the season promoted by the Auto-Cycle Union was decided on Saturday, over a route of 125 miles, starting and finishing at Uxbridge. Despite the greasy state of the roads twenty-two out of thirty starters made non-stop runs, and twenty-six riders completed the journey. Five of the machines were passenger vehicles, three being side-cars and two fore-cars. Times were taken up Dashwood Hill, on the outward journey to Banbury, and at Amersham Hill on the return, with the following results, the fastest time in each case being represented by zero:—

DASHWOOD HILL.

BICYCLES.

| Name. | Machine. | Time. |
|---------------------|---------------------|-------------|
| T. H. Tessier ... | 6-7-h.p. Bat ... | Zero. |
| W. G. McMinnies ... | 3½-h.p. Triumph ... | 3 3-5 sec. |
| W. H. Bashall ... | 6-7-h.p. Bat ... | 6 sec. |
| A. W. Bentley ... | 3½-h.p. Triumph ... | 8 1-5 sec. |
| W. H. Wells ... | 5-h.p. Vindec ... | 14 1-5 sec. |
| G. F. Cooper ... | 5-h.p. Vindec ... | 16 4-5 sec. |

PASSENGER MACHINES.

| | | |
|---------------------|-----------------------------|-------------|
| F. Eagles ... | 8-h.p. N.S.U. side-car ... | Zero |
| M. Geiger ... | 6-h.p. N.S.U. side-car ... | 6 sec. |
| E. W. Brewerton ... | 10-h.p. Lagonda tri-car ... | 39 2-5 sec. |

AMERSHAM HILL.

BICYCLES.

| | | |
|---------------------|---------------------|-------------|
| W. H. Bashall ... | 6-7 h.p. Bat ... | Zero. |
| W. G. McMinnies ... | 3½-h.p. Triumph ... | 6 3-5 sec. |
| W. H. Wells ... | 5-h.p. Vindec ... | 12 2-5 sec. |
| F. Applebee ... | 5 h.p. Rex ... | 18 1-5 sec. |
| T. H. Tessier ... | 6-7-h.p. Bat ... | 19 sec. |
| G. F. Cooper ... | 5-h.p. Vindec ... | 20 sec. |

PASSENGER MACHINES.

| | | |
|---------------------|-----------------------------|----------|
| M. Geiger ... | 6-h.p. N.S.U. side-car ... | Zero. |
| F. Eagles ... | 6-h.p. N.S.U. side-car ... | 14 sec. |
| E. W. Brewerton ... | 10-h.p. Lagonda tri-car ... | 44½ sec. |

THE INCORPORATED INSTITUTION OF AUTOMOBILE ENGINEERS.

THE Council of the Incorporated Institution of Automobile Engineers met on Wednesday of last week, at the Institution of Mechanical Engineers. There were present Mr. Dugald Clerk (in the chair), Dr. H. S. Hele-Shaw, Messrs. Chas. Wheeler, D. J. Smith, J. S. Napier, A. S. Hill, T. C. Pullinger, T. B. Browne, R. K. Morcom, Max R. Lawrence, J. S. Critchley, D. Leecham, A. Craig, J. Lyons Sampson, F. L. Martineau, and Rees Jeffreys (secretary).

The secretary reported the receipt of £10 9s. 6d. in donations to the Foundation Fund since the last meeting of the Council, including one of £5 5s. from Wolsley Tool and Motor-Car Company, Ltd.

Mr. Dugald Clerk proposed and Dr. Hele-Shaw seconded a vote of thanks to the Daimler Motor Car Company, Ltd., Coventry, the Rover Company, Ltd., Coventry, and the Wolsley Tool and Motor-Car Company, Ltd., Birmingham, over whose works the graduates of the Institution had been conducted on their summer tour.

The following were elected members of the Institution:—Messrs. A. F. Evans (Ipswich), W. Morgan (Coventry), V. G. New (Manchester), A. W. Reeves (Sheffield), A. A. Remington (Birmingham), A. J. Rowledge (Birmingham), H. J. Spooner (London), O. Clegg (Birmingham).

The following were elected associate members of the Institution:—F. Buckley (India), M. Graham-White (London), J. S. Irving (Coventry), A. F. Kemp (King's Lynn), W. O. Kennington (London), T. W. Loughborough (Dorking), W. L. Wilson (Hemel Hempstead), J. Davison (India).

Mr. Dugald Clerk suggested that, in view of the rapid growth of the aeroplane movement, a sub-committee should be appointed to collect information and report to the council on the science of the aeroplane movement. This was unanimously agreed to, and the following appointed a committee:—Mr. Dugald Clerk, Mr. F. W. Lancaster, and Dr. H. S. Hele-Shaw.

It was decided that centres should be formed at Birmingham and Coventry. Centre committees were appointed as follows:—Birmingham.—Messrs. O. Clegg, F. W. Lancaster, E. E. Baguley, A. Remington, and M. Shaw. Coventry.—Messrs. A. Craig, J. S. Napier, A. S. Hill, T. C. Pullinger, and W. Morgan.

A letter was read from the Society of Motor Manufacturers and Traders suggesting that a meeting of the Institution should be devoted to a discussion on the report of the Society on Horse Power Formulae for Petrol Engines. It was decided that the next ordinary meeting should be given up to this, and a committee, consisting of Messrs. Dugald Clerk, Mervyn O'Gorman, F. W. Lancaster, Max R. Lawrence, J. S. Critchley, A. Craig, D. J. Smith, L. H. Hounsfield, and C. R. Garrard was appointed to consider the report.

The preliminary report of Mr. Max R. Lawrence on the question of "Valve Setting for Explosion Engines" was received. Messrs. Max R. Lawrence and T. C. Pullinger were appointed to go further into the matter. In connection with this subject the M.C.J. valve-setting card will be sent free to any member of the Institution on application to Messrs. Cordingley and Co.

FOLLOWING the presidential address of Mr. Dugald Clerk on the 14th inst., reported in our last issue, was a discussion, in the course of which Dr. Hele-Shaw gave it as his view that the clutch was only a temporary adjunct to the automobile, and mentioned that great developments in connection with the hydraulic variable transmission were likely. Mr. J. S. Critchley advised the Institution to take up the study of carburettor improvements, and Mr. R. W. Brewer referred to his own researches in connection with carburetting, and said that the problem of temperature would have to be considered in connection with fuel economy, seeing that it influenced the flow of fuel through the jet by as much as 25 per cent. Mr. Max Lawrence referred to the president's suggestion to raise the gravity centre. This had made for greater stability and reduced oscillation in loco. work, but those results were not borne out in the motor-car. On this point Mr. P. L. Renouf referred to the many factors which were peculiar to the latter.

MANCHESTER.

THE concluding run of the season was held by the Manchester A.C. on Saturday, when there was a speed-judging trial. The cars assembled at the Brooklands Hotel, and a route card was handed to each member, comprising a run of between twenty and thirty miles in Cheshire. The competitors were expected to drive their cars at prescribed rates, the speeds given to the different cars ranging from sixteen to nineteen miles per hour. The first prize was won by Mr. T. W. Grace on a 30-40-h.p. Belsize, who was only 11 sec. too slow over the whole course. The second prize was obtained by Mr. A. C. Tattersall, 40-h.p. Siddeley, who was 2 min. 24 sec. out of his reckoning. The results, with approximate errors per mile, are as follows:—T. W. Grace (30-40-h.p. Belsize), ½ sec. slow; A. C. Tattersall (40-h.p. Siddeley), 6½ sec. fast; Mrs. E. A. Riley, (14-16-h.p. Belsize), 6½ sec. slow; A. W. White (14-16-h.p. Argyll), 6½ sec. slow; H. P. Wigley (20-30-h.p. Rapid), 7½ sec. fast; W. Stones, (40-h.p. Napier), 8 sec. slow; Mrs. D. W. W. Parry (20-30-h.p. Renault), 11 sec. fast; C. H. Occleston (28-36-h.p. Daimler), 16½ sec. fast; Mrs. D. A. Parkyn (40-h.p. Siddeley), 26½ sec. slow; H. E. Holmes (12-14-h.p. Swift), 41 sec. fast; F. W. Hobday (8-h.p. Sizaire) mistook the route. The first prize for the best kept engine was awarded to Mrs. D. W. W. Parry's chauffeur, and the second prize to Mr. D. A. Parkyn's chauffeur.

NORTHAMPTONSHIRE.

ON Friday of last week the Northamptonshire A.C. held its second annual dinner, with Sir Thomas Hesketh, Bart., its president, in the chair. After the usual loyal toasts Prince Francis of Teck proposed "Success to the Northants A.C.," which he mentioned was one of the first of the county clubs to express loyalty to the R.A.C. With regard to motor politics he felt that there must be one camp, one set of ramifications, and that a continuance of the dual method would lead to discord. Hence the dual idea had been cut right off. The parent Club was taking many steps forward and wanted the whole of the county clubs to affiliate to one great system for the benefit of the movement.

Major Leslie Renton, M.P., having replied, Lord Annaly gave the toast of "County and Borough Authorities," coupling therewith the name of Col. Sackville, the chairman of the Northamptonshire County Council. Col. Sackville spoke of the good relations between the motorists of Northamptonshire and the authorities, and said that the County Council had no idea of putting back the clock. They had no police traps, the chief constable having rightly decided not to place "controls" on straight stretches of road.

"Success to the R.A.C." was proposed to Mr. W. R. Adkins, M.P., Mr. J. W. Orde responding. Mr. F. H. Thornton, J.P., proposed "The President," and the Rev. W. Seggins Pratt "The Hon. Secretary," Mr. Sydney Harris, who briefly acknowledged the toast.

SCOTTISH.

EXAMINATIONS for driving and mechanical proficiency certificates, will be held as under:—Glasgow, Tuesday, October 27th; Edinburgh, Thursday, October 29th; Dundee, Thursday, November 5th; Aberdeen, Friday, November 6th; Inverness, Saturday, November 7th; Dumfries, Tuesday, November 17th; Hawick, Thursday, November 19th.

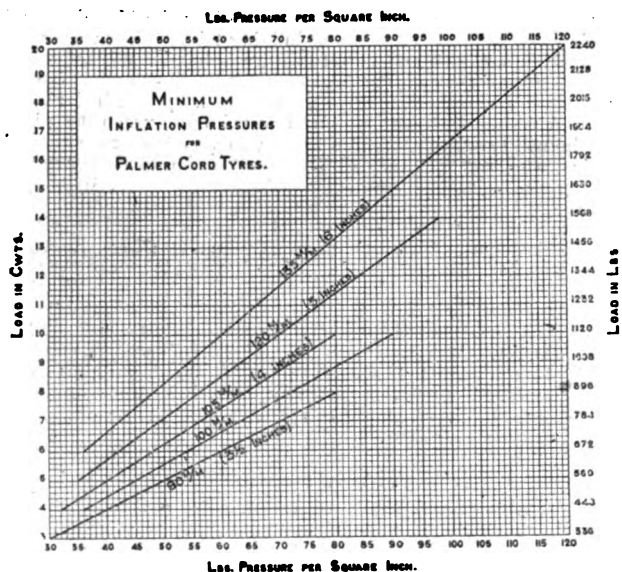
LINCOLNSHIRE A.C.

A MEETING of the committee of the Lincolnshire A.C. was held on Monday at the Great Northern Hotel, Lincoln. The secretary reported that the direction plates to be erected in the Bull Ring, Horncastle, in conjunction with the Horncastle District Council were now in position.

TYRE INFLATION PRESSURES FOR PALMER CORD TYRES.

In a recent issue we referred to the pamphlet under the title, "Is your Tyre Pressure Right?" which has lately been issued by the Palmer Tyre Company, Ltd. As the question of tyre inflation is just now attracting some attention, and as the Palmer Company have for some time been making experiments to ascertain the best inflation pressures for and the load-carrying capacity of different sizes of their cord tyres, the following extracts from the booklet will be of interest, especially as the trials have conclusively shown that the subject of inflation is intimately linked up with that of tyre economy.

In the first place it is important that motorists should get their cars weighed fully loaded. Each axle should be weighed separately with the full number of passengers in the car and all tools and spares, &c., as the distribution of the load varies according to the design of the car. The back axle usually carries the bigger load, and a higher pressure is therefore necessary for the driving wheels. If owners of cars would only consider the functions of a pneumatic tyre, they would perhaps better appreciate the importance of proper inflation. The weight of the wheel is not carried directly by the pneumatic tyre, as it is in the case of one of the solid rubber type, but by compressed air held in place by the cover. If the pressure of air is greater than necessary, the car is less comfortable in running, but no damage is done to the tyre. If the air pressure is insufficient to carry the load the tyre is distorted as the wheel goes round, and this causes very unequal strains to occur, which give rise to much friction and cause the fabric of the cover to wear very much quicker than it would with proper inflation. The outcome of the experiments above referred to is shown diagrammatically in the accompanying chart, from which the appended table indicating the



minimum inflation pressures—which must be fully maintained—for Palmer cord tyres has been compiled:—

| Load per wheel. | Minimum Inflation Pressure in lbs. per sq. inch. | | | | | |
|-----------------|--|--------|--------|---------|---------|---------|
| | Cwts. | 75 mm. | 90 mm. | 100 mm. | 105 mm. | 120 mm. |
| 3 | 3 | 40 | 30 | — | — | — |
| 3½ | 3½ | 45 | 35 | — | — | — |
| 4 | 4 | 50 | 40 | 36 | 32 | — |
| 5 | 5 | — | 50 | 45 | 40 | 35 |
| 6 | 6 | — | 60 | 54 | 48 | 42 |
| 7 | 7 | — | 70 | 63 | 56 | 49 |
| 8 | 8 | — | 80 | 72 | 64 | 56 |
| 9 | 9 | — | — | 81 | 72 | 63 |
| 10 | 10 | — | — | — | 80 | 70 |
| 11 | 11 | — | — | — | — | 77 |
| 12 | 12 | — | — | — | — | 84 |
| 13 | 13 | — | — | — | — | 94 |
| 14 | 14 | — | — | — | — | 98 |
| 15 | 15 | — | — | — | — | 105 |
| 16 | 16 | — | — | — | — | — |
| 17 | 17 | — | — | — | — | 102 |
| 18 | 18 | — | — | — | — | 108 |
| 19 | 19 | — | — | — | — | 114 |
| 20 | 20 | — | — | — | — | 120 |

As has already been mentioned, the above are the minimum pressures recommended; the tyres can be run, however, at any desired higher pressure, there being no danger of over inflation. Reverting now to the matter of maintaining the specified pressures, the Palmer Company point out that the idea held by some motorists that they can judge whether a tyre is properly inflated or not by the extent of its "side bulging" over the point of contact with the road is absolutely misleading if applied to cord tyres, as these do not bulge at the sides to anything like the same extent as ordinary pneumatics. In fact, judged in this manner, a cord tyre might appear fully inflated when only half inflated, owing to the fact that the cords are laid straight, whereas the threads in canvas tyres are always more or less curved. To obtain the best results from tyres the pressure should be tested frequently by means of a gauge; this only requires about three or four minutes, and the life of the tyres is greatly increased by always running them at the correct pressure. They add that the pressure gauges used in connection with pumps should never be depended upon alone, as they are often strained by use and register a much greater pressure than is actually in the tyre, the consequence being that many of those who imagine they give special attention to inflation get tyre troubles owing to the pump gauge being inaccurate. To obviate this they are now supplying a testing gauge by means of which the accuracy of the registration of the pump gauge can be tested.

Finally the Palmer Company point out that it should not be necessary to use the pump on any tyre more frequently than about once a month. If it is found that they require more attention than this to keep the pressure correct, it may be safely assumed that there is a slight leak, probably in connection with the valve, and it is better to correct this at once than to be repeatedly using the inflator. With regard to the point as to which size of tyre is best for any particular car, if the question of first cost is not the controlling feature, the makers advise the use of the largest size the car will take, as this allows the tyres to be run at a comparatively low pressure, thus giving the maximum degree of comfort.

MOTORING CONVENIENCES IN HOLLAND.

SUPPLEMENTING the article elsewhere on touring in Holland, the following list of hotels and garages in the leading towns, compiled from one of the excellent publications of the Hull and Holland Steamship Service Joint Committee, will be of practical service to visitors to that country.

Rotterdam.—Hotels: Leygraaff's, Maas, Coomans, Weimar, Victoria.
Garages: Naamloze Vennootschap Auto Rijtuig Onderneming, A. J. P. Smits.
Delft.—Hotel: De Balk Hotel Central—with garage.
The Hague.—Hotel des Indes, Vieux Doelen, De Twee Steden. Garage: Haagsche Automobiel Maatschappij.
Scheveningen.—Hotels: Palace, with garage, Kurhaus, Grand, d'Orange, des Galeries. Garage: Verwey and Lugard.
Leyden.—Hotel: Levedag—with garage.
Haarlem.—Grand Hotel Funckler—with garage, Scholten's.
Amsterdam.—Amstel, de l'Europe, Doelen, Bible, American, Victoria.
Garage: J. Leonard Lange, 114, Stadhouderskade.
Gouda.—Hotel de Zalm—with garage, De Romein.
Dordrecht.—Hotel Ponsen, Hotel Bellevue—both with garages, Pennock's Hotel.
Breda.—Hotel de Zwaan—with garage, De Kroon, Pret Jonkers.
's Hertogenbosch.—Hotel Central—with garage, De Gouden Leeuw.
Zalt Bommel.—Hotels: Gottschalk and Tivoli—both with garages.
Utrecht.—Hotels: Kastel van Antwerpen, de l'Europe, Pays Bas.
Garage, H. B. Goetsch, Maliebaan.
Leeuwarden.—Hotels: Nieuwe Doelen and de Klandery—with garages, Wapen van Friesland.
Kampen.—Hotel des Pays Bas—with garage.
Amersfoort.—Hotel Vergulde Zwaan—garage: D. H. Eyrink.
Franker.—Hotel de Korenbours—with garage.
Harlingen.—Hotel Het Heeren Logement.
Zwolle.—Hotel Het Heeren Logement—with garage.
Groningen.—Hotels: Drelen and Frigge, each with garage.
Arnhem.—Hotels: Du Soleil, Des Pays Bas, Rijn, Sonsbeek, Het Zwynshoofd, Bellevue. Garages: Van Dam van Polanen, Rijukude.
Apeldoorn.—Hotels: Van Der Burg and Nieuwe Kroon, both with garage.

PUBLIC SERVICES.

THE employees of the Eastbourne branch of the Provincial Motor Cab Company, Ltd., have held their first annual dinner, with Mr. T. B. Pink in the chair, and the chief constable (Major E. Teale) being among the visitors. The latter, in responding to the toast of his health, said he welcomed the company to the town, which it had benefited in several ways.

TAXI-CABS now await the arrival of the trains from London to Brighton between 5 p.m. and 8 p.m. every day.

M. HENRY BOISSY is now installed at 46, Knightsbridge, W., in connection with the opening of those premises by the Societe Anonyme des Automobiles Peugeot.

THE VALVELESS ENGINE.*

By CHARLES Y. KNIGHT.

(Concluded from page 712.)

THE bulk of criticism of the new motor appears to be directed at lubrication. The fact is, not one man in a thousand reading the description of the construction really comprehends its *modus operandi*. Our critics get an idea that we are depending upon perfect fit of the sleeves to hold compression. The impression is only natural, and is doubtless due to an erroneous comparison with the work of the steam slide-valve. I hope I may make it plain that the fit between the two sleeves and their relation to the water-jacketed cylinder bear no relation whatever to compression. We have successfully operated these motors with sufficient clearance between the sleeves to permit the introduction of a thin sheet of cardboard. I do not mention this as good practice, only to illustrate to what extent we can go in neglecting this fit. Upon the other hand, we have tested upon the block and run upon the road for hundreds of miles motors in which these sleeves are a "dead" fit. We do not regard the latter to be good practice either. Such experiments have been necessary to ascertain our limitations. Compression, so far as the ports are concerned, is held solely by the wide ring at the bottom of the head, from inside the cylinder. The spring ring beneath the segments comprising the ring against the inner sleeve and prevents the escape of any gas after the ports have passed behind the same. There is always a film of oil between the seat of this segment and the surface of the sleeve to seal the joint. The timing of the ports is controlled by eccentrics, which are turned integral with the shaft with such a mathematical precision that improper timing of port openings and closings is not possible after the motor leaves the shop, and it never needs adjustment. The eccentric shaft which actuates the sleeves travels at half the speed of the main shaft. The inner sleeve weighs 10 lbs. and the outer 6 lbs. on the 38-h.p. Their travel is 1 in. When the motor is turning at 1,200 r.p.m. the sleeves are travelling at the rate of 1,200 in., or 100 ft. per minute. The pull upon the pin of the inner sleeve at the top of the stroke is 62 lbs., and at the bottom, because of the slower travel as a result of the connecting rod's different angularity, the force is 40 lbs. On the outer sleeve the impact at the top is 34 lbs. and on the bottom 26 lbs. The pull of the two sleeves combined upon the eccentric shaft is 76 lbs. upward and 60 lbs. downward. Compare these pressures with the tons of impact of the explosion upon the gudgeon pin in the piston of any motor, or the strain upon the lugs which hold the cylinders to the base, and the groundlessness of any fears is at once apparent.

The sleeves are of cast iron; their bearing surfaces work under the very best conditions. The area of that portion of the sleeves which receives the lateral pressure of the piston upon its power stroke is 45 in. The greatest pressure occurs when the crankshaft has turned about 30 deg. on its outward explosion stroke. At this point, basing our calculations upon a maximum initial pressure of twenty-five atmospheres at ignition, we find a side thrust of 900 lbs. Divide this into the 45 in. and we have a momentary pressure of 20 lbs. to the square inch. The piston produces this pressure with less than one-third of the wearing surface, making 60 lbs. to the inch for that member, hence these sleeves are working under only one-third of the pressure of the piston, and at only one-tenth its speed. In practice under years of usage we find no appreciable wear.

I am frequently asked to what feature of design I attribute the motor's great flexibility. I am unable to find but one explanation for its ability to pull smoothly and tenaciously at abnormally low speeds, and that lies in the shape of the explosion chamber. To obtain that steam-like flexibility which pulls steadily at slow speeds, a spherical explosion chamber is necessary, and the less wall surface in proportion to volume, the greater the range of speeds, all other conditions being equal. Undoubtedly, the position of the sparking plug has also much to do with flexibility. The surprise in the operation of the motor lies in the fact that instead of being more difficult to cool than the standard type, it possesses a standing up quality which, so far as we are able to ascertain, is unprecedented in any form or design of high speed internal combustion engine. One of our 114 by 140 mm. motors has been under constant load for fifty days to an extent which, if employed driving a touring car, would have travelled with its full load up a 7 per cent. grade for 14,850 miles at the rate of 33 miles per hour. The grade of 7 per cent. about equals the steepest inclines between London and Coventry on the Holyhead road, and the power of the motor is sufficient to pull its load up the steepest of these inclines steadily at 33 miles per hour.

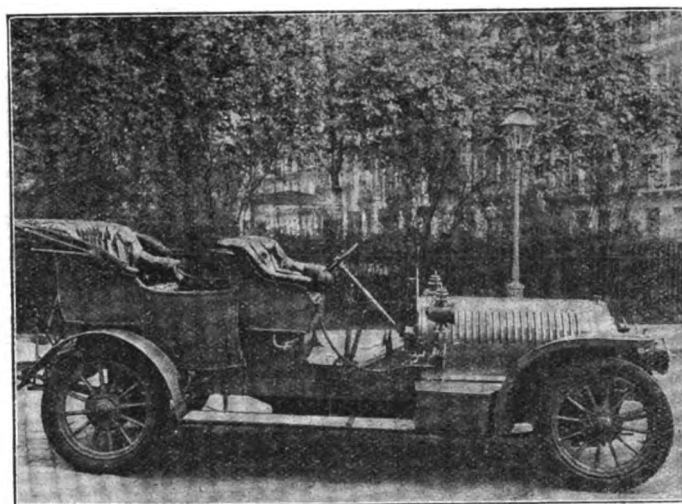
There has been considerable criticism of various details of construction which, strangely enough, have in practice worked to perfection. The actuating of the sleeves from one side has been referred to as unmechanical. The fault is fancied, not real; the bearing surfaces are too great and the sleeves too long to permit any binding or cramping to occur; in fact, in operation these sleeves have proved themselves to be remarkably free from causing trouble.

So far as injury of the ports by burning is concerned, all I can say is that they do not burn; they are never exposed to the extreme heat of the initial explosion. At the time of the explosion they are between two walls of water, from between which they do not emerge until the heat and pressure have been reduced through the expansion of the gases as the piston travels outward on the power stroke. So far as cooling the sleeves is concerned, the reciprocating motion appears to

exert a wonderfully beneficial influence. Doubtless two films of oil between the piston and the water jacket might act as an obstruction to the dissipation of heat were the sleeves at a standstill and the oil undisturbed. But the constant rubbing together of the sleeve surfaces is an ideal operation for transferring heat from one to the other and in turn to the water jacket.

It will probably have been observed that I have had nothing to say concerning weight. I believe this to be a matter so closely associated with the policy of the engineering departments of the various concerns that comparisons are almost impossible. Employing the same weight flywheel used on the 1908 Daimler, the 38-h.p. valveless came out at about 12 per cent. lighter. Then the unexpected development of about 10 per cent. more power caused some strengthening of parts, particularly in the cylinders and motor base, which added about 15 lbs., leaving the construction from 8 to 10 per cent. lighter.

In the course of the discussion which followed the reading of the paper Mr. Dugald Clerk said the experiments shown him by Mr. Knight, as conducted in Paris, proved that, in that engine, if one gave petrol equal to giving 100 heat units, he got in the cylinder indications that the proportion he was then working with was 28—that is, 28 heat units were returned in the form of indicated work within the cylinder, and 23 heat units as brake power. The efficiency would be something like 87 per cent. No doubt the system of smooth surfaces possessed a great advantage in running at low speeds, but the tendency was with a more rapid speed to smooth out those differences. Although a cylinder with pockets would be less economical certainly than a cylinder with a smooth face like that, the difference would not be very great at 1,200 revolutions. When Mr. Knight came to test engines of equal compression and equal volume, he would find that at the high speeds with a full load there was not much to choose. When one came to the low speeds there



The Hotchkiss 40-50-h.p. Six-Cylinder Car recently supplied by the London and Parisian Motor Car Company, Ltd., to Mr. E. Donaldson Hudson, making the fourth vehicle he has had of this make.

would be a great deal in Mr. Knight's favour, and that, of course, was a very important point for hill climbing.

Mr. J. S. Critchley said some people had the notion that the Knight motor was going to cause a tremendous revolution, and that the tappet valve was a thing of the past. He did not agree with that. They would see a battle between the valves, and makers who pinned their faith to the tappet valve would not go under without making a bold fight.

Dr. Hele-Shaw, F.R.S., referred to a difficulty which he imagined did exist, viz.—the conduction of the heat. The way in which Mr. Knight had explained what happened was admirable—the extremely practical way in which he had pointed out that it was not a question of conduction, but of convection. He did not think that anyone who had had experience of the effect of rubbing surfaces and of conductivity would fail to appreciate the importance of the way in which that difficulty was overcome. Oil, at the temperatures at which it was working there, was very thin. He (the speaker) had been working with oil a great deal, and there were oils that, although quite thick at ordinary temperatures, became like water at something below a temperature of 150 deg. At that temperature it was extraordinary, when one came to measure the viscosity in a thick cylinder oil, what a great decrease had taken place in the viscosity. That was now rubbed, and he could quite understand why the cooling effect was so perfect.

Mr. W. Watson wished to express his admiration of the engine, not only for the beautiful work of the design, but for the completeness with which it stepped out in an entirely new direction. Not the smallest advantage, from the experimental point of view, was that one could take off the top of the combustion chamber and alter the shape of the combustion chamber at a comparatively small cost, which one could not do with the ordinary build of engine.

The discussion was resumed on Thursday evening.

*Abstract of paper read to the members of the R.A.O. on the 16th inst.

SUPERHEATED STEAM AS APPLIED TO ROAD VEHICLES.*

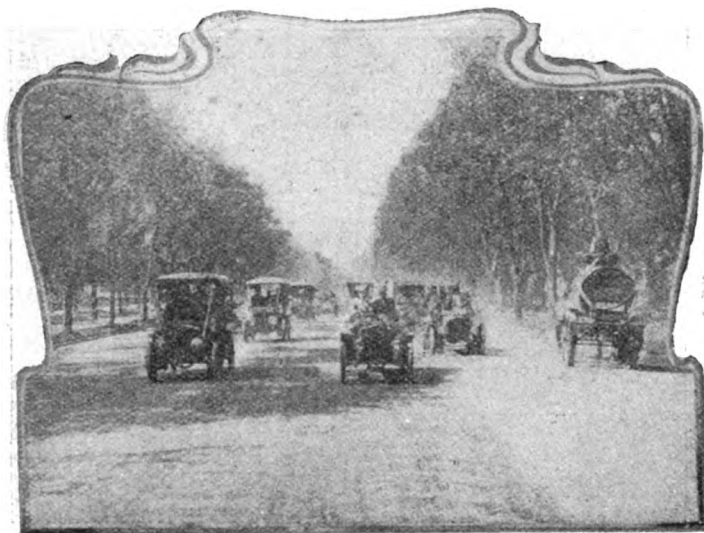
By E. D. SUGGATT.

THE modern steam plant as used on a motor vehicle differs so much from the old steam engine as to be almost a different form of power. This great difference is due to the fact that the steam is heated to such a high temperature that it becomes a gas, so that its temperature can be reduced without condensation, and the temperature of the steam rather than the pressure is the most important factor in the running of the modern steam car.

Superheated steam can be produced by passing the wet steam from a boiler through a superheating coil placed over the fire, but on most modern vehicles a "flash" or proportionate generator is used. This consists essentially of a length of tube coiled into any convenient form and into which water is fed in proportion to the amount of steam required the time.

It is heated by a liquid fuel burner, whose heat must be regulated to give an even temperature to the steam produced, whatever its amount. The flash generator will not explode, though very high pressures are used, and it does not scale owing to the high speed of circulation. It is much lighter than a boiler of the same power. The controlling of the water and fuel is done more or less automatically and in a number of ways:—

- (1) Fire kept constant and water varied according to the steam required.
- (2) Fuel and water fed in constant proportion and in quantity according to the amount of steam required, the control of this being either by hand or by the pressure of the steam.
- (3) The water controlled by the pressure of the steam and the fuel by the temperature.



The March of the Motor.

An everyday scene on a fashionable highway outside New York, where the water-car is almost the solitary horse-drawn vehicle.

Where a boiler is employed, the fuel is controlled by the steam pressure, and the water level either by hand or by a special thermostat. A boiler has to have a water level gauge, which is quite unnecessary with a flash generator.

The burner is a most important part of a steam car, as on it depends the smokeless combustion of the fuel under all conditions.

The burners used on motor vehicles are all of the vaporiser type, burning either petrol or paraffin vapour, generated by their own heat. They are of two types, the Hæcla or blow-lamp type and the induction type, in which a mixture of air and vapour is made in the burner body before combustion, by the injector action of the jet of vapour.

Having considered the generation of the steam, we come to the engine. With certain modifications an ordinary double acting engine can be used, but the glands, which are an essential feature of double acting engines, give trouble, and the slide valves are very difficult to lubricate at high pressures and temperatures. Another disadvantage of a double-acting engine is that the least slackness in the connecting rod bearings causes a knock. These troubles disappear, however, with a single acting engine and mushroom valves, similar to a petrol engine. Very high pressures and temperatures can be used without scoring the valves or blowing the glands. The mushroom valves give better distribution of the steam, and all the parts being in constant thrust, there can be no knocking whatever wear takes place. The only possible source of trouble with these engines is the possibility of steam leaking into the crank case and interfering with the lubrication; this has, however, been overcome by a special piston which allows leakage steam to escape into the air.

* Digest of a paper read before the Graduates' Section, London Branch of the Incorporated Institution of Automobile Engineers, on Tuesday, October 20th, 1908.

The use of compound engines, in which the steam, after leaving the high pressure cylinder, is further expanded in a larger cylinder, would apparently be desirable, and in one car a compound engine is used. It is found, however, that equally good economy can be obtained by using simple engines, and utilising the waste heat of the exhaust to heat the feed water (by means of a feed heater or recuperator-condenser).

The advantages of steam are, briefly, silence, flexibility, self-starting of engine, no change-speed gear, greater speed on hills, and no electricity. A steam car is also cheaper than a petrol car of equal capabilities both in first cost and upkeep. A petrol engine is usually considered to be much lighter than a steam plant, but this is not so, as the following figures will show:—

WEIGHT OF COMPLETE POWER PLANT.

| Steam. | Petrol. |
|-----------------------------|---|
| White, 45-h.p., 643 lbs. | Napier engine, 40-h.p. six-cyl., 681 lbs. |
| E.J.V.R., 45-h.p., 695 lbs. | Renault engine, 44-h.p. four-cyl., 706 lbs. |

THE LIABILITY OF MOTOR-BUS COMPANIES.

IN the King's Bench Division of the High Court of Justice two cases have been heard before the Lord Chief Justice and Mr. Justice Walton in which the Vanguard Motor-bus Co., Ltd., was the defendant.

In the first the plaintiffs were Messrs. Isaac Walton and Co., Ltd. It was an appeal from the decision of the deputy judge of the Bloomsbury Court. The action was brought by the plaintiffs to recover damages from the motor-bus company for injury done to a standard lamp erected on the footpath in front of the plaintiffs' premises, with which one of the defendant's omnibuses collided. The centre of the standard was some 14½ in. from the edge of the kerb, and it was struck at a height of 8 feet from the ground, the standard being broken at a height of 5 ft. 6 in. from the ground. Upon these facts the deputy county court judge non-suited the plaintiffs upon the grounds (1) that there was no evidence of negligence on the part of the defendants, and (2) even if there were such negligence the plaintiffs were not entitled to recover, because they had not shown that they had any right to erect the standards on the footpath. From this decision the plaintiffs appealed.

The second case was an appeal from the decision of the judge of the Westminster County Court. An action was brought by the plaintiff to recover damages for injury done to a standard lamp belonging to him, which stood outside the Holborn Music Hall, as the result of the motor-bus belonging to the defendants skidding into it upon a day when the roads were greasy. The county court judge found that the omnibus in question was duly licensed and that the driver was guilty of no personal negligence; that it was a well-known fact that in certain conditions motor-omnibuses were liable to skid, and that when they did so it was impossible to control them. In these circumstances he held that the defendants were liable for placing a nuisance on the highway and for negligently using the highway, and gave judgment for the plaintiff. The defendants appealed.

The Lord Chief Justice, in giving judgment, said in the first case he thought the appeal must be allowed. It was not proved as part of the plaintiff's case that there was any abnormal skidding or exceptional circumstances which made the omnibus come against the lamp-post. They had this fact, however, that a vehicle which, in ordinary circumstances, confined itself to the roadway, knocked down a permanent structure on the pavement. In his judgment, that was evidence upon which a jury might come to the conclusion that there was negligence on the part of the driver of the vehicle. The appeal in the first case must, therefore, be allowed, and the case sent back for a new trial. The second case raised a different point. It seemed to him that, in the face of the findings of the county court judge, they could not interfere. If they were correct findings of fact, he did not think that there was any doubt that the defendants had placed a nuisance on the highway. It was right and fair to the county court judge to point out that he did not base his judgment on any other ground, because he specifically said that there was a negligent use of the highway, not of the motor-omnibus. He based his judgment on the fact that the defendants placed a nuisance on the highway. He (the Lord Chief Justice) desired also to point out that there was an express finding in his judgment that the driver was not guilty of personal negligence. In other words, he could not by the exercise of reasonable skill have avoided what happened. For the reasons he had stated, he thought the appeal in the second case must be dismissed with costs.

THE CAST IRON BRAZING COMPANY, of Station Street, Stratford, E. are repairing anything that is in cast iron, notably broken cylinders or jackets.

OWING to the increasing demand for Avon tyres the manufacturers, the Avon India Rubber Company, Ltd., of Melksham, Wilts, have found it necessary to establish a London depot at 35, Long Acre, W.C. The building, which is a new one, consists of five floors and has been specially erected for the Avon Company. The show rooms are now open, and London motorists can inspect and obtain Avon tyres from this address. Amongst the orders recently secured by the firm may be mentioned the War Office contract, an excellent recognition of the merits of these tyres.

CASES AGAINST MOTORISTS.

CHARGE AGAINST A MOTORIST.

At Bow Street, John Hesketh Pearson, an engineer, living at Brighton, was charged on the 15th inst., before Mr. Curtis Bennett, with the manslaughter of an old man, named James Talbot, who was knocked down by his motor-car in Parliament Street, and was again remanded on bail. Mr. Muskett, who appeared for the prosecution, said that although a coroner's jury had returned a verdict of "Accidental death," the Commissioner of Police had decided, in view of the importance of the matter from the public point of view, to lay the facts before the magistrate, in order that he might decide whether the defendant should be sent for trial. Mr. Harry Wilson, solicitor, said that Mr. R. D. Muir, who had been instructed by him for the defence, was unable to be present that day. The case was adjourned till Tuesday, when the accused was again remanded on bail.

MOTOR CAR V. CAB.

Sir Philip Grey-Egerton, of Oulton Park, Tarporley, sued Messrs. James Lovell and Sons, jobmasters, New Church Street, Camberwell, in the Lambeth court recently to recover £20. damages for injuries said to have been caused to his motor-car. Sir Philip's chauffeur stated that whilst the car was standing on the incline leading to the main departure platform at Waterloo, one of the defendants' cabs was driven up behind, and the shaft smashed through the back of the motor. The defence was that the motor-car ran into the cab backwards. Judgment was entered for the plaintiff, his Honour assessing damages at £14. Stay of execution was granted that application for a new trial might be made.

DRIVERS SENT TO PRISON.

At Bow Street (London) Police Court, on Saturday, Charles Formage, 23, a French subject, was charged with being drunk while in charge of a motor-car, and was sentenced to one month's hard labour without the option of a fine.

At the Westminster Police Court, on the same day, George Goldsmith, of Hammersmith, driver of a motor-cab, was charged with driving in a manner dangerous to the public whilst drunk. Mr. Horace Smith said it was his inflexible rule to send to prison any drunken driver of a motor-car endangering the public. The prisoner must go to prison for one month with hard labour.

THE BENEFIT OF THE DOUBT.

Before the Guildford County Bench, on Saturday, Mr. S. F. Edge was summoned for having driven a motor-car at Witley on September 20th at a greater speed than twenty miles an hour. P.s. Pyke stated that the speed of the car, which came from the direction of Godalming, was equal to thirty miles an hour. The defendant told the witness that he could not be going at that speed, because he had been warned of the police trap, and he drew the witness's attention to the speedometer, the red hand of which pointed to "19." The defendant said that showed his highest speed. Superintendent Jennings informed the defendant that when the same car was stopped three weeks before and the speed was then over thirty-two miles an hour the hand of the speedometer registered the same—namely, under twenty miles. P.c. Edwards gave corroborative evidence. Mr. Edge, in his evidence, said he was going five or six miles an hour slower than the car in front of him. He was a good judge of speed and was not going at even twenty miles an hour. When he pulled up, the constable told him that he did not know whether it was his car or the yellow car in front that was wanted. John Attwood deposed to testing the speedometer and to finding it three seconds out. That was insufficient to describe it as an inaccuracy. The Bench considered that there was a doubt and dismissed the case.

BATCHES.

Several cases against motorists have recently been heard: at Torpoint (4), Malton (5), Epsom (5), Arundel (3). Steyning and the usual places familiar to our readers.

THE EXECUTION OF ORDERS FOR CARRIAGE WORK.

Before Mr. Justice Darling, in the King's Bench Division of the High Court of Justice, on Saturday, Mr. Max Graddon sued the British Motobloc Syndicate, Ltd., from whom he claimed £79 12s. 6d. for building and fitting a phaeton body to a chassis of a motor-car. The principal point in the defence, raised in an affidavit, was that the work at the time of issue of the writ was incomplete, it being alleged that some fitting of the brass beading round the front and back seats was not done. Dealing with the evidence, his Lordship said he was satisfied that the work was finished and the car was ready for delivery at the time in question. He gave judgment for the plaintiff for the amount claimed, with costs on the High Court scale.

THE NEED FOR ACCURACY IN REGISTRATION.

At Rye Borough Bench, on Monday, before the Mayor, Edward Montague was summoned for not having a registration number on his motor-car at Rye, on September 23th. P.s. Verrion stated that the car had plates on the back and front numbered 194L3, which defendant said was his French number. He (defendant) landed in Newhaven on August 1st and had been down there about a month. He got his London number out from the back of the car; that number was LB6127. Superintendent Bristow said that inquiries in London showed that defendant had registered and the car was described as blue. Defendant told the Bench that he had always been under the impression a French car was entitled to travel for a time in England without having an English number—three months he understood. He applied to the London County Council for an English number and said that his car

would be blue, because he intended having it painted that colour. The Superintendent stated that it was important that cars should be properly described, because so much turned in a case of identification as to the colour of a car that was seen bearing a certain number, which would throw the blame on an entirely wrong person. Fined 20s. and 10s. costs and his licence was endorsed.

F.I.A.T. COMPANY v. THE "BIRMINGHAM DAILY POST."

THE action brought by the F.I.A.T. Company against the proprietors of the "Birmingham Daily Post" for libel in respect to certain statements published in their newspaper at the end of 1907 came up for hearing in the High Court, King's Bench Division, on Wednesday of last week. The company's object in instituting the action being to counteract as far as possible the injury done to the firm and the F.I.A.T. Company, of Turin, by the publication of the statements referred to rather than to obtain heavy damages, they agreed to settle the case on payment of £100 and costs, Mr. Eldon Bankes, K.C., on behalf of the defendants, withdrawing the statements made, and expressing great regret at having published what was found on inquiry to be absolutely without foundation.—The directorate in Turin was considerably strengthened at the annual meeting in August last by the addition of the chairman of the Bank of Italy, and directors of two others of the leading banks in Italy. The position of the F.I.A.T. Company, of Turin, is therefore stronger than ever, and their financial status beyond all question. We are informed that nearly 3,000 men are now employed at the factory, and very large orders are in hand.



Touring in India.—A 10-12-h.p. Coventry Humber passing a native bullock cart in a suburban street near Madras.

COMPANY NEWS.

In the case of New Companies the file number is given at the end of the particulars.

THE STEPNEY SPARE WHEEL COMPANY, LTD., will hold their second annual meeting on Tuesday next, when the directors will report a profit of £26,060 after allowing for depreciation, &c. This, with the sum of £2,432 carried forward from last year, will allow a total dividend of 20 per cent. for the year, 15 per cent. to be written off the patent rights, £1,000 off goodwill, and a balance of £4,300 to be carried forward. The German branch has made steady progress, and arrangements are being made to establish small works in Canada. Patent rights have also been assigned for Turkey, Roumania and other eastern countries, and the position of the company is being strengthened in the United States of America. Reference is also made in the report to the show-rooms and workshop that have been opened at 168, Great Portland Street, London, W., where the new flange for facilitating the attachment of a Stepney wheel can be put on to the cars of customers.

WILLINGDON MOTOR COMPANY, LTD.—Registered, with a capital of £7 in £1 shares, to carry on the business of omnibus proprietors, carriers of passengers and goods, &c., between Eastbourne and Willingdon. Private company. Registered office: Barclay's Bank Chambers, Terminus Road, Eastbourne.

FROM the Stella Motor Company, Ltd., 18, Regent Street, S.W., comes a copy of the new catalogue of the Stella car. The vehicle, which is fitted with a 16-20-h.p. four-cylinder engine, 90 mm. bore by 120 mm. stroke, is claimed to have a very low petrol consumption and to be very light on tyres.

FORTHCOMING EVENTS.

OCTOBER.

24th (Sat.).—Motor Parade and Gymkhana of the Blackpool and Fylde District M.C. at the Agricultural Show Ground, Blackpool.

Conference of provincial clubs at Birmingham to consider the question of affiliation with the central motoring organisations.

29th (Th.).—Paper by Mr. Wicksteed on "Change Speed Gears," at R.A.C.

31st (Sat.).—Run of the Birmingham M.C.C. to Harrington Hall.

NOVEMBER.

3rd (T.).—Hull and East Riding A.C.C. Annual Dinner.

6th (F.).—Invitation Smoking Concert of the Stanley Cycling Club at the Queen's Hall, London, W.

11th (W.).—Prof. B. Hopkinson, at Institution of Automobile Engineers, on "A Complete Test of a Modern Petrol Engine."

13th-21st.—Olympia Motor Show, London.

14th (Sat.).—Thirty-third Annual Dinner of the Stanley Cycling Club, Hotel Metropole, London, S.W.

18th (Wed.).—Annual Dinner of the Motor Union.

20th-28th.—Stanley Show at the Royal Agricultural Hall, London, N.

26th (Th.).—400-mile International Grand Prize Race of the Automobile Club of America.

28th (Sat.).—Opening of the Paris Motor Car Exhibition.

DECEMBER.

13th (Sun.).—Closing day of the Paris Salon.

23rd (W.).—Speed and reliability trials at Nagpur, Central Provinces.

JANUARY, 1909.

22nd-30th.—Scottish Motor Exhibition at the Waverley Market, Edinburgh.

26th.—Scottish Motor Trade Association Dinner at Edinburgh.

FEBRUARY.

War Office Fourteen-days' Trial for Light Tractors.

LIGHTING-UP TIMES—LONDON.

| | | | |
|----------------|-------------|-------------|-------------|
| Oct. 24th—5.48 | 26th—5.44 | 28th—5.40 | 30th—5.36 |
| " 25th—5.46 | " 27th—5.42 | " 29th—5.38 | " 31st—5.34 |

To find the approximate lighting-up time in October for Birmingham 6 minutes should be added to the above times, 2 for York, 8 for Manchester, and 14 for Glasgow.

COMMERCIAL MOTOR USERS' ASSOCIATION.

At the meeting of the executive committee of the Commercial Motor Users' Association, held last week, it was reported that the engineer of the South-Eastern Railway Company had promised a list of the bridges on which notices had been placed limiting the weight of heavy vehicles allowed to pass over the same.

It was decided to suggest to the authorities of the City of London that in future the returns for the accidents caused by motor vehicles be sub-divided under different headings, viz., cabs, omnibuses, petrol vans, steam vehicles and tractors, private motor-cars and tramways.

The membership has now reached 310, the latest accessions being the following firms:—J. Greenwood and Sons, Ltd. (Huddersfield), Aylesbury Brewery Company (Aylesbury), Desmond Motor Company (Liverpool), Wall Paper Manufacturers, Ltd. (Chiswick), Evan Cook's Depositories, Ltd. (Peckham), H. W. Thompson (Fulham), T. Hickling (Leicester), Wm. Verity (Manchester), Oaklands Bros. (Barnsley), Mann, Crossman and Paulin, Ltd. (London).

POLICE "CONTROLS."

ON a good stretch of road between Barnsley and Redbrook the police have a timed distance.

THE police have a long distance trap of 5 miles 220 yards between Newhaven and Brighton which is in frequent operation.

THERE are measured distances at several points of the main roads outside Wakefield.

POLICE officers are timing motorists on the Malton and Scarborough main road.

THERE is a measured half-mile at Garelochhead, Dumbarton.

SUPERINTENDENT BRISTOW told the Rye borough magistrates on Monday that the chief constable had a party of men in the district timing motor-cars, and if any excess of speed was detected the cases would be brought before the magistrates.

As an instance of how well a speedometer can serve the motorist the following extract from a letter to Messrs. Gamage, Ltd., will be of interest:—A police trap was laid on a mile of public road here (Perthshire) which led to a local chauffeur being reported for exceeding the limit. On examination of his speedometer he was confident the mile was short, and at once challenged the accuracy of the distance. The "mile" was measured by one of the District Road Surveyors and was found to be deficient by 218 yards. There were no further proceedings taken." This evidently confirms the instance reported in the *M.C.J.* this week.

ROAD REPORTS.

BRIGHTON.—The Brighton Corporation is endeavouring to borrow £8,816 for the re-laying of the King's Road with tar macadam.

CLAYTON.—The Clayton (Sussex) Parish Council is endeavouring to secure a speed limit of ten miles an hour for the bottom of Clayton Hill.

MOTOR ROADS.—The President of the Local Government Board having been asked whether he would consider the possibility of utilising some portion of the unemployed labour now available upon the construction of motor roads throughout the country to accommodate the growing motor traffic, has replied that "Parliament has not authorised the construction of any roads for the exclusive use of motor traffic. In the absence of the legislation necessary to give such authority, I am afraid," the right hon. gentlemen proceeds, "it would not be practicable to adopt the suggestion in the question."

AUTOMOBILE ACCIDENTS.

LATE on Saturday night a fatal motor-car accident occurred at Cull-nall Green, near Droitwich. Mr. Nicholls, a partner with Mr. Heath, motor-car agent, of Birmingham, was driving in company with Mr. Broome, jun., of Areley Court, near Stourport, and Mr. Dunn, of the Royal Hotel, Droitwich. A dense fog prevailed, and, apparently owing to this, a wrong direction was taken and the motor-car ran up a steep bank and overturned. Mr. Nicholls was killed on the spot. Mr. Broome suffered injury to his spine, and was for several hours unconscious, and Mr. Dunn sustained a broken thigh and other injuries. The victims of the accident remained undiscovered for a considerable time owing to the fog. When at last they were found they were taken to the Royal Hotel, Droitwich.

AN accident, which resulted in the almost instantaneous death of a soldier, occurred at Brook Street Hill, near Brentwood, Essex, on Sunday afternoon. Shortly after one o'clock Mr. Montefiore Mendelssohn, of London, was driving a motor-car towards Southend. When approaching Brentwood a cyclist turned out of a lane into the main road. He went into the centre of the road and was then caught by the car, which threw him from his machine and he sustained a fractured skull. Death took place within a few minutes. At the inquest on Tuesday the jury returned a verdict of "Accidental death," exonerating the motorist from all blame.

LORD NORTHAMPTON was in his motor-car on Monday evening when the car ran into a herd of cattle just outside Danstable. The car fell thirty feet down an embankment and was wrecked. Lord Northampton escaped with a severe shaking, but the driver was found under the car. The occupants of a passing taxi-cab rendered assistance, and his lordship and the driver were taken to Danstable, where it was found the latter had a broken rib.

BUSINESS NEWS.

IN the Chateau Thierry hill-climb, held on Sunday last, the "Four-Inch" Darracq scored yet another notable success, being first in the 96-100 mm. class. It also made fastest time of all cars carrying four passengers. In the 111-120 mm. class a Darracq car was also first.

THE Motor Radiator Manufacturing Company conducted a series of comparative efficiency tests of two cellular type motor radiators on Thursday, last week, at their works in Bermondsey, to demonstrate the efficiency of their system of construction.

MR. W. WATSON, the driver of the winning car in the Four-inch Race, has written to Messrs. Easton and Melville, Ltd., stating that he has "much pleasure in informing you that I used your 110 lubricating oil throughout the Four-inch Race, and in practising, and it gave entire satisfaction. When the great and continuous piston speed is taken into account, I think it proves conclusively that the oil must have been a perfect lubricant."

THE partnership subsisting between Messrs. George Henry Wait and Christopher Brooks Warner, carrying on business as cycle and motor-car manufacturers at 42, London Road, and at Belgrave Gate, Leicester, under the style or firm of G. H. Wait and Co., has been dissolved by mutual consent. All debts due to and owing by the late firm will be received and paid by Mr. G. H. Wait, by whom the business will in future be carried on under the same style.

MESSRS. SHIPPEY BROTHERS inform us that they have disposed of their sole agency rights for Lancashire, Yorkshire, Cheshire, North of Wales, and the Isle of Man for the sale of their "Chemical Decarboniser" and "Decalcifier" compounds, as used for removing carbon deposits from the cylinders and incrustations from the radiators and water jackets of motor-car engines, to the Motor and Gas Engine Decarbonising Syndicate, of 47, Marlborough Street, Liverpool, to which Messrs. F. H. Hornblower and Co. have been appointed managers. We learn that the syndicate is arranging to establish official agencies in the leading commercial centres, such as Manchester, Leeds, Sheffield, Blackburn, Hull, and other approved districts, where a stock of these specialities will be kept. Messrs. Shippey Brothers state that the wholesale trade in these specialities is largely extending and that they are receiving many repeat orders and testimonials from satisfied users as to the successful working of the compounds. We also learn that the Scotch and West of England rights, also the Birmingham and Midland concessions, are under negotiation with other well-known engineering firms.

THE Motor-Car Journal.

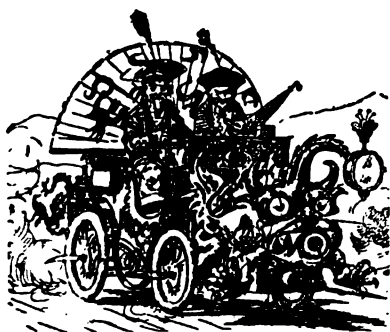
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COMMENTS.



IT was a horrible picture of desolation that was drawn at the Guildhall, London, on Tuesday, by the ducal orators who assailed the motor-car as a formidable engine of destruction, and the man who drove it as a selfish and iniquitous person. Apparently those who drive cars are callous about "shaving" pedestrians—according to His Grace the Duke of Northumberland—and the only way to inculcate the spirit of toleration will be to give the magistrates power of confiscating cars, without compensation and for a time limit of six months. Lord Willoughby de Broke did not consider all the trouble had arisen from the inconsiderate motorist. It was partly owing to the fact that people had tried to introduce a form of traffic which the roads were never intended to carry, and to drive that traffic at a speed wholly inconsistent with the safety and comfort and common law rights of the peaceable enjoyment of the roads by the people of this country. A resolution calling on the Government to introduce new legislation was adopted on the motion of Mr. Harold Cox, who regretted the cautious attitude of Mr. Burns, and declared that the bare facts relating to motor-car matters were refused by the journals of the day. Mr. Cox has been a contributor to newspapers often enough to know that public interests are the first concern of those responsible for the conduct of the press.

The Scottish Trial.

ALTHOUGH our recent Symposium on the Trial question revealed the fact that the trade as a whole did not desire a repetition of the 2,000 Miles Trial, which proved such a lengthy and costly experiment this year, there was a feeling evidenced in favour of regarding the Scottish Trial as a useful and authoritative test for the reliability of motor vehicles. Hence considerable interest attaches to the announcement that we are now able to make to the effect that the Trials Committee of the Scottish A.C. are recommending to the General Committee of that organisation that the Scottish Reliability Trial in 1909 should comprise 1,000 miles. The committee is further suggesting that the event shall take place during the week beginning June 14th, and as soon as the sanction of the General Committee has been obtained will get to work upon the regulations.

1,000 Mile Trial.

MR. MARK DAVIES, of Shrewsbury, recently left the town with a friend on a 1,000 miles tour. Starting from Shrewsbury on his 10-12-h.p. Darracq car, they journeyed to Hereford, Ross, Gloucester, Bristol, Weston-super-Mare, and Bridgwater. From the latter place they made a start for Minehead and Porlock, up the steep winding ascent from Porlock, and down what is perhaps the worst road in England for gradient and a broken surface, to Lynmouth. Then up the precipitous and tortuous road that leads to the cliffs above Lynton. The

next stop was at Ilfracombe, from which the way was made through Woolacombe and Barnstaple to Bideford and Clovelly. They then journeyed back more inland to South Molton, Bampton, Wiveliscombe, Milverton, and Taunton to Bridgwater, Dorchester, and Bournemouth. The roads there were on the whole very bad, having several inches of dust on them. Next day they travelled on to Lymington and Brockenhurst, and through the New Forest to Southampton, which was a beautiful run and an excellent road. Crossing to the Isle of Wight and seeing the island occupied a day. Leaving there they journeyed to Portsmouth by boat, and back thence to Southampton. Next day they visited Winchester, then went on to Salisbury, and crossed to Bridgwater again. The following day they went to Glastonbury, Wells, Bath, and Stroud, thence to Tewkesbury and Malvern, and next day did Worcester, Kidderminster, Bridgnorth, and home to Shrewsbury. Save for three tyre troubles they had no involuntary stop in the whole of a 1,000 miles tour.

The Making of Roads.

INAUGURATING a new reservoir at Molesey for the Metropolitan Water Board on Saturday, Mr. John Burns had something to say to those responsible for the great main roads of the country. Last year no less than £14,000,000 was spent on the highways and bridges in Great Britain alone. According to most authorities the proper time to make a road is between October and March, but, unfortunately for the organisation and regulation of labour, many local authorities undertake such work at a time when the harvest is demanding all available manual assistance. The President of the Local Government Board therefore suggests that the greater portion of the money which is spent on such work, in which motorists are naturally interested, should be used in the slackest months of the year, from next month until the spring. This is being done in many leading counties, and is a subject to which the provincial clubs might well give their attention.

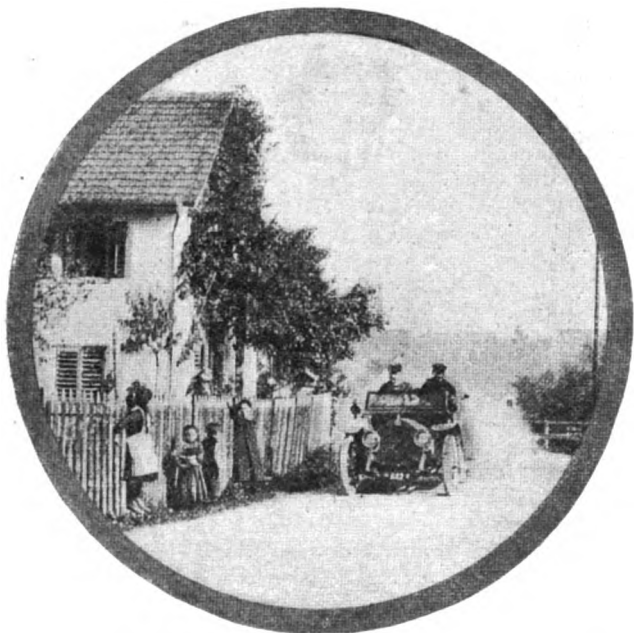
Gauging Speeds.

THERE is much practical common sense evidenced in the experiment carried out at a recent week-end by the Skipton Urban Council in connection with judging the speed of motor-cars. In discussing the recommendation the local authority shall make to the West Riding County Council as to speed limits through the town some of the members urged that six miles an hour should be the limit, while the chairman and others favoured eight miles an hour—this being the limit suggested by the local bench of magistrates. It was contended by the advocates of eight miles only that the ordinary observer could not judge to several miles an hour the actual speed a car was travelling, and to put the matter to test a series of eight runs was carried out along High Street. The results were interesting. The first run over a measured distance showed a registered speed of nineteen miles an hour. The nearest estimate was 15, and the lowest 5; second run—actual 10 miles an hour, nearest estimate 7, lowest 4; third run—actual 25, nearest estimate 20, lowest 12; fourth run—actual 16, nearest estimate 12, lowest 6½; fifth run—actual 10, lowest 5; sixth run—actual 5, correct estimate 5 in five individual cases; lowest 3; seventh—

run—actual 30, correct estimate 30 in three cases, lowest 18 ; eighth run—actual 22, nearest 20, lowest 14.

In the West Riding.

AT the meeting of the West Riding County Council the chairman of the Highways Committee reported upon the opinions of local authorities which had been obtained since the issue of the recent circular by the Local Government Board. These suggested that no fewer than 258 lengths of road should be prohibited to motor traffic and that the speed of motor-cars upon 1,024 roads and portions of roads should be restricted to rates varying from four to fifteen miles an hour. Out of 148 local authorities which had been consulted, 121 have expressed some desire for restriction. The Highways Committee were, however, not inclined to recommend the County Council to ask the L.G.B. for the imposition of any further regulations restricting speed within the West Riding area. But this recommendation was referred back by forty-four votes to three, and the committee is now expected to reverse its original decision.



Touring in Switzerland.—A Snapshot from Adliswil, near Zurich.

The Manx View of the T.T. Race.

HAVING in the last few issues set forth the views of competitors in the Tourist Trophy or Four-Inch Race in the Isle of Man as to its influence on the design of cars, we are now pleased to be able to give the opinion of the President of the Manx Automobile Club with regard to the local effect of the contest. Mr. George Drinkwater, whose 18-h.p. Motobloc bears the registration No. 1 on the island, believes that the races have undoubtedly had a stimulating effect on the residents, for there are now more than 100 motor-cars and motor-cycles on the island—a large number for a comparatively small place, whilst—and this is a piece of information which the trade will appreciate—more orders are about to be placed. "The actual race," continues Mr. Drinkwater, "taught Manx motorists little beyond showing the control exerciseable over the swift-moving machines, the power, especially up hill, that can be obtained from a four-cylinder, and, perhaps more than anything, the strain and rough usage that a modern motor can stand. The wear and tear on the roads was slight except where brakes were put on and at bends and corners. The organisation of the race was perfect, but the Manx Automobile Club—who had duties assigned to them—do not contemplate contests on the same scale. The T.T. races have unquestionably educated the

horses and their drivers, also children not to try 'last across,' and generally the Manx people are not hostile to motors, as was the case a few years ago. The majority like the races from their inherent love of sport and because of the grist that comes in with the competitors and spectators, and as a consequence the races have a tendency to check the feeling of resentment against motorists that unfortunately is noticeable elsewhere." It is evident, therefore, that so long as motorists on the mainland want races the roads of the Isle of Man will be available.

Motorists and the Territorials.

FROM the Lincolnshire A.C. we have received particulars of their scheme for the registration of owners of motor-cars willing to lend assistance in connection with the mobilisation of the Territorial Force. This has the support of the commanding officers of the two infantry battalions of the county, and it is not intended to trench on the province of the Army Motor Reserve, whose duties, it should be noted, are of an entirely different nature. On the order to mobilise being given, the point of concentration will be named, and troops transported there as rapidly as possible. The railways will probably be occupied to their fullest capacity with the transport of guns, ammunition and also regular troops from beyond the county. It is suggested, therefore, that the Lincolnshire owners of motor-cars should assist by placing at the disposal of officers commanding units of the Force in the Fen country motor-cars, so that as many men as can be conveyed at once to the point required would have headquarters assigned to them. It is estimated that an average motor-car could carry three or four soldiers with their arms and equipment, and if the distance was not too great, two or more journeys could be made. In this manner twenty automobiles would be able to transport a company (117) to a distance of, say, fifty miles within twelve hours. The committee of the Lincolnshire A.C., having regard to the good service that could thus be rendered to the military authorities, are inviting owners of cars who are not engaged in the military service in any other capacity to allow their names to be enrolled as willing to assist the conveyance of troops to the points of concentration.

Signalling by Handkerchief.

IN the court at Mortlake an interesting incident occurred on Wednesday, when a driver of a motor-car who had been "trapped" challenged the accuracy of the police method of signalling by handkerchief and setting their watches on receiving the warnings. He asked for a test in court, and, although the inspector demurred to such procedure, the Bench rightly allowed the defendant the opportunity of demonstrating the uncertainty of human signalling. He had been timed over a 220 yards measured distance; in court the constables were only a few yards apart and were half a second out in ten seconds—sufficient to prove that there was a reasonable doubt when similar methods are pursued on the road. Such points should always be contested, and, although they may not be appreciated by the police, they will tend towards caution in summoning motorists.

Motor Cars and Roads.

AT a time when so many county surveyors are denouncing the motor-car for its ravages upon their highways, it is interesting to come across the report of Mr. C. S. Morris, the county surveyor for Northamptonshire, whose roads were recently the subject of most favourable comment by Prince Francis of Teck after H.S.H. had travelled over many miles of them. Mr. Morris's opinion is that the alleged damage to the roads by fast-travelling light motor cars is much exaggerated. At the same time he does not deny that heavy vehicles and those with steel-studded tyres have damaged the roads, but not to the enormous extent which is generally assumed. The county surveyor for Northamptonshire holds no brief for motorists, but,

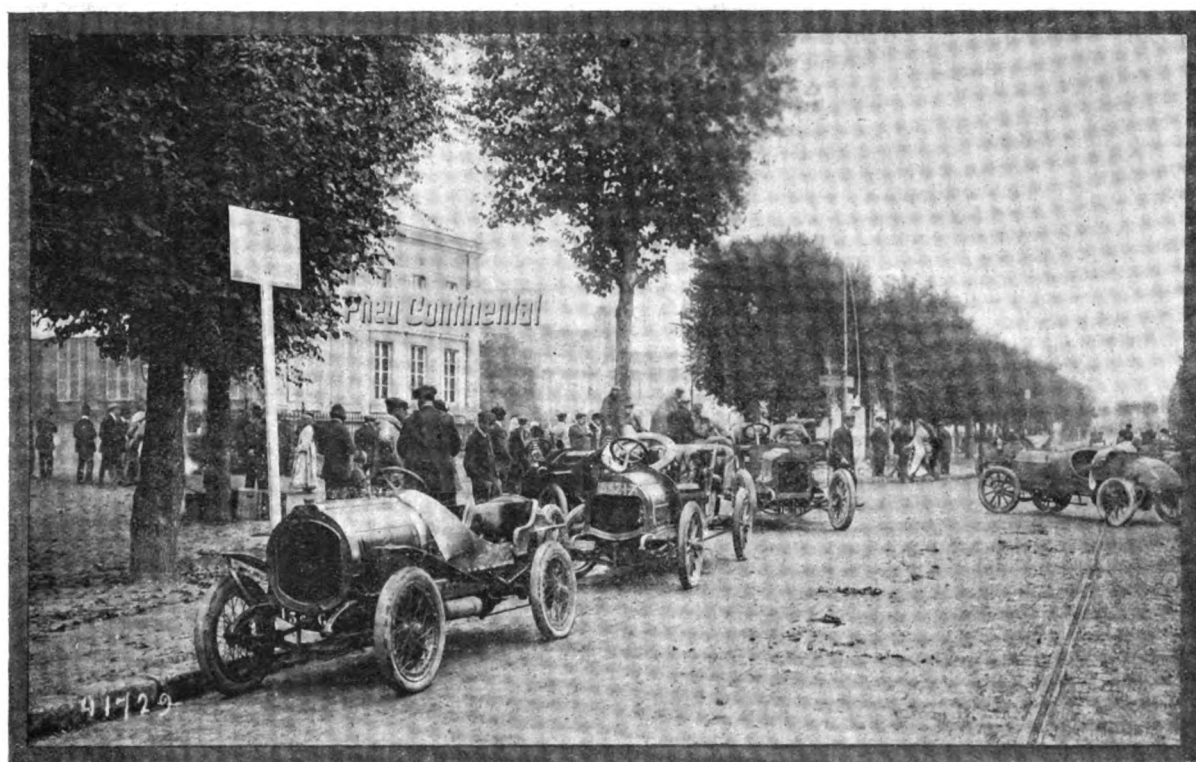
after inspecting the damage to the Watling Street road several times during the past year, finds that only about one-fifth of the total length shows evidence of damage to any extent. There is also evidence of injury on the Northampton and Market Harborough road, but, apart from these two instances, he has little to complain of so far as fast-travelling motor-cars are concerned, and comes to the definite conclusion that "the total damage in this county is at present not sufficient to materially affect the cost of maintenance."

Four Policemen to one Motorist.

It seems better that murders may be committed, and the murderers allowed to remain undiscovered, rather than that one motorist should be allowed to escape persecution. On Saturday last, a correspondent writes, he was proceeding along Castelnau Road, Earnes, at about twelve or fourteen miles an hour, when a policeman stepped off the path and stood in front of the car, not more than two yards off. The vehicle was immediately pulled up, and, although the roads were exceedingly

Speed in the Fen District.

At a meeting of the Spalding Rural District Council a resolution urging the Government to deal with the excessive speed of motor-cars has been adopted, with only one gentleman, Mr. Richard Gleed, a motorist, protesting. Mrs. Royce, of Donington, whose husband is a prospective Parliamentary candidate for the Division, as well as the owner of a car, said her experience of automobilists was that when they got out of their own district they were often reckless as to speed—a remark that may raise some comment from those who are in the habit of touring at any distance from their own place. The fact is that the sense of responsibility requires to be fully emphasised wherever possible; and there is no doubt that in Lincolnshire a great deal of harm was done a few years ago by cars racing along the fine level roads of the county. This prejudice, is, however, being worn down by the Lincolnshire Automobile Club, which is doing much useful work in encouraging the considerate driver. We have often noticed that cars bearing trade numbers are the greatest sinners in this respect, and



The Chateau-Thierry Hill Climb.—The Scene near the Starting Point.

greasy, the car did not skid in the slightest degree when the brakes were applied. Two plain-clothes men afterwards came up and said our correspondent was travelling at the rate of thirty miles an hour. To prove this they showed their watches, which tallied to the exact second, despite the fact that the men were stationed a furlong away from each other and there was traffic on the road and foot passengers on the path. The usual information was given that a summons would follow. On the Sunday morning, our correspondent further informs us, a constable went to the garage before 9 o'clock in the morning to verify the address, although it was on the licence; then a SECOND officer came and said a mistake had been made in copying the licence; later a THIRD called with the interesting information that he would be summoned; and finally a FOURTH duly served the summons. The above, without comment, must cause reflection in the minds of our readers, and suggest the uses to which our police force are put. Apparently it is not for the purpose of protecting either persons or property, but chiefly to harass and endeavour to kill an industry employing tens of thousands of hands.

would urge upon firms in the industry the necessity of insisting that their employees should always drive with care and caution.

A MOTOR first-aid machine has recently been supplied to the Fire Brigade of Southampton by Messrs. Merryweather and Sons, Ltd. The vehicle, which is fitted with a 55-h.p. petrol engine, has accommodation for about half-a-dozen firemen and is provided with a fifty-gallon chemical tank.

"THE Story of a Midland Town" is a well-printed quarto publication compiled by Mr. Thomas Adams and issued by the Wolverhampton Industrial Development Committee. The illustrations and letterpress are well calculated to cause manufacturers who are thinking of removing their establishments from heavily-rated areas to consider the terms and conditions prevailing in this town of 95,000 inhabitants, where it is calculated that rent and prices are 18 per cent. less than in London, while coal is 40 per cent. cheaper. In proximity to Wolverhampton are several delightful suburbs, while the industries already represented include several automobile firms, one of which is the well-known Star Company.

Motor-Cars of the Future.



WHAT THE PUBLIC DEMAND AND IMPROVEMENTS THE AGENTS SUGGEST.

THE motor trade is apparently in a state of transition; the days of "motoring for motoring's sake" are passing away, and the public interest is now turning from the cars of great power and cost to those of economical upkeep and ability to do the ordinary work of getting quickly and reliably from place to place.

Recognising the unique position of the provincial agent for gauging the present position and observing the course of fashion in the automobile world, we have extended an invitation to some of the leading agents to communicate their views through our columns. We have suggested that the public will be interested in knowing the tendency of the demand for cars, and that the makers would welcome the opinions of agents as to points of future improvement. Thus the symposium serves a two-fold purpose. The replies received to our questions prove an appreciative interest in the matter, and have been so numerous that but a small instalment can be given in the present issue.

Mr. Hubert Egerton, of Norwich, whose firm (Messrs. Mann, Egerton and Co., Ltd.), is well known throughout the eastern counties, writes:—"We should say that, from our experience of Norfolk and neighbouring counties, the average buyer is looking for something about 15 to 20-h.p. To put it more plainly, amongst that class that have the means to go in for a large car, say a 40 or 50-h.p., the tendency to buy such big cars is decidedly on the wane, and a great many from that class, who would two years ago have bought a 40-h.p., would to-day buy something more like a 20-h.p. The greatest number of buyers, we should imagine, at the moment can be found for cars from 14 to 20-h.p. And below that h.p. there is a very large class, consisting of doctors and other professional men who use a motor-car simply as the cheapest means of annihilating distance, and who are not really motor enthusiasts at all in many cases, and whose needs are satisfied with a car of from 10 to 14-h.p.

We would suggest as the two most needed improvements the adoption by all makers of forced feed lubrication through a hollow crank shaft. This system, if properly designed and carried out, from our own experience, we can safely say is infinitely ahead of anything else, both for simplicity, efficiency, and freedom from the host of minor troubles to which the splash system is heir. The second improvement, which would be most advantageous (and this is a matter which has been horribly neglected by the majority of makers) is the fitting of the magneto in an accessible position. We could give the names of any number of different models wherein it is the work of an acrobat to get at the magneto at all. There are some noted exceptions, of course, but still to-day there are a number of makers of renown whose cars are still fitted with totally inaccessible magnetos."

Mr. W. Blues, of Pitlochry, is well known to participants in the Scottish Trials, and suggests that with regard to the type and horse power most in demand there can be no question that the requirement is for 10-12 to 16-20-h.p., with Cape cart hood and wind-screen according to the purse of the owner. "As to the special points of improvement, I think a slightly higher set car, well sprung and roomy in the body, without being too long in the wheel base for turning corners, with a good under screw, easily detached, would be much in demand, live axle-drive being preferred to a chain drive. I think, personally, that the reason for a small car becoming more popular is that people are now getting the full power out of their engines, and the case of a man running for weeks on three-cylinders without knowing it is getting more rare every day."

Mr. G. W. Hodgkinson, of Buxton, notes a tendency in favour of the 10-12-h.p. four-cylinder side entrance light touring car and the 30-h.p. limousine or landaulet. He suggests that

makers should take care to fit tyres capable of carrying the weight and doing the work expected, giving the approximate mileage of the same. It would be also an advantage if the mileage to be obtained per gallon of petrol could be given.

The demand, according to the experience of Messrs. Rock, Thorpe and Chatfield, of Tunbridge Wells, seems to move towards a moderately horse-powered four-cylinder car at moderate price, and they are of opinion that sales are more likely to increase in the direction of 15 to 18-h.p. rather than the more powerful type. For those who require a bigger car a power of 35 to 40-h.p. will give ample satisfaction.

Messrs. W. H. Johnson and Sons inform us that 80 per cent. of the cars they have sold this year range in h.p. from 12 to 18, the average price being £400. Their experience covers a wide area, business being directed from their places at King's Lynn and Hunstanton.

They consider that all cars should have dual ignition and an easy form of change-speed—a "gate," for instance—and above all the makers should adopt as standard a tyre well up to the weight of the car.

Messrs. Stradling and Plenty, Ltd., of Newbury, do not find that any one type, horse-power, or price predominates in their district, but, speaking generally and from their own experience, a car from 12 to 18-h.p. would satisfy most people if it fulfilled the following conditions:—1, it must have a fair turn of speed; 2, must be a good hill climber; 3, must be light on tyres and petrol; 4, must be silent and wear well without requiring constant attention; 5, must be smart looking and comfortably sprung.

"We have suggested in the above some of the desirable features which a car should possess, and think manufacturers should, in addition, aim to simplify gear changing, and improve clutch mechanism; brakes, too, are yet capable of betterment, larger surfaces, and should be internal expanding. A radiator also that was efficient and would not leak would be a godsend."

A "TEN years' constant reader" of the *M.C.J.* suggests that motorists passing through Buxton should remember that invalids go there for treatment. This hint is particularly directed to the many people that attend the hunt in their cars.

MESSRS. A. W. GAMAGE, LTD., are now making the generous offer that they will allow motorists a free use of the fully-charged Sioco tyre inflator. This is obtainable ready charged at the Holborn house, and customers have the free use of the inflator until discharged, when (unless they wish to retain it) the deposit will be refunded in full.

AN attractive catalogue of their high-class motor clothing as well as liveries for chauffeurs reaches us from Messrs. Charles Baker and Company's Stores, Ltd., 137 to 140, Tottenham Court Road, W. At this establishment the firm have a motor clothing depot, in charge of an expert who is practically acquainted with the requirements of those who motor. For the winter season several excellent garments have been produced, including loose overcoats in tweed, frieze or cheviot, and lined with tweed, camel-hair or leather. An excellent speciality is their lined fur overcoat with detachable leather lining. Messrs. Charles Baker and Company, Ltd., have also brought out an "umbrella" waterproof overcoat in drab twill for gentlemen. The ladies' department is replete with serviceable and fashionable raiment, motor coats and costumes having long been a speciality of the firm. In the department devoted to liveries and engineers' clothing there are some good lines in blue and green army cloth and combination suits respectively. The list concludes with a selection of motor caps, motor gloves, and, in fact, everything that is likely to be worn by the motorist of either sex.

THE VANDERBILT CUP RACE.

THE fourth annual contest for the Vanderbilt Cup was held on a 23½ mile course on Long Island, U.S.A., on Saturday last, in the presence of a crowd of spectators estimated at not less than 200,000. The circuit, which took in the recently constituted "motor parkway," which is nearly 11 miles long, had to be covered eleven times, making a total distance of about 258½ miles. Until quite recently it appeared as though the contest would be confined to American machines, for, though the Vanderbilt competition had in previous years been the only motor race of importance in the United States, this year the Automobile Club of America is promoting an international contest for Grand Prix cars, and there was some antagonism between the organisers of the two events. A settlement was arrived at only by the Vanderbilt Cup Commission agreeing to make the

Robertson's average speed for the 258½ miles is equal to just over 64 miles per hour. Most of the drivers met with tyre troubles, while great difficulty was experienced in keeping the crowd off the track. Indeed, after the arrival of Robertson and Lytle at the finishing point the race had to be called off, owing to the spectators crowding on the course.

NO SHORTAGE IN PETROL.

HAVING in view the great increase in motor traffic during the past year or so owing to the large number of motor-buses and cabs that have been put on the streets, fears have been expressed in certain quarters that the demand for petroleum spirit would advance at a greater rate than the supply, and that not only would the price consequently



A View on the Motor Parkway, Long Island, U.S.A., which was comprised in the course for the Vanderbilt Cup Contest.

race a national one. The international element was, however, preserved by allowing foreign machines to run, provided their owners were Americans.

Nineteen cars—twelve American and seven European—were entered for the event, they comprising two Locomobiles, two Knox, a Chadwick, two Mathesons, three Thomas, an Acme, a B.L.M., three Mercedes, an Isotta-Fraschini, a Hotchkiss, a Brasier and a Renault. Of these seventeen actually competed. The start took place at 6.30 a.m., the competitors being sent away at intervals of 30 sec. Robertson on a Locomobile led for the first three rounds, but in the fourth circuit he was passed by Haupt, on the Chadwick, his time being 1 hr. 26 min. 10 sec. On seven circuits, however, Robertson regained first position, and from that point to the finish he was not displaced.

Appended is the result of the race:—

| No. | Car. | Driver. | Time. |
|-------|----------------------|------------------|----------|
| | | | h. m. s. |
| 1 ... | Locomobile ... | P. Robertson ... | 4 0 48 |
| 2 ... | Isotta Fraschini ... | H. Lytle ... | 4 2 36 |
| 3 ... | Mercedes ... | Lutgen ... | 4 30 35 |
| 4 ... | Locomobile ... | J. Florida ... | 4 31 10 |

increase but the very groundwork on which the whole motor movement is based would become insecure. It is gratifying to learn, on the authority of Dr. P. Dvorkovitz, that there is no need for alarm, and that the petroleum refining industry is capable of placing on the market supplies of motor spirit more than sufficient to meet any possible demand for it, especially now that consumers are recognising that heavier grades can be used with equally satisfactory results as the lighter qualities formerly considered necessary. In a letter to the "Times" Engineering Supplement Dr. Dvorkovitz points out that "large as was the demand for spirit during 1907, the total imports for that year have already been exceeded during the past nine months. The various importing firms have laid themselves out to keep pace more effectively with the demand, and only a few days ago the largest spirit cargo on record—over 2,500,000 gallons—was delivered into the storage tanks at Thames Haven. Now that heavier motor spirits are in demand, we see that the oilfields of Grosny (Russia) and Roumania are steadily coming into prominence with their motor spirit, which, in past times, has been precluded simply because the motorist was not aware that they constituted a satisfactory fuel."

THE CARE OF MOTOR-CARS IN WINTER.

SOME SUGGESTIONS.

IN our last issue we dealt at some length with a few of the matters that need attention in connection with motor-cars during the winter season. The remarks then given mainly applied to vehicles which are kept in commission throughout the whole of the year. While there is no reason why all cars, now that front glass screens and Cape hoods, not to speak of covered bodies, are so general, should not be used in the winter as well as in the summer, there is still a small section of the motoring community who, as soon as the cold weather comes, put their vehicles away in the stable only to bring them out again in the spring. Even when a car is to be left to itself for some months some little care on the part of the owner is necessary to put it into proper condition for this period of inactivity; otherwise, when he comes to take it out at the beginning of next season, he may experience unexpected trouble that may be obviated if attention is given to the matters outlined below.



Motor-Cars and Hunting.

Mr. W. P. Brigstocke, of Ryde, Isle of Wight, has sent us the interesting snapshot reproduced above, showing a stag weighing 23 stones he recently took home in his car.

First of all the car, prior to being stored away, should receive a thorough cleaning. Usually the last runs have been over wet and muddy roads and the wheels and the underframe, as well as the body, are covered with mud. It is important that the body and other painted and varnished parts should be washed perfectly clean and well dried before being placed in winter quarters, as, if the mud is allowed to remain through the cold season, it cannot be removed without leaving permanent marks upon the varnished surfaces. The lamps should be thoroughly cleaned out; and it must not be forgotten, also, that acetylene generators contain water reservoirs, which should be completely emptied, otherwise they will be damaged in periods of frosty weather. Removable bright portions of the car, such as the lamps and horn, may be taken off and stored in the house, if desired, and cushions and mats may be accorded the same treatment. The bright exposed portions of the car which cannot readily be removed, such as the operating levers, may be given a light but complete coat of vaseline to protect them from corrosion. The same treatment should be applied to all working parts of the transmission, which should be thoroughly cleaned from all old

oil and the grit and dirt which it contains. Paraffin is best for this work, followed by a coating with the vaseline brush. Even those parts of the chassis which form the outside of the car and are painted to correspond with the body—frame members, springs, the bright parts of the radiator bonnet, and metal fittings on the dashboard, &c., will be none the worse for a coat of vaseline.

If the car is provided with a hood, it is essential that this should not be put away folded down, but it must be erected as for use and all struts and straps tightened to the full, otherwise creasing will take place, and if the hood is of leather, damage may be done by cracking at the folds.

As to the engine, the cylinder should be well washed out with paraffin. This treatment dissolves any oil which may be on the cylinder walls or piston, and which may cause them to stick, and it prevents the oxidation of the oil which may occur if it is allowed to remain. All the lubricators should be drained of any oil which they may contain, and should be thoroughly washed out with paraffin or stale petrol. Where sight feed lubricators are fitted, or other patterns which necessitate the using of lengths of copper pipe to convey the lubricant from its receptacle to the bearings, such pipes should be removed, and should have paraffin passed through them to sweep away any congealed oil. If this is attended to carefully and the pipes are reconnected, one will be satisfied that, when the time comes for the car to be again taken out, all that is necessary for the good working of the lubricating system is a fresh supply of oil.

The water should be drawn off from the entire engine cooling system, care being taken to see that this has been thoroughly done and that none remains anywhere in the pipes, connections, pump or radiator, or serious trouble may ensue in a frosty spell. In order to remove all possible danger from fire, the petrol tank and carburettor may as well be completely emptied. This will wash out most of the sediment which may have accumulated during the season's running, and leave the tank in good condition for next year's supply.

Where accumulator ignition is used the batteries should be disconnected and removed from the car, and great care must be taken to secure their proper preservation. They should be tested, and if found to be below the full voltage (4.4) they should be recharged. The acid should then be poured out from the cells, which should be washed out with clean rain water two or three times so as to remove all the acid, and they should be afterwards filled up with pure clean rain water to a point the height of a quarter of an inch above the top of the plates. The vent plug should then be replaced. While washing out the cells, the terminals also should be carefully washed to free them from all traces of acid; they should then be wiped dry, and given a coat of vaseline as a further protection against their corrosion.

Perhaps the most important subject of precaution, when putting away the machine for the winter, is that of the tyres. In order to relieve them of all strain during their period of inactivity, the machine should be raised clear of the floor a distance of two or three inches and supported on jacks or wooden trestles. The four points of support should be the axles, nearly under the springs, and the supports should not be so placed as to prevent the wheels or any other operating part of the car from being turned. If no suitable trestles are available, wooden blocking will suffice, provided it is secure, with no likelihood of toppling over in case the car is handled. When the vehicle is to remain out of use for several months many motorists deem it advisable to take the tyres off the wheels and keep them well wrapped up in a dry and dark place until they are again wanted.

When the above points have been attended to, a cover of holland or other suitable material should be thrown over the whole machine, after which one may feel that all reasonable care has been taken to ensure a minimum of deterioration.

OFFICIAL representatives of foreign countries not being subject to local law in Washington, the letter "D" is now being placed on cars belonging to members of the diplomatic services of foreign states in America.

GOSSIP FROM PARIS.

NEXT year's Grand Prix will almost certainly be contested on the Anjou circuit. The subscription, to which all the communes through which it passes have contributed, already amounts to over £4,000, and an additional sum of £200 to promote the race on that circuit has just been guaranteed by the authorities of the State and West of France Railways. The cost of the competition will be considerably increased in 1909, because the law of two years' military service, which has now come into full force, precludes the use of soldiers for the maintenance of public order at races, shows, &c. Consequently it will be necessary to employ and to pay other people to keep the public from invading the roads during the event. M. Dupeyrat, the Prefect of Maine et Loire, who was instructed by M. Clemenceau to notify that fact to the A.C.F., was, however, able at the same time to indicate the means to surmount the difficulty created by the absence of the troops. He stated he could promise to place the majority of the 600 road sweepers of his department at the disposal of the Sporting Committee of the A.C.F. for the maintenance of order during the races, as well as a considerable number of gendarmes. In addition to these, the men of the Fire Brigade might be utilised. The Anjou circuit has, however, at least one drawback, without counting its distance from Paris, and that is its shortness. It measures only 75 kilometres 322 metres. Will it be long enough for the increased number of racing cars which, owing to the diminution of the bore of the cylinders, will doubtlessly be entered for it? This year there were nearly fifty cars in the Grand Prix Race, and some people predict that in 1909 the number will be doubled. On the other hand, it would be scarcely prudent to start more than one car per kilometre, which would reduce the maximum number to 74 or 75 at most. Should it be ascertained that the entries are likely to greatly exceed that number, it is possible that manufacturers will only be permitted to enter two cars instead of three for the event, otherwise it might be requisite to have recourse to elimination races, which are not popular.

"We must look out for the Germans, they are ready," was the remark of a French motor-car builder, who was nevertheless delighted at the regulations just fixed for next year's Grand Prix. It is probable the Germans are nearer being ready than the French, and, at any rate, the reduction of the cylinder bore from 155 mm. to 130 mm. is at least a tacit admission on the part of the French that the Germans were in the right when they proposed 135 mm. bore for the last international competition. At next year's Congress the A.C.F. will perhaps have to come down to the English suggestion of 120 mm. bore. It is to be hoped they will, and even the 1909 Grand Prix regulations constitute a step towards a type of vehicle which might be put on sale. However, the length of the stroke being left to the choice of the constructors, the vast majority of the racing cars of next year will in all probability not be such as could be utilised for touring. Moreover, with the reduction of the minimum weight to 900 kilogrammes, the speed will be quite as high if not higher than that attained at Dieppe last July. Consequently, in spite of the reduced weight, the tyres will again play a very important part in the Grand Prix of 1909.

IF matters progress as they are doing at present, aviators will have no reason to complain. During the debate on the Budget the French Chamber will be asked to vote a large sum for the encouragement of aviation. The Aero Club of France has already created a Grand Prix of £4,000 to be competed for in 1909; the National Aviation League has received many thousands of pounds to be offered in prizes; £500 is to be given to the first man who crosses the Channel on an aeroplane; another £500 is promised for a flight over Paris; and £400 will be awarded to the aviator who may first leave the ground at Bagnères de Bigorre and fly to the summit of the Pic du Midi and return to Bagnères. These are only some of the newly-created prizes, to which many others will surely be added before long, to say nothing of the old prizes still remaining to be won, such as that for a flight from London to Manchester, the Michelin

prize for a flight from Paris to Clermont Ferrand, the £800 for the longest controlled flight before sunset on December 31st next, &c. Undoubtedly all these competitions, most of which are international, will stimulate aviators, and the progress in the conquest of the air has within the last twelve months been so prodigious that it would be rash to bet against the winning of any one of the prizes during 1909. It is only a question of motors. If one is found to be reliable, the person or persons possessing it will soon reap a rich harvest. And "it will," as a prominent aviator said to me the other day, "be astonishing if one or more of the numerous manufacturers now constructing light motors for aeroplanes does not succeed in turning out a really first-class article to which a man can trust his life."

THE banquet to be given by the French Aero Club at the French Automobile Club on the 5th prox. in honour of Wilbur Wright will be a grand manifestation. The gold medal of the Aero Club will be presented to the Brothers Wright, because, if Henry Farman first demonstrated publicly that man could fly, there is no longer any doubt that the American aviators flew in private a couple of more years before him, and because the performances of Wilbur Wright at the military camp of Auvours have given an extraordinary impetus to the science of aviation.



Col. Holden and Mr. Mervyn O'Gorman, two of the R.A.C. Delegates to the International Conference.
From a Caricature Sketch [in "L'Auto."]

The French have not bestowed their admiration grudgingly. They would, no doubt, have been yet better pleased if it had been a Frenchman who had made the marvellous flights, carrying passengers with him on his aeroplane, but they have recognised to the full the merits of the foreigner, who will certainly return to his native country with a better opinion of the French nation than he had when he landed in the Old World at the beginning of the summer.

MARNEY.

A CORRESPONDENT at Shanghai reports that at this important Chinese port the motor-car is steadily growing in favour, the number, which at present is about 150, being constantly added to. Owing, however, to the narrowness of the roads and the congested state of the traffic, there have been, and still continue to be, numerous collisions, some of which have been attended with fatal results. Most of the chauffeurs are Chinese, and as a rule are very careful, but if they see anything coming anywhere near them they lose their heads. The tram drivers are all Chinese, and they handle the cars very well on a clear road, but as soon as the traffic becomes congested they become nervous.

CONTINENTAL NOTES.

British Motorists in France.

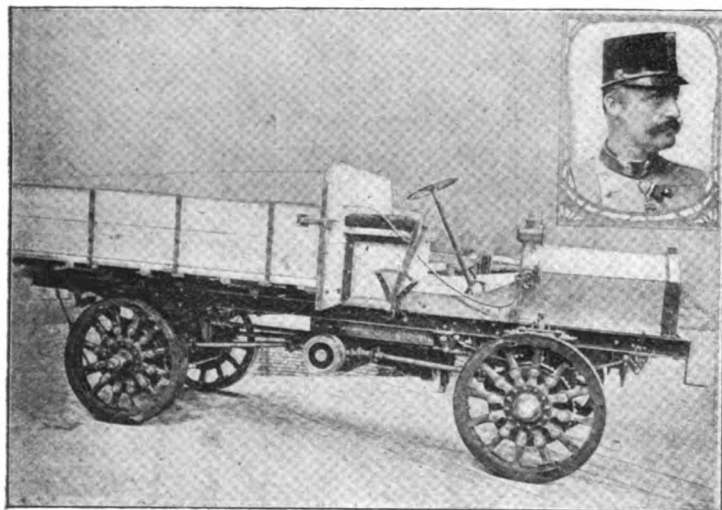
Recent British visitors to France with their cars include Mr. and Mrs. John Scott (60-h.p. Napier); Mr. and Mrs. W. R. Emmott, London (40-h.p. Siddeley); Mr. Stephens, London (24-h.p. De Dion); and Mr. F. Henniker and Mr. Scully, Birmingham (50-h.p. Charron).

Motorists Forbidden to Splash.

The Mayor of St. Germain, near Paris, has issued a regulation forbidding motorists to travel so fast on muddy days as to splash passers by, and has warned them that gendarmes will be appointed to see that the order is obeyed.

A Novel Garage Fitting.

A somewhat novel fitting has lately been installed in the garage at the rear of the Club-house of the A.C.F. in Paris. In getting their cars ready for work, many chauffeurs give their engines a trial run, generally with an excess of lubricating oil, with the result that heavy clouds of smoke are given off. It was to get rid of this, and to render the atmosphere of the garage much clearer than it usually was, that M. Max Richard, a member of the A.C.F. Technical Committee, devised a combined electric motor and fan. To the suction side of the latter is



The 40-h.p. Military Motor Lorry designed by the Archduke Leopold Salvator of Austria.
(Allgemeine Automobil Zeitung.)

attached a flexible pipe which can be slipped over the outlet nozzles of engine silencers, so that any smoke passing from the latter is drawn away and discharged into a chimney which passes up to the top of the building.

New Motoring Regulations in Denmark.

A new automobile law recently came into force in Denmark. The principal provisions are in regard to (a) the prohibition to drive by night, except along roads entirely illuminated, from half-an-hour before sunset until half-an-hour after sunrise, from August 15th to May 1st, inclusive; (b) the speed limit, which is fixed for Copenhagen and suburbs, the commercial towns and through thickly populated country towns at a maximum of two Danish miles (about fifteen kilometres), and for other places at four Danish miles an hour; and (c) the special application of the law to foreigners with no fixed residence in Denmark. It is enacted that a Bill to revise this law, which is very unpopular with Danish motorists, shall be introduced into the Rigsdag before the end of 1909.

Belgian Motor-car Imports and Exports.

Returns just issued show that the value of the foreign motor-cars and parts imported into Belgium during the nine months ending with September last amounted to only £116,816,

as compared with £135,744 in the corresponding period of last year. On the other hand, there has been an increase in the exports of Belgian motor-cars and parts—from £341,476 in the first nine months of 1907 to £379,100 in the similar period of the current year.

Aeronautical News.

At Toury, near Janville, on the 20th inst., M. Bleriot made a successful flight on his aeroplane, covering seven kilometres in 6 min. 40 sec. at a height of between 12 and 20 metres. On the following day he met with an accident, which, but for his great presence of mind, would have cost him his life. He had requested the committee of the Aero Club to attend, as he intended to endeavour to win the prize offered by the Aero Club for the greatest height reached by an aeroplane. The apparatus rose immediately from its start to a height of sixty feet, but had not flown more than 500 yards when the motor stopped and the machine became stationary and then fell rapidly; the tail hit the earth first and was smashed, but M. Bleriot was fortunately uninjured. —Wilbur Wright performed four flights in his aeroplane on Saturday last, the first alone, being of 3 min. 20 sec. duration; the second with Signor Pirelli, of Milan, as a passenger, lasting 4 min. 3 sec.; the third with Major Petithomme, of the Ministry of Marine, 7 min.; and the fourth with Baron von Lanken-Wakenitz, the German Chargé d'Affaires, 3 min. —In Germany the dirigible airship Parseval ascended on Thursday last week, for the first time since the accident in September. Carrying five persons the balloon, despite the strong wind, manœuvred over West Berlin, and returned within an hour to its landing place. The vessel was out again on the 23rd inst., when, for some reason not fully explained, it descended to earth more rapidly than was intended, and became entangled in a tree, several rents being torn in the balloon before it could be emptied. On the same day the reconstructed airship Zeppelin No. I. made a triumphant first flight, manœuvring for three hours with the greatest success. Prince Henry of Prussia experienced his first aerial voyage on Tuesday, when he had a successful trip, lasting about six hours, on the Zeppelin airship. A number of other passengers were carried.

Miscellaneous Items.

The Automobile Club of Norway has been admitted to the circle of federated national automobile clubs. —A service of electrical motor-cabs is being introduced in the town of Bremen, Germany. —M. Fallieres, the President, has promised to open the Paris Salon on the 28th prox. —The Royal Automobile Club of Barcelona proposes to hold an exhibition of motor-cars in that Spanish town in March next. —The date of the next year's Prince Henry of Prussia touring car competition has been fixed for June 10th to 18th. —According to a recent return, there are now 1,542 motor-cars in use in Wurtemberg, as against 1,014 at this time last year. —An automobile club has just been formed at Lerida, Spain.

A PRACTICAL step towards the adoption of motor vehicles has at last been taken by the Australian Postal Authorities, two Albion motor vans having recently been ordered from the Kellow Motor Company, of Melbourne, for the purpose of clearing suburban letter-boxes and assisting in the general work of the department.

A STATEMENT has appeared in "Le Journal des Tarifs et Traités de Commerce" to the effect that motor-omnibuses holding thirty to forty persons would be very useful for travellers in Algeria. Some of the markets, for instance, are over thirty miles apart. The roads are generally good, and vehicles capable of attaining speeds of from ten to twelve miles an hour would be suitable.

WHAT may safely be claimed to be the largest procession of motor-cars that has so far been organised was recently held in Chicago on the occasion of the Deep Waterways Convention. One of the features of the meetings, which were attended by 5,000 delegates, was a trip on motor-cars lent for the occasion by motorists in Chicago. It is stated that no fewer than 1,000 vehicles took part in the procession, which was close upon six miles long.

THE "G.L." CARBURETTOR.

THERE is probably no adjunct of a petrol engine which has received so much attention during the past few years as the carburettor. Among those who have devoted long and careful attention to the subject of carburation are Messrs. Gillett and Lehman, of Carburation Ltd., Byron House, Fleet Street, London, E.C., who first introduced what they termed a controller and petrol economiser, and later a complete carburettor. A brief illustrated notice of the latter, as exhibited at the Cordingley Show at the Agricultural Hall, Islington, in March last, has already been given in the *M.C.J.* Since that time, however, some detail improvements, tending towards greater efficiency, have been introduced, and, as fuller particulars are now available, the following description of the latest device may be of interest.

The object of the designers has been to produce a carburettor which shall automatically furnish a mixture of the requisite quality or richness at all speeds of the engine, without the use of extra air valves and their concomitant spring and other devices. Speaking generally, the carburettor may be said to be of the constant-level float-feed type, but throughout the construction and arrangement is on unusual lines. Referring to the accompanying illustrations, Fig. 1 depicts the general appearance of the carburettor, Fig. 2 gives a section of the apparatus, while Figs. 3 and 4, for which we are indebted to the "Commercial Motor," show respectively a view of the interior of the carburettor and the combined snail throttle, choke tube and mixing chamber. Dealing first with the constructional features of the carburettor, attention may be drawn to the novel form of the float D (Fig. 2), which reminds one of a diabolo spool; it is built up of two cones screwed together, the top portion, which has all its sides enclosed, being the float proper, the bottom part, of funnel shape, that is having its wide end open, serving to operate the balanced levers that actuate the needle valve C. It is claimed that the design of the float is such as to render it susceptible to the slightest variation in the level of the petrol, while its screw-threaded

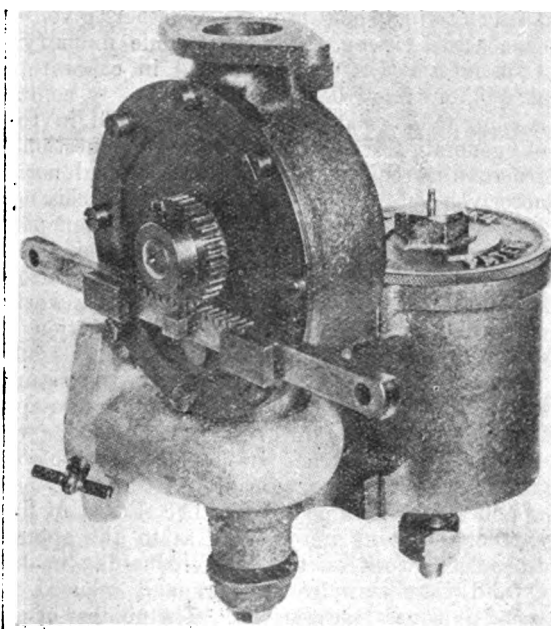


Fig. 1.—General View of "G.L." Carburettor.

connection with the lower part enables the level of the spirit in the float chamber A to be adjusted to correspond to any desired point in the spraying jet. The float chamber itself is of a large capacity, so that, if an unusually steep hill is met with, sufficient petrol is present in the carburettor to keep the engine going even if the gravity or pressure feed be insufficient to maintain the supply of liquid fuel, owing to the

acute angle of the gradient up which the car is being driven. The cover of the float chamber is readily removable, it being screw threaded into position in place of being held by the usual screws. A point which will be greatly appreciated is the facility with which the jet K (Fig. 2) can be removed from the carburettor. As will be seen, it has an enlarged base, the outer surface of which fits close up against a ground-in seating, where

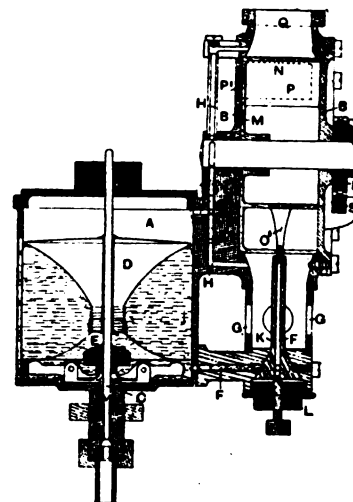


Fig. 2.—Section of "G.L." Carburettor.

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|------------------------------------|---|
| A.—Float Chamber with Screwed Lid. | L.—Fastening for Jet. |
| B.—Throttle Casing. | M.—Throttle Disc. |
| C.—Needle Valve. | N.—Snail-shaped Throttle. |
| D.—Adjustable Conical Float. | O.—Air Slot in Throttle Wall. |
| E.—Spun Foot to Float. | P and P'.—Ports for admitting fresh air only. |
| F.—Petrol Feed Tubes. | Q.—Outlet to Engine. |
| G.—Air Inlet. | K.S.—Rack and Pinion for actuating Throttle. |
| H.—Balance Tubes of Controller. | |
| K.—Ground-in Jet. | |

it is held by a screw nut and centring screw. Thus, should the jet ever become blocked by any dirt which has managed to pass the filter, it is an exceedingly simple matter to remove and clear it. A groove is formed round the centre of the jet base, in which holes are provided to allow the spirit to flow to the centre of the jet. The only air inlet to the carburettor is that which passes in by the pipe which entirely surrounds the stem of the jet.

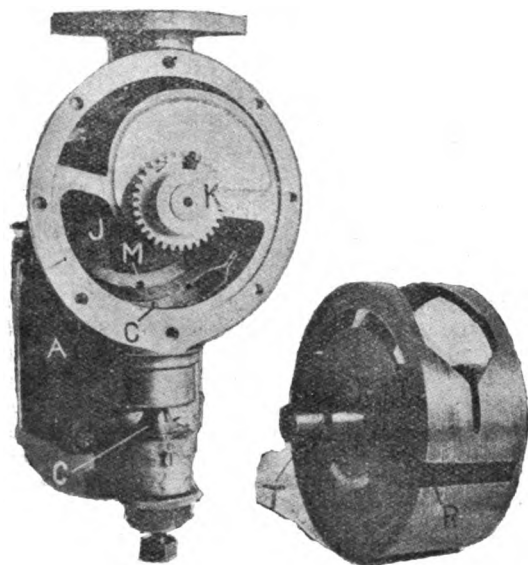
Another important feature of the device is what is known as the pressure controller and petrol economiser; this was one of Messrs. Gillett and Lehman's first introductions, and is incorporated in the new carburettor, the object of the arrangement being the regulation of the flow of spirit, as well as of the flow of air past the jet, by the degree of vacuum which is caused by the suction of the engine. It will be seen from Fig. 2 that a connection is made between the admission pipe above the throttle, on the one hand, and on the other with the top of the float chamber and the jet chamber by a small pipe H. In Fig. 1 the outlet of the latter in the jet chamber is shown as being just below the top of the jet, but in the new models it is, as seen in Fig. 3, just above it, being practically always kept open by means of a slot formed in the rear wall of the snail throttle. The pressures on either side of the throttle are, of course, fluctuating with every movement of the latter, but by the aid of the controller a mean between the two points is established, so enabling the pressure of air in the float chamber to automatically change in such a way that the flow of the petrol through the jet is varied in proportion to the degree of throttle opening and the speed of and load on the engine.

Without a series of drawings it is very difficult to clearly illustrate the construction of the combination throttle, choke tube, and mixing chamber. Some idea of its shape will be gathered from Figs. 3 and 4, which show it in position on the left, and detached at the right. The lower edge of the chamber J, into which the top of the jet projects, is provided with a long slot of approximately V shape, which forms the choke tube, a narrower portion of the slot being brought around the jet as the

B

throttle, formed by the tapering space at the top, is closed. The supply of air is thus diminished as the throttle is shut, the richness of the mixture being consequently increased. A further point about the carburettor is the means provided of entirely closing the throttle and introducing fresh air into the cylinders when running down hill, so scavenging the same and also enabling the engine to be used to some extent as a brake. The snail throttle is provided at R (Fig. 4) with a slot which does not extend right across. In the wall of the throttle chamber a V slot is also formed, this being entirely closed while the throttle is the least open. When, however, the throttle is fully closed a slight movement of the lever brings the two slots into line with each other and also in communication with the admission pipe, so that the engine can only draw in pure air. In this way the motor is kept in a cool condition and waste of petrol is prevented.

A simple yet effective method of operating the throttle is adopted. As will be seen from Fig. 2, the spindle on which it is mounted has fixed on it, outside of the body of the carburettor, a pinion R, operated by a steel rack S, the latter being connected with the usual throttle lever on the steering column. The necessary richness for starting is attained in a simple manner, the air slot in the snail throttle being constructed in such a form that, at one point of movement of the lever, the throttle proper be-



Figs. 3 and 4.—Details of "G.L." Carburettor.

comes wide open, and at the same time the air opening is almost entirely closed. Turning the starting handle under this condition induces a good flow of petrol from the jet, accompanied by very little air, which both occur at the same time, so that the engine has no chance of refusing to start. Having placed the throttle lever at starting point, the handle is turned once or twice, and, where fitted with magneto ignition, the engine starts immediately, or, in the case of a car using coil and accumulators, the motor starts on the switch. The vaporisation of the fuel is accomplished perfectly; instead of attempting to spray the petrol as usual, a flat, curved surface is presented to the jet, the distance becoming greater or less in accordance with the throttle-opening. On reaching this surface the petrol spreads out into a thin film, which is swept upwards towards the engine by the incoming air, the latter, owing to the tapering form of the air passage, increasing in velocity as maximum point of throttling is reached. In driving, the air-admittance port opens and closes in fixed proportion to the degree of throttle-opening, the relation between the air inlet and the gas outlet being such that correct mixture is obtained even at extremely low speeds, while, with the throttle remaining in the same position, the tendency to take more petrol as the speed of the engine picks up is counteracted by the controller already referred to.

In company with the inventors we recently went for a short trial run on a 12-14-h.p. Argyll car fitted with one of the new

carburettors, when its ready responsiveness to sudden changes of throttle opening, engine load, and road gradient were fully demonstrated. Making for the somewhat hilly district of Hampstead, the capacity of the device in furnishing a properly proportioned mixture at low as well as high engine speeds was clearly shown in the way the car could be slowed down in traffic on a hill and the speed picked up again as the throttle was opened, and furthermore its ability to hold the top gear, it doing this, without any slipping of the clutch, until the travelling speed had fallen to such an extent that in many cars the time for a drop to a lower gear would have been indicated by a "knocking" engine. One of the most convincing proofs of the instantaneous action of the controller in regulating the flow of spirit through the jet, and so varying the quality of the mixture, was seen in the way a practically uniform speed of the engine was maintained whether running light or under load. In most cars, when the clutch is disengaged the motor will commence to "race," unless the throttle is quickly closed; in the case of the Argyll fitted with the "G.L." carburettor no such tendency was observable; when the load was taken off the engine by depressing the clutch pedal, but without touching the throttle or ignition levers, only the slightest perceptible increase in engine speed was noticeable, while conversely, when the clutch was let in, even on a gradient, no pulling up of the motor could be felt. As for the advantages of the carburettor in the way of economy in fuel consumption we were not able to check this ourselves, but we are informed that the car on which we rode, and which is about two years old, can do from twenty-five to twenty-eight miles to the gallon, while in the case of a 16-20-h.p. vehicle of another make the consumption has been improved from fifteen to twenty-six miles to the gallon.

THE CENSUS OF PRODUCTION.

IN connection with the Census of Production which is being taken by the Board of Trade under an Act of Parliament passed two years ago, information is now being obtained from firms in connection with the motor and allied industries which will, when brought together, give us some idea as to the actual extent of the automobile industry in this country. The information to be obtained in connection with this Census will, of course, be regarded as strictly confidential, and care is being taken that it shall only be used in the compilation of general statistical results. The questions upon which information is required are the number and net selling value of motor vehicles, motor chassis and motor-cycles. Lamps for motor-cars are in a separate category to "other parts and accessories," the net selling value of which is required. A column is also set out for the value of repair work done, and also of the construction and repair work executed by the firm's workpeople on its own buildings and machinery. Information is also required with regard to the aggregate cost of materials purchased and the stores used in the year for which the returns are required. Under this heading materials will include components, parts and accessories, worked up or used in producing the output, fuel, gas and electric current purchased, oil, waste and other stores, all tools replacing these worn out in the year, materials for packing and non-returnable cases. The Board of Trade is also desirous of obtaining information as to the approximate number of people at work on the last Wednesday in January, April, July and October, wages earners and salaried persons being regarded in separate categories. The number of calendar days on which the establishment was open for production is also required, and questions are set forth with a view of obtaining the record of the engine equipment of motor works so far as the capacity of engines and the amount of electricity used is concerned. The way in which Mr. A. Wilson Fox, who is Comptroller-General of the Census of Production, has dealt with the motor trade should do much to favourably impress its members with the advisability of giving all information that is available, so that we may ultimately have a complete view of the actual industry. The particulars with regard to motor-car bodies, &c., will be included in the carriage, cart and wagon building trades Census.

AN AMERICAN MOTORIST IN ENGLAND.

DURING the past summer more American motorists have been met with in English hotels than ever before, and the facilities now provided for shipping cars from the United States to Continental and British ports, where they can be readily obtained for road service, has done much to popularise motor travelling among Americans abroad.

Now that the season is nearly over the views of some of those who have "done Europe" are being communicated to the Press, and among the most interesting reminiscences which have come to our notice are those of Dr. A. H. Heaton, who, leaving New York early in the summer, made a 7,000 mile tour through Europe. He commenced from Paris, where the examination for a motor driver naturally interested him, and the doctor was much struck, on coming to London, to find the ease with which the licence to drive in Great Britain could be obtained. Speaking generally, he, in common with other Americans who have motored here, was gratified with the progress of the motor movement, as well as with the novelty of such a means of taking a holiday.

We have before us the record* of a journey through some picturesque parts of southern England, with historical and literary observations by the way. This is published by Messrs. G. P. Putnam's Sons, the author being Mr. John M. Dillon, who has previously been associated in the literary world with such dry-as-dust compilations as "Marshall's Constitutional Decisions." Dropping legal phraseology and subsiding into the chatty form which one would expect when writing to a friend, Mr. Dillon has made a book of 300 pages which will be read with interest on this side of the Atlantic and with profit on the other. Regarded generally, Mr. Dillon and the party with him, who travelled in an American car brought from New York and also a Daimler hired in London, were favourably impressed with the British hotel hospitality. One or two contrary instances are frankly and fearlessly given by the author; as, for instance, in the account of one "attractive" hostelry in the Midlands:—

It stands in ample and well-kept grounds, and everything is clean, neat and prosperous. The beds are good, the linen soft and fine, the attendance perfect, there is only one trouble, they do not give their guests any food. The buxom landlady can certainly make an infinitesimal quantity of food good further than any living person. My roast beef was impossible. It was like trying to eat one of the motor tyres.

But, apart from all this, Mr. Dillon discovered many good hotels, notably the Randolph at Oxford and the Empire at Bath. The result of these several weeks' touring in this country has led him to give the following practical advice to those of his countrymen who are fortunate enough to have similar opportunities for motor holidays in this country:—

Having decided upon the hotel, it is without doubt advisable to telegraph in advance for rooms, and if the weather is at all chilly or damp it is well to ask that they be warmed. Sometimes you may get a room fairly comfortable if means exist for heating them. The heating apparatus in the ordinary English inn or hotel is usually a thing to laugh at if you are not too cold and too out of humour.

The way of the travellers was from London to Hampton Court and along the Thames side from Maidenhead to Henley, thence to Reading and Oxford, where a practical member of the party, having counted up the mishaps and the repairs which had been necessary owing to a couple of breakdowns, totted up the expense as the party was on the train for Oxford, leaving the vehicles in the hands of the repairer. He found "how economical one can travel by motor and find that, including repairs, transportation, chauffeur's salary, &c., you have been motoring at a cost of 14 dols. per mile." "I retorted that we were on the train then and had given up motoring temporarily, consequently we were saving money every minute, therefore everyone ought to be happier than his appearance indicated." It was not the English car that caused the trouble. At Oxford the party seemed to have dipped into the archives of every college, the result being that

about 100 pages of the volume are concerned with doings in the ancient university city.

Blenheim was included in the journey, but "on arriving there we found that motor-cars were not admitted in the estate, as the Duke disliked the odour." From thence the route taken was to Bath, and in that delightful district an opportunity was found for reflections upon the difference between the English and American scenery. In this chapter literary references scintillate like stars in a clear sky and afford a good example of the author's characteristic style, for we have mention of Scott's Kenilworth, the description of the district given in Tom Brown's Schooldays, a quotation from Russell Lowell, a criticism of Reynolds' pictures, reminiscences of Beau Nash, tales from Goldsmith's entertaining stories of the literary men of the period, eulogies of Bath by Carlisle, Macaulay, and Walter Savage Landor, to say nothing of the incident of Fanny Burney and Mrs. Thrale taking lodgings in the town. Not many men manage to revive such memories of the past as did Mr. Dillon in the course of a modern holiday. His views of English landscape are interesting, revealing a close observation and keen insight into the differences existing between this country and his own.

The hills seldom rise above ten or twelve hundred feet, and will hardly average a half of that, but they are adorned in their own manner both by nature and man. The little villages are clustered in the combs or on the summits of these hills or again on their sides, the little church with its spire lifted above the surrounding trees and the cottages are nestled about it. Topographically America far exceeds England. Nature with us is in a more sublime mood, but let us confess cheerfully that as regards the ornamentation of the landscape America suffers greatly by comparison. The farms, villages, and roads are component parts of the whole, and lend beauty and pleasing effects to the general landscape. With the exception of purely manufacturing towns one seldom, if ever, sees a collection of buildings, whether large or small, which does not by the charm of its setting enhance the view and add a new interest and a pleasing variety to the scene, and again let us gracefully admit inferiority in the matter of picturesque farms and farm buildings.

Away to the West went the party, and were puzzled by the Somerset dialect, the untruthful ladies of Taunton and the giving out of petrol at Crowcombe. Fortunately, however, they managed to borrow some from a passing car, thanks to the motor freemasonry which, although not so common as was the case in the early years of motoring, has not yet entirely gone out of fashion among those who travel on the road. Continuing the trip to Lynton and Lynmouth, they were persuaded from attempting the Porlock Hill by motor, owing to the terrible accounts given of previous motorists who had thus ventured by the landlord of their hotel. The return was through Winchester and then via Brighton to London, the stay at the seaside giving opportunity for many quaint reflections on the ways of holiday-makers as well as the confession that the English roads are perfection. This probably was due to the author's knowledge of the main thoroughfares of the United States, compared to which doubtless our English highways must appear excellent indeed. In an interesting addendum Mr. Dillon gives some practical suggestions to those who travel by car, and urges the motorist on a long tour to provide himself with the following articles and parts:—Some extra sparking-plugs, an extra pair of driving chains and a few extra links, two extra exhaust valves, two extra exhaust springs, two extra inlet valves, two extra inlet springs, non-skid gaiters for the rear wheels, one extra fan belt, four extra pump blades, one extra tyre pump, an assortment of bolts and nuts, a tyre repair kit, a tube of powdered fire extinguisher, a voltmeter, a short piece of small but tough rope, a number of inner tubes and a Stepney spare wheel.

"Motor Days" have certainly provided us with some interesting reading, and those who have spent the summer in travelling their native land will be glad to turn to Mr. Dillon's entertaining volume and tell their journey o'er again during the winter evenings that are coming upon us. The illustrations comprise some excellent pencil drawings by the author, together with several photographs which are more or less familiar to English readers, but which will be quite new to those Americans to whom Messrs. G. P. Putnam's Sons have issued the book simultaneously with ourselves.

* "Motor Days in England." By John M. Dillon. London and New York: G. P. Putnam's Sons.

MALVERN AND MOTORS.

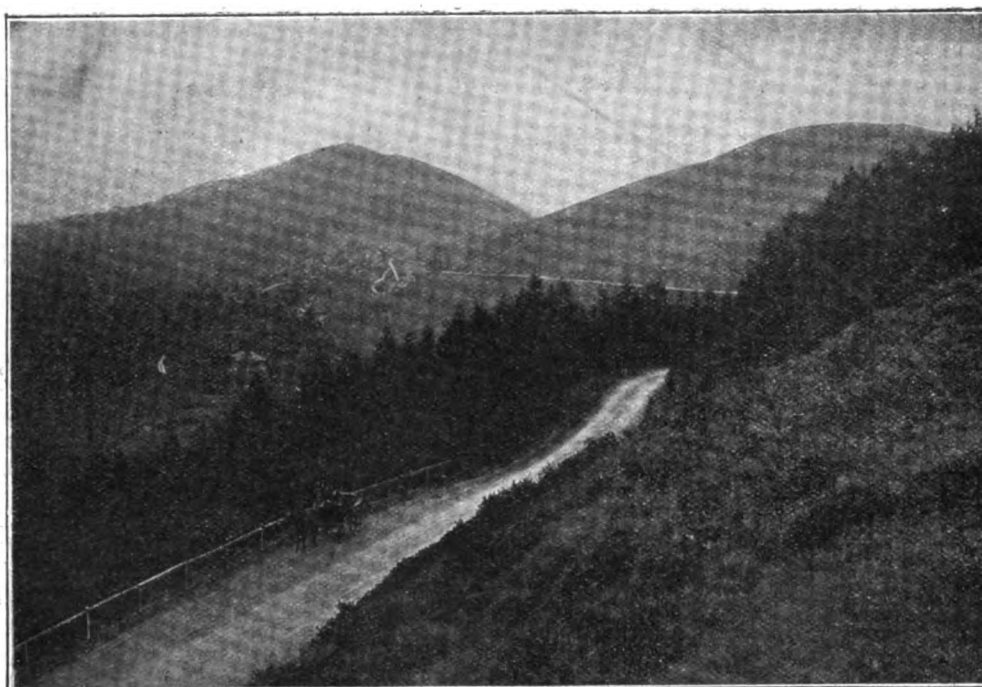
"MALVERN" is something more than a town of pleasant aspect and notable healthiness. It comprises the eastern slopes of a fine series of hills for a distance of nearly six miles, with the exception of West Malvern, which lies on the western side. The other places are Great Malvern, Malvern Link, Malvern Wells, North Malvern and Little Malvern—all linked in one authority which delights in describing the district as Malvern. To visitors Malvern, to quote the late Sir Henry Campbell-Bannerman, "recommends itself with its free air and lovely country," as well as the variety which the range of hills give to the landscape. Fortunately the roads of the district are good and lead to some very charming towns, for many excursions by car may be conveniently made to the following places—to name some that occur as the memory of a holiday in the region—Worcester, Bromyard, Abergavenny, Bridgnorth, Cheltenham, Droitwich, Chepstow, Church Stretton, Deerhurst Priory, Evesham, Cirencester, Forest of Dean, Kenilworth Castle, Goodrich Castle, Gloucester, Hereford, Hay, Ledbury, Ross, Leominster,

SOME USEFUL NOTES.

WHEN leaving the car at night, or for any length of time, make it a practice to shut off the petrol supply. If this is not done, and if there is a leak, or a flooded carburettor, a fire may be caused by someone carelessly tossing a burning match under the car.

THE proper unguent for the cupped leather washer of the piston of a tyre pump is vaseline. Oil is too thin and it tends to work into the rubber hose, and even into the tyre itself if too much is used. Vaseline, on the other hand, clings to the leather and lasts a considerable time.

THE universal joints of cardan shafts do not, in many cases, receive the amount of attention due to them at the hands of those responsible for the running of the car. The joints get a far greater amount of work to do than they are generally credited with, and, owing to their generally inaccessible position, they receive but little attention. The chief point is to keep the



The Jubilee Drive at Malvern.

Warwick, Ludlow, Monmouth, Pershore, Leamington, Raglan Castle, Stratford-on-Avon, Tewkesbury, and Tintern Abbey.

There has lately been some amusement in the place, owing to the suggestion introduced to the Town Council by the local energetic Improvement Association. It was suggested that the main roads in the district should be indicated by pieces of coloured glass, of various shapes, affixed to the street lamps, and that notice-boards should be erected at the approaches to the town and in the centre of Malvern, explaining these signs. Despite the support of the Gas Company the proposal was laughed out of the Council Chamber, one speaker declaring the suggested indicators would be an absolute puzzle to motorists. The town would be illuminated like a Chinese tea-garden with these pieces of blue, red, green, and yellow glass. Motorists would be obliged to descend from their cars to read the explanation of these mystic lights which it was proposed to print on notice-boards. The scheme has been rejected.

Apart from the pleasures of the visiting motorist, the visitor to Malvern is catered for by the Portland Motor Garage, which not only organises daily motor trips but also possesses a riding school—a combination that indicates the enterprise associated with this lovely district of our country.

joints well lubricated and free from grit and dirt, which is so disastrous to their long life and sweet working. If not already so provided, a simple way of accomplishing both objects is to encase the joints in a flexible covering filled with grease.

MESSRS. GROUVELLE AND ARQUEMBOURG, the well-known makers of ribbed-tube radiators, report that in reality it is very rare that any incrustation forms in the pipes of radiators, as incrustation only takes place when the water is at boiling point, which ought not to take place in a radiator. When it does, it is an indication that the apparatus is not large enough. The same remark does not, however, apply to the water jackets of the motor, where the water often reaches a very high temperature. In cases where incrustation does happen to form in radiators, a small quantity of hydrochloric acid should be added to the water, and this caused to circulate for a time, making sure afterwards to thoroughly remove all traces of the acidulated water. Messrs. Grouvelle and Arquembourg point out that while incrustations are rare, deposits are frequently formed on the internal walls of the pipes, due to impurities in the water. These can, however, be removed by sudden injections of water by means of a pump.

THE SOCIAL WHIRL.

THE King motored from London to Newmarket early on Tuesday, being received on arrival by the stewards of the Jockey Club. There are several house parties in the district, among the motorists at Newmarket being Lord Wolverton, Lord Howard de Walden, Sir Ernest Cassel, Mr. Leopold de Rothschild, and Mr. Arthur Sassoon. The Earl of Ellesmere is, as usual, at Stetchworth Park. On Tuesday he motored over to the course in time for the first race.

LAST week-end Prince Arthur of Connaught and Mr. A. J. Balfour visited West Dean Park, where the King was staying, motoring to and from Chichester.

THE Duke of Northumberland's remarkable tirade against motorists and their cars at the London Guildhall on Tuesday was received with cheers by an audience obviously partisan. Lord Willoughby de Broke and Lord Waldegrave were on the platform, and I noticed four M.P.'s present—Messrs. Harold Cox, who had been called "the champion of all lost causes" in the House of Commons on the previous evening, Arnold Herbert, F. Mac-karness, and the persistent Cathcart Wason.

LORD AND LADY GUTHRIE recently entertained the nurses of the Edinburgh Hospital at Swanston Cottage—five miles from the city. This delightful house was once the summer home of R. L. Stevenson, from 1867 to 1880, and the nurses, conveyed in thirteen motor-cars without a suspicion of a superstitious feeling, were delighted at the opportunity of seeing such a literary Mecca, as well as of meeting Lord and Lady Guthrie.

MANY novelists are motorists. Mr. Rudyard Kipling was one of the early drivers, and as long ago as 1901 I met him on a car travelling from his residence at Rottingdean to Brighton. Sir A. Conan Doyle and Mr. Max Pemberton, too, can deal with motoring matters as interestingly as they can produce fiction, and Mr. and Mrs. C. N. Williamson are, of course, equally at home on the car as in the library. It is not so generally known, however, that Mr. Robert Hichens, the author of the "Garden of Allah" and other delightful works, who has been staying in a Kentish village lately, is also a motorist. He lives in a charming place in Worcestershire, and has driven all over the country without coming into conflict with the police. He employs a chauffeur who is a Sicilian and a very careful driver.

IN further illustration of the money-distributing powers of the motor-car I would refer to the nine motorists who were fined an aggregate of £38 and costs at Dumbarton on Monday. One was the Earl of Shrewsbury; others came from West Hartlepool, Pollokshields, Stirling and Helensburgh, and the other four from London.

CAPTAIN QUINTIN DICK, who has been touring in Scotland recently in a car from the Shrewsbury Motor Garage, has been elected a member of the Royal Automobile Club. Captain Dick was for some time tenant of Walcot, the beautiful Shropshire seat of the Earl of Powis.

THE Duke of Grafton has within the last few days been practically all over the country. He went close to Hereford, and never saw anything so perfect as the notices and warnings and the directions of roads as in Gloucestershire, Warwickshire, and Worcestershire. Hence he has come to the conclusion it is a disgrace to Northampton that things are so bad in this respect. There are no notices at all to catch anyone's eye in that county, except what his Grace describes as a little sort of triangle in a dark spot no one can see.

LORD ALVERSTONE, the Lord Chief Justice, is a good sportsman as well as a sound lawyer. Motoring can be added to his accomplishments, and his lordship follows technical controversies with the zest with which he pursues the records of sport. That was evident in a case heard in the King's Bench Court the other day.

LOLLIUS.

HERE AND THERE.

MESSRS. FRISWELL, LTD., inform us that they have supplied a Standard six-cylinder limousine to La Milo.

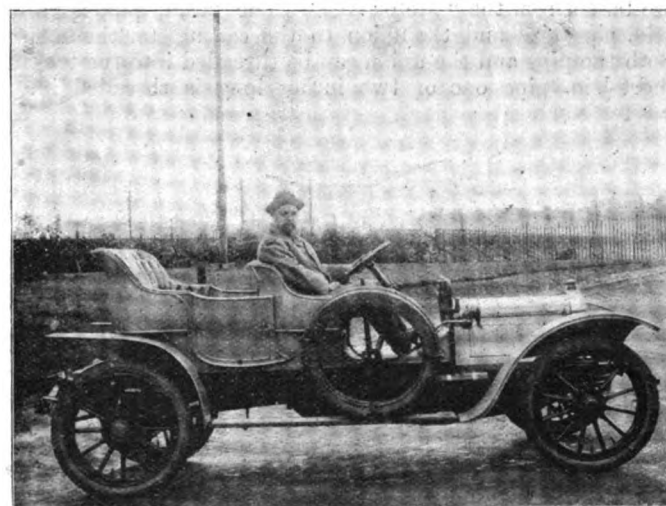
MESSRS. HANS RENOLD, LTD., secured a gold medal for their exhibit in the machinery section of the Franco-British Exhibition.

A COPY of a new monthly publication, "The Australian Motorist," claimed to be the first motor paper in the Colonies, has just reached us.

THE fiat has gone forth that racing cars are not to be exhibited at Olympia, in accordance, it is generally conceded, with a suggestion emanating from the region of Piccadilly.

THE magistrates of the Brentwood Petty Sessions have addressed a long letter to the Chief Constable of Essex with regard to prosecutions for speedy driving by motorists in that county.

THE 1,000 miles trial of the 25-h.p. "Valveless" car entered by Messrs. "Valveless," Limited, was completed on Saturday; the Technical Committee met on Monday, and the certificate was passed. Messrs. "Valveless," Limited, have applied for another trial of 1,000 miles. This will commence on Monday next.



Mr. T. H. Woollen, the late General Manager of Messrs. Clement-Talbot, Ltd., at the wheel of his 15-h.p. Talbot.

This car, the engine of which comprises four cylinders 90 mm. by 117 mm. stroke, has a unique record, for it has taken part in five competitions during the season just ended, and has obtained the highest award on each occasion. Altogether nine prizes have been won by Mr. Woollen on this car, comprising five handsome silver cups and four gold medals.

ANSWERING Mr. A. B. Markham, M.P., in the House of Commons the other day, Mr. John Burns said that if it were true that the regulations with regard to motor traffic were habitually broken in every street in London—as alleged by his questioner—the responsibility rested with the L.C.C., which would be doing its duty by making representations on the matter.

A COPY of the "Dictionary Autotechnic," compiled in four languages by Herr R. Schmidt, and which forms Vol. 23 of Kuster's Autotechnical Library, has reached us. The work is published by Messrs. Richard Carl Schmidt and Company, of Berlin, and Mr. David Nutt, London, and is intended for the use of British touring motorists, the English words being given in alphabetical order and the corresponding word or phrase in German, French or Italian in parallel columns. While the author has undoubtedly been at great pains to make his compilation complete, we fear that the book will need considerable revision ere it can be thoroughly recommended, for in the few pages we have glanced at we have found several errors which, though small in themselves, detract from the value of the dictionary. Thus we find "adjusting devise," "anti-freezing solution," "ash word." Some of the technical phrases, too, are not quite clear to us. For example, we are puzzled as to the meaning of "air lever throttle" and "petrol spring," to mention only two examples.

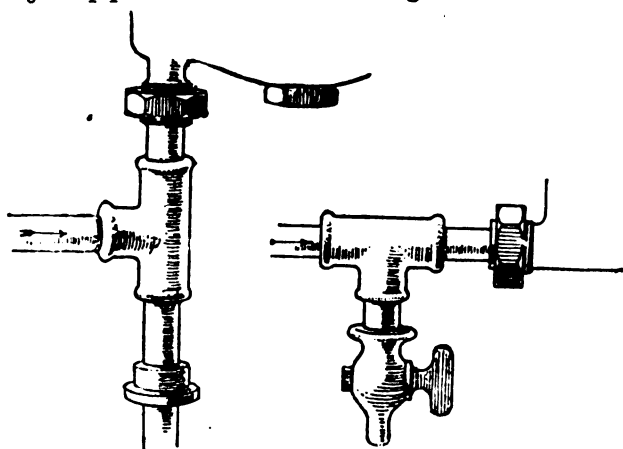
MR. JACOB HUTCHINSON, of Cleator Moor, has bought a Halley motor-van for the purpose of conveying mails between Cleator Moor and Sellafield, a distance of twelve miles.

RECENT purchasers of Daimler cars include Sir Charles Metcalf, Bart., the Hon. Keith Turnour-Featherstonehaugh, the Marchioness of Donegal, and the Governor-General of Costa Rica de la Guardia.

THE British Motobloc Syndicate, Ltd., have now on view at their depot at 85, Shaftesbury Avenue, W.C., the first of the new 9-h.p. single-cylinder Motobloc cars reference to which was made in our last issue. The vehicle is of the live axle type, has three forward speeds, and throughout is on up-to-date lines.

FACED with the problem of taking the whole of the members of the City Council of Lincoln, with the officials, to Elkesley, near Retford, for the purpose of the ceremony of the turning of the first sod for the new water scheme, the engineer arranged a fleet of sixteen cars, and on Saturday the large party were taken to Elkesley, then through the beautiful Dukeries estates to Ollerton for the official lunch, and back to Lincoln, nearly sixty miles, and without a single hitch to any car.

AN effective and very simple device for separating solid particles and water from petrol as it enters the carburettor is the tee connection shown in the accompanying sketches, which are taken from the "Motor Age." The petrol pipe is probably $\frac{1}{2}$ in. pipe size and the union to the carburettor the same size. Both the pipe and the union can be threaded into the tee and a short $\frac{1}{2}$ in. pipe one or two inches long is threaded into the



bottom connection of the tee and is closed by a removable cap or petcock. The flow of petrol through the tee will be slow enough to permit water and solid particles to settle in the bottom pipe. Evidently the tee can be connected with ease, and without change in the length of the petrol pipe, whether the carburettor connection is in the side or bottom. The threaded connections should be sweated together so that vibration will not start leaks, this being a prolific source of trouble with poor joints.

AN interesting demonstration was given on Thursday at the Wolseley-Siddeley Garage, York Street, Westminster, of the qualities of a new discovery in motor spirit. The new spirit, which is known as N.U., is claimed to eliminate all the fumes from combustion and over-lubrication, thereby dispelling any noxious discharges from the exhaust which are so unpleasant and injurious.

AT a conference of the Street Noise Abatement Committee, held in London, on Saturday, the following resolution was proposed by Judge Wheeler, K.C., seconded by Mr. J. H. Seaverns, M.P., and adopted:—"That in view of the nuisance to property owners and residents in the metropolis, and the danger to those who use the streets caused by the noisy and offensive traffic now permitted, a special committee be appointed, with power to add to their number, to ascertain the present condition of the law upon the subject and the best mode in which it can be enforced, and, failing adequate protection to property owners and to the population at large, to advise in what form legislation is desirable."

RIGAL, Hautvast, Duray, Nazzaro and Wagner left Havre on Saturday last for the United States in readiness for the A.C.A. Grand Prix race in Savannah, which is to be held on the 26th prox.

OUT of 148 cars which passed one point in the west end of London in half an hour one afternoon recently it was noticed that fifteen only did not contain ladies, and of the remaining 133 cars the passengers consisted of 160 women against thirty men.

THE New Zealand Customs authorities have lately given a decision to the effect that motor-car chains are to be classified under No. 447 of the tariff, the duty on foreign-made chains being 10 per cent. *ad valorem*, while those of British manufacture are admitted free.

WITHIN the covers of "Picturesque Staffordshire," a new guide to the North Staffordshire Railway Company, are several maps, which, being photographic reproductions of the latest Ordnance Survey maps, add to the value of the little volume, which is published by Messrs. Wood, Mitchell and Company, Ltd., of Hanley.

ON Friday last week Messrs. C. E. Whittaker, Ltd., submitted one of their Imperia 20-30-h.p. cars to a speed test on Brooklands track. Except that it was fitted with a two-seated body and was geared as high as possible, the vehicle was of the standard type, the engine comprising four cylinders 106 mm. bore by 130 mm. stroke; according to the certificate issued a speed equal to no less than 75.464 miles per hour was attained.

MR. J. E. HUTTON informs us that after very careful consideration of the position of the motor trade he has determined to relinquish trading on his own account, and has consequently decided not to take over the contract for the "Hutton" car, with which he will no longer be identified. Mr. Siddeley having made him an offer to take up an important position in the Wolseley Motor Company, Mr. Hutton has accepted it and will join them on the 2nd prox.

THE Motor Supply Company, Ltd., of Piccadilly, W., have delivered this week a Renault 14-20-h.p. car to Mr. Mortimer Mompes, the famous war artist; also a Standard 20-h.p. six-cylinder with two-seated Victoria body to Lord Howard de Walden; a Siddeley 14-18-h.p. to Mr. E. P. Powles; a Standard 30-h.p. landaulet to the Hon. Louis Greville; a Delaunay-Belleville 15-h.p. six-cylinder to Mrs. Sauber; and a Daimler 42-h.p. landaulet to Mrs. Stanton, of York.

FROM Messrs. Dennis Bros., Ltd., we have received a photograph of the 30-cwt. van recently sold to Messrs. William Whiteley, Ltd. We understand that the machine has been running with considerable success, and is giving the greatest satisfaction. The engine is a 20-h.p. four-cylinder, fitted with both magneto and accumulator ignition with turnover switch. The change-speed gear gives four forward speeds, having a direct drive on the third speed and a geared up fourth to reduce petrol consumption.

AT the forthcoming show at Olympia Turner's Motor Manufacturing Company, Ltd., Wolverhampton, will exhibit a number of entirely new models of the Turner-Miesse steam cars, including light vehicles fitted with cardan axle, one model specially designed as a two-seated body, and one a light 10-h.p. touring car fitted with a four-seated side-entrance body. This latter will be the leading type for the 1909 season, and as it will be offered at a moderate price it should meet the requirements of many steam car enthusiasts. The makers inform us that they have perfected a paraffin burner (designed especially for the work of a medical man) which cannot blow out or backfire, no matter how long it is kept standing, and which can be turned up and down quite readily, doing away with the use of a pilot light except for lighting up from dead cold. No petrol is required with this burner even during the operation of lighting up. The company advise us that they have appointed Messrs. Taylor and Smart, of the Westminster Motor Works, 45, Horseferry Road, S.W., their sole agents for London and district. A full range of the new models of the Turner-Miesse steam cars will be on view at the London depot immediately after the Olympia Show.

Correspondence.

[Letters to the Editor should be addressed to the office, 27-33, Charing Cross Road, London, W.C.]

THE DEVELOPMENT OF MOTOR-CAR DESIGN.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—It was with much interest that I studied the account of the new Napier 15-h.p. car, and was especially struck by the many new features, new to Napier practice and therefore new to the ordinary accepted principles of the majority of present-day cars. The main new features are, I think, as follows: First and foremost, worm drive, undoubtedly, if properly designed, the very best drive yet invented. The lubricating system is also very sound. I would draw attention also to the method of attaching the magneto so as to be released by one bolt. Another very important departure is placing the fly-wheel in front of the engine, surely the right place, if the proper balancing of the crank-shaft in its bearings is to be secured. Multiple disc clutch is also fitted, the sweetest clutch again, if properly designed, on the market. The bolting of the gear-box (clutch, brake and gears) to the crank chamber is also sound practice, as, among others, it has the great advantage of enabling the engine and gears to be dropped from the car all in one in a very short time. I note also that castellations are used for attaching the brake-drum to the driving shaft, a very beautiful form of joint. Now all, or nearly all, these excellent features are new to Napier practice, yet all have been thoroughly tested and have stood the test of several years' experience, being embodied in the Lanchester car ever since the new vertical engine was first put on the market in their 20-h.p. cars. Surely a vindication, if vindication were now needed, of the principles adopted and so courageously adhered to by the Lanchesters. They have been undoubtedly the pioneers of much that has been recognised to-day as the soundest and most scientific principles in motor-car design. Every one of the features as enumerated above are now to be found in the latest 28-h.p. cars, and are found and were found in the 20-h.p. cars three years ago.

I address to you this letter as I think every motorist should be conversant with the history of the development of the motor-car, and because I think honour should be given (though sometimes tardily) where honour is due. As the proud possessor of one of the Lanchester Company's 20-h.p. cars I am particularly gratified in that, having always, since way back when I drove a 10-h.p. air-cooled Lanchester, been a thorough believer in their principles, I now see them adopted by some of the leading motor engineers in England.—Yours truly,

ARTHUR N. PAZOLT.

THE HORSE-POWER RATING PROBLEM.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—The report of the S.M.M.T. Rating Sub-Committee on horse-power formulae for petrol engines has recently been published, and motor papers have devoted space to criticism, or to a "criticism of the criticism" of said report. Opinions may be at variance as to the usefulness and reliability of the results arrived at, but all are agreed on the S.M.M.T. deserving our warmest thanks for the conscientious work done by its sub-committee. I cannot help thinking, however, that in this case the "saint is not worth the candle," for, in my mind at least, quite a number of unsolved problems in motor-car construction have greater claims to the efforts of the gifted technical members of the society than the comparatively irrelevant question of a suitable rating formula. It occurs to me that, even granted the right formula were found, we would have no practical use for it, being almost in the same plight as the shipwrecked person stranded with a bag full of gold on a bare and lifeless island.

With the exception of commercial vehicles, automobiles can be divided into two classes, (1) touring cars, (2) racing cars; and dealing first with the touring cars, however simple and reliable the formula might be, it is evidently preferable to have the engine—or, which is better still—the complete transmission on the chassis, directly tested by means of one of the well-known testing plants. When somebody is ready to pay £500 and more for a car, he is undoubtedly entitled to see the behaviour of both engine and chassis when a brake test is applied to them; and the result of such a test is certainly more reliable than the one obtained by the application of a more or less empiric formula.

I should even go a little further and say that, in actual touring car practice, the knowledge of the engine h.p. is useless, and under circumstances might even become misleading. A prospective purchaser is entitled to have a free trial on the same or similar car to the one he wants to buy; this will afford him an opportunity to judge of the power, quietness, comfort, fuel consumption, speed and hill-climbing properties of the car in question; and if the results fit the requirements of the buyer, why or what would he care about the actual h.p. of the engine? The use of a h.p. formula—no matter which—as a criterion for classing competing touring cars is also objectionable, since for such vehicles all-round reliability, economy, price and smoothness of running are far more important factors than speed alone. A touring car contest is supposed to give the public information about the behaviour of a car when in the hands of the purchasers. The trial should therefore take place on such roads as most usually met with by touring cars. Under these circumstances it is at once clear that the only criterion by which to classify

competing cars is the fuel consumption; this latter, of course, varying according to the weight of the vehicle. The winner of its class should then be the car that shows the best compromise between reliability, comfort, smoothness of running, price and greater economy. Such are the factors by which to judge of a touring car, but I utterly fail to see where the h.p. of the engine comes in. Among engines of the same type and same power the best—both mechanically and commercially—is invariably the one showing the least consumption of fuel; this last criterion, therefore, is not only sufficient for classification purposes, but is actually conducive to good design and faultless workmanship to a greater extent than the use of a h.p. formula, whether it takes into account the stroke or not. How many miles he can get out of his car per gallon of petrol, the speed, both on the level and uphill, and reliable information about the comfort of the vehicle are the points insisted upon by the average motorist. He does not care a jot, neither would it be of any help to him to know, whether his engine is a 10 or a 100 h.p.

With racing cars speed alone is the decisive factor. We have had every opportunity to give a fair trial to various formulae, but in each case the practical results have been almost *nil*. Nor could we have expected anything else, since, whatever formula be employed, it is inherently incorrect, and as such nearly always provides a loophole for the enterprising manufacturer to get actually more power out of his engine than shown by the formula. We have witnessed races in which the piston displacement was the basis for classing competing cars. The result has not been the long-dreamed-of engine, with the ideal relationship of bore to stroke, but a fast short stroke engine, quite useless for practical purposes. On the other hand, whenever the bore alone is considered, the maker is at liberty to choose the speed and stroke; prepossessed by the idea of winning the race, he will not strive after the best compromise between speed and stroke, but he will simply increase them both



From a Sketch

[in *La Locomotion Automobile*.

until he thinks the engine thus evolved is more powerful than those of other competitors. The result is thus such as could have been easily foreseen—that is to say, a fast long stroke motor, which, we are told, is also quite unsuitable for propelling pleasure cars.

The rating formula recommended by the report already referred to contains a constant whose value varies according to the type of the competing cars; or, in other words, instead of building the engine on the basis of the formula, we stretch this latter to suit the engine, whether this be a freak one or not. This, again, clearly shows that not only does the h.p. worked out by a formula convey no definite idea as to what the car is actually going to do, but this same h.p. is also an illogical criterion for classing competing cars. It is also incidentally a proof of our ignorance of what is going on in the cylinder, and of the most suitable value of the different cylinder dimensions; and if so, what is the good of concealing this lack of knowledge under an elastic formula? Take the case of steam practice, for instance; does not the same h.p. formula hold good whether it is applied to an engine driving a dynamo or to one driving a cotton mill or a forge blower? Yet no one cares a jot about knowing the h.p. of a locomotive or even of a tractor or a steam roller. Besides, I am referring now to speed contests only. Does it not sound somewhat illogical to get the cream of our technical men to work out for us an elaborate formula, so as to eliminate freak engines, when the contest which is to show up the performance of a car is nothing else but a freak feat throughout? How many times is the race won by the driver though lost by the car? Where is the motorist who, inwardly at least, had not some reluctance in crediting the winning vehicle with being the best among the lot. Are we not used to see people quite enthusiastic about a race, and yet belittle its results the day after, if their favourite vehicles did not succeed in securing a place. Where is the engineer who can retrace to such contests a single useful departure in practical engine design. What valuable information about the motor have we secured, that would not have been gained by a reliable bench test?

Whenever the work to be done is not constant, as in the case of petrol cars and locomotives, the h.p. will also vary, and the knowledge of its actual value is therefore useless. But to each mile travelled a certain amount of petrol must be used, and, other conditions remaining the same, that engine is best, both mechanically and economically,

that covers the distance with the least amount of fuel. Incidentally it will be observed that a certain h.p. will correspond to the amount of petrol actually used; but, while we can exactly control this latter, we are in the dark as to the former.

Why, then, not introduce the fuel consumption as a criterion for classing purposes instead of using h.p. formulæ, which are inherently incorrect and otherwise unsuitable? If, instead of hunting for a never-attainable h.p. formula, we introduce the fuel consumption—or even, as an alternative, the diameter of the inlet valve—we leave the maker completely free to adopt what dimensions he thinks best, thus fostering a sound and economical engine—the only one really required—we will acquire valuable data on the relationship between petrol consumption and speed, beside insuring greater attention being paid to carburettors and all-round efficiency.

It has been suggested to me that one object of the new rating formula was to arrive at a more correct catalogue rating. I daresay that every self-respecting maker either has a motor testing block or can easily fix one up for a few shillings. Why, then, not give in the list the actual b.h.p. instead of the incorrect h.p. as worked out by the formula, or the nonsensical nominal h.p. sometimes referred to?—Yours truly,

C. A.

[The above letter opens up quite an interesting subject, on which we shall be glad to have the views of readers.—Ed. M.C.J.]

THE TRANSPORT OF CARS.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—I notice in your issue of the 24th inst. a descriptive article referring to the North Eastern Railway Co.'s facilities for shipping

Down had to come the radiator, off had to be taken the starting handle, the pump had to be removed, a dozen nuts which held the plate over the distribution gear had to be undone, and then a loose, idle distribution pinion was found; the pin which ought to have held it to its spindle was there, but the spindle had fallen back into the crank case. More things had to be undone, off had to come a cylinder cover, and there in the crank case was the spindle. All had to be replaced, and then the engine had to be retimed, and all because the pin that should have held that idle distribution pinion to its shaft had not been burred over. And, to add to it all, none of the distribution pinions were marked where they should be meshed with one another.

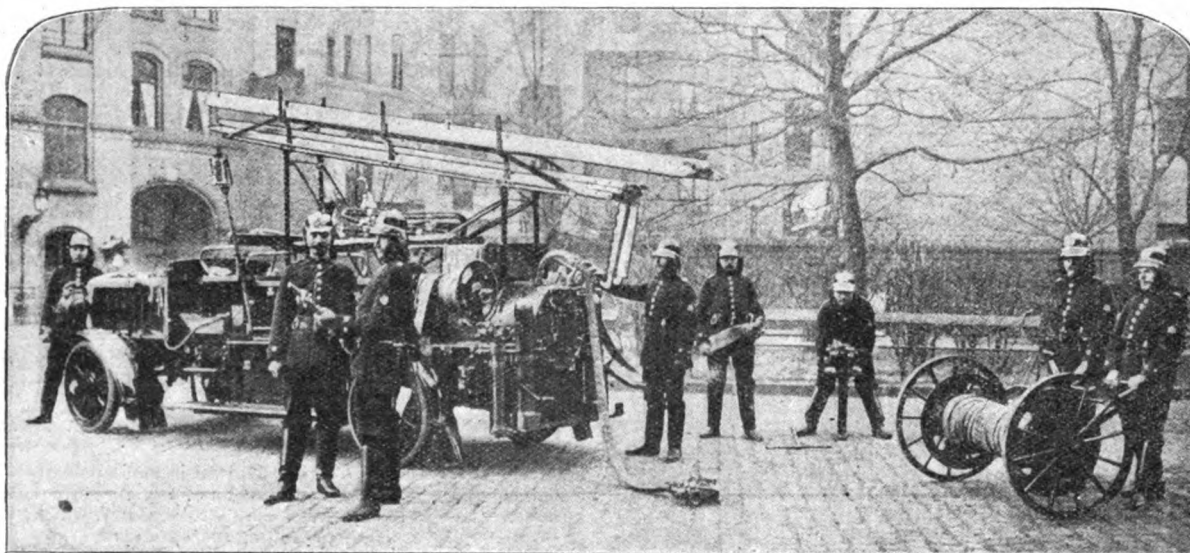
The moral seems to be—and thus this letter—the need for better inspection of cars prior to their being sent out. If the vehicle referred to had at each stage been properly inspected, the unburred pin would have been seen and attended to, and the car and its makers would not now be the subject of many a disparaging remark by its late owner. An unburred pin is a trifle, but the neglect of this trifle caused a great deal of bother, as well as making four people go without a lunch. It was a foreign-made automobile; but I have heard that English cars have also given trouble in this way. I know "tis not in mortals to command success," but let us hope motor manufacturers will at least try to deserve it, and, anyway, see that their pins are well burred over.—Yours truly,

H.

THE PROCEEDINGS AGAINST LORD BERKELEY.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—We are instructed by Lord Berkeley to inform you that immediately upon being served with what purported to be a summons to appear before the Oxford city magistrates his Lordship consulted us



The Electrical Motor Fire Engine recently put into service by the Fire Brigade at Dusseldorf, Germany.

motorists and their cars from Hull to Holland; also in the same issue a photograph of a car being put on board the steamer for transit between Plymouth and Brest.

Having recently availed myself of the former route, I would like to point out that the method of shipping the car is not only more up-to-date and safer, but is unattended by risk of damage to the appearance of the car.

The North Eastern Co.'s method of running the car on to a tray on which it is slung into the steamer is admirable.

My own car was thus slung into the steamer at Hull, and also at Rotterdam for the return journey, early in August this year, without receiving the least trace of damage from handling.—Yours truly,

J. E. HODGKIN.

A TALE OF A TRIFLE: ITS CONSEQUENCES AND MORAL.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—
"Oh! she is all perfections,
All that the blooming earth can send forth fair."

Can we say that of the modern car? I knew a happy owner who thought so of his. He had a bitter awakening. His was a four-cylinder, double ignition, live axle, up-to-date machine, and she could and did go. Alas! one day his pride came to a fall. He was touring, and came to a forest, and in a most lonely part thereof the car stopped. The commutator spindle ceased to revolve, the magneto and pump shaft did not go round, the valves no longer lifted! What consternation! and the owner was alone with his prodigy and three lady guests and miles from any aid or luncheon

upon the matter, and we at once advised him that the proceedings were, in our view, illegal, and that any further proceedings taken thereon would be bad.

We are instructed, therefore, to state that it was for the above reason that Lord Berkeley from the first abstained from appearing before the magistrates.—Yours truly,

ANDREW WALSH, GRAY AND CO!

A MAGNETO TROUBLE.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—Referring to "Magneto's" letter in the last issue of the journal having reference to the red fibre strip in the distributor fitted to his Nilmelior magneto, we did fit a certain number of magnetos in this way in the earlier days. We found, however, that it was the common practice on the part of the owners to clean the distributor with a piece of emery, and that particles of the emery became embedded in the fibre and thus caused short circuiting; consequently we dispensed entirely with the red fibre, and have not fitted this for some years.—Yours truly,

For Nilmelior (England) Ltd.,

W. R. ELDERFIELD, Manager.

REFERRING to a review of the Encyclopedia of Motoring in last issue, a correspondent suggests its value would have been enhanced by the publication of a plan of a chassis.

A READER of the M.C.J. would be glad to hear from any other readers having the following issues (unbound) which they wish to dispose of:—Nos. 1 to 42, 44, 46 to 49, 51 to 54 56 to 71.

CLUBS AND ASSOCIATIONS.

ROYAL.

THE Cleveland Branch of the Yorkshire A.C. has resolved to become associated with the R.A.C.

A meeting of the organising committee was held at the club house on the 22nd inst., and the associated clubs were well represented. The principal business before the committee was the scheme for dealing with inconsiderate driving, and a number of details in connection with the operation of the scheme were settled. It has been resolved to ask the associated clubs to specially communicate with the Justices of the Peace and other judicial authorities in their districts in order that they may be informed as to the purpose and extent of the scheme.

THE MOTOR UNION.

MR. G. H. DODD presided at the October meeting of the General Committee of the Motor Union. Report was made as to the action taken in nine complaints of inconsiderate driving against outside motorists.

The receipts for the nine months ended September 30th totalled £11,026, as against £9,370 for the same period last year. In addition the foreign touring department has received deposits amounting to £4,193 for Customs charges.

Complaints having been received of the danger incurred by road users in consequence of cattle being driven on the highways after dark, it was decided that when the Lights on Vehicles Act again comes before Parliament an endeavour should be made to embody a clause requiring such cattle to be preceded by a light after sundown.

Hon. local correspondents were appointed as follows:—Shipley, Yorks, Mr. F. Hannam; Aberdeen, Mr. Lawson Turnbull; Thame, Mr. B. H. Andrew; Biggleswade, Mr. F. A. Maythorn; Bridgnorth, Mr. H. T. Skelding.

Motor Union medals were granted to the Blackpool and Fylde, Berkshire, Southern and West Essex clubs. The committee agreed to hold a provincial meeting in South Wales next year.

During September forty-six hotels and thirty-three repairers received the recommendation of the Touring Committee, and it was agreed that recommended repairers should be asked to exhibit in their window the current price for petrol.

The Motor Union Cycle Committee reported that seventy-two motorcyclists had joined under the 10s. 6d. subscription, and seventy-eight under the guinea subscription.

The following appointments as solicitors to the Motor Union have been made:—Farnborough (Hants), Mr. G. Brook Knight; Wisbech, Mr. A. Frank Whittome; Colwyn Bay, Mr. Francis Nunn; Ruthin, Mr. W. O. Jones; Llanrwst, Mr. A. Lloyd Griffith.

MOTOR CLUB.

SIXTY new members were elected at the last committee meeting. The semi-final of the golf tournaments will be completed to-day (Saturday). Dr. W. G. Grace is still left in the club handicap, and Mr. Schlentheim in the Bisque Tournament, for which he is kindly presenting a silver cup.

There will be a house dinner on Wednesday, November 18th, with Mr. Charles Jarrott in the chair.

AUTO-CYCLE UNION.

THE Stanley Show is to be held at the Royal Agricultural Hall, from Friday, November 20th, to Saturday, the 28th. The Auto-Cycle Union will have its stand in the same position as last year, where the secretary and other officials will be in attendance or can be seen by appointment.

THE INCORPORATED INSTITUTION OF AUTOMOBILE ENGINEERS.

AT the first ordinary general meeting of the session of the Graduates' Section of the Incorporated Institution of Automobile Engineers, held at 1, Albemarle Street, Piccadilly, W., a paper was read by Mr. E. D. Suggate on "Super-heated Steam as applied to Road Vehicles," illustrated by lantern slides and also by the actual parts of various makes of steam cars. This was given in our last issue. An animated discussion followed, in which Messrs. C. E. House, P. Bishop, L. H. Baskerville-Cosway (hon. secretary of the London Branch), D. J. Smith, L. H. Hounsfield, H. Caudwell, Vernon Jones, J. H. P. Daman, H. Burchall, and the president (Mr. Dugald Clerk) took part.

BLACKPOOL.

ON Saturday the Blackpool and Fylde A.C. held a gymkhana on the Agricultural Show Ground at Blackpool. There was not a large attendance of the public. There were nineteen competitors, who figured in most of the events.

The results were as follows:—Backing into home: 1, A. E. Crowdy (Manchester); 2, C. E. Oliver (Manchester). Balancing: 1, A. E. Crowdy; 2, Mrs. E. A. Riley (Haslingden). Musical chairs: 1, H. Ingham (Oldham); 2, Mrs. Riley. Blindfold driving: 1, H. Ingham; 2, H. Walker (St. Annes). Academy stakes: 1, E. Allen (Bowden);

2, Mrs. Riley. Obstacle race: 1, E. Allen; 2, A. Birtwistle (Burnley); 3, H. Walker. Nightingale competition: 1, E. Allen; 2, C. E. Oliver. Slow race: 1, J. V. Marchanton (Lytham).

The special prize of £10 and medal of the Motor Union was won by Mr. E. Allen, of Bowden.

LINCOLNSHIRE A.C.

REPORTS were received concerning the level crossing at Hubbert's Bridge, which the G.N. Railway Company had now put in good order, and the level crossing at Weelsby, near Grimsby.

A scheme for the registration of owners of motor-cars in the county of Lincolnshire willing to render assistance in case of mobilisation of the Territorial force was discussed and adopted.

SOUTHEND.

THE committee of this club has adopted the following resolution:— "This committee, who had decided to give to the members of the club from the 1st January, 1909, the desirable benefits of association with the Royal Automobile Club in addition to those benefits accruing from continued affiliation to the Motor Union, greatly deplore the decision of the R.A.C. not to associate any club owning allegiance to more than one central body. Considering that, in view of this decision, the provincial clubs must either abstain or be compelled to take sides, against their will, the committee of this club are of opinion that the R.A.C. resolution, by forcibly dividing forces still further, is not conducive to the welfare of the automobile movement in this country."

SEVERAL prominent and energetic members of the Motor Club have urged upon the committee the desirability of starting an aerial branch.

ROAD REPORTS.

EAST HAM.—In the spring of last year a length of road in this district was treated with "Dustabato" under the instruction of Mr. A. H. Campbell, M.I.C.E., the Borough Surveyor. "Dustabato" consists of a composition of pitch and other materials which is poured in a boiling state upon the freshly rolled area of macadamized surface, the flux flowing over the surface into the interstices between the stones, the whole surface being thereafter rolled with a heavy roller until consolidated. It is the same formation as was recently applied to the front of the Houses of Parliament, and so far it has given satisfaction in East Ham.

HIGH WYCOMBE.—The Local Government Board inspector is to hold an inquiry into the application of the Town Council of High Wycombe for a ten miles per hour speed limit to be imposed on some of the main roads through the town.

ABERDEENSHIRE.—The Road Board of the Aberdeen County Council have recommended the limitation of the maximum speed of motor vehicles to fifteen miles an hour, but, after discussion at the meeting of the Council, this was referred back for further consideration.

REDHILL AND HORLEY.—Long Bridge, near the 25th milestone from Charing Cross, and between Horley Church and Povey Cross, is being rebuilt. Motorists from London should take the right-hand road at Gatton Point, before reaching Redhill, and drive via Reigate. If, on the other hand, they really desire to go by Horley, they should, on reaching the Chequers Inn at that place, proceed straight forward over the railway-bridge and thence via Pound Hill, Balcombe, and Cuckfield, joining the main Brighton road near Bolney.

COMPANY NEWS.

In the case of New Companies the file number is given at the end of the particulars.

DRAKE AND GORHAM, LTD.—At the annual general meeting of Drake and Gorham, Ltd., held at the office, 66, Victoria Street, Westminster, S.W., the chairman, Mr. B. M. Drake, M.I.E.E., said that the motor-car business in this country had been less brisk than during the previous year, and they had naturally felt the effects of this. They had, however, bought and tested a number of cars for clients who were glad to avail themselves of their services where they had not technical knowledge themselves, especially in view of the fact that these services cost them nothing. A pamphlet on the subject, called "The Choice of a Car," had been prepared and circulated during the year.

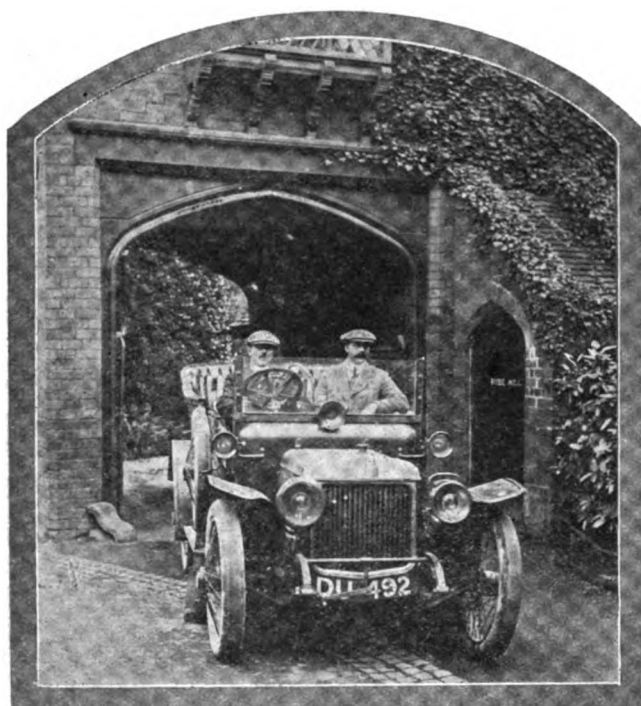
SUNBEAM MOTOR CAR.—The directors, after adding £1,500 to the reserve fund and placing £200 to bonus fund, recommend a dividend of 7½ per cent., tax free, on the ordinary shares for the year ended August 31st. A balance of £904 remains to be carried forward.

AT the Franco-British Exhibition the Coventry Chain Company have been awarded a silver medal.

MESSRS. C. E. WHITTAKER, LTD., 66, Great Russell Street, W.C., are putting on the market a new speedometer; it will be known as the Imperia, and will be essentially for the man of moderate means. The device, which will be jewelled to ensure accuracy, will be gear driven, and the maximum speed it will register will be fifty miles an hour. Larger models, however, can be put in hand on request.

THE VALVELESS ENGINE.

At the meeting of the R.A.C. on the 22nd inst. the discussion on Mr. C. Y. Knight's paper was resumed by Mr. Alexander Craig, who dealt with some of the points advanced in favour of the new system. With regard to silence he submitted that they should judge of that in twelve months' time, when the engine had been on the road and had been built in quantities. As to the claim for smoothness, the superiority of the engine had been ascribed to the absence of cams, which at speed produced a tremor throughout the car. He (the speaker) submitted that Mr. Knight was entirely wrong in that. The tremor at speed was due to a well-known principle in the four-cylinder engine—a slight want of inertia balance of the main reciprocating parts. The piston speed in the first half of its stroke was not the same as the piston speed in the last half of its stroke, by reason of the length of the connecting-rod, and that brought about a slight want of balance that was not present, of course, in a six-cylinder; in addition, there were explosion balances to consider, but as far as that was concerned, they had a four-cylinder engine put before them which was claimed to be more free from vibration. Mr. Knight claimed a better balance than the old four-cylinder engines. Given the same weight of reciprocating parts, he (the speaker) submitted that it was impossible that there should be a difference. As far as inertia disturbance was concerned, the weight of the parts moved by the cam was so small that that must be absorbed in the general mass of the engine and never reach the occupant at all. He was assuming that it was



The Daimler 38-h.p. 1909 type car, fitted with the new silent engine, which lately made a non-stop run of 650 miles.

now a well-designed engine of recent date. The flexibility was not due to any special design of the engine beyond the form of the combustion chamber, which was not peculiar to that particular engine. With regard to endurance he did not think the author had fully appreciated what had been done in recent practices with the ordinary engine. Reliability yet remained to be tested. He was not going to prophesy that the engine could not work, but he was going to draw attention to points that were against it in connection with reliability. The opening of the valve was made by uncovering the junk ring, when the sleeve passed below that junk ring, and while the exhaust valve was open it had to stand the blast of the discharge. Those who knew anything about a piston valve with superheated steam knew that they did not get on any too well, that it was not unusual to find them soiled by the dry gas, and he did not think they could look for petrol vapour to be any more gentle. Turning to another point, he thought that there must be more mechanical loss in that engine. Mr. Knight mentioned a test on the dynamo which proved that the mechanical efficiency was 87 per cent. He would like to know on what principles that test was carried out, and by what means he established its efficiency.

Mr. S. F. Edge asked if Mr. Knight had ever ridden in a modern six-cylinder car, and went on to refer to the various records of the R.A.C. with regard to flexibility, reliability, and other points for which tests had been made. Each claim put forward by Mr. Knight was categorically dealt with, and, to sum the whole matter up, he went on to say, Mr. Knight had made eleven claims. Six of them by official

test were quite wrong; he was utterly beaten on official tests recorded by that Club. The other five he left to him, because he had no official record to bring forward to disprove them.

Lord Montagu referred to the test he had made of the Knight engine on French roads, 529 miles of which had been traversed under his own personal observation. The average consumption had been about 13½ miles to the gallon, and during a great portion of the time he was running the car "all out" in order to test it at high speeds and the three jets were all brought into play. When running more steadily at 30 to 40 miles an hour the engine averaged about 15 to 17 miles per gallon. The difference in flexibility and silence of the new engine and of the six-cylinder is very hard to tell. At high speeds Mr. Knight's engine was possibly more silent, and the absence of engine vibration at high speeds was a remarkable feature. As regards lubricating oil, one gallon was used in addition to some that was in the car at the time it started. The characteristics of the engine seemed to be great flexibility, exceeding that of any other four-cylinder engine with which he was acquainted; noiselessness, especially marked when under way and running at high speed, and great power of picking up when a hill had to be negotiated, or when, after a slack for traffic, speed had to be attained again to get out of traffic.

Mr. F. R. S. Bircham said it was quite a new theory to him that oil would transmit more heat if kept moving. They were told that a piston was cooled by the oil filaments being kept moving between the pockets and practically acting as metal. He did not know what size that type of engine had been built to, but he very much doubted if it was possible to cool the piston for 6 in., and certainly not more than 8 in., in diameter. The actual number of parts in Mr. Knight's engine, owing to the cam shaft being made in two pieces, which was not obvious unless closely examined, was 112. In the ordinary type of four-cylinder engine with valves, as he suggested, the parts were ninety-nine. That figure included the valve springs. If they added valve cotters and washers, it was 115, which was three more. But he thought that that disproved Mr. Knight's claim to fewer parts and cheaper cost.

Mr. H. Austin believed that the tests given by Mr. Knight were really insufficient. Ten years ago they might have been considered quite severe, but to-day they were not very much. A client of his (the speaker's) told him once that, although he was quite ashamed to say it, he had never ground the valves, and he had driven 15,000 or 18,000 miles. It was quite as good as it was in the first place. There was nothing unusual in running 10,000 miles without grinding the valves, keeping them, nevertheless, in quite good order in a well-designed machine. He should say it was quite usual to run 10,000 miles without having any leak whatever in the valves. The engine would probably be better with regard to compression at the end of the time than at the start, if properly cared for. Few manufacturers got valve trouble to-day; the trouble was infinitesimal. For the last four or five years he had never replaced a valve, and he had never heard of one breaking on an engine he had made. Looking at the design from a purely theoretical standpoint, he did not think that it would enable Mr. Knight to claim greater power or efficiency than, say, an engine where the cylinder had got the valves in the head opening into the combustion space. He could not see how any system could be better purely on the score of efficiency; consequently he could not see how it could be better on power, because the cylindrical valves took a great deal more power to drive than the ordinary poppet valves.

Mr. W. Worby Beaumont mentioned that the points with regard to the construction of the engine showed that Mr. Knight had a design that should give them certain thermo-dynamic advantages as compared with the ordinary engine. Whether it were an advantage or not, so far as construction was concerned, he was enabled by means of his tubular sliding valves to get a period and length of duration of admission of his gases and of exhaust, which was of considerable advantage as compared with the periods of duration in most of the engines in ordinary use. There could be no doubt that he should get an advantage in the working of the engine which, so far as the thermal conditions involved were concerned, should give an economical result. Whether the mechanical efficiency of the engine were much higher, or any higher, than with an engine constructed with the ordinary poppet valve was a matter that really they were not in a position to determine at present, inasmuch as, so far as he knew, no actual and trustworthy indicator diagrams had been taken of an engine of that design. Of course, it was possible, by the method that had been mentioned, to obtain an estimated indicated h.p. by taking the power of the engine at different outputs, and so arriving at an estimate such as the one that had been given of 87 per cent. He was not, however, quite satisfied that that, whether it were much greater or less than 87 per cent., was an estimate that they could rely upon at present.

Mr. Percy Martin said he had many results that even Mr. Knight had not seen himself, which had led them to the decision to take on the engine. It was a beginning. Mr. Knight had been on it for five or six years, but he had been single-handed. A great many people would be engaged on those lines in the course of the next two or three years, and a great many improvements would be made; they did not claim to have reached perfection. He agreed with Mr. Austin that gears for driving the shaft of the engine would give trouble in the best regulated engine. To get rid of them by means which they considered, from some experience they had had, to be quite satisfactory he would suggest putting in new links with a new chain. He was not going to tell them a good deal as to cost of manufacture, but he might say that the estimates up to the present time were quite satisfactory. The chief beauty of the

manufacture was that they got more round work in building that engine than one did in the old type engine. They got more finished work direct from the machine, and eliminated a great many of the costly operations under the head of fitting. As a manufacturing proposition he would much rather build the new engine than the old. It was a prettier proposition to tackle with the machine shop that they had at their command. He thought that results would prove the advantages in machining and manufacture as it would prove that the machine was reliable. He thought consumption on the road and flexibility could be eliminated from the discussion. The Daimler Company had gone far enough into the question of reliability, and he believed they would guarantee it to the satisfaction of everybody who was inclined to risk it. They could not, of course, say that they had had six years' experience in this country under the observation of the R. A. C. and so forth; but, no doubt, as time went on they would take up all those points and hope to prove that they had an advantage over the existing type.

Mr. Knight replied. So far as he knew the Daimler Company had laid down 600 of these motors. A record of 2,212 miles run by one of these motors had shown an average of 17½ miles to the gallon, the lubricating oil working out to 512 miles to the gallon. Mr. Knight dealt with practically all the points that had been raised, and received a very hearty vote of thanks from the meeting.

BENZOL AS AN AUTOMOBILE FUEL.

THE utility of benzol as a fuel for the engines of motor-cars has recently been made the subject of two papers by M. A. Grebel, the first a discussion of the relative merits of benzol and petrol, published in "Le Genie Civil," and the second a very comprehensive paper covering thoroughly the whole subject, read before the Société des Ingenieurs Civils de France. The following notes are taken from these papers.

Almost all benzol is produced as a by-product in the manufacture of coke, the process of extraction from the waste gases consisting of dissolving the crude benzol in heavy oils and later recovering it from the solution by distillation. It is then rectified by the removal of carbon bisulphide, tar, naphthalene, and other impurities, and a final purification is obtained by washing with acids, soda, and other reagents. If the benzol is intended for use in automobile motors, this purification must be very carefully performed. If it is improperly carried out tarry products are left which interfere with the proper working of the carburettor and give rise to obnoxious and corrosive fumes. About five kilogrammes of rectified benzol are recovered per ton of coal coked. In the present state of the industry, France, Germany, England and Belgium produce large quantities of benzol annually, but the amount could be largely increased in all countries, so that the present price of about 10d. per gallon could be maintained even though the demand were to increase to very large proportions.

The comparative physical properties of benzol and petrol are as follows:—

| | Benzol. | Petrol. |
|---|------------------------------------|---------|
| Density | 885 | 700 |
| Calorific power | Calories per kilogramme. 10,033 | 11,464 |
| | Calories per litre. 8 879 | 8,025 |
| | Degrees C. -6 to -8 | -100 |
| Freezing point | | |
| Quantities of fuel added to 1 litre of air at 0 deg. C. and 760 mm. for theoretically complete com- bustion | Grammes 0.9615 | 0.8434 |
| | Cubic centimetres. 1.0864 | 1.205 |
| Vapour tension at 20 deg. C. ... | 122 | 296 |
| | Degrees C. 81 | 50 |
| Temperature of boiling | | |

The close similarity between benzol and petrol has been the cause of many disappointments and vexations. It has led to the belief that benzol could be simply substituted for petrol without any difficulty, and it must be admitted that by accident certain motors have worked well for a time within certain narrow limits of speed. In cases where bad results have been obtained, however, they have been hastily and erroneously attributed to the fuel itself. Benzol, indeed, presents many points of similarity to petrol, but it is distinguished from it by various characteristics, of which account must be taken in the design of carburettors, the regulation of ignition, &c.

The principal charge made against benzol is that it causes fouling, but the black smoke, the odour of burned gases and the fouling are due entirely to imperfect combustion. M. Grebel has made upwards of 200 tests on a Panhard motor and has never encountered any fouling except when testing a benzol only 50 per cent. pure. It is an easy matter to prevent fouling, because, in order that a deposit of soot may be formed, it is necessary that the proportion of benzol in the fuel should be raised to double that theoretically necessary for complete combustion. Many carburettors, however, make an explosive mixture imperfect to a degree that would be believed impossible without the striking evidence of analysis of the waste gases. The influence of the mixture on the efficiency of the benzol motor cannot be too strongly emphasized. Even when the exhaust gases are colourless and odourless and the motor seems

to be working perfectly, the combustion and consequently the efficiency may be relatively poor.

M. Grebel's investigations have shown that the minimum specific consumption corresponds to a percentage of carbon dioxide in the exhaust gases of 14 in the case of petrol, and 17 in the case of benzol, without excess of oxygen and without carbon monoxide. These are the highest percentages attainable in practice, though the theoretical percentages for complete combustion are 14.4 and 17.4 respectively. The maximum of power is found at about the point of maximum explosibility which corresponds to the highest explosive pressure. This is given by a mixture slightly richer in benzol than the mixture for theoretically complete combustion. With the mixture giving maximum power, about 1½ per cent. of carbon monoxide is found in the burned gases. In M. Grebel's tests the minimum of consumption has always been found to be attained when the air actually introduced bears to the air theoretically necessary the proportion of 1 to 1.1. This differs considerably from the proportion of 1.3 to 1.7 recommended some years ago by Sorel and adhered to by many builders through fear of a shortage of air under certain conditions.

GUARDING AGAINST GARAGE FIRES.

DECLARING petrol to be "an enemy of life and property far more terrible than dynamite, gun-cotton or nitro-glycerine," Mr. J. A. Archibald, fire chief of Cincinnati, U.S.A., at a recent convention of chiefs of fire departments, proposed a complete set of garage regulations which are of interest as embodying the ideas and experience of a veteran fire-fighter who has made a special study of garage phenomena and the things that happen as a result of the peculiar qualities of petrol vapour. Its greatest danger, he declared, lies in the fact that the unseen vapour "hunts its way into every crevice, driving out the air with its heavier weight and finally reaching its opposing force with that death-dealing effect only too well known to the fireman." After discussing some of the chemical and practical aspects of petrol, Mr. Archibald offered his suggestions for rules for garage conduct and regulations for equipment that to his mind are calculated to protect alike the garage, its patrons, its neighbours, and the public. His recommendations take the form of a proposed ordinance, which, in addition to the usual provisions, contains one or two suggestive and valuable ideas in this connection, some of which are outlined below.

No garage should be carried on except in a fireproof building not more than three stories high. No garage should be maintained within the same square with hotels, theatres, school houses, hospitals, or other buildings designed for public purposes, nor in any building of which any part is used as a dwelling. Heating should be done by steam or hot water; the boiler room to be fire-proof, and all openings between it and other parts of the garage to be protected by double "standard" doors; there should be no stoves, forges, torches, or furnaces, and no open flame fire, except as provided in the fire-proof boiler room. No lights, except electric incandescent lamps, properly enclosed in vapour tight globe, protected by approved wire-guards, should be allowed in any garage.

All volatile substances should be stored in closed tanks. None of the latter should be placed, constructed, or maintained under a public sidewalk or in a sidewalk area. All tanks should be constructed of steel and coated on the outside with tar or other rust-resisting material. The material of which they are constructed should be at least 3-16 in. thick. No tank should have a capacity in excess of 250 gallons, and all joints must be tightly caulked. They should be so buried that no part of the top shall be less than 2 ft. beneath the surface of the ground at the point where the tank is located; they should be completely cased, and surrounded with 12 in. of Portland cement, and all fire or lights on motor-cars should be extinguished upon the entry of the vehicles into the garage within 10 ft. of the threshold, and should not be lighted while they are in the garage. Movable incandescent lights in the garage should be protected by vapour-tight globes, inclosed in approved metal guards, and should be fitted with keyless sockets, and all electric switches and cut-outs should be permanently located at least 4 ft. above the floor and in an approved cabinet. No person should smoke in the garage. The reason for such restriction is quite obvious. Therefore, a notice in large letters, to read, "No Smoking," should be kept displayed in a conspicuous place and manner on all floors and at the entrance of all garages. No volatile inflammable liquid should be used in a garage for cleaning or for any other purpose whatsoever other than filling the tanks of such vehicles. No such liquids should be allowed to run upon the floor or to fall or pass into the drainage system of the garage.

On the floor of every garage there should constantly be kept and maintained convenient receptacles filled with sand, to be used in absorbing waste oils on the floors. In addition, sand should be kept on every floor in boxes or buckets of approved construction, provided with hand-scoops, to be used for fire-extinguishing purposes only—one such box or bucket for 800 square feet of floor area or fraction thereof. Beds of sand, or metal drip pans filled with sand, should be placed under every vehicle kept on the floors that are not fireproof. One 3-gallon carbonic acid gas fire extinguisher of approved construction should be provided and conveniently located for each 1,000 square feet of floor space, or fraction thereof. Self-closing metal cans, set firmly on 4-inch legs, should be kept on the floors of every garage, into which all inflammable waste material should be deposited.

THE EFFECT OF MOTOR VEHICLES ON MACADAM ROADS.*

By LOGAN WALLER PAGE, Director Office of Public Roads, U.S.A.

It is to Tresanget, engineer-in-chief of the district of Limoges, that we are indebted for the first scientific treatise on broken stone road construction. He clearly specified several types of broken stone roads, one of which, in quite general use throughout England and America to-day, is known as the Telford. It is a matter of interest that while roads of the Tresanget type are in extensive use throughout England and America, they are rarely seen in France, the macadam type having almost entirely superseded it. Tresanget's report to the Council of Bridges and Roads, written in 1775, on road maintenance is, in my opinion, the best ever written on the subject. Following Tresanget, McAdam made his splendid contribution. Since the time of these great engineers many improvements and modifications have been made in road building, the most important of which have been largely brought about by time and labour-saving machinery.

It is not my purpose to consider the history of road building, and I have only alluded to it for the purpose of showing that the broken-stone road of to-day has been of slow development. Although the methods of construction vary somewhat in different countries and different localities the main object sought has always been the same—to withstand the wear of iron-tired horse vehicles at a reasonable cost. Until the last decade these conditions have been successfully met and the broken-stone road was all that could be desired. Under modern motor traffic, however, the conditions have changed. Roads which formerly withstood the wear of horse vehicles are now quickly denuded of the fine binding material, and become loose and disintegrated. On the principally travelled roads the great clouds of dust raised by rapidly moving motor vehicles are not only a great waste of the material of which the road is composed, but this dust is carried by the wind and disseminated over adjacent property to such an extent that it has, in many instances, affected the value of real estates as well as the comfort of near-by residents and pedestrians. The road surface becomes so loosened that water makes its way to the foundation, and in general the cost of maintenance has very greatly increased.

With a constantly increasing motor traffic, these are, briefly, the conditions we find to-day, and which have to be met. The problem is such a serious one that it has called forth the best efforts of highway engineers in every civilised country. By the proper use of bituminous materials the mechanical difficulties have in a large measure been overcome, but the cost of such treatment is so great that it is hard to believe, at present, that such methods can ever be generally used on the many thousand miles of rural highways affected. As already stated, the broken-stone road has been developed to withstand the wear of iron-tired horse vehicles, and has met successfully the demands of suburban and rural traffic until the advent of the motor vehicle. When in its highest state of perfection, the rock from which such a road is made is so suited to the volume and character of traffic which passes over it that the amount of dust worn off is only sufficient to replace that removed by wind and rain. The dust remaining should be just enough to bond the surface stones thoroughly, forming a smooth, impervious shell. A road of this character wears uniformly under the traffic for which it was designed, and when properly maintained always presents an even surface.

When such a road is subjected to continuous fast motor traffic, entirely new conditions are brought about. Since the advent of this new traffic its effect on the road has been the subject of much study by both highway and mechanical engineers, and many highly interesting and ingenious theories have been advanced to account for the injury to roads derived from it. While the slipping of the tyre, skidding, shape of car body, suction and other causes contribute more or less to the injury of the road surface, I think it is quite generally agreed that the suction of the pneumatic tyre on the surface is the main cause of the trouble. The object of this paper is to show, however, that the great tractive force, or shear, exerted by the driving wheels of motor-cars is the main factor of injury. It has been demonstrated by connecting both front and rear wheels of motor-cars with separate speedometers that there is a considerable amount of slipping of the driving wheels on the road surface, and, on account of the numerous irregularities on the average road surface, this is what should be expected. This slip, due to the decrease in the bearing surface of the tyre, undoubtedly increases the amount of finely divided material of the road surface thrown into the air. The increased amount of damage done on this account will be in proportion to the irregularities in the road and the speed of the car. While it is an important factor, its effect is greatly reduced if the road has a smooth surface.

The effect of skidding is only observable on roads that are subjected to a considerable volume of fast motor traffic, and only then on curves. The result of this is to shift the crown of the road tangentially to the gutter. While very annoying to those having the maintenance of such roads, it is not one of the serious or costly causes of injury, as it is generally confined to rather sharp curves. It is my belief that too much stress has been laid upon the effect of the car body and its shape in removing dust from the road surface. After a number of experiments and observations, I am now convinced that little or no dust is removed

from the road surface by this means, except on very dusty roads. The dust lifted by the wheels, however, is greatly accelerated by the action of the car body and the air currents set up in its rear, which has much to do with the dissemination of dust. This is one of the important factors to be considered, as much of the dust lifted by the wheels would not be carried from the road but for the air currents developed by the car body, and these, of course, are much affected by its shape.

Probably no single factor has been considered of as much importance as the so-called suction of the pneumatic tyre. Some writers have even gone so far as to maintain that a slight vacuum is created in the rear of each tyre, which is sufficient to lift the finer particles of the road surface in the air. In my opinion, entirely too much importance has been given to this phenomenon, for, if it exists at all, its effect is probably so slight that it can be considered a negligible quantity, and I shall endeavour later on to give my reasons for this view. Beyond a doubt, the most injurious action of motor traffic is the great tractive, or shearing, force exerted by the driving wheels of these cars. The fine dust which ordinarily acts as a cementing agent to the road surface is thrown into the air to be carried off by the wind, or that remaining on the road is so loosened that it is easily washed into the gutters by rain. The pneumatic tyre wears off from the broken stone of the road little or no dust to replace that thus removed, and the result is that the stones become loose and rounded, giving the greatest resistance to traction and allowing water to make its way freely to the foundation of the road.

For the purpose of studying this phenomenon I recently conducted a series of tests with motor-cars of various shapes and sizes, from a heavy limousine to a small run-about. These cars were run at various rates of speed, and their effect studied on a section of average broken-stone road. The most interesting result was obtained with a 60-h.p. car stripped for racing. The wheels of this vehicle were 36 in. in diameter, with 4 in. front and 4½ in. rear tyres. The weight of the car with driver and mechanism was 2,800 lbs. The vehicle was driven over a level section of broken-stone road at speeds varying from 5 to 60 miles an hour. The road used was a section which had been resurfaced two years previous to the test and was in very good condition. Up to fifteen miles an hour little or no effect was produced on the road, and even at twenty miles it was judged by those present that no serious damage was done. From twenty miles an hour on, however, the effect was markedly noticeable with each increase in speed. At a point on the road designated for the proper speeds, photographers with the necessary high-speed cameras were stationed for the purpose of taking photographs from different points of view of the effect produced. I have some photographs which I think illustrate the action of the wheels very clearly. They show the car travelling at various rates of speed from five to sixty miles an hour. The chief point of interest in these photographs is the difference in effect on the road between the front and rear wheels. Now, if it is true, as has been claimed, that a vacuum is formed in the rear of the pneumatic tyre, or that it possesses any power of suction, this should be equally true of both front and rear wheels. I am convinced, after most careful observation, that this is not the case, and I think this point is illustrated by the photographs.

To sum up the matter briefly, the pneumatic tyre, or any type of tyre which propels a vehicle, must have sufficient tractive resistance to overcome the load of the vehicle. This, of necessity, must cause a shear on the road surface, which varies with the weight and speed of the vehicle. The broken-stone road surface has little power to resist a shearing stress, consequently the fine material of which it is composed is thrown into the air. Once lifted from the road, this fine material is subject to the effect of air currents generated by the car body, and subsequently by the wind. In this manner large quantities of the material of which the road is composed are carried from the road and must eventually be replaced or the road will rapidly deteriorate. This action may be greatly accelerated by other causes, but in the main it is sufficient to account for the observed results. Apart from the dust carried from the road in this manner, this shearing force of the motor-car has a decided disintegrating effect on the surface of the road.

"SCHOOL" FOR CHAUFFEURS.

At the Essex Quarter Sessions, Walter Carlyon, of Stapleford Abbotts, described as a gentleman, was sentenced to six months' hard labour for obtaining ten guineas by false pretences. Prisoner, who possessed a dilapidated motor-car, started a school for chauffeurs. Prosecutor, Cecil Stones, of Brixton, was taken out on an ancient motor-car, which broke down every time it was used, and had to be pushed home. At the end of a fortnight prisoner told him he was a qualified chauffeur, but prosecutor knew better, and the police were communicated with. Prosecutor paid ten guineas as a premium.

WE understand that a petition for the compulsory winding up of Messrs. Frank Morris, Ltd., King's Lynn, has been granted. It will probably be remembered that Mr. Frank Morris has not been identified with the business in any way for some considerable time.

FOR some time past V-type engines with their cylinders set at 90 deg. have been in use, and are now being manufactured by various firms. Until recently the only ignition possible on such motors was coil and battery, but in view, however, of the increasing demand the Bosch Magneto Company, Ltd., of 23, Store Street, W.C., have now brought out a magneto suitable for this class of engine. Full particulars will be sent on application.

* Abstract of address delivered before the Legislative and Good Roads Convention at Buffalo, U.S.A.

CASES AGAINST MOTORISTS.

DISCHARGED.

At the Surrey Quarter Sessions at Kingston, on the 21st inst., Edward Toms, of North Haven Point, Parkstone, Dorset, surrendered to his bail on an indictment charging him with wantonly and furiously driving a motor-car, and knocking down Alfred Berry, thereby causing him grievous bodily harm, at Long Ditton, on September 3rd. The evidence given by eight witnesses at the police-court was repeated. Berry was running in line with a cart laden with Thames ballast, of which he was in charge, when the prisoner's car knocked him down and inflicted serious injuries upon him, including concussion of the brain. Berry had subsequently to be removed to the county lunatic asylum, at Brookwood, where he is now detained. The defendant, in giving evidence, said before reaching the junction of the Portsmouth and Brighton roads he sounded his horn. He denied that he was racing with another car, and no car ever came abreast with him until after the accident, when a large car passed him. As he got within thirty yards of the injured man, whom he had previously seen on the pavement, Berry suddenly darted across the road. When about half-way across he hesitated, and witness applied his brakes. Then Berry stepped aside, and the witness released his brakes, as he was then clear of him, but Berry stepped in front of the car. As witness was within three or four feet away, the car skidded on the greasy road. At the time of the accident his pace was about fourteen miles an hour. After other evidence, the jury retired, and eventually returned a verdict of "Not guilty," defendant being thereupon discharged.

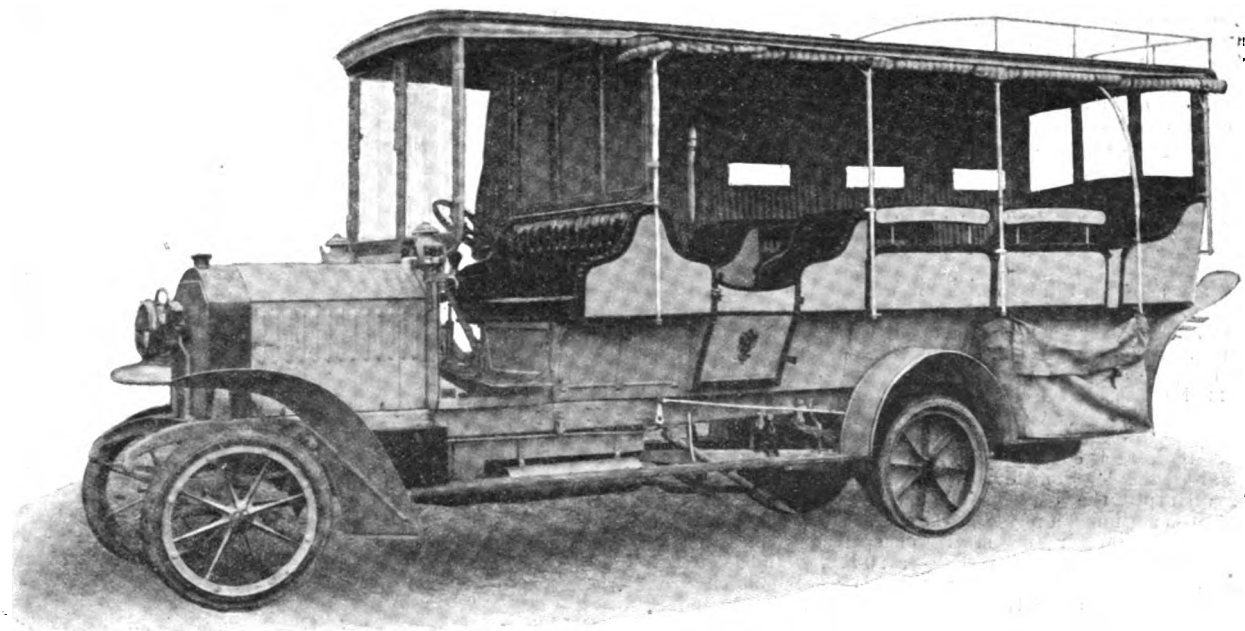
MOTOR-CAR BRAKES.

In the King's Bench Division, before the Lord Chief Justice, Mr. Justice Bigham and Mr. Justice Walton, an important decision with respect to motor-cars and their construction, given by the Divisional Court in the case of *Wilmott v. Southwell*, has been appealed against. Mr. Hogg explained that the case was an appeal against the conviction of Wilmott for driving in London a motor mail van, which was not fitted with two independent brakes as required by the regulations. The van had a brake which operated on the wheels. The wheels were driven by a broad leather band, and when the engine was cut off, the belt formed a very powerful brake.

The Lord Chief Justice: It means the wheels drive the engine instead of vice-versa. There has been a great deal of controversy about the matter. Some people think a great deal of harm is caused by using the engine as a brake, and others think it is a very good thing. He expressed the opinion that the case was too clear for argument. The regulations required two independent mechanical devices, and not the engine as brake and one mechanical device. The magistrate was right in convicting, and the appeal would be dismissed.

A DRIVER DISQUALIFIED.

At Chelmsford, R. H. Green, of Plaistow, was charged with driving a motor-car in a dangerous manner at Margareting. Mr. Suthery, for the prosecution, said the defendant hired the car to demonstrate its merits to a prospective purchaser. The defendant, who had been previously convicted of dangerous driving, was fined £2 and costs £2 14s. 6d.; his licence was suspended until February 23, 1909; and he was declared disqualified from obtaining a licence for eighteen months from that date.



One of the Austrian-Daimler 35-h.p. vehicles built for the public service between Neumarkt and Predazzo, in the South Tyrol.

SUMMONS AND CROSS SUMMONS.

At Aldershot, Mr. James Sturrock, of Kensington, answered on the 22nd inst. to three summonses alleging that on the 15th inst., at Hartley Bridge Flats, he drove a motor-car to the danger of the public, that he obstructed the passage of the free highway, and that he committed a common assault. Mr. W. Taylor Parkes, who appeared for the defendant, applied for a cross-summons against Col. Verner, who was the complainant. The justices granted the cross-summons, and adjourned the hearing until the 5th prox.

APPEAL ALLOWED.

The magistrates at the West Riding Sessions at Wakefield have heard an appeal by John Lees, motor-car driver, Penistone, against a conviction by the West Riding magistrates at Barnsley for driving a motor-car at a speed dangerous to the public. The alleged offence took place on July 23rd, on the road at Smithies, about three miles from Barnsley, and it was stated that two cars were racing at an excessive speed, and they created big clouds of dust, which were a great danger to the public. A cyclist was knocked down by appellant's car and injured. Both drivers were convicted, but the other man had not appealed. Appellant emphatically denied that he drove at an unreasonable speed, and said the clouds of dust which were raised were due to the rough and loose road. He had held a licence since licences were granted, and had driven regularly without complaint. During the whole drive on the day in question he never exceeded twenty miles an hour. The other occupants of the car having given evidence, the Bench allowed the appeal, with costs.

ALLEGED AIDING AND ABETTING.

Sidney Samuel Ingall, of 24, Handforth Road, Brixton, was summoned at the Horsham Petty Sessions, on Saturday, for exceeding the motor speed limit of ten miles an hour at Ifield on September 21, and George Howlett, of 193, Clapham Road, London, was summoned for wilfully aiding, counselling, and procuring Ingall to commit the offence for which he was summoned. P.s. Blackman said the speed was upwards of nineteen miles an hour. Ingall admitted the offence and a conviction at Huntingdonshire for driving to the danger of the public. He was fined £3 and costs. George Howlett pleaded not guilty to aiding and abetting Ingall. P.s. Blackman said when he stopped the car Howlett remarked: "He was going by my instructions. It's the first time I've been stopped. I'm very sorry." Witness said, "Do you know you are in the ten-mile limit?" to which defendant said, "Yes, I know that." Subsequently witness saw the defendant in London, when he said that when he engaged his driver he told him he knew nothing about motor-cars, but he knew what speed was, and if he (the driver) went beyond a speed limit and got summoned he would discharge him. When the driver got home on Monday he apologised for being stopped. P.s. Lee also gave evidence. Defendant said when he was stopped he remarked to the constable, "I'm very sorry we've been stopped. It is my first experience of being stopped," and his instructions to the driver had been imperative never to exceed the speed limit. He suggested the officer misunderstood what he said. He denied having said the driver was going under his instructions. The driver was called, and said he was in conversation with the constable while the sergeant was speaking to the defendant. He spoke as to the definite instructions he had received

never to exceed the speed limit or to get into any trouble with the police. The case was dismissed, each party having to pay their own costs.

BATCHES.

On recent days batches of motorists have been fined: at Mortlake (4), Chelmsford (9), Kingston (12), Brentford (6), Farnham (2), Saddleworth (3), Woking (11), Dewsbury (4), Horsham (8), Grantham (10), Ayr (7), Newcastle-on-Tyne, (3), Bromley, Kent, (5) Feltham (2).

POLICE "CONTROLS."

AMONG the Deeside police traps lately reported to us have been those from the overline bridge which crosses the railway near the farm of Houghhead, Aboyne, to the fortieth milestone at the farm of Braehead, Tulloch, a distance of about eight miles; a distance of about seven miles, from the overline bridge to the thirty-ninth milestone; and a third over a distance of about 1½ miles, from the farm of Houghhead to Boghead, Aboyne.

SEVERAL police controls have been established on the roads about Loch Lomond.

MOTORISTS are often timed at the cross roads at Shipley, near Horsham.

SEVERAL traps are reported in the Canterbury district, notably on the road to Folkestone.

A POLICE trap was being worked on Sunday in Harston village, on the Royston-Cambridge main road.

AT Liversedge—on the Huddersfield road—is a police trap over a distance of a quarter of a mile.

THE police are assiduous in their attentions to speedy motorists travelling through Ripley village.

THE Kingstown, near Carlisle, trap is frequently in operation.

AMONG the police traps recently established in Scotland are several in the vicinity of Ayr and another in the village of Poundland, Colmonell.

THE police have measured distances through Seaton Burn, Walbottle and Stanington, all leading to the court at Newcastle-on-Tyne.

BUSINESS NEWS.

THE Calmon Asbestos and Rubber Company, Ltd., Trinity Place, Tower Hill, London, E.C., are now supplying ready cut flange jointings made in ordinary asbestos millboard, or in the tougher compressed asbestos jointing. These washers are claimed, owing to their softer nature, to be much better than copper and asbestos joints in cases where the flanges are not a perfect fit against each other, and have the advantage of being cheaper in price.

VAUXHALL MOTORS, LTD., of 157, Knightsbridge, London, S.W., have taken new premises at 180, Great Portland Street, London, W. They hope to be in occupation some time during December, and will make their first start there at the beginning of the new year. In addition to having obtained ample room for the display of chassis and complete cars of all types, the company have also at Nos. 86, 87, and 88, Bolsover Street (immediately in the rear of the showrooms) adequate accommodation for full stocks of spare parts. The 1909 Vauxhall cars will consist of three models—a 20-h.p. of the 2,000 mile trial type, a 16-h.p. vehicle similar to the above, but having an engine 80 mm. by 100 mm. and a three-speed gear-box, and a 12-16-h.p. vehicle.

THE Junior and Otav Cars Co., Ltd., 117, Long Acre, London, W.C., inform us that they have changed their telegraphic address from "Bertelli, London," to "Juniotav, London."

OWING to the fact that so many firms have adopted the word "Simplex" in connection with the name of their cars, Ariel Motor, Ltd., while believing they were the first to make use of it, have decided to drop the word altogether. In future their cars will be known by the name "Ariel" for which they have a registered trade mark which fully covers their sole right to its use for motor-cars and the like.

MESSRS. DUCROS MERCEDES, LTD., write us with regard to their exhibit at the forthcoming show at Olympia as follows:—"Up to this year Messrs. Ducros, Mercedes, Ltd., have always obtained a position in the main hall, but, on account of their refusal to sign the bond, although representing undoubtedly the finest made car and the car with the largest reputation in the world, they have been relegated to possibly the worst position in the annexe. The space allotted to us will not permit of our showing more than three cars or chassis. For this reason we are only showing one complete car, viz., 45-h.p. limousine. Of the other types we shall show chassis only, viz., 35-h.p. live axle and 65-h.p. We are arranging, however, to have a very comprehensive range of Mercedes models, with latest designs of coachwork, touring, limousine and landaulet, on view at our head showrooms, 132, Long Acre, London, W.C., during the run of the show."

THE British Petroleum Company, Ltd., has issued an excellently printed brochure on their "Shell" spirit. Therein is set forth the method of distillation and shipment and the claims made for the excellence of the fuel.

THE seventh International Motor Exhibition of the Society of Motor Manufacturers and Traders, of which the King and Prince of Wales are patrons, will commence at Olympia on November 13th and will remain open till Saturday, November 21st. The inaugural dinner takes place on November 11th in the Whitehall Rooms, S.W.

FORTHCOMING EVENTS.

OCTOBER.

31st (Sat.).—Run of the Birmingham M.C.C. to Harringdon Hall.

NOVEMBER.

2nd (M.).—Mr. R. W. Brewer at the Society of Engineers on "The Flow of Liquid Fuels through Carburettor Nozzles."

3rd (Tu.).—Hull and East Riding A.C.C. Annual Dinner.

6th (F.).—Invitation Smoking Concert of the Stanley Cycling Club at the Queen's Hall, London, W.

10th (Tu.).—Meeting of the Incorporated Institution of Automobile Engineers to discuss the report of the Society of Motor Manufacturers and Traders on Horse-power Formulae of Petrol Engines.

11th (W.).—Prof. B. Hopkinson, at Institution of Automobile Engineers, on "A Complete Test of a Modern Petrol Engine."

13th-21st.—Olympia Motor Show, London.

14th (Sat.).—Thirty-third Annual Dinner of the Stanley Cycling Club, Hotel Metropole, London, S.W.

18th (W.).—Annual Dinner of the Motor Union.

20th-23rd.—Stanley Show at the Royal Agricultural Hall, London, N.

26th (Th.).—400-mile International Grand Prize Race of the Automobile Club of America.

28th (Sat.).—Opening of the Paris Motor Car Exhibition.

DECEMBER.

13th (Sun.).—Closing day of the Paris Salon.

23rd (W.).—Speed and reliability trials at Nagpur, Central Provinces.

JANUARY, 1909.

22nd-30th.—Scottish Motor Exhibition at the Waverley Market, Edinburgh.

26th.—Scottish Motor Trade Association Dinner at Edinburgh.

FEBRUARY.

War Office Fourteen-days' Trial for Light Tractors.

LIGHTING-UP TIMES—LONDON.

| | | | | | | |
|----------------|-----|----------|-----|----------|-----|----------|
| Oct. 31st—5.34 | ... | 2nd—5.31 | ... | 4th—5.28 | ... | 6th—5.24 |
| Nov. 1st—5.32 | ... | 3rd—5.30 | ... | 5th—5.26 | ... | 7th—5.23 |

To find the approximate lighting-up time in November for Birmingham 5 minutes should be added to the above times, 5 for Manchester, and 8 for Glasgow.

AUTOMOBILE ACCIDENTS.

DR. S. FRAZER, medical officer at Brentwood, and a member of the Billericay Rural Council, was being driven in a motor-car near Hedley Common by Mr. Daniel Cornish, when the car suddenly broke down and both gentlemen were precipitated into the roadway. Dr. Frazer fractured his left wrist, while Mr. Cornish severely injured one of his arms and was otherwise cut about. Assistance was rendered, and they were conveyed home.

ACCORDING to Mr. H. Gladstone, the number of motor-car accidents during the months from January to September of the present year was 2,945.

WHEN walking in Verulam Road, St. Albans, on Sunday night, a young couple were knocked down by a motor-car. It is stated that the occupants of the car drove on towards London, although people standing by called out to them to stop.

A SERIOUS motor smash occurred early on Tuesday morning in the vicinity of Kirkstall Abbey, Leeds. Entering Abbey Road there is a rather awkward bend, and the driver of the car failed to keep it in the middle of the road. Skidding badly on the back wheels on the wet and greasy road, it collided with a horse trough, then swung into and partially dislodged a tramway standard, and finally ran into the bank so violently that the car was completely wrecked. The driver was thrown clear and escaped injury, but the two passengers sustained serious injuries.

TO CORRESPONDENTS.

All communications intended for insertion in this Journal or relating to Editorial matters should be addressed to THE EDITORIAL DEPARTMENT, MOTOR-CAR JOURNAL, 27-33, Charing Cross Road, London, W.C., and must be written on one side of the paper only. Letters must in all cases be accompanied by the name and address of the writer, as no notice will be taken of anonymous communications.

To insure insertion communications and contributions must be in the Editor's hands by Tuesday forenoon of the week in which the same are intended to appear. Disappointment may be caused by non-compliance with this rule, and to avoid this earlier receipt, if possible, is necessary.

Photographers, both professional and amateur, are invited to send photographs of current events or of motoring scenes and incidents. The fee, if any, required for reproduction should be stated in each case, otherwise no liability will be accepted.

THE Motor-Car Journal.

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LONDON, SATURDAY, NOVEMBER 7, 1908.

[No. 505.]

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COMMENTS.



EARLY in the year the R.A.C. discouraged provincial clubs from organising speed contests among their members on public roads, and now, in order to more completely close such trials, the Society of Motor Manufacturers and Traders has decided to ask its members not to participate in such events. This will have the effect of considerably curtailing many club programmes for next season. Those organisations which have among their membership gentlemen who own large estates will have a decided advantage in that respect. But no one is likely to complain of the efforts now at work to prevent a repetition of the contests on public roads—true these have been unattended by accidents, but they have probably caused some of the public to have an erroneous view of the motor-car.

M.P.'s and Motoring.

THE three tailors of Tooley Street, whose attempts to reform the national life did not affect things greatly, have attained a certain prominence in historic annals. We doubt, however, whether such permanent fame is reserved for the three members of Parliament who, in a circular issued to their fellow members of Parliament, have gravely asserted that "The position of motors in relation to public traffic, public rights, and public roads becomes day by day more intolerable." Possessed of such an idea they have therefore convened a meeting of M.P.'s to consider what steps shall be taken to reduce the evil to tolerable limits. We hope those members who motor—Sir Henry Norman, the Hon. Arthur Stanley, Mr. A. du Cros, Mr. Stopford Brooke, to mention but a few—will attend to show Messrs. Harold Cox, Cathcart Wason and Luke White that there is another side to the question which they have presented in such a prejudiced fashion.

Horse-Power and Rating Formulae.

ON Wednesday, at the Institution of Mechanical Engineers, a discussion on Horse Power and Rating Formulae took place, in the presence of a Commission, nominated as follows: one-third by the Royal Automobile Club, one-third by the Institution of Automobile Engineers, and one-third by the Society of Motor Manufacturers and Traders. Mr. T. H. D. Berridge, M.P., who was announced to occupy the chair, was to take the sense of the meeting in settling the questions to be submitted to the Commission for its report.

A Suggestion.

IN connection with the efforts now being made to secure an authoritative system of rating Mr. G. H. Baillie's contribution to the discussion is interesting. As he points out, the data actually do exist; each maker of engines must know the h.p. of his own motors. All that is wanted is to collect this knowledge, and with some assurance that the different makers have measured the h.p. under similar conditions. He then makes this suggestion to the Commission that is dealing

with the subject:—That a small committee independent of all trade influences, such as could be formed from the Technical Committee of the R.A.C., should prescribe conditions for testing the normal maximum h.p. of an engine, and that the different makers should supply the results of their tests on new types or sizes of engines put on the market. The results would have to be treated as confidential by the Committee, otherwise it might be difficult to ensure getting the figures of normal engines. The Committee might then, at the beginning of each year, issue a nominal h.p. formula, based on these results.

Cambridge University Regulations.

THE Proctorial Syndicate at Cambridge have had under consideration certain questions arising in connection with the use by persons *in statu pupillari* of motor-cars and other motor vehicles. It has been represented to them by the proctorial body that well-grounded complaints have been made of reckless and inconsiderate driving by persons *in statu pupillari* in and near Cambridge. The system of county registration has been found inadequate for identification, and the Syndicate propose that no person *in statu pupillari* shall keep, or use, a motor vehicle within the precincts of the University until he shall have obtained permission from some member of the proctorial body. This permission will not be granted until a sufficient description of the vehicle has been deposited with the proctorial body together with evidence that similar permission has been obtained from the college tutor of the student seeking proctorial licence. It has further been brought to the notice of the Syndicate that the word vehicle as used in the prohibitory notices with regard to driving on Sundays may be taken with its various contexts to refer exclusively to horse-drawn vehicles. This was the original meaning of these notices, but the Syndicate think that the time has come for extending their operation.

Teaching Driving in Parks.

THE bye-laws governing the management of the parks, gardens, and open spaces under the control of the London County Council have just been amended so as to include a prohibition of "learning or teaching the driving of any motor vehicle." On another page we give the new wording of the bye-law which deals with the matter; and now draw prominent attention to the point as one of importance to those who have ever taken advantage of the absence of traffic during certain hours in the parks to obtain confidence at the wheel. Apparently only the experienced motorist or those well qualified to drive may now enter the London parks. No novice may drive therein.

The Volturette Record.

ON the Brooklands track, on the 28th ult., M. Naudin accomplished an excellent performance on a Sizaire-Naudin car, fitted with a motor having a 3.934 in. bore, 6-h.p. R.A.C. rating. The day was wet and windy, but, in spite of these disadvantages, M. Naudin—who was accompanied by M. Sizaire—accomplished the half-mile speed test at a rate of 66.48 miles per hour, the fifty miles he covered in 45 min. 54.247 sec., sixty-

five miles 755 yards were accomplished in the hour, and the 100 miles took exactly 1 hour 31 min. 53.452 sec. This constitutes a world's record for a car of the voiturette type, and as such the performance was really remarkable. The conditions under which the car ran were those arranged for the Grand Prix des Voiturettes, and the time of M. Naudin for each lap taken independently gives an idea of the extraordinarily regular running of the car. The fastest lap was the seventeenth, which was covered in 2 min. 30 sec.

London Traffic Board.

THE Deputation from the London County Council which is to meet the Prime Minister, urging him to give precedence to the proposals for a Traffic Board of London, will really follow the lines of the Royal Commission on London locomotion, whose work, though so completely done, has been singularly neglected by the responsible authorities. The main feature of their report was in the recommendation for a Traffic Board, which should not only exercise an advisory function with regard to widening thoroughfares in London itself, but should report on the important main roads leading out of London, Building Laws as affecting districts not yet built over within the area of Greater London, and the general consolidation and amendment of laws affecting traffic.



One of the Aries Petrol Motor Lorries with its novel two-wheel tractor used in the recent military manoeuvres in France.

Orthodox Lines.

DESIGNERS of steam cars have been restricted in their scope of observation as compared with those responsible for petrol cars. The latter have had the experience of many competitors to guide them; those interested in steam car construction have had little direction in that respect. Hitherto attention has been greatly centred on the generation of steam and the economy of the engine, while, now that such matters have had a full measure of study, designers are able to give more heed to the appearance of things, and, as will be evident at the forthcoming show, there will be evidences that steam cars are being built still more closely on the orthodox lines which have been associated with petrol automobiles.

Magistrates and Motorists.

THE recent conviction at the Spittlegate Sessions, Grantham, of Lord Savile's chauffeur, for driving at excessive speed on the Great North Road, has led to correspondence between Lord Savile and Major Longstaffe, chairman of the Bench, who have sanctioned the publication of the letters. Lord Savile complained that the evidence of the Grantham police was not always trustworthy, and said that all sensible and unprejudiced magistrates agreed that the police would be far better employed

in endeavouring to catch murderers and burglars, who now pursued their calling without interruption because the officers were lying behind fences trapping unoffending motorists who might be exceeding the speed-limit by two miles an hour on a clear road. Major Longstaffe, having taken his colleagues into consultation, replied that, as Lord Savile's reflections on the impartiality of the Bench had been made by one who was himself a magistrate of an adjoining county, and repeated by him in the public Press, they could not allow them to pass without formal protest. They were therefore taking steps to bring the whole correspondence to the notice of the Lord Chancellor.

At Cross Roads.

ELSEWHERE we report a legal pronouncement in Scotland which establishes, under the authority of the Supreme Court north of the Tweed, the principle which has been recognised by experienced users of the road as the proper one, but which has hitherto had the confirmation of inferior courts only, viz., that vehicles going on to a main road from a side road are bound to go slow and with special caution, and to have regard to the possibility of there being through going traffic on the main road. The facts of the case which has secured this pronouncement of the Court of Session are given on page 779. In such instances there must be much give and take, with a prior understanding as to the way in which the respective parties are to act. That those entering from side roads should give way to those on the main road, and that both should act in the spirit of courtesy that enables pedestrians to get along on the footpath without physically encountering each other seems reasonable—and may now be regarded as the legal view.

Why Oppose?

THE Haslemere Parish Council have recently come into prominence by reason of their discussions on automobile matters, and at length they have decided to urge the Surrey County Council to make application for a ten miles Speed Limit to be enforced on several roads in the district. The Chairman referred to the difficulty in securing such impositions being made, as the motoring organisations fought every case. We could point out that it is this fact which secures something like equity in the matter, otherwise Parish Councils might be tempted to seek restriction and prohibition without any regard to the convenience of other people but themselves.

Central v. Local Authority.

THE wisdom of not allowing the small rural councils to have administrative sway with regard to motoring matters has just been illustrated in the West Riding of Yorkshire. The Northallerton Urban District Council urged the Highways Committee of the West Riding County Council to petition to the Local Government Board for a ten miles an hour speed limit for motor-cars. The Highways Committee, recognising their responsibility in the matter, went thoroughly into the merits of the application, and found from the report of the Chief Constable that no complaints had been made to the police by the public of the locality nor had it been found necessary to caution any driver for excessive speed, reckless or negligent driving. In fact, from a census which was taken on a recent day, when no fewer than 746 cars passed through the main street, it was found that the average speed was 11.75 miles per hour. Under such circumstances the County Council have rightly declined to accede to the request of a small body whose attitude was apparently dictated by prejudice rather than by a desire to secure equity in the local administration.

ICHABOD—it is past. When the word Ichabod was mentioned in "Motoring Illustrated," in the beginning of this year, the meaning was misunderstood, but now we understand its full significance.

MOTORING ACROSS AUSTRALIA.

FROM ADELAIDE TO PORT DARWIN.

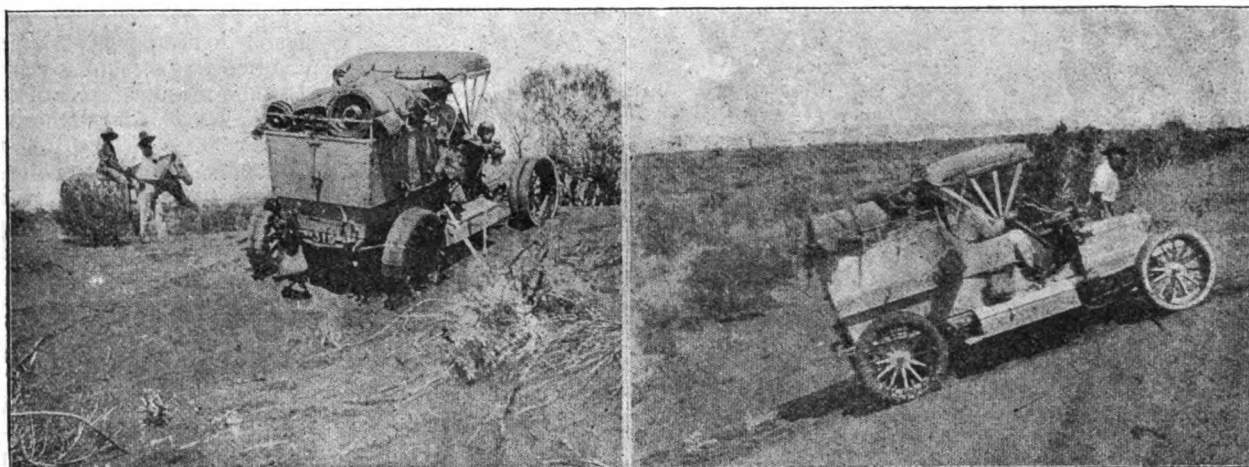
IN a recent issue we recorded the successful completion of a journey across Australia by Messrs. H. H. Dutton and H. M. Aunger on a 25-h.p. Talbot car. The latter gentleman has since visited Melbourne, where he was interviewed by the "Australian Motorist." It is well known that this was Messrs. Dutton and Aunger's second attempt to cross the wilderness, and part of their programme was to pick up the first car where it had been temporarily abandoned. This they successfully accomplished, and took both vehicles through to Port Darwin.

Mr. Aunger, who is of nuggety, Burns-like build, and looks as if the rigours of the trip had only added to the condition of a naturally fine physique, is a motorist by instinct as well as training. He took on the trip as an adventure in that casual way which such men have, and seems not disinclined to do it again. "Mr. Dutton said one day that he would like the trip, if I would go with him," he quietly observed, "and so we went." "We left Adelaide on June 30th, and spent the first night at Mr. Dutton's home, Anlaby, sixty miles from the city. Next day we spun along the main road, and were eventually met by the Burra Automobile Club. The squatters about the district are mostly motorists. They gave us a good time, and we passed on

swallowed us up, petrol, provisions, car and all. Every mile now was won by hard work, but the car behaved marvellously well, and we came by slow stages to the Anna Creek head station, and, continuing on a few miles, ended the detour by again striking the railway.

Without pausing, we pressed on to Oodnadatta, 675 miles from Adelaide. And now a fresh kind of trouble beset us. The country was riddled with washouts. The winter's storm watercourses tear up the sandy soil into holes and gullies which in the dry season remain rigid and most ugly for travelling. We had to simply smash over a long tract of this nature as best we could. At Neil's River came one of our worst experiences to date. We had to dismount and break a causeway through the high banks to effect a crossing. We used the earth broken from the banks to fill up a passage across the watercourse wide enough to let the car pass over, and then we rushed her through, chancing whether the earth would fall away beneath her, or that the car would roll over sideways. Luckily, we got through, and thus, with various adventures every hour, we reached Oodnadatta, after twelve days' run.

Half a mile out from Oodnadatta, which is not yet a palatial city, we struck Alburga Creek, half a mile wide, the bottom rumpled up into lumps of uneven sand. The car simply flung herself from one to another of these in a series of jerky bounds. There was no other way of progressing. Some fair running in



Motoring Across Australia.—Two typical views of the country passed through by Messrs. Dutton and Aunger.

to Petersburg, and still along the main road, without any difficulty, as far as Hawker, 300 miles inland.

From there we commenced rougher experiences, on a bridle track, as far as Hergott Springs. Then the track became worse every mile. There were several ranges of hills and a lot of bamboo saltbush country and the road simply dwindled out of existence. Our next point was Strangway Springs, on the railway. The soil became sandy and broken by several bad watercourses. At Stewart's Creek and the Finnis we found difficulties in crossing, particularly the former, where the banks are 60 ft. high, with a few feet of mud and water in the channel. From the springs we left the line and made a detour to avoid what are known as the Strangway Sandhills. We followed up the banks of the Warrender Creek, and crossed it at its junction with the Anna, keeping as much as possible along the margins of the streams, in order to take advantage of the natural levels of the country. But in this region difficulties are not to be avoided for long. Presently we came across a succession of bad sandhills. We pushed the car and endeavoured to take the rises flying; but in one day we were not able to do more than ten miles. Motoring is strenuous work when you have not only to find your course through a wilderness, but make a road for the car whilst advancing, and even build your own bridges. Crossing the Warrender, we had to make a corduroy track of branches and saplings which we cut out of the scrub, for in the bottom of the creek was a treacherous quicksand, which would otherwise have

the region of Blood's Creek led us on to a labyrinth of boulders and sharp-edged stones, over hundreds of acres of which we rattled frightfully, but the tyres stood the strain marvellously. More trouble of a new type followed on our departure from Charlotte Waters. The country is sandy all the way to Alice Springs, and to vary the monotony there are forty-nine sandhills to be crossed in forty-five miles.

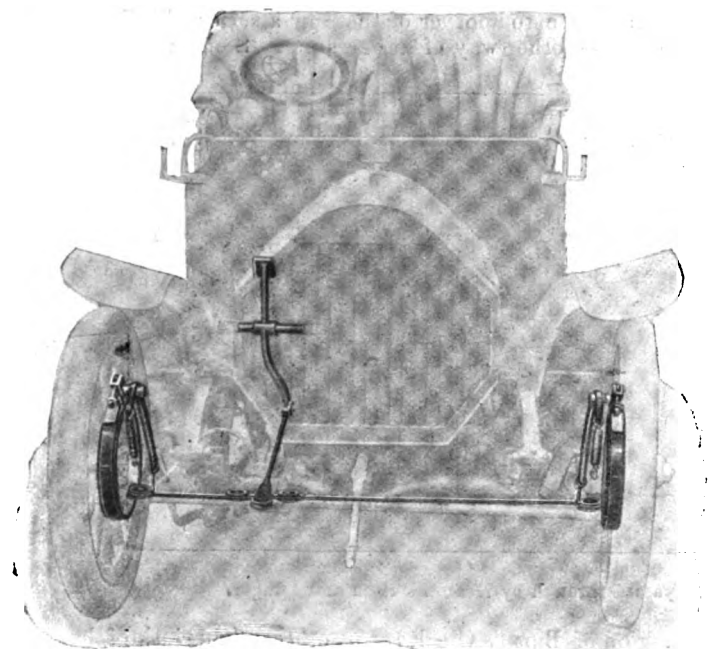
And here we were at last in the centre of Australia, 900 miles from Adelaide, and only half our journey accomplished. And trouble upon trouble, we well knew, was piled up ahead. To begin with, the McDonnell Range is very rough and sandy. At one part we had to get out of the car and roll away many boulders before it was possible to proceed. This laborious progress tried our patience a good deal, but yet another variety of obstacle this forbidding land had to raise against us. This we found on Burke's Plain, where for 80 miles we crunched through the thick, harsh grasses of the desert, which had sprung up everywhere four feet high after the rains. The growth seems almost miraculous. The grass clogged our wheels and got tangled in the engines and gear; but worse was the bother experienced in thousands of anthills hidden in the grass. The larger ones we could see and avoid, but we staggered amongst the smaller ones with a series of bumps which made the teeth rattle. At last the car was brought to a standstill, and we had to chop the anthills down to clear a course for the car."

(To be concluded.)

THE ALLEN-LIVERSIDGE FRONT WHEEL BRAKE SYSTEM.

ON various occasions during the last few years we have referred to the Allen front wheel brake arrangement, the object of which is to overcome the trouble of sideslip or skidding, and at the same time to greatly reduce the wear and tear on the driving mechanism and tyres of cars, doing away with shock during the application of the brakes, and affording double braking power in cases of emergency. The idea has been so far developed that it is now being put on the market by the Allen-Liversidge Front Wheel Brakes, Ltd., of 106, Victoria Street, Westminster, who last week gave a demonstration of the advantages of the system at the garage of the Humber Company in Brook Street, Holborn, E.C.

As will be seen from the accompanying illustration, the brakes are of the ordinary band type, mounted close up against the spokes between the inner side of the wheel and the steering pivot, and are controlled by a pedal on the driver's footboard. The actuating lever which draws the band on the drum on one wheel is coupled to the similar actuating lever on the other by means of a steel cable or other flexible coupling. The latter



View of 15-20-h.p. Humber Car showing the Allen-Liversidge Front Wheel Brakes and Operating Mechanism in Relief.

runs parallel to the line of the axle, and its freedom of movement is obtained by transmitting the braking action through a pulley on which the coupling cable is adapted to run. This can take place irrespective of the pivoting action of the wheels, and is, therefore, not affected by the turning of the road wheels for steering purposes. The flexible coupling, before it is attached to the brake lever, at either end passes round a pulley pivoted to an extension of the steering pivot, and this is also capable of a movement independent of the steering movement. By this means a pull on the brake lever through the pedal actuates each brake simultaneously and evenly, as the automatic adjustment or compensation due to the cable running on the pulleys takes place exactly evenly on both sides, the flexible cable simply sliding over the pulleys and adjusting itself automatically to the altered condition of the wheels, without in any way affecting the action of the brakes, either when the latter are applied or are released. It will be seen, therefore, that braking and steering are absolutely independent movements and do not in any way affect each other. The application of the brake makes no difference to the steering in any way. Another point is that, whatever the angle of the front road wheels, the tension of the cable is not affected.

To demonstrate the efficiency of the new front-wheel brakes, a 15-20-h.p. Coventry Humber fitted with them was driven over a portion of the Humber garage which had been made slippery for the occasion. When the ordinary hand-brake acting on the rear wheels was applied the vehicle skidded round to an alarming degree; on the other hand, when the front wheel brakes were applied a perfectly straight course was maintained until the car came to a stand. A test was also carried out on the road, when the capacity of the new brakes to pull the car up in an extremely short distance was clearly shown, while it may also be mentioned that a slight pressure on the actuating pedal appeared to steady the car where, under ordinary circumstances, sideslipping would have been expected. One great advantage of the system is that it divides the braking power over the four wheels, and thus all are available in case of emergency, whereas in the ordinary arrangement, should anything go wrong with the transmission mechanism, the driver has only one set of brakes to depend on. Not only so, but it is claimed that a greater braking power is afforded by applying it to the front road wheels, thus rendering the usual countershaft brake unnecessary, and that, owing to the increased grip of the road it gives to the latter, steering on greasy corners is facilitated rather than interfered with. It is suggested by the company that when the front-wheel brakes are used, they should be connected up to the usual brake pedal and regarded as the running brake, the rear-wheel brakes being kept in reserve for emergencies.

Altogether the Allen-Liversidge arrangement appears to be a step in the right direction, and on this account is worthy of the attention not only of motorists and manufacturers of motor-cars, but also of the engineers of public service and taxi-cab concerns. So confident are the makers, that they are prepared to fit the front wheel brakes to cars with the condition that before delivery the vehicle so equipped shall be tested on a greased surface equal to the worst conditions of a London street, and if any sideslip be then occasioned by the application of the front-wheel brakes no charge will be made.

THE KEMPSHALL TYRE.

IT will be of interest to motorists generally to know that the Kempshall motor tyre, which has been re-designed, will be presented in a new pattern at the forthcoming Show. The idea has been to retain the full resiliency of the ordinary pneumatic tyre at a considerably reduced air pressure as well as to secure the additional advantage of a non-skid band. We may mention that, in order to demonstrate the merits of the improved form of tyre, a run to Brighton was organised from Northumberland Avenue, London—where the headquarters of the Kempshall Company are located—on Friday of last week. Mr. Schack Somers, the managing director of the Kempshall Tyre Company, was fortunate in securing a fleet of six-cylinder Standard cars on which to carry out this trial, which convinced us that, so far as ease of running and entire absence of skidding are concerned, nothing could have been more effective than the behaviour of the Kempshall tyre. In the new pattern the side walls of the tyre have been stiffened. The ribs from the "suction rings" of the tread now extends to the bead, the effect being to considerably strengthen the whole tyre. Regarded from every point of view the trial was a great success. The party went south and returned from Brighton without a single mishap, the universal feeling being strongly in favour of the Kempshall tyre on all the points that are desirable.

At the opening meeting of the new session of the Institution of Civil Engineers on Tuesday Mr. J. C. Inglis, the president, said it was an interesting speculation how far the steady development of traction by road-motors, both for passenger and goods, would direct outlying sources of traffic into definite channels. Undoubtedly the introduction of road-motors marked a stage in the development of transport in this country.

GOSSIP FROM PARIS.

WILL there be a Paris Salon de l'Automobile in 1909? The question of transforming the great annual show into a biennial exhibition was raised last year, but now the movement in favour of the change has assumed a more definite character than it ever had before. The truth is most of the large manufacturers consider they would sell just as many cars if there was no Salon, and they would like to suppress the heavy expense the show entails on them. I personally know that several of the big firms are willing to undertake not to participate in any automobile exhibition in France in 1909, and I am informed on very good authority that most of those who manufacture at least 100 chassis a year will shortly be asked to sign an engagement to that effect under penalty of the payment of £2,000. In the case of that accord being realised the smaller firms will in their turn be requested to adhere to it. If this campaign succeeds, it is very likely the same means will be adopted to also transform the annual Grand Prix race into a biennial competition, especially if by chance the French happen to carry off the prize next July.

ON Thursday last week the Sporting Committee of the A.C.F. paid an official visit of inspection to the Anjou circuit with a view to its adoption for the Grand Prix of 1909. The following day the Municipal Council of Angers voted a subvention of £1,000 to promote the race. The unanimous support it has found from all the communes through which it passes and the equally unanimous opinion of the Sporting Committee in favour of the circuit leaves no doubt of it being officially adopted. It has, however, one determined opponent. It is a M. Moreau, or someone biding his identity under that name, which is as common in France as Smith is in England. He wrote to M. de Knyff threatening to shoot him if he came in the capacity of President of the Sporting Committee to examine the circuit. M. de Knyff was not, however, killed, though he did drive round the whole of the circuit. The threatening letter, which also contained a most violent and senseless series of invectives against motor-cars and their owners, was handed to the Prefect of the department, who ordered the Public Prosecutor to open a judicial inquiry. On their side, M. de Knyff and his colleagues of the Sporting Committee, who were all condemned to death, have offered a reward of £20 to anyone who may discover M. Moreau or the individual who signed the threatening letter with that name.

HENRY FARMAN has flown from the military camp of Chalons to Rheims, high over the trees, the church steeples, the villages, roads, the railway lines, and the telegraph poles. After accomplishing this feat, unprecedented in the history of man, the English aviator, born in France, announced the fact to his parents in the simple, unpretending words telegraphed from Rheims: "Have flown from Chalons to Rheims without incidents." That depicts the man. He never boasts of what he has done and never

talks of what he intends to try to achieve. I remember how patiently he worked last autumn after he had in October made what may be called his first hops off the ground of a few hundred yards till he had won the Deutsch-Archdeacon prize by flying a kilometre, starting out and returning to his point of departure. Though he had thus demonstrated the possibility not only of flight on a machine heavier than the air, but also that man could direct the machine at will, his head was not turned by all the praise lavished on him. He made no long speeches at the banquets given in his honour, and was, indeed, with his retiring nature, incapable of doing so. Henry Farman is a man of "deeds, not words." His silent determination to vanquish showed itself publicly at eighteen years of age, when he entered the lists against so many champion cyclists in the Paris-Clermont-Ferrand race, which he won with an advance of twenty minutes on his nearest rival. A couple of years later he carried off the cycling championship of France for 100 kilometres, and subsequently, when the automobile races were instituted,

won with his now proverbial modesty several of the most coveted prizes, and among them the trophy awarded for the first of the heavy cars in the Paris-Vienna race.

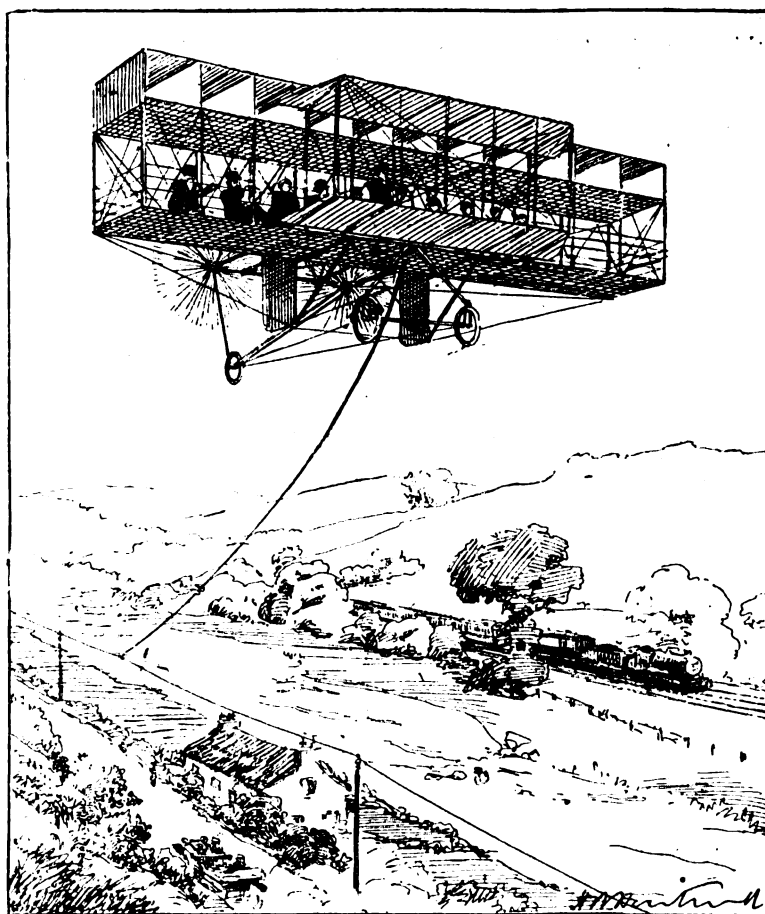
DURING that period of his life he was at the same time studying art in the studio of the great French artist Courtois with as much silent determination to succeed as he showed in sport. But with his true British common sense he at length recognised that in art he could never hope to excel all others, and he wished to be at the top of the tree, in fact a leader. Practising his art of painting as a pastime and working with his brother Dick in the automobile business, he was constantly on the watch for something new in which he could lead the way. He was not very long in finding it in aviation, which he studied all the more passionately because he was conscious it would operate a yet greater revolution than that already effected by the motor-car, and because the conquest of the air would realise perhaps the most deeply seated ambition of the human race. Henry Farman is by his English blood and his French home

the incarnation of the Entente Cordiale. He loves France as his native land and England as his mother country. Though he has as yet never spoken of attempting it, he may one day in a near future seek to link the two countries yet closer together by creating an aerial road between them by flying across the Channel.

MARNEY.

THE Lansdowne Motor Garage is located at the corner of Belvedere Road, Upper Norwood. It has motor landaulets for hire and is finding useful employment in connection with theatre parties and the like.

"PLEASE remember that your acetylene lights are a nuisance to everybody else but yourself, and don't use them in city streets or where not absolutely necessary." Such is the advice which is being given on printed cards to members by the Rhode Island Automobile Club.



Trackless Traffic; or the Trolley Aeroplane.
Fresh Air! No Dust! No Smells! No Police Traps—as yet!
By permission of ["The Electrical Times."]

CONTINENTAL NOTES.

The Prince Henry of Prussia Touring Car Competition.

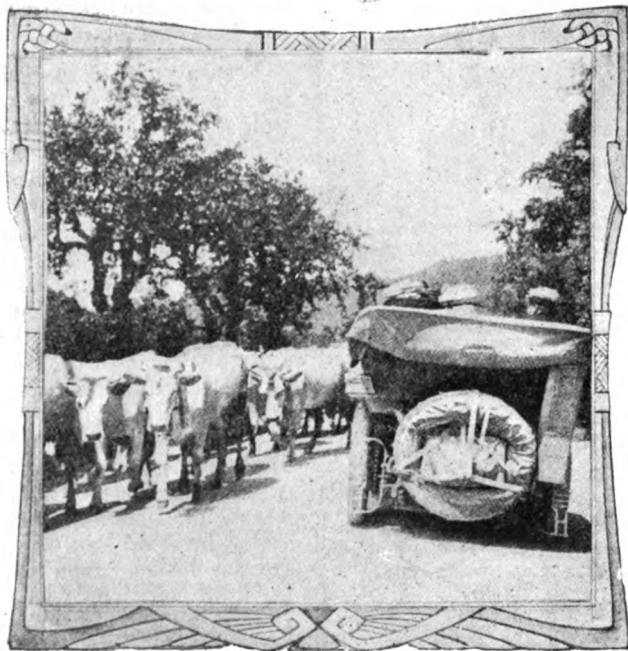
As briefly announced in our last issue, the 1909 Prince Henry of Prussia touring car competition is to be held from June 10th to 18th. Starting from Berlin, the daily runs will be to Breslau, Tatra Lomnicz, Budapest, Vienna, Salzburg, and Munich. There will be a day's rest at both Budapest and Vienna, while the prizes will be distributed at a banquet held at Munich on June 18th.

A Lorraine-Dietrich Two-cylinder Car.

Following the tendency amongst the leading French motor manufacturers to build cars of smaller horse-power than hitherto comes the news that the Lorraine-Dietrich Company are introducing for the coming season a 10-h.p. two-cylinder live-axle car. The engine, which has a bore of 80 mm. by 120 mm. stroke, will be fitted with a high-tension magneto, thermo-syphon water circulation, and three speeds, with direct drive on the top.

Motor Races in Belgium.

It will be remembered that this year the Ardennes races had to be abandoned owing to the dates clashing with the



Touring in Italy.—A Snapshot on the road to Naples.

events organised in Italy. Apparently the Belgian Automobile Club does not mean to be out of the running next year, for it has already decided to hold the Coupe de Liedekerke contest and a race for light cars on the Ardennes circuit at the end of August next. There is also some talk of organising a race for six-cylinder vehicles, and for machines having four-cylinder engines of a maximum bore of 90 mm.

Aeronautical News.

The past week is one which will mark an epoch in the history of aviation. Principal interest centres round the performances of Henry Farman, who scored a fresh success with his aeroplane on Friday, the 30th ult., when he succeeded in making the journey from Châlons to Rheims in twenty minutes and without coming to earth. This is the longest straight flight that has yet been accomplished with a heavier-than-air machine, the distance as the crow flies being about seventeen miles. Farman brought his week's exploits to an end on Saturday by winning the French Aero Club's prize of £100 for the first officially observed ascent to a height of 25 metres (82 ft.). The course was marked out by a series of captive balloons and a long pole set on a tower. Farman found no difficulty in executing his task; his aeroplane

on leaving the ground rose at once to a height of about 100 ft., or some 20ft. more than required to win the prize, and after circling twice above the captive balloons he descended without mishap.

—Wilbur Wright gave a first lesson in aeroplaning to Comte de Lambert on Wednesday last week. Three flights were made, Mr. Wright working the levers controlling the raising and lowering of the wings and connecting with the rear rudder, while Comte de Lambert handled the lever commanding the front rudder. Following a slight accident on the 30th ult., Wright attached a new motor to his machine, and on Saturday, at Anvours carried out a series of flights in the presence of the French Army Commission, and subsequently took a passenger for a ten minutes' trip in the air. —On the 30th ult. Blériot made another attempt at Chartres to win the prize offered by the French Aero Club for the greatest height reached in an aeroplane. After a flight of fifteen seconds the motor suddenly stopped, and the machine came down, the shock of the fall seriously damaging the framework and warping the propellers. This is the fifth or sixth time that M. Blériot has had an accident in mid-air, but he has so far always escaped any serious injury. His greatest success to date was achieved on Saturday, when, after a brief trial, he swept away from his practice ground and was quickly lost to sight. Motor troubles caused him to descend twice, but he flew in all from Chartres to Toury and back, a distance of 16½ miles. He passed directly over three villages, and covered one stretch of 8½ miles in eleven minutes. —The Paris Municipal Council has allocated the sum of £600 to the Ligue Nationale Aérienne for the encouragement of aviation. The League has also received two more prizes of £400 each —one for the first aeroplanist who flies 100 kilometres without stopping, in less than two hours; the other for the first flight from Châlons to Issy, near Paris, a distance of 112 miles. —The new dirigible balloon, the Clément-Bayard, with four passengers on board, made a successful initial trial trip on Thursday last week over Paris from its shed at Sartrouville, in the suburbs. The balloon, which is fitted with an engine of 120-h.p., resembles in general lines the Ville de Paris and the Patrie; it is 60 metres long, and 10½ metres in diameter. —Herr Meschler, a well-known German engineer, has constructed, at Tempelhof, near Berlin, an aeroplane that follows very closely the lines of the Wright machine. The preliminary trials are reported to have given great satisfaction. —Baron de Caters, the well-known Belgian motorist, made a trial with his aeroplane a few days ago. The "Albatross," as it is called, in the course of its flight rose to a height of about 6 ft. and flew nearly a mile. —The Italian military airship accomplished a notable feat on Saturday last, going from its shed at Vigna di Valle, near Bracciano, to Rome and back.

Speed Trials in Russia.

A series of flying kilometre speed trials was held at Moscow a few days ago; the best time recorded was that of M. Prochoroff on a Fiat, who covered the distance in 39 sec., equal to a speed of about 61 miles per hour.

A New Aeroplane Engine.

One of the new Renault air-cooled engines for aeroplane purposes was last week subjected to an official test before the officials of the French Automobile Club. The motor, which weighs complete about 3 cwt., ran for three hours without a stop, and at 900 revolutions per minute developed 58-h.p.

Miscellaneous Items.

The Criminal Investigation Department of the Berlin police force has lately acquired a motor-car for the use of detectives engaged more especially in important murder cases and burglaries. —The leading importers of foreign motor-cars in Brussels have lately resolved to only supply spare parts for, or carry out any repairs to, such vehicles as are purchased through the official agents in the country. The cars of tourists are of course excepted. —The German Imperial Automobile Club proposes to hold a Reliability Trial of light cars in July next year. —A service of motor taxi-cabs has just been started in Turin. —An automobile club has lately been formed at Pilsen, Austria.

THE SOCIAL WHIRL.

THE King has been staying at Moulton Paddocks with Sir Ernest Cassel, and taking motor-car drives in the vicinity. On Tuesday afternoon the Queen went out for a motor drive with Princess Victoria from Buckingham Palace.

THE Prince and Princess of Wales went on Wednesday to Wynyard Park, Stockton, as the guests of the Marquis and Marchioness of Londonderry, and will remain there till the 7th inst. The programme includes pheasant shooting for the Prince and motor-car excursions for the Princess, on Thursday and Friday to Lumley Castle, near Chester-le-Street, and into Durham respectively.

THE third annual dinner of the Automobile Co-operative Association was a very pleasant gathering, over which the Earl of Onslow presided, and amongst those who were present were Viscount Massereene and Ferrard, Lord Leigh, Sir Wroth Lethbridge, Lady Berwick, Sir O'Bryen Hoare, Mr. Solomon J. Solomon, R.A., and Mr. Staveley Hill, M.P. The latter proposed the toast of the evening, and congratulated them on having recently secured the hon. member for Orkney and Shetland, who had not always been regarded as a friend of motorists.

I REGRET to hear that the recovery of Lord Curzon, after his recent motor-car accident, is proving a more tedious matter than was originally anticipated. The shock was really more serious than was announced at the time, and a sea cruise is now in serious contemplation by his lordship.

MR. J. T. SEWELL, who, as president for the year of the Press Club, took the chair at the annual dinner on Saturday, when the Earl of Crewe was the principal speaker, is also one of the best-known members of the Motor Cycling Club.

THE activity of the Aero Club has caused many people to forget that the oldest society in this country devoted to aeronautics is the Aeronautical Society of Great Britain, which was founded in 1866. It is, according to Col. J. D. Fullerton, R.E. (retired), the hon. secretary, the oldest society of the kind in the world, and numbers among its members nearly all the principal scientific workers on this subject. Lord Rayleigh, President R.S., Sir W. Crookes, F.R.S., Mr. Davies, F.R.S., Sir Hiram Maxim, Dr. Shaw, F.R.S., Colonel Templer Major Baden-Powell, and Colonel Capper, R.E., are members of the council, and the negotiations for the acquisition of a large experimental ground for the use of members are now practically complete.

THE Hon. Eustace Dawnay has given consent to the erection of a notice board at West Heslerton, on the York and Scarborough road, indicating that the Motor Union had contributed towards the cost of the road improvement at that place.

THE mobilisation scheme for the Lincolnshire A.C. is being considered by the North Yorkshire A.C. and other motoring organisations. A large number of motorists in the Fen county have already asked Dr. Godfrey Lowe, of Lincoln, to place their names on the register.

MR. DE RODAKOWSKI, who has acted as clerk of the Brooklands course during the racing season, has, to the regret of the committee, resigned that office. He will remain a member of all the committees of the club.

LOLLIUS.

AMONG the cars sold during the last week by the Motor Supply Company, Limited, of Piccadilly, W., are a 14-20-h.p. Renault landaulet to Mr. Stanley Whitfield, of East Grinstead, a 40-h.p. Deasy to Captain Vandebyl, and a 14-20-h.p. Siddeley to the Rev. Howard Hall, of Hull.

HERE AND THERE.

IN the High Street, Sutton, Messrs. Davis and Co. have just opened a well-arranged garage.

DR. ROBERTS, of Dublin, has lately acquired a Darracq car through the Dublin Motor Company.

WE learn that the Austin Motor Company have decided to build a team of cars for next year's A.C.F. Grand Prix race.

MESSRS. C. J. RICHARDS AND CO., motor engineers, Pontypridd, have lately put a Star 12-h.p. taxi-cab in service in that town.

THE municipal authorities of Wellington, New Zealand, are at present considering the question of increasing the number of their motor fire-engines.

THE County Councils Association have decided to convene a conference early next year to consider the conclusions of the recent International Road Congress held in Paris.

AT the foot of Star Hill, Rochester, the City Motor and Engineering Company have opened a garage where motor-cars will be stored, cleaned, and repaired by contract if desired by local motorists.

THE magistrates of Inverness are urging the Town Council to apply to the Secretary for Scotland to make a regulation restricting the speed of motor-cars within the burgh boundary to ten miles per hour.

MESSRS. MCCURD'S, LTD., the well-known dealers in second-hand cars, of 81, Euston Road, London, are about to open a large depot at Store Street, Tottenham Court Road, W.C. The premises are not only extensive, but are being splendidly equipped and are most centrally situated.

TO their series of Guides to historic towns Messrs. Methuen and Co. have just added Wells and Glastonbury—a volume full of interest and dealing with a wonderful abbey and town. Mr. T. S. Holmes is the author, and to those motorists who delight in antiquarian expeditions the volume will prove delightful reading.

A CAIRO correspondent reports that the number of cars in Egypt this season has shown a considerable increase over last year. In Cairo 264 motor vehicles have been registered, as against seventy-five, and one or two new garages have been opened. In Alexandria there are thirty-seven cars owned locally and registered.

THE members of the Scottish Agricultural Commission have just returned after a trip of inspection through Canada. At one agricultural town visited by them they found twenty motor-cars, which were provided by local farmers for their service. It was stated that at least a dozen of these were owned by men who had worked as farm labourers in the Dominion within the last fifteen years.

THE Chelmsford Town Council have received a letter from the Home Office with reference to the appeal of Mr. Austin, of the County Motor Works at Chelmsford, against the restrictions which the Council proposed with reference to the storage of petrol. The Home Secretary thought that if the store was fenced it would not be necessary to erect an unclimbable fence at the entrance to the yard, and he could not see that it was less dangerous to store 550 gallons than it was to store 1,000 gallons. Before he came to a decision upon the appeal, he wished to know whether the Council would modify their restrictions. The matter was referred to the Sanitary Committee.

MESSRS. HICKEN AND KIDSTON, of 106, St. Paul's Road, Southsea, have sent us particulars of a little device they have designed and protected, in the shape of an automatic tell-tale for the rear lights of motor-cars, railway trains, or any light out of ordinary sight, by means of which the driver is given a warning when his rear light has gone out by means of an electric lamp, which may be fitted on the dashboard, becoming suddenly ignited. The device is intended to be used in connection with any existing rear lamp, paraffin or acetylene, and is arranged to be used in connection with a 4-volt accumulator, preferably one of the spares generally carried by motorists. No current is, however, used, should the rear light become extinguished, except for the few minutes that elapse while the driver relights the lamp.

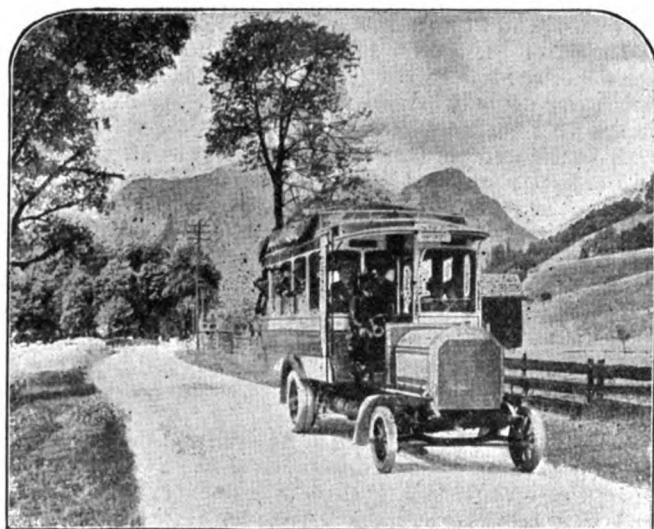
MR. H. H. CARTER, who has had considerable experience in connection with public service vehicles, has started a motor repair depot at Gloucester Green, Oxford.

THE latest contribution to the news about the Knight "silent" and "valveless" engine is that Mr. Harvey Du Cros has secured British selling rights therein for Panhard-Levassor.

MR. A. WHALEY has a compact and well-equipped garage in the Bridge Street, Forres, and has done well during the past season in attending to the requirements of motorists passing through that popular Highland town.

MR. HENRY FARMAN'S aeroplane voyage from Chalons-sur-Marne to Rheims, on the 30th ult., which constitutes such an important step in the history of aviation, is to be recorded by two monuments. The spot from which he started and the place where he landed are to be marked either by a statue or an obelisk.

MESSRS. W. SEARLE AND CO., who are responsible for the O.S. first prize speedometer, announce the publication of a brochure dealing with speed and mileage recording instruments. Owners of cars who are interested in methods of ascertaining car cost, checking up-keep expenditure, as well as knowing their car's speed, are invited to write for a copy of Edition M. of this pamphlet, which will be sent on application to the firm at 33, Glasshouse Street, London, W.



A Bavarian Government Public Car Service.—A Snapshot between Bershtesgaden and Hintersee.

WHEN the list closed on the 31st ult. twenty-seven entries had been received for the American Automobile Club's Grand Prix race, which is to be held in Savannah on the 26th inst. The American competitors are fourteen in number, and comprise an Acme, three Garfords, a Stearns, a Thomas, two Lozier, a Pennsylvania, two Chadwicks, a Matheson, a B.L.M., and an American Berliet. Europe will be represented by three Fiats, three Benz, two Mercedes, a Lorraine-Dietrich, two Bayard-Clements and two Renaults. The three Benz cars for the contest are the same as took part in the A.C.F. Grand Prix in July last; they have, however, been fitted with new engines, the cylinder dimensions of which are stated to be 150 mm. bore by 200 mm. stroke.

THE United Motor Industries, Ltd., whose headquarters are at 45 and 46, Poland Street, London, W., have issued their new catalogue for 1909. Amongst the specialities illustrated and described therein are the new "Castle" accumulator plates made at the firm's Eagle Works at Holloway. These have effectually overcome the risk of buckling, and the accumulator in which they are fitted has a new incorrodible terminal. The Eisenmann magneto, the "Castle" single trembler condenser coils, the L.M. de Luxe plugs, new "Castle" switches, Castle-Jupiter lamps, Simplex speedometer, new radiators, &c., are all referred to in this extensive list, the new style of numbering the pages of which will facilitate easy reference.

THE police authorities in the Dunfermline district have taken action against several vanmen and carters who have not been conforming to the Light on Vehicles Bill.

SPEAKING at Leeds, Mr. Philip Snowden, M.P., declared, a few days ago, that the Government must face a scheme of new roads for motor-cars to be a link between the railways and the land. Such a plan would involve an expenditure of ten or twenty millions sterling.

AN advance of 5d. per gallon in the price of industrial alcohol has been announced by the methylators, and manufacturer's spirit is now 4d. per gallon dearer than it was before the enforcement of the Revenue Act, 1906, by which a rebate of 5d. per gallon was granted on specially denatured spirit for industrial uses. The increase in the cost of raw material, the close agreement existing between methylators, and the absence of German competition have contributed to the advance, the latter two being, according to the "Manchester Guardian," the predominating causes.

THE Tyre and Accessory Section of the Society of Motor Manufacturers and Traders, having had its attention called to a custom said to be more or less prevalent in the accessory trade of marking ignition storage batteries with a fictitious capacity, recommend (1) that accumulators shall have printed on their labels their actual capacity when discharged at a definite rate continuously, this rate being one-twentieth of the capacity claimed. An interval of rest to be allowed, such interval not to take place until half the period of discharge has expired. (2) The accumulators can have printed on their labels the approximate capacity with intermittent current, which shall be arrived at by doubling the actual capacity obtained by following rule 1.

THERE is evidence that there will be a demand next season for cars of a relatively low horse-power, and, anticipating this, the Mors Company have produced an interesting 10-15-h.p. four-cylinder model, the engine of which, under R.A.C. rating, gives 15.9-h.p. The new vehicle comprises all the characteristics of the Mors design and construction, and is practically a big car in miniature. It is of the live-axle type, with direct drive on the top gear, fitted with magneto ignition, metal-to-metal clutch, and the length of chassis is such as to allow of a roomy, comfortable, side entrance carriage body of the closed or open type being fitted. We learn that Mors (England), Ltd., have succeeded in purchasing the whole of the output of this particular model, with the result that they alone are entitled to sell the same. Since the arrangement was concluded they have received applications from French agents for batches of the cars; but the company are endeavouring to retain as many as possible for the English business. Mors (England), Ltd., will be able to start deliveries almost immediately, and are ready to arrange for exclusive agencies for the new 15-20-h.p. car in any part of the world.

As briefly mentioned in our last issue, a demonstration was given on Thursday, last week, at the garage of the Wolseley Company at Westminster, S.W., of a new motor spirit known as "N.U." It is claimed that the fuel, which is being introduced by a syndicate styling itself N.U. Motor Spirit, not only gives a perfect combustion with a consequent economy in the cost of running, owing to the greater mileage per gallon, but also dispels all noxious fumes from the exhaust, and that even when the engine is over-lubricated no annoying smell or smoke is emitted. In proof of this two Siddeley cars, which were lent by the Wolseley Company for the occasion, were driven round the garage for some time, while in the yard outside a vehicle was run, the engine of which had been purposely over-lubricated. So far as the demonstration went, it certainly appeared to uphold the claims made for it, the outlet pipe of the silencer, in place of the usual obnoxious fumes, emitting an invisible puff of warm, agreeable air. No information was, however, given to those who attended the demonstration as to the composition of the new spirit, or the treatment it is subjected to in order to give to it the useful properties it possesses; all we could learn was that it has a specific gravity of from .715 to .720, that it necessitates no change in the adjustment of existing carburettors, and that its price will be the same as ordinary motor spirit.

MOTOR-CARS OF THE FUTURE.

FOLLOWING the suggestions made by agents in our last issue with regard to the points of improvement on cars which would be appreciated by motorists, and also the tendencies noted, so far as the demand for automobiles is concerned, the letters below will have interest for all our readers:—

THE MIDLANDS.

The principal demand in Leicestershire, according to Messrs. G. H. Wait and Company, is for cars from 8-h.p. to 16-h.p. and the prices from £200 to £350.

With regard to the matters for improvement, undoubtedly one of the great points is the clearance of underworks and shape of wings to reduce the dust raising to a minimum. Another important point for the designers to study is the question of keeping the weight backwards as much as possible, so as to prevent the rear part of the car skidding round to the front, and the third point is the question of accessibility of parts.

Other correspondents in Birmingham, Worcester, and Hereford suggest that the demand in the immediate future will be for cars of 10–12-h.p. up to 15-h.p.

SOUTH WALES.

Mr. Parker Thomas, of the South Wales Motor Company, believes that the type of car which will be popular is that of about 12–14-h.p., four-cylinder, fitted with either two or five seated bodies.

Special points that manufacturers should study are, in his opinion, in the details, both as regards the body and the chassis. The convenience of filling the petrol tank, lubricating oil tank, and getting the working parts covered in, &c., seem to be appreciated by the buying public to-day.

DEVONSHIRE.

There is not the slightest doubt, writes Mr. Ernest Gould, the managing director of Messrs. Gould Bros., of Exeter, but that there is a growing demand for cars of a medium horse-power, and cars of from 15-h.p. to 20-h.p. are not in such demand as hitherto.

Personally we think there is an opening for a light car with a four-cylinder engine of about 8-h.p. to 10-h.p., as we get several enquiries for such a vehicle from gentlemen in the medical profession, and we believe, also, there are a number of local traders who would go in for such a car. From the fact that none of the makers cater for this class of buyer they have no alternative but to purchase second-hand cars in order to get a four-seated car of moderate power, and even in many cases these cars are much too powerful for this class of motorist, as the cost of petrol consumption and tyres is more than they can afford to keep up. With regard to the design of such a light car as we mention, this should be fitted with a light side-entrance body, and, if possible, with detachable tonneau, so that the car might be used as a two or four seater. There is still a good sale for cars, and we feel certain, in the event of one being produced to meet the requirements as we have before mentioned, there would be a large number of such cars sold, especially in this district, where we have a large number of customers of moderate means to cater for.

Mr. T. R. Davis, the managing director of the Plymouth Automobile Engineering Company, Ltd., finds that the people who are entertaining the idea of purchasing cars show a decided favour for the cars of small horse-power, such as 12–14 and 14–16-h.p. Those who ask for vehicles above 20-h.p. are very few in number.

He would like to see makers go further in the direction of simplicity of control, and also fit their cars with tyres of a larger size than is usually the case.

BRISTOL.

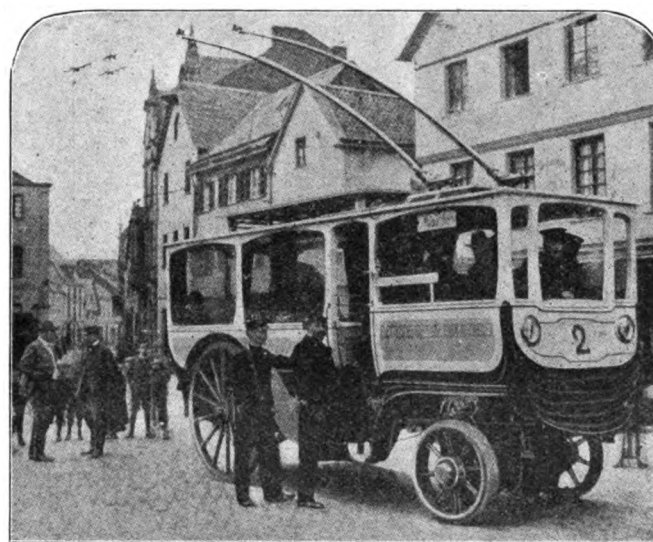
There is no particular horse-power upon which the public seems to have set its mind, report Messrs. Perry and Turner, Ltd., of Bristol, but there is undoubtedly a very strong tendency to leave the high-powered cars alone. They find cars selling quite freely in the district up to 20-h.p., but above that power few sales have been made in the past six months.

While they have received scores of minor suggestions in the course of their trading, they invariably find that whenever they bring these before high-class manufacturers they have already been anticipated, and at the moment they have no serious suggestion which they could put forward. Messrs. Perry and Turner, Ltd., have made it their practice to sell nothing but the very highest class of car, and the success of such vehicles to-day makes it very difficult to find fault. Most certainly they do not think that high-class motors have reached the stage of perfection, but the consistent good running of the cars as sold by them has been remarkable, and, were it not for some of the cheaper goods finding a market, their repair department would be in a very sad plight. Personally they note a strong growing tendency for the public and manufacturers to encourage small cars.

SOUTH COAST.

"Generally speaking," writes Mr. F. Constable, of the Brighton and Sussex Motor Works, "large cars of high power, landaulets and limousines, have been in demand, although in this town of Brighton almost all makes of cars of all powers are represented."

Almost every intending purchaser has his own view, or is equally influenced by the opinions of his friends, who may or



One of the Electric Motor-Buses in Service at Ahrweiler, Germany. As will be seen, the vehicle takes the necessary current from an overhead conductor in the same way as electric tramways. It is proposed to introduce the system in this country at Dundee and Manchester.

may not have cars, as to what improvements are desirable in these vehicles. Generally, the car most likely to be in demand is one with a good margin of power, so as to avoid frequent gear changing, reasonable passenger capacity, moderate weight and inexpensive upkeep."

Messrs. Hill and Boll, of Yeovil, consider a 15-h.p. about the most suitable for general use for their district, distinguished by compactness, with a wheel base that is not too long, on account of country lanes.

From Southsea Messrs. S. Rose and Co. write that the type of car which seems in demand in Hampshire is a four-cylinder ranging from 12-h.p. to 18-h.p., the price not exceeding £400. There seems a tendency to have bodies convertible to two seaters.

THE garage of the Royal Express Motor Works, Richmond Road, East Twickenham, has accommodation for fifty vehicles and a special plant for the overhauling and repair of cars of all types.

THE Aeroplane Trial Grounds which M. Delagrangé is establishing at Savigny-sur-Orge, France, is approaching completion, and it is expected that some trial flights will take place in a few days.

New Cars for the 1909 Season.



SOME NEW MODELS TO BE SHOWN AT OLYMPIA.

THE annual motor-car exhibition at Olympia opens on Friday, the 13th inst., and will continue until the 21st inst. While many manufacturers are restricting the alterations in their 1909 models to matters of detail, there will be quite a number of new vehicles on view, including several specially designed for motorists of moderate means. It may therefore safely be said that the interest of the forthcoming show will be well up to that of its predecessors. For one thing the new "valveless" engine of the Daimler Company will make its first public appearance, and in addition there will be several other motors of new design—notably one working on the two-cycle system, which will well repay careful scrutiny. Below we commence our review of the principal exhibits.

The Mors Cars.

The *piece de resistance* of the exhibit of MORS (ENGLAND), LTD., will be the new 10-15-h.p. four-cylinder car (Fig. 1), not the least prominent

public, and to call the car by the name of its designer, Mr. E. J. Y. Rutherford. It will therefore in future be known as the Rutherford. The 30-40-h.p. type remains the standard for 1909, but has been considerably improved and simplified. The chassis is built on similar lines to that of an up-to-date live axle petrol car, the difference being that in place of a petrol motor a "flash" generator is fixed beneath the bonnet and that there is no change-speed gear. The flash generator, which consists of a series of spiral tubes heated by a paraffin burner, is located immediately to the rear of the condenser. The burner is adapted to use ordinary paraffin oil as fuel, and a distance of about twelve miles per gallon can be covered. Behind the generator is a heavily-lagged division plate, which prevents any heat from the generator passing along the chassis. The three-cylinder engine is partly under the bonnet and partly under the footboards, as in last year's models. It is of the single-acting vertical type, the cylinders being $3\frac{1}{2}$ in. bore by $4\frac{1}{4}$ in. stroke, fitted with cam-operated mushroom valves. The friction clutch has been dispensed with, so that a positive

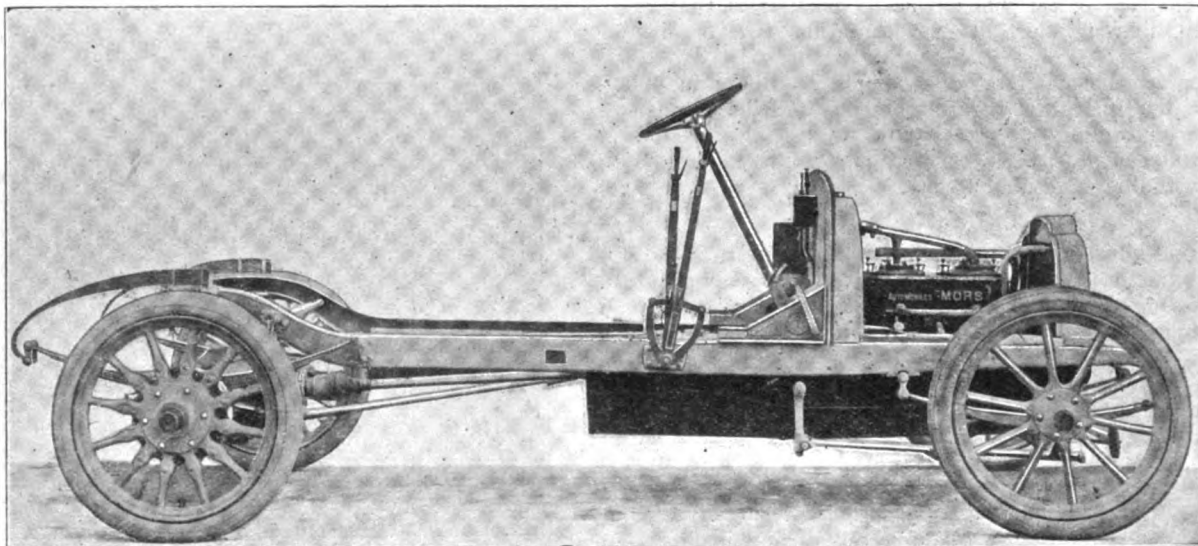


Fig. 1.—Chassis of New Mors 10-15-h.p. Car.

feature of which is the relatively low price at which it is being offered. The engine has the four cylinders, 80 mm. bore by 90 mm. stroke, cast in one piece, with the valves all on one side. The carburettor is of the automatic type, and has two jets; when the engine is running light only the smaller of the two is working, but as the throttle opens the larger one comes into action, the other being cut off by a cone valve. The lubrication is controlled by exhaust pressure, an auxiliary hand pump being also fitted. The ignition is by high-tension magneto. The clutch is of the metal-to-metal contracting type. The gear-box gives three speeds, the final transmission being by cardan-shaft to a live axle; on the top speed the drive is direct. The pressed steel frame is suspended forward on semi-elliptical and at the rear on three-quarter elliptical springs. The chassis is of sufficient length to take a side entrance body of roomy dimensions. Other Mors live-axle cars to be exhibited include a 15-h.p. and a 20-h.p. The remaining models will be chain driven, and will comprise a 30-h.p. and a 45-h.p. four-cylinder, and a 50-h.p. six-cylinder. The limited output of the latter has been chiefly absorbed in England this year, and the great satisfaction the vehicles have given to their users has induced the company to decide to push this type very actively during the coming year.

The Rutherford Steam Car.

Since last year it has been decided by the HIGHCLERE MOTOR CAR SYNDICATE, LTD., Highclere, Newbury, to discontinue the initial letters under which the E.J.Y.R. steam car was introduced to the

drive is transmitted direct through the cardan shaft and bevel gear to the live axle. It is, however, possible to run the engine free for warming up. The automatic control has been very considerably improved, and now enables a constant head of steam at a uniform pressure and temperature to be always maintained in the generator without any action on the part of the driver. The water tank holds enough water for 100 miles, and, as the consumption of paraffin is about eighteen miles to the gallon, these cars should compare very favourably with petrol cars as regards upkeep and running cost.

The Adler Cars.

The great success of the Adler 9-h.p. car, which won the silver cup in its class in the 2,000 miles trial, has induced Messrs. MORGAN AND CO., LTD., London, to place on the market for the coming season a new model with a 12-h.p. four-cylinder engine. The construction is essentially similar to the 9-h.p. chassis, with two-cylinder vertical engine, which has given excellent results, not only in trials, but in ordinary practical use. An outstanding feature of the new vehicle is the accessibility of all its parts, they being so arranged that they can be readily and rapidly taken to pieces and reassembled. In addition to the above, a specially-constructed chassis of similar engine power, but shorter wheelbase, fitted with specially-designed two-seated "Morgan" body, capable of a speed of fifty miles per hour, is being introduced, also a 7-h.p. (R.A.C. rating) chassis with two-cylinder vertical engine, bore 75 mm., stroke 100 mm., with magneto ignition. The vehicle can be fitted with either a two or four seated body.

The Charron Cars.

A full display of Charron cars will be made by the LONDON MOTOR GARAGE COMPANY, LTD., the sole agents in England. Hitherto only vehicles of relatively high power have been turned out, but to meet the demand for popular-priced cars two new models are being shown at Olympia for the first time. These are the 8-10-h.p. two-cylinder (Fig. 2) and 16-h.p. four-cylinder. The chassis are identical in every respect except as to the number of cylinders and that the 16-h.p. has all four cylinders in one casting. The bore and stroke in

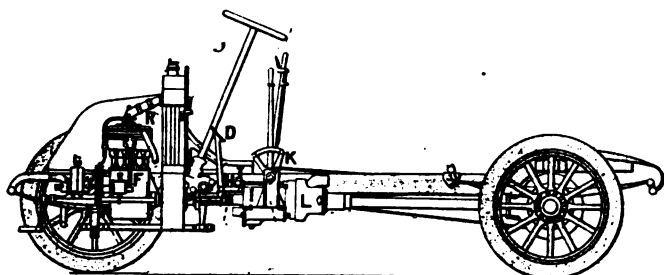


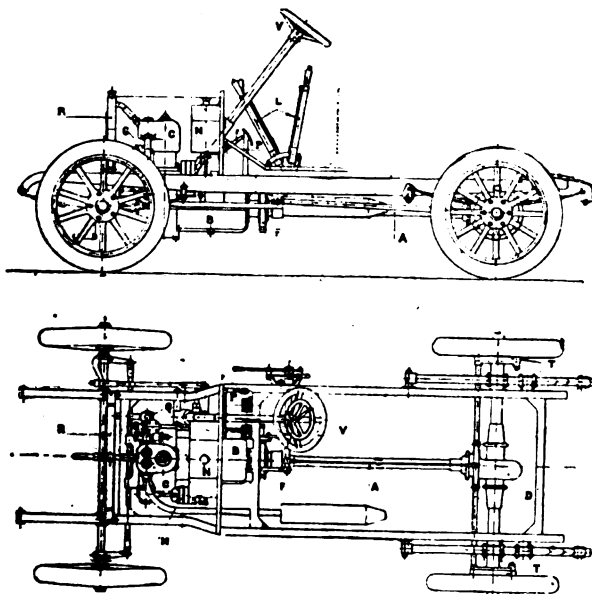
Fig. 2.—Chassis of Charron 8-10-h.p. Two-Cylinder Car.

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| D.—Clutch Pedal. | K.—Change Speed Lever Quadrant. |
| F.—Carburettor. | L.—Case enclosing Brake and Cardan |
| G.—Magneto. | Joint. |
| H.—Pedal Brake Connection. | R.—Engine. |
| I.—Gear Box. | |

both cases is 80 mm. by 120 mm. While following the general lines of the Charron cars, a notable feature of the new models is the placing of the radiator at the rear of the bonnet and in front of the dashboard, similarly to the Renault vehicles. Ignition is by high-tension magneto, and the lubrication by a pump located in the base chamber and operated off the rear end of the single cam shaft. The transmission is through a cone clutch, three-speed gear-box to a live axle. The following cars and chassis will comprise the exhibit:—An 8-10-h.p. two-cylinder single landaulet, adapted for use in towns and suitable for the work of professional men; a 16-h.p. chassis; a 22-h.p. double landaulet with carriage work by Hooper; a 30-h.p. limousine landaulet, with Hooper body; and a 30-h.p. limousine, painted grey, with dark red under-carriage.

The Motobloc Cars.

Hitherto the Motobloc cars have been of relatively high power. For the coming season quite a new class of motorist is being catered



Figs. 3 and 4.—Elevation and Plan of Motobloc 9-11-h.p. Single-Cylinder Car.

for by the production of a 9-11-h.p. single-cylinder car, designed to be fitted with either a two or four-seated body. A plan and elevation of the chassis is given in Figs. 3 and 4, while a photograph of the motor is reproduced in Fig. 5. The frame is of the usually pressed steel construction. The engine, which has a bore of 100 mm. by 120 mm. stroke, has the mechanically-operated inlet and exhaust valve arranged behind the radiator. The throttle of the automatic carburettor is

controlled both by hand and foot levers. The ignition is by a gear-driven high-tension magneto. A simple but effective device to ease the compression enables the motor to be easily started; the arrangement is actuated by a lever concealed in the side member of the frame near the radiator. The latter, which is so supported in the frame that it is protected from road shocks, is of the honeycomb type; the water pipes, through which the circulation is maintained by a novel form of pump, are kept as short as possible. As is usual in the Motobloc design, the engine base chamber and gear-box are bolted together to form a single unit. The clutch is of the metal-to-metal type, somewhat on the lines of an internal expanding brake; it is arranged to run in oil. From the three-speed gear-box the power is transmitted by a cardan shaft and bevel gear to a live axle of strong design. The BRITISH MOTOBLOC SYNDICATE, LTD., the British agents, in addition to the single-cylinder car described above, will also display an 18-22-h.p. chassis, a 25-h.p. chassis, and a 35-h.p. landaulet. These are all fitted with four-cylinder engines, a noticeable feature of which is that the flywheel is enclosed in the crank case between the two pairs of cylinders.

The Unic Cars.

Messrs. MANN AND OVERTON'S have for some time past been devoting special attention to the demand for landaulets for town and station use at a moderate price, and vehicles of this class will form a

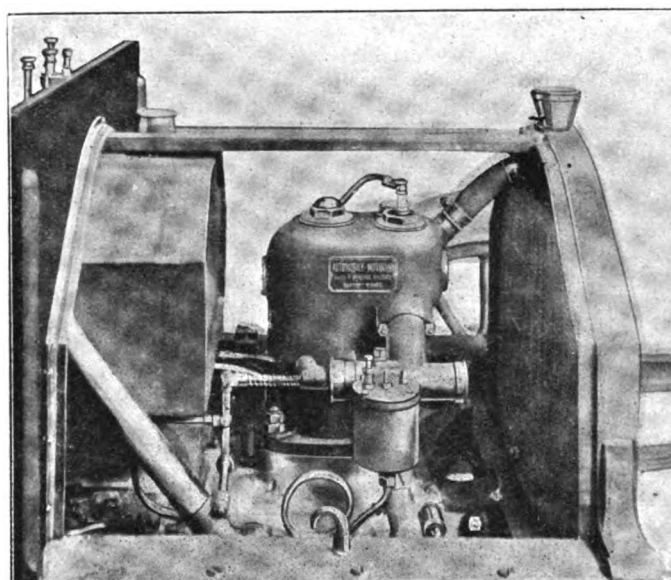


Fig. 5.—View of Engine of Motobloc 9-11-h.p. Car.

special feature of their exhibit at the forthcoming show. A prominent place will be given to the Unic 10-12-h.p. two-cylinder car. This has already been described in the *M.C.J.*, so it will suffice to mention that the engine comprises two cylinders 102 mm. bore by 110 mm. stroke, and that the transmission is through a leather clutch, a ball-bearing gear-box giving three speeds and a reverse, and a direct drive on the top through a cardan shaft and bevel gear to the rear live axle. The chassis is of the same type as that employed in the large number of Unic cabs now running in London. Other cars on view will be a Unic 12-14-h.p. with side-entrance body and a Unic 16-20-h.p. chassis. Of the Brasier productions, the display will include a 30-40-h.p. touring car and one of the new 10-12-h.p. two-cylinder landaulets. The engine of the latter, which is 90 mm. bore by 120 mm. stroke, is provided with thermo-syphon water circulation; a leather cone clutch is employed, while the three-speed gear-box gives a direct drive on the top speed.

The Motor Supply Company.

THE MOTOR SUPPLY COMPANY, LTD., of Piccadilly, W., will exhibit on Stand No. 120, in the Annexe, some fine specimens of cars of moderate power, namely, a 14-20-h.p. Renault with a splendid example of Brainsby's best carriage work in the form of a three-quarter landaulet body, seating four inside, with extension over driver's seat. They will also have an 18-24-h.p. Austin double landaulet with coachwork by McNaught. This makes a beautiful and most comfortable carriage, and will easily accommodate five persons inside. In addition a Zedel 10-12-h.p. two-seated car will also be on view, the vehicle being suitable for a doctor or professional man.

The Star Cars.

The exhibit of the STAR ENGINEERING COMPANY will consist of three live-axle models of respectively 10-h.p., 12-h.p., and 15-h.p. The first-named should appeal to a large class of buyers, for it is up-to-date in every respect, as may be judged from the brief specification appended. The engine comprises two cylinders 4 in. by $4\frac{1}{2}$ in., the ignition being by Bosch high-tension magneto. The change-speed gear is gate-controlled, giving three speeds with direct drive on top. The

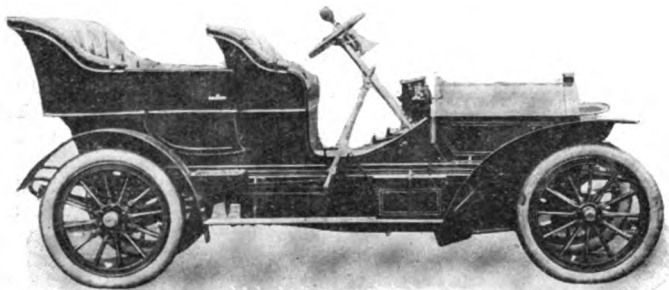


Fig. 6.—The Star 12-h.p. Live Axle Car.

vehicle is designed to be fitted with a four-seated side-entrance body. Fig. 6 depicts the Star 12-h.p. car, which is one of the company's most popular productions. The engine comprises four cylinders, $3\frac{1}{4}$ in. by $4\frac{1}{2}$ in. stroke, the other details being the same as the 10-h.p. An entirely new model, of which a polished chassis will be shown, is the 15-h.p. four-cylinder car (bore $3\frac{1}{2}$ in. by $4\frac{1}{2}$ in. stroke). This vehicle will be fitted with two systems of high-tension ignition, while another feature is that the gear-box gives four forward speeds, the direct drive being on the third and not on the top gear. The excellent reputation enjoyed by the Star cars should be well maintained by the 1909 models.

The Ariel Cars.

A prominent place will be given on the stand of ARIEL MOTORS, LTD., to a new 20-h.p. car which has been introduced to meet the demand for a medium-powered vehicle of high-grade construction and moderate price. The engine, which comprises four cylinders, 100 mm. by 115 mm. stroke, has the valves arranged on opposite sides. The ignition is by high-tension magneto, while the lubrication will be by a pump driven off the motor, and located in the crank case. The transmission is through a "gate"-controlled gear-box, propeller shaft,

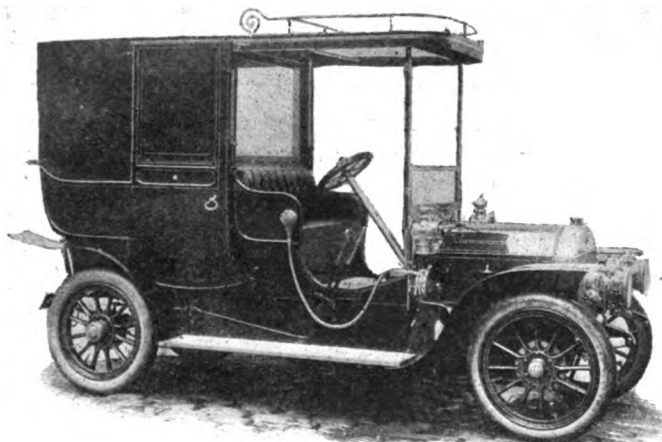


Fig. 7.—The New Ariel 20-h.p. Car with landaulet body.

and bevel gear to a live axle. The wheelbase of the chassis is 9 ft. 3 in., enabling a roomy side-entrance body of the closed or open type to be fitted. Fig. 7 depicts one of the new models, with single landaulet body, recently supplied to Mr. A. St. G. Hamersley, one of the prospective Parliamentary candidates for Mid-Oxford. For the 1909 season three other sizes are being made—viz., 30-h.p., 40-h.p., and 50-h.p. The engines of these will be provided with overhead inlet valves, and lubrication by means of a pump. As to the chassis, the rear suspension is by means of three-quarter elliptic springs. The Ariel exhibit will comprise a 20-h.p. car fitted with special rotund side-entrance

body; a 20-h.p. town carriage, with landaulet body by Mulliner, Birmingham, painted dark green and lined with three black stripes, and picked out with crimson lines; a 30-h.p. show-finished chassis; a 40-h.p. Ariel 11 ft. wheelbase chassis, fitted with Dunlop detachable wheels, with special cabriolet-landaulet body by Mulliner, of Northampton; a 40-h.p. with a special touring phaeton, with round panelling and cane panelling, by H. J. Mulliner, London; and a 50-h.p. with special Pullman body by Rippon Bros., Huddersfield; the latter car will be complete with every refinement, and it is designed so that the driver is completely closed in.

The Dolphin Car with Two-Cycle Engine.

One of the novelties of the show will be the Dolphin 28-h.p. car, exhibited by the TWO-STROKE ENGINE COMPANY, LTD., of Shoreham. One of the principal features of the new car is found in the engine, which is on the two-cycle valveless system; it comprises four working cylinders set at an angle to a corresponding number of pumps or scavenging cylinders. We give in Fig. 8 a sectional drawing of a pair of the cylinders, which will enable the appended description of the method of operation of the new engine to be followed. Presuming that there is an explosion charge already in the working cylinder A, on this being fired the piston is driven down, and at the same time the pump piston B is drawn downwards, which again draws

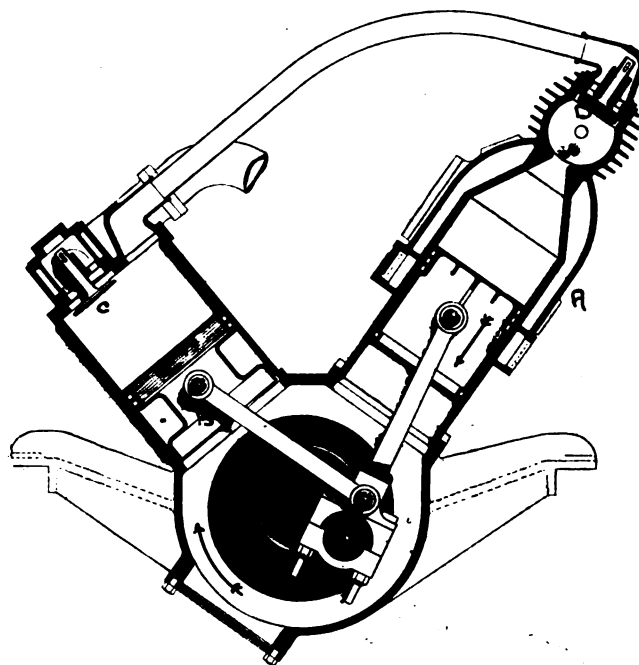


Fig. 8.—Section through Two-stroke Engine Company's New Motor.

in a charge from the carburettor through the valve C. When the pump piston is at the bottom of its stroke it then rises and proceeds to compress the gas in the pump cylinder, causing the valve C to shut, and driving the compressed gas through the cross pipe to the valve D in the working cylinder. When the piston in the latter reaches the end of its power stroke it uncovers ports round the walls, allowing the burnt gases to escape. As soon as the pressure due to the exhaust gases is removed the valve D opens, admitting a fresh charge into the top of the cylinder A, this continuing until the pump piston B has reached the top of its stroke, which occurs simultaneously with the working piston covering the exhaust ports. The working piston now compresses the new charge, and is fired in the ordinary way on reaching the top of its stroke. It will be noted that the pump connecting rod, instead of being worked from the crank shaft, is connected to a forked connecting rod of the working cylinder; this gives the pump piston a slow suction and a quick delivery. The water-circulating pump, magneto, and contact maker are driven by bevel and skew gear off the four-throw crank shaft. Passing now to the transmission, the clutch is of an old design which has been in use on cranes and disappearing guns for a large number of years with perfect satisfaction. Briefly described, it might be said to comprise nine plates, four keyed to the outer casing and five to the centre shaft; the plates, instead of being of thin sheet steel or copper, are made of 5-16 in. steel and case-hardened. The gear-box, which gives four speeds, is fitted

throughout with large diameter ball bearings; the layshaft bearings are mounted in plumber blocks, which can be adjusted to throw the teeth of the gears deeper in mesh or otherwise, in order to render these free from friction and silent. This is done by the makers whilst tuning up the car and made a fixture, so that it cannot be altered by inexperienced drivers. The gears are operated by one lever, working in the conventional gate, and are positively locked in position, so that no two gears can be in mesh at the same time. The final drive is by a propeller shaft and bevel gear to a live axle. The latter is constructed so that the entire weight of the car is carried on the outer casing, which is forged from one piece of metal. On the front portion of the casing is fixed a strong aluminium casting, which not only carries the driving pinion, but also the whole of the differential, which being on plumber blocks, is affixed thereto by four substantial bolts; this gives great accessibility, for by removing the back casing and loosening four bolts, the whole differential gear can be withdrawn and inspected. The axles, too, can be drawn out for inspection by simply removing the hub caps. The steering gear is of the usual worm and segment type, with the exception that instead of there merely being a segment, a complete wheel is fitted, this allowing four separate wearing places on the wheel by simply taking out the steering arm and rekeying the same into another place when the wheel has been turned round. Provision is also made so that the rake of the steering column can be adjusted to any desired angle.

The Turner-Miesse Steam Cars.

The display of TURNER'S MOTOR MANUFACTURING COMPANY, LTD., Wolverhampton, will comprise a number of entirely new models, including a light car fitted with live axle, one model specially designed for two passengers, and one a light 10-h.p. touring vehicle fitted with a four-seated side-entrance body. This latter will be the leading model for the 1909 season, and, as it will be offered at a moderate price, it ought to meet the requirements of a large number of motorists who have a preference for steam. The Turner-Miesse steam cars are too well known to need anything but a brief description. The makers inform us they have perfected a paraffin burner—designed especially for the work of a medical man—which cannot blow out or backfire, no matter how long it is kept standing, and which can be turned up and down quite readily, doing away with the use of a pilot light except for lighting up from dead cold. No petrol is required with this burner, even during the operation of lighting up. The Turner-Miesse steam cars are fitted with a three-cylinder, single-acting engine, the great feature of which is that there are no glands or packing to require attention. The generator is of the "flash" type, and cannot fur up with long use. It is made in four sections, so that the bottom section can be replaced at trifling cost when necessary. The control is extremely simple, one pedal and one lever being all the driver has to attend to all the time the car is running. The lever governs the supply of water to the generator, and therefore regulates the speed, while the pedal instantaneously cuts off the steam, and when depressed still further puts a double-acting brake on the crank shaft. The advantage of this system is that the driver cannot carelessly put on his brake before cutting off the power. A very desirable point in these vehicles is the extreme accessibility of every part likely

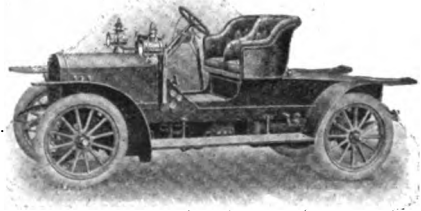


Fig. 9.—The Turner-Miesse 10-h.p. Live-Axle Steam Car.

to require attention. The machines in general appearance closely resemble modern petrol cars. There is, of course, no vibration, and there are no change-speed gears to manipulate, the pace being entirely regulated, as already stated, by the amount of water that is allowed to pass to the generator.

The White Steam Car.

Considerable notice will be taken of the White Steam Cars for 1909, which represent a considerable advance on anything that has previously been shown by the White Company. On Monday the chasses

were assembled at the depôt in Carlow Street, Camden Town, N.W., under the superintendence of Mr. Frederic Coleman, who has just returned from the States full of enthusiasm for the new models, upon which he has had many long road tests in Cleveland. For next year cars of 15-h.p. and of 40-h.p. will be the standard sizes, and in both the design is identical, the parts being, of course, proportionately larger on the higher-powered vehicle. As in previous years, the generator consists of a series of coils of steel tubing located one above the other, and connected in series, the water being pumped into the upper coil, steam coming from the lower one, the process being so rapid that the steam is always available as required. The most

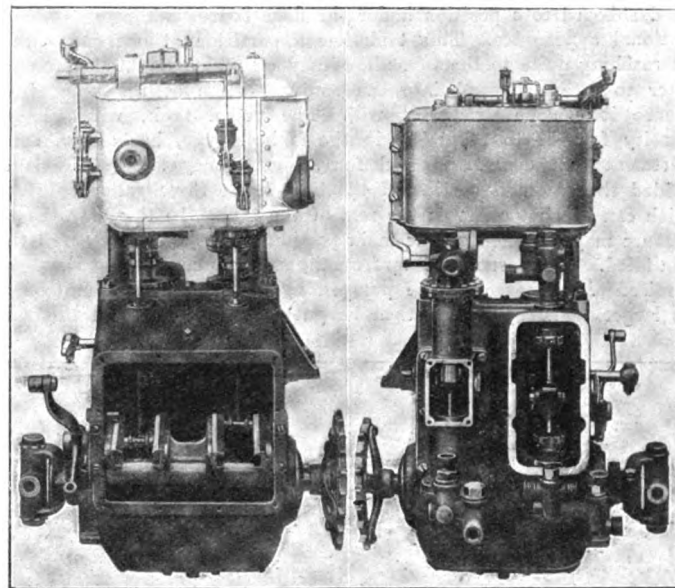


Fig. 10.—Front and Rear View of new White Steam Engine with covers removed.

significant change in connection with the new models is concerned with the engine, where, by the adoption of the Joy valve motion, greater simplicity of construction has been obtained. The number of working parts has been reduced to nearly one half of those formerly employed; the eccentrics on the crank shaft which were required with the valve motion previously fitted have been dispensed with, and by bringing the cylinders closer together a shorter crank shaft can be used. The latter is in one piece, forged of tool steel, and has only two main bearings, seen in Fig. 10, these being of the annular type. The ball bearings of the connecting rods are fitted with separators, the balls being of extra large size. Piston valves are employed for both high and low pressure cylinders. The steam is admitted through the centre of the valves, and is exhausted from the ends, so that the pressure on the valve stuffing-boxes is reduced to that of the exhaust from the respective cylinders. The lubricator is mounted on the dashboard, and is actuated by a ratchet device operated through a small arm on the end of the pump rocker shaft. The condenser is provided with an air-inducing fan driven by a chain from a sprocket on the forward end of the crank shaft, and the ratio of the sprockets is such that the fan-shaft runs faster than the engine. As a good draft of air between the condenser tubes is an important element in securing proper condensation, which means economy in water consumption, these improvements in driving the fan are of value. Accessibility has been carefully studied, and all parts can be easily reached by the removal of the side and bottom plates of the crank case. The cylinders (high pressure $3\frac{1}{2}$ in. bore, low pressure 6 in. bore, and $4\frac{1}{2}$ in. stroke in the 40-h.p. model, and $2\frac{1}{2}$ in. and $4\frac{1}{2}$ in. bore with 3 in. stroke in the 15-h.p. type) have relief valves for getting rid of any water which may be in the cylinders when starting the engine "cold." The engine is supported on two cross members of the frame, and all the weight is behind the front axle. The exhaust pipe from the engine to the condenser is on the right-hand side, and within it is a coil of piping through which the water from the pumps circulates on its way to the generator. Thus the feed water is heated, and the process of condensation aided in a very neat and compact way. The regulation of the supply of water to the generator and the supply of fuel to the burner are so controlled as always to be in perfect balance. When

the steam pressure rises appreciably above the normal working pressure, both supplies are stopped; then, when the pressure falls below the normal, water and fuel are again supplied in proper proportion.

In general appearance the new White models approximate more closely to the orthodox automobile design than anything yet introduced by the company. In the 15-h.p. chassis is the first steel frame which has been fitted to a White car. The wheel base is 8 ft. 6 in., with 32 in. wheels. The wheel base of the larger vehicle is 10 ft. 2 in., with 36 in. wheels, the frame being of armoured wood, the reinforcing plates of nickel steel being fastened on both sides of the wooden sills. The chassis is suspended about five inches nearer the ground than has formerly been the case. The removal of the water tank from the dashboard to a position under the floor boards adding to the conventional appearance. This tank has a partition at one end which, not reaching quite to the top, allows any oil which might float on the water to escape beyond into the empty portion of the tank, from whence it can be drawn at will. The petrol tank, which has a capacity for 150 to 170 miles in the 15-h.p. type, has also a spare apartment that can be utilised for an emergency supply. It is so divided that a small portion of the tank holds three gallons of fuel, which can be shut off from the rest of the tank. In this way the air pressure may be taken off the main portion of the tank, and the latter then filled. The burner is lit up from the small tank, and after the steam is raised air pressure can be pumped by the engine air pump on to the larger tank, which can then be put into operation. In this way

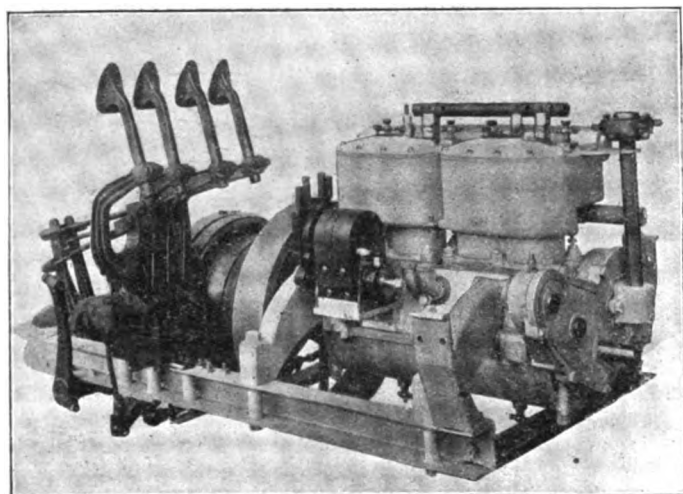


Fig. 11.—The Adams 14-16-h.p. Engine and Change-Speed Gear.

pumping air pressure on to the fuel tank by means of the hand air pump is practically eliminated. Another improvement has been introduced into the pilot light, tending towards durability, cleanliness, and efficiency. While the design has been carefully studied, the materials have had close attention, the drop forgings made by the White Company's own plant being a particularly strong feature. The new construction of the White chassis admits of the fitting of bodies of ample size, and in the coachbuilding department at Carlow Street, N.W., we have seen those in course of erection for the show chassis which will combine with the new models to place the White Steam Car in a forward position among the automobiles of 1909.

The Adams Cars.

The ADAMS MANUFACTURING COMPANY, LTD., who have always paid special attention to the construction of small cars, will give prominence to a 10-h.p. four-seated touring car. The engine is of the single horizontal cylinder type, 4½ in. bore by 6 in. stroke. The gear is adapted to give three forward speeds and a reverse, the control being by the company's system of interlocked pedals; by pushing any one forward, it positively frees any gear previously in operation. The car has proved so successful that few changes have been found necessary. It may be mentioned, however, that the bonnet has been lengthened, and its lines generally brought more into conformity with the general appearance of other light touring cars. A new model is the Adams 14-16-h.p. car. We give a view of the four-cylinder vertical engine and change-speed gear of this vehicle in Fig. 11. The cylinders are cast in pairs, the bore being 3½ by 3½ in. stroke. The crank-shaft is a solid forging steel, and runs on ball bearings of very large

diameter. The inlet and exhaust valves are situated on one side, being actuated off a single camshaft. The ignition is by magneto, the point of firing being fixed. The radiator is of a distinctive design, with ample cooling capacity. The pipes are of large diameter, and arranged for thermo-syphon circulation. Draught is induced by the fan flywheel of the engine. The change-speed gear is of the company's patent balanced planetary type, having wheels always in mesh, and giving three speeds forward and a reverse, and a direct drive on top with no gear wheels running. There is one pedal for each of the forward speeds and one for the reverse, all so interlocked that by pushing any one forward it positively frees any gear previously in operation. The final transmission is by cardan shaft and bevel gear to a live axle. The universal joint has large case hardened wearing surfaces and is entirely enclosed by a grease-tight cover.

The M.M.C. Six-Cylinder Cars.

The MOTOR MANUFACTURING COMPANY, LTD., one of the oldest concerns in the trade—they were established in 1896—will display the later models of their 35-45-h.p. six-cylinder cars. No startling features have been incorporated in the 1909 type, the object of the company having been rather to produce a vehicle which for all-round excellence and wearing qualities will equal any on the market. The motor, which has the six cylinders, 110 mm. bore by 150 mm. stroke, cast in pairs, is provided with a special system of water distribution, force feed lubrication to all crank journals, fan flywheel, magneto and synchronised coil and accumulator ignitions, and air brake. The change-speed gear is of the gate-controlled type, giving a direct drive on the top—third—speed. Ball bearings are fitted throughout the gear-box, which has a three-point suspension. The driving shaft is carried through a tube with spherical end to the cardan shaft, and this effectively bears all torque strains. The propeller shaft, which is well supported on ball bearings, transmits the power to the bevel pinion through a spring drive. All the brakes are centred on the rear wheel hubs, one set expanding internally, the other contracting externally. The steering joints are of a new type, which obviate the possibility of accident arising through the steering connections coming adrift, and allow any slack due to wear to be automatically taken up.

The Hotchkiss Cars.

The LONDON AND PARISIAN MOTOR COMPANY, LTD., inform us that the range of Hotchkiss cars for the 1909 season will include four models: 16-20-h.p., 20-30-h.p., and 30-40-h.p. four-cylinder and 40-50-h.p. six-cylinder. The 20-30-h.p. vehicle is a new introduction; it is fitted with an engine having the cylinders cast in pairs, the bore and stroke being 110 mm. by 130 mm. The ignition is by Eise-mann high-tension magneto. The details of the three other types remain very much the same as for 1908, slight modifications only having been introduced. They are all fitted with the Hotchkiss design of live axle, leather cone clutches, and a four-speed gear-box. In the case of the 40-50-h.p. six cylinder car an addition to the clutch is seen in the provision of a positive drive, this consisting of four projecting studs which, when the clutch pedal is fully released, fit into corresponding slots in the flywheel. The vehicles to be exhibited include a 40-50-h.p. with three-quarter landaulet body by Hamshaw, a 30-40-h.p. limousine by Million-Guiet, a polished chassis of the 20-30-h.p. and 16-20-h.p. models, and a 16-20-h.p. touring car with side entrance body by Melhuish.

The Calthorpe Cars.

While a year ago the CALTHORPE MOTOR COMPANY, LTD., Birmingham, confined their attention to a single model of 16-20-h.p., for the coming season two new types are being introduced. One of the main new departures in the Calthorpe vehicles is the adoption of the thermo-syphon system of water circulation, thus doing away entirely with a pump. The first of the new models is a 10-h.p. two-seater, fitted with a double-cylinder engine, 93 mm. bore by 123 mm. stroke, magneto ignition, thermo-syphon water circulation, Hele-Shaw disc clutch, gate-controlled change-speed gear, and ball bearings to all parts except the engine. The other is a 25-h.p. car on the lines of the company's "four-inch" car which secured the fourth place in this year's tourist trophy competition. The engine dimensions are:—Bore, 102 mm.; stroke, 130 mm. As regards the 16-20-h.p., a number of improvements have been introduced. Among these may be mentioned an increase in the stroke of the engine from 105 to 120 mm., the bore remaining at 93 mm., the adoption of a gate-controlled gear-box, and the fitting of ball bearings to the pressed-steel front axle.

(To be continued.)

MOTORING ACCESSORIES.

The Rotax Specialities.

CALLING at the extensive showrooms of the Rotax Motor Company, at 43 and 45, Great Eastern Street, London, E.C., we recently inspected several novelties that they are introducing to motorists, and a quartette of which we have selected for reference to on this occasion. These include an adjustable lamp bracket (Fig. 2), which has been designed to fix on the front dumb iron of a car without the use of bolts. In addition to being adjustable for a lamp of any size it can be fixed on any dumb iron, special provision being made for the taper. The Rotax adjustable bracket is quickly and easily fitted and detached when required, the fastening being made by two nuts easily removed on occasion. The bracket is made in several finishes and should attract considerable attention at the forthcoming show. The company is also bringing out a folding step to be carried on the foot board of the car, to which it is affixed with five bolts. When luggage is to be placed on the roof of a limousine or landaulet, the step can be quickly placed in position

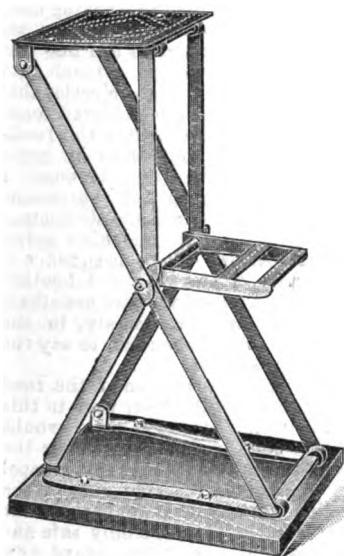


Fig. 1.

and used without any risk of injury to the panels or varnished work. It folds completely out of the way and opens with only three separate movements being necessary. When elevated (Fig. 1) it gives a firm foothold and should prove effective in connection with all touring cars. The advent of winter makes a reference to the Rotax patent foot warmer appropriate in the present article. This consists of riveted copper plates attached to the existing cooling system and does not occupy more space than would an ordinary rubber mat. These foot warmers can be supplied in various shapes and sizes according to requirements and are brought into use by merely turning a tap. In connection with the storage of petrol the Rotax Motor Company have brought out

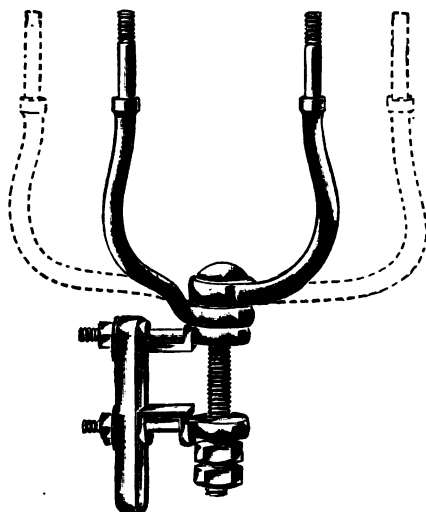


Fig. 2.

a new safety store which is constructed with a water channel all round the top. The lid shutting down into this effectually prevents the escape of any vapour that may be inside. A certain quantity of water is also contained inside the tank and a valve is provided at the bottom which is released when the lid is open, thereby allowing any superfluous water or petrol that may have leaked from the tin to pass out of the tank. Should any petrol become ignited inside it can be immediately extinguished by removing the lid. This store is made with a capacity for ten two-gallon tins and should prove of considerable in-

terest to our readers. The Rotax specialities are of sound construction as well as of excellent design.

C.A.V. Sparking Plug.

Messrs. C. A. Vandervell and Co., of Warple Way, Acton Vale, London, are introducing the C.A.V. sparking plug, which is guaranteed for two years. It is easily dismantled, without the necessity of removing the lower body of the plug from the engine, and is practically indestructible. In this device the electrodes are very substantially made of nickel, and the insulation is carried out with a treble-baked porcelain.

The Stepney Wheel.

The specialities which the Stepney Spare Motor Wheel, Ltd., of Llanelli, will show at Olympia, will include their "Stepney" wheel with flange attachment for facilitating the fitting of the Stepney wheel in case of punctures; the combination Stepney wheel for fitting to cars having different size tyres, on the front and rear wheels; the ring carrier, mudguard extension, sunproof and other devices incidental to the Stepney wheel. The special attraction for the coming season will, however, be the "Stepney" road grip tyre, which is being introduced to the public this week. Its novel features should attract much attention.

The "Orno" Foot Glove and the Lubrimeter.

Now that chilly days may be expected, the "Orno" foot glove introduced to motorists by Messrs. G. T. Riches and Co., of 19, Store Street, London, W.C., should be of considerable interest to a large number of our readers. The idea of its general appearance can be obtained from Fig. 3, and suffice it here to say that the foot-glove is made in soft black or brown leather and is lined with wool. It is kept in position by a pin at the heel, and, as will be seen, the feet can thus be kept warm without any necessity to keep

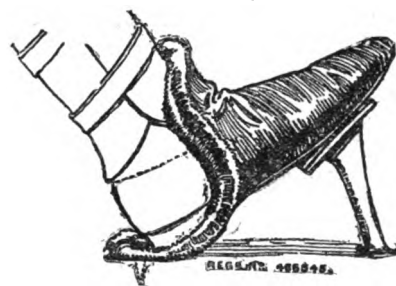


Fig. 3.

them cramped in any particular position. The device is extremely portable and we anticipate that it will be appreciated by those who have much driving to do in the open air during the coming winter. Messrs. Riches have now also taken up the agency for the Lubrimeter, an interesting device for use in conjunction with the engines of petrol cars, that was first introduced to the motoring public at the Cordingley Show at the Agricultural Hall in March last. As the name indicates, this appliance is intended to show the maximum and minimum levels of the oil in the crank chambers. This is done by means of lamps fitted on the dashboard, a red or white light being shown to demonstrate whether there is too much or too little oil respectively. The adoption of the appliance should prove a great convenience to motorists, offering, as it does, a check on all systems of lubrication. By means of the indicator on the dashboard one can ascertain the exact quantity of oil existing in the crank chamber, and so obviate foul exhaust and similar objectionable features. The use of the Lubrimeter also secures economy in the consumption of oil, while the fact that it can be fitted to any car gives it interest to every owner and driver.

The "L. M. De Luxe" Sparking Plugs.

From the United Motor Industries, Ltd., Poland Street, W., the sole British agents, we have received samples of the new "L. M. De Luxe" sparking plugs for coil and high-tension magneto ignition which have lately been put on the market. An examination of the latest plugs shows that while retaining all the good points of the old "L. M.," they have a better finish, that the terminal nuts are more substantial, and that the porcelains are of the very highest grade, and are of an orange colour. So confident are the agents as to the reliability of the plugs that they are guaranteeing them against all defects of any nature whatsoever, the United Motor Industries informing us that for all orange porcelain plugs that are returned to them with any sort of defect new ones will be sent in free exchange.

THE DAVIS PARAFFIN CARBURETTOR COMPANY has opened works at Station Avenue, Kew Gardens, S.W., to which address all communications should in future be sent, instead of to Shawford. As the motive power for the works is derived from an engine using the Davis carburettor, the company will be pleased to show the installation to anyone interested.

Correspondence.

[Letters to the Editor should be addressed to the offices, 27-33, Charing Cross Road, London, W.C.]

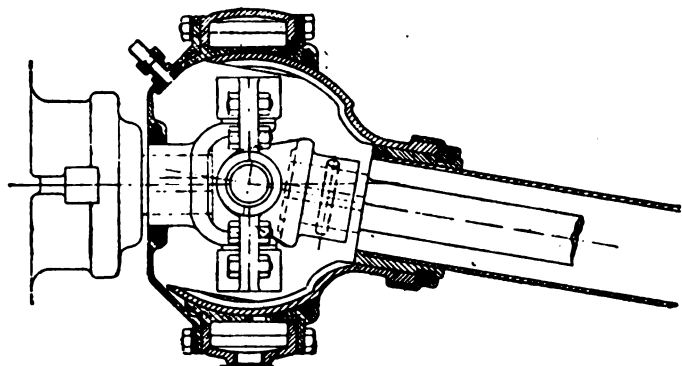
UNIVERSAL JOINTS ON CARS AND SHAFTS.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—We were very pleased indeed to note that you were calling attention in your issue of the 31st ult., under the heading of some "Useful Notes," to the attention that is necessary, and yet so very seldom given, to the universal joints on the propeller shaft of live axle cars. This is a part of a motor vehicle that is very often grumbled at for wearing badly, the cause of which is in a good many cases want of proper attention. We think the design of a number of cars is also greatly responsible for this, as not only are the lubricating arrangements very inadequate, but they are also fitted in such a way as to create unnecessary and very harmful strains upon the universal joint.

Owing to the joint having to be in rather an inaccessible position under the body of the car, special care should certainly be taken to let it run under the most advantageous circumstances. Very often they are left exposed, whilst in a number of cases they are merely covered with a loose leather covering, and filled up with grease in a very temporary sort of way.

One of the most common defects in design of the arrangement of the universal joint is that of making the rear axle move at a radius from a different point to that of the centre of the universal joint. In order to compensate for this, allowance is generally made either in the joint itself or for the end of the propeller shaft to slide. Now, when one



considers that these parts are expected to slide when they are taking the full pressure on their surfaces necessary to drive the car, it stands to reason that in a good many cases they do not slide at all, only when the road wheels are off the ground, or if they do slide, the surfaces are under very heavy pressure and naturally create wear. In the Sheffield-Simplex car we introduced a method by which the rear axle is always kept moving at a true radius from the centre of the universal joint, so that the same is relieved from all the strains mentioned. At the same time when carrying these out we enclose the joint in a steel globe, which enables the same to be run in a bath of oil the whole time; and further, to obviate the necessity for getting at the joint for lubrication, we arrange for oil to be supplied to the joint from our mechanical lubricator the whole time the car is in motion, so that in this case the universal joint is running under ideal conditions. The result of this has been a remarkable mechanical freedom in the running of the car, and has resulted, after 12,000 miles of running, in the universal joint showing absolutely no signs of wear whatever.

We enclose a section showing the universal joint, with the steel globe around it to illustrate the way it is constructed.—Yours truly,

PERCY RICHARDSON.

MOTORISTS, THE ROADS AND THE PUBLIC.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—Every day we hear complaints about motorists. Remedies are occasionally suggested, but, generally speaking, the alterations proposed, from a common-sense point of view, commence at the wrong end. For instance, the outcry against dust:—Dust is the result of the way in which roads are made. In country districts nothing can be said against the use of granite, but much can be said against the use of the material with which granite is grouted. In most suburban places the material used is road scrapings. It does not require any practical knowledge of road-making to ascertain of what road scrapings consist when we see oats and weeds growing upon the heaps of scrapings which are to be seen in every country district. To put the matter plainly, road scrapings only require a little water to make them into a soft, slimy mud, consisting of worn granite and horse filth. The first shower of rain softens it, and the passing of wheels over the road causes this filth to squeeze up from between the pieces of granite and very quickly we have a plentiful supply of mud. A little sun and wind very soon converts this into dust, which is stirred up more or less by every passing vehicle, and scattered by the slightest breeze. We inhale it, our clothes get covered with it, it

blows into our windows and doors, and is in every sense of the word most objectionable.

District Councils during the last two years have, to a great extent, met this difficulty by tarring the roads; but they think that, having done so, their duty is ended. Common sense, however, points out that they are wrong, because dust will collect, and the habits of horses are not less objectionable because the roads are tarred. We do not get so much dust as we did before the use of tar, but what there is is of a more objectionable character. Why is dust and filth allowed to accumulate on tarred roads as it is in most places? In the district in which I live, before the roads were tarred, they were swept every morning, sometimes by horse brooms and at other times by gangs of men with hand brooms. I believe I am right in saying that, at any rate in this particular district, once a week is supposed to be sufficient. In some districts a wide road is supposed to be sufficiently tarred by the machine going once up the middle and leaving the sides as before. The consequence is pedestrians naturally prefer the cleanest part of the road and hooting becomes unnecessarily frequent to warn pedestrians that there are others requiring the use of the roads besides themselves. Surely, in the interest of all, there should be a place at the side of the road, to say the least, equally clean and agreeable for foot passengers.

There are also many complaints about the destruction of the road surface by wheels. Carts and waggons of course take their part in this destruction, but motorists get blamed for it all. Common sense would point out the necessity of the traffic being equally distributed over the road instead of being nearly all in the centre. One would say, compel everyone driving a vehicle of any kind to keep on the near side of the road; but this is neither safe nor possible in many districts because the roads are made with such an amount of camber that the only safe and comfortable place to travel is on the crown. I have never heard any bona-fide reason for this excessive camber. I have spoken to several surveyors, and the only one who has given any reason said "the road looks so nice when well rounded." From my point of view the remedy for many of the road inconveniences is to make the roads almost flat and compel everyone to drive on the near side. Excessive camber also causes another annoyance, which is, that heavily laden vehicles always take the crown of the road, and generally stick to it, which necessitates anyone overtaking them crossing right over to the off side of the road; then, if another vehicle happens to be coming in the opposite direction on the near side, there is of course a sudden pull up of both vehicles, much grumbling and frequently bad language, all owing to the fact that by reason of excessive camber it is not possible for the driver of the heavy vehicle to get along comfortably on the near side.

I wonder if there is a driver who has not frequently narrowly missed an accident in turning a corner on the near side. I narrowly escaped a severe accident myself only a few weeks ago. I was driving along a fairly wide road and had to turn down a hill to the left. Knowing the preference that other people have for driving on the wrong side of the road, I was turning this corner at not more than three or four miles an hour. A very high hedge was on my left and it was impossible to see more than a few yards in front. On getting about half way round the corner I was suddenly met by a man driving a horse (rather heavily loaded) which was coming up this little shoot out of the lane at a gallop—he was on his wrong side, of course. I stopped quite close in to the hedge and the man crossed to his right side just in time to miss my car. I called out to him, "Why don't you keep your right side of the road?" He replied, "I like to teach you to come round corners carefully." This is a specimen of what very often happens in country districts.

We hear that many people are annoyed by the excessive use of the horn. I have read of clergymen asking motorists not to use the horn outside a church during divine service. From my point of view the proper method of preventing this annoyance is to remove the cause—the effect will immediately disappear. The cause is loafers standing in the middle of the road and vehicles being driven on the wrong side. If the police had power to compel all drivers to keep the near side, and to prevent loafers congregating in the road, there would be no necessity for using the horn.

I think that a disregard for the comfort and convenience of others, i.e., selfishness, is the cause of a very great deal of annoyance throughout the country, not only with regard to vehicular traffic, but many other things. Is it not selfishness that causes a lady to go to a theatre with a hat the diameter of which is 2 ft., and sometimes more? Is it not a disregard for the comfort of others that causes the cock-crowing and the dog nuisance? There are thousands of dogs absolutely useless. It is quite easy to train a dog to come to heel and remain there. The well-trained dog enjoys a walk with his owner under these circumstances quite as much as the untrained brute who goes barking and yelping after horses, cars and bicycles. I wonder how many hundreds of cyclists have been thrown and seriously injured by these yelping, useless curs. It can only be a disregard for the safety, comfort and convenience of others which induces people to keep these beasts.

Lastly, with regard to the laws under which we, as motorists, have to exist. We have to carry a red and white light behind, the former to

show that a motor-car is in front, the latter to illuminate the number. With regard to the illuminating part of the business, it is an utter failure, and why can it be necessary to show that a motor-car is in front? We are never overtaken by other vehicles; but a brick cart or a heavy laden waggon, which is overtaken by almost every other vehicle, need carry no rear light. Surely this is an absurd law. Then with regard to leaving a vehicle unattended; a butcher or a baker may leave his horse outside a house and no notice is taken, but should a motorist leave his car for any length of time, he is fortunate if he escapes a summons. Yet the horse can, and frequently does, move either to the opposite bank for a feed of grass, or simply because he thinks he will, and the car cannot move. I have premises in a town near to a butcher who has a large business. I have seen four horses and carts standing without an attendant outside his premises and no notice whatever taken by the police. On the other hand, I have drawn up with my car and have been warned that I am causing an obstruction. Upon one occasion I had not been two minutes away from the car when I was followed by a policeman and requested to take it away at once. I remarked to the constable that I had only just got out of the car and had not been away two minutes. He replied "I can't help that, take it away. I am going to stir some of you motorists up."

I think that if a little more common sense on the part of all concerned with vehicular traffic, whether it be Councils, police or motorists, could be used, we should hear no more of the annoyance caused by motorists. —Yours truly,

E. W.

however, endeavoured to escape his patriotic obligation, and mislaid a portion of the engine in order to put it out of action. This subterfuge having become known, the Prefect of Police, acting on the existing law, will take action in the courts against the automobilist. The calling to the colours of automobiles in this way during mobilisation for manoeuvres or for exercises has been found to produce the best results; the automobilists learn to adapt themselves to all the necessities of military discipline, which renders them much more efficient in the case of actual warfare. —Yours truly,

ALFRED STEAD.

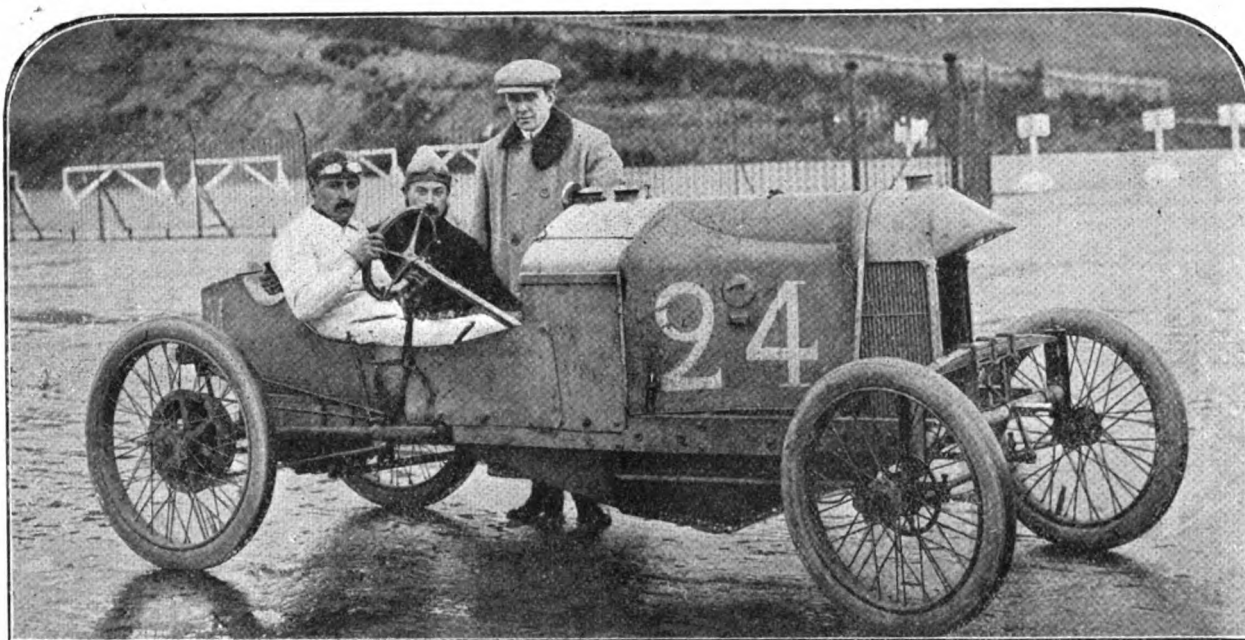
Roumanian Consulate General,
49, Parliament Street, S.W.

M.U. AND R.A.C.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—The extraordinary attitude taken by the R.A.C. Committee calls for comment, and I am sure all reasonably minded motorists will agree with the resolution of the Derby and District A.C. Committee, which states "That the committee unanimously deplore the dictatorial tone in which the latter part of Clause 18 of such scheme (R.A.C. Associate Scheme) is framed, in which the R.A.C. states that the clubs *must* be associated with the R.A.C. *only*," &c.

It is somewhat difficult to believe that the R.A.C. Committee can genuinely have the good of motoring at heart when they deliberately



The Sisaire-Naudin Car which last week attained a speed of over sixty-five miles per hour on Brooklands Track and covered 100 miles in 1 hr. 31 min. 53 sec. In the picture M. Naudin is seen at the wheel, at his side being M. Sisaire and Mr. C. Jarrott.

THE SYSTEM OF TRANSMISSION IN RACING CARS.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—Will you kindly answer me through the medium of your valuable paper whether the majority of racing cars are driven by chains or by cardan shaft and bevel gear to a live axle? I have had a discussion with a friend on the matter, and I would like to have some definite information on the point. —Yours truly,

G. COTTERILL.

[There were forty-nine cars entered for the A.C.F. Grand Prix heavy car race in July last, of which twenty-nine were chain driven, while only twenty had live axles. On the contrary, in the voiturette race the bulk of the vehicles had cardan shaft and bevel gear transmission.]

MILITARY MOTOR-CARS IN ROUMANIA.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—It may interest your readers to learn the following details with regard to the part played by automobiles in the Roumanian army. There has recently taken place the trial mobilisation of an entire army division, and in connection with this mobilisation the military authorities asked for the requisition of numbers of automobiles. This was carried out by the Prefect of Police of Bucharest, the choice being made by lot. Those automobilists chosen in this way at once placed their automobiles at the disposal of the authorities, and there were those whose names had not been drawn who voluntarily lent their vehicles, notably the general secretary of the Royal Roumanian Automobile Club. One motorist,

oppose all efforts which have been made to prevent division in the ranks of the various motoring clubs.

May I just draw attention to an interesting point in the way the R.A.C. carries out its promises. On page 25 of the R.A.C. Journal for January 9th, 1908, it is definitely stated that the work of the R.A.C. General (Associates) Committee is *not* subject to review—and yet within nine months, when this General Committee recommends that a joint affiliation scheme for clubs to join the R.A.C. and Motor Union be inaugurated—the R.A.C. Club Committee not only refuse this recommendation, but immediately make a rule to oppose it. Is not this submitting the General Committee's work to review. The associates have no control whatever, the R.A.C. Committee can alter and amend not only the whole Associate Scheme, but any action proposed by the Associates General Committee, and, in fact, have already done so.

There is a point in the scheme not generally recognised, and that is that the individual Associates (subscription £1 1s.) have only one representative on the General Committee for every 100 members, while the clubs which only pay a fee of 5s. for each member have one representative for every fifty members—a somewhat unusual rule.

Now on the Motor Union Committee the clubs and individual members are equally represented by one individual for every fifty members (approx.), the work of the committee is in no way subject to review, and it has ample funds to carry out its work—its income this year already exceeding £11,000. It has always made every effort to unite motorists and not to divide them; and at this critical time, when so much hostility is being shown, this is of supreme importance. The action of the R.A.C. is causing only dissension and division.

Anyone who remembers the events of 1902 will recollect that the

Motor Union was made an active body after the R.A.C. had for some sixteen months done all the work and had failed to call a meeting of the Motor Union Committee. As long as the R.A.C. had a working majority on the Motor Union Committee they had no fault to find with the agreement, but as soon as they began to be outvoted by the clubs and individual members they endeavoured to divide motorists into two camps. —Yours truly,

J. L. LOCK, M.A.

MOTOR MOBILISATION.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—The R.A.C. is to be congratulated on the promptness with which it has followed the lead of the Lincolnshire Club in the matter of assisting the mobilisation of the Territorial forces. This, however, seems an object which can be better dealt with by the county organisations than by a central body, which can only act as an intermediary, with consequent delay.

The scheme outlined by the Lincolnshire A.C. secures that the secretary of that organisation, who has personal as well as written information concerning the abilities and the cars owned by the members,

any other outhouse which is less than twenty feet from the dwelling house?

(2) In the case of a posting establishment, where no special provision is made for storing petrol, are parties who keep their cars there in order in keeping petrol in the same building as their cars (other than that in the car tanks), if the proprietor or other people who have cars or carriages there raise no objections?

(3) In the case of a workshop which is isolated from other properties, could the proprietor keep a quantity of petrol in a wooden erection adjoining the workshop?

In the first case, the party is only endangering his own property, although of course his fire insurance company might have something to say about it. Of course there is also his servants' personal belongings.

In the second case, anyone keeping petrol in the building would be endangering other peoples cars, carriages, &c., which might be stored there.

In the third case, the party is only endangering his own property, if we except any of his workmen's belongings which may be in the shop at the time. The opinions of your readers on the foregoing will much oblige.—Yours truly,

CYCLE MECHANIC



Mr. Henry Farman en route in his Aeroplane from Chalons-sur-Marne to Rheims.

is the unit with which the War Office would immediately confer should occasion arise for the utilisation of their services. If every County Club organised its membership in the same way, it would be very simple for the War Office in Whitehall to communicate at any time with each county unit, so that in an hour or two those responsible for this branch of mobilisation would be informed of the duties expected of them.

But if the county organisations are only to deal with the central authorities through the medium of another organisation which can know little of the particular services which each district will require, much time will be lost and confusion often result. Therefore it is to be hoped that the interest in the matter which the central club has shown since the county organisation took the initiative will be restricted to a kind of sympathetic encouragement rather than to any attempt to mould the whole movement into its own particular groove.—Yours truly,

FREE LANCE.

STORING PETROL.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—I am not quite clear as to the reading of the Petroleum Act as regards private users. I understand that a private user can keep 60 gallons for his own use without a licence, but the premises in which it is to be kept I don't think are very clearly defined. To quote a few cases in point.

(1) If a gentleman's property is all enclosed by itself, no other proprietor's property being near, is he entitled to keep spirit, say, from a few gallons up to, say, forty, in the coachhouse where he keeps his car, or in

HILLS AND THEIR GRADIENTS.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—I noticed in a recent issue of the *M.C.J.* some interesting figures respecting various hills. I have been in the West of England this summer, and about twelve miles west of Taunton, at a place called Wiveliscombe, there is a steep hill, and would like to know if any of your numerous readers could help me respecting the gradient; there are two hills, Wiveliscombe is between them. There are a few round Clovelly, Bude, and Boscastle and Bideford, but I cannot help as to what their gradients are.—Yours truly,

A CONSTANT READER.

[We have not been able to ascertain the gradients of the hills at Wiveliscombe; if any of our West Country readers can furnish the information we shall be glad].

REFERRING to the article on "Some Novelties at the Coming Paris Salon," in our issue of the 24th ult., Messrs. Panhard and Levassor ask us to mention that the chassis prices of the 15-h.p., 25-h.p., and 35-h.p. 1909 models are, respectively, £460, £600, and £720.

MR. D. DOYLE writes:—"In your last issue you publish particulars of the G.L. carburettor; it is therein stated that means are provided for introducing cold air to the cylinders for cooling and scavenging whilst coasting. This principle is by no means novel, and was first introduced by the writer some four years ago, and formed part of his claim in the patent known and sold as the Doyle valve, particulars of which were published in the *M.C.J.* about that time."

CHANGE-SPEED GEAR.*

By CHARLES WICKSTEED.

WE have arrived at this position. Given a first-class box, a first-class car, and a first-class driver there is little fault to be found. The gears are very seldom missed, and very seldom any noise to speak of is made. But neither all gears nor all cars nor all drivers will ever be first-class. The bulk of them will be second-class and many third. If a change-speed, therefore, can be devised that will do better with three third-class conditions than the sliding gear will do with three first, we must admit it is a great advantage. That is what I claim.

The details of the advantages that I claim with my gear I will set forth after I have explained what it is. Two hard steel taper clutches are connected with the gear wheels, which are always in mesh and which are thrown in and out of action as the clutches are pressed together or relieved. This is done by a screwed socket fitted with thrust ball races. There are, of course, as many clutches as you require speeds. The fast speed works direct on the main shaft. The screws are moved backwards and forwards by means of a crank shaft, which is actuated through a pair of bevel wheels through an upright pillar conveniently placed on the left-hand side of the steering wheel. The crank shaft, of course, keeps the clutches in time, so that when one is in gear the others must of necessity be withdrawn. To set up the clutches it is not necessary to take the lid off the gear-box, but only to remove the lid of the crank chamber, which is done by a thumb-screw. The rod is then lengthened slightly by means of the nut provided. In all cases the wheels form a part of the clutches, so that there are no extra parts to key on to the shaft. These parts are keyed on in the usual and most approved way by being pressed on to a taper with the extra security of one or two keys according to the load upon the wheel. The set nuts which adjust the thrust bearings have a small ledge on the outside when they are turned. This ledge is knocked down in three places into little grooves put in the sockets, which makes it absolutely impossible for them to move. The screwed sleeves or nuts that the actuating screws work in are screwed tight between the two halves of the box. But to prevent any possibility of their moving round a flat dowel is inserted between the upper and lower halves of the box cutting through the flanges.

To keep the crank shaft in exact position a small disc is placed on the crank shaft with four notches into which is sprung a V-shaped stop. The reverse, it may be noted, is simply a sliding motion actuated by small levers placed on the top and bottom of the actuating pillar. A locking bar worked by an eccentric from the crank shaft makes it impossible to put in the reverse when any other speed is on. The bottom half of the box is filled about half full of oil. No grease is used.

I have got a fair number of gear-boxes out to the often enthusiastic satisfaction of the users, and the first one I made I ran 9,000 miles before I took it out for exhibition. I have, of course, had my troubles, but in no single case have they been owing to the wear or giving way of the clutches.

A discussion followed, with Mr. M. O'Gorman in the chair.

Mr. C. W. S. Crawley said with some such form as Mr. Wicksteed's clutch change he thought it possible that the 'bus-driver might get on, even with the constant changes that he had to make the whole day. He would like to know how far the clutch surfaces separated, and if there was any difficulty from the film of oil between them still driving when they were apart.

Mr. A. Duckham said that there was one point upon which he wished to ask a question, and that was as to the nature of the lubricant employed. In the first place, he had always found in metal-to-metal clutches that one had to be very particular about the viscosity of the oil. One might have an oil that worked very well in summer but slipped in winter. Was there any difficulty in withdrawing these clutches, for the angles were very small, and it struck him that they might jam if they were let in fiercely? Further, was it necessary to almost fill the gear-box in order to secure perfect lubrication of the clutches? If so it meant considerable absorption of power.

Mr. J. S. Critchley said the standard gear from the engineer's point of view was a very barbarous piece of mechanism. He would never have thought that such a clutch could transmit the power that Mr. Wicksteed claimed. If Mr. Wicksteed had not had experience of that sort of mechanism for other purposes, he would not have had the courage to put in such a small size clutch. As to the wear of clutches, it appeared from Mr. Wicksteed's statement that they were the most lasting pieces of the mechanism. That was very gratifying to the outsider, who would naturally say that there must be wear of those small clutches, and that they would require attention from day to day.

Mr. J. Lyons Sampson said that it must have required great courage on the part of Mr. Wicksteed to bring forward a new arrangement of gear like that, when the barbarous and unmechanical Panhard sliding gear had practically driven everything else out of the field.

Mr. E. De Wilton, Mr. G. Koyle, Mr. Muntz, Mr. Oscar Thompson, and others having spoken, Mr. Wicksteed replied. He said Mr. Crawley had asked how far the clutches stood apart; the distance was about $\frac{1}{2}$ in., which was far enough for the oil to get in. As to the lubricant, he had worked with all sorts of oil, and could not see any sensible difference between them. The oil he used was engine oil. As to its being too thick on a very cold morning, it soon got warm.

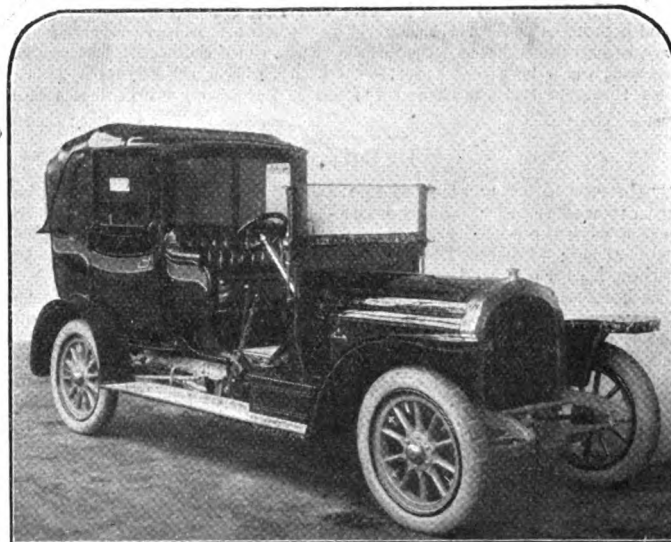
*Abstract of Paper read before members of the Royal A.C. on October 29th.

A RULE OF THE ROAD.

ON Thursday of last week the First Division of the Court of Session, the Lord President (Dunedin) and Lords Kinnear and Mackenzie on the Bench, considered an appeal from the Edinburgh Sheriff Court which raised an important point with regard to the rule of the road. In the Sheriff Court at Edinburgh, Charles Douglas Macandrew, Edinburgh, had sued Henry Tillard, Cramond Bridge, for payment of £39. On July 17, 1907, a car belonging to the pursuer was being driven from Edinburgh along the Queensferry Road when it was run into by another car, owned by the defender. The defender's car was being driven along the road from Davidson's Main, and in attempting to cross the main road to Queensferry collided with the pursuer's car, which was thrown on to the embankment on the side of the road and damaged. The pursuer stated that the defender's car was being driven in a careless and reckless manner. The defender attributed fault to the driver of the pursuer's car in proceeding at an excessive speed. Sheriff-substitute Guy found that both the drivers were to blame for the accident, and absolved the defender, with expenses.

The pursuer appealed, and the Division has recalled the interlocutor of the Sheriff-substitute and found in favour of the pursuer, reserving the question of damages.

The Lord President said it was not possible in motor driving to lay down rules as to dealing with crossings. There were crossings and crossings, and the speed depended upon various things, such as the angle of the crossing, the breadth of the road, and the state of the hedges or



The 35-h.p. Deasy Car which has recently been supplied to Lord Fitzhardinge by the Deasy Motor Car Manufacturing Company, Ltd.

Particular interest in this vehicle lies in the body, which is of the cabriolet type and has been specially designed to meet his lordship's requirements. The back part is intended to be used either open or closed; when closed, it provides ample protection from climatic changes, and when open—the windows being let down and the front supports of the hood folded—it has the same advantages as an ordinary side-entrance touring body.

buildings which formed the angle of the crossing. All that could be said was that a driver should approach a crossing of a main road with caution and not at excessive speed. Looking to the conditions of this crossing, which was not a bad crossing, it could not be said that the pursuer's car, which was on the main road, was going at an excessive speed. But the driver of the other car knew he was crossing at right angles a frequented main thoroughfare, and if there was one rule more than another to lay down in such circumstances it was that it was the business of those who were crossing a main road to look out when they entered the main road and give way to all traffic going along that road. He did not mean that they should not cross until there was no one in sight, but that if there was any possibility at all of a collision it was the business of the person on the side road to give way to people on the main road. Accordingly a driver of a car on a side road should approach a main road with his car under control. In this case the driver of the defender's car came up to the main road with the intention of crossing at once, and only at a somewhat late time he gave way to the other car. The only way to account for the accident was that the driver of the defender's car had lost his head for the moment.

At their stand at Olympia the ANGLO-AMERICAN OIL COMPANY, LTD., 22, Billiter Street, E.C., will show the Royal Warrant they have secured this year for the supply of Pratt's motor spirit to the King, as well as a series of photographs of their plant at Silvertown for washing and filling cans. They will have a collection of aluminium cans in which their .760 spirit is packed.

CLUBS AND ASSOCIATIONS.

-6-
ROYAL.

ON Wednesday the list of candidates submitted to the Committee for membership of the R.A.C. contained 130 names, leading to the hope that by the end of the present year the membership roll will run into 4,000.

The Essex County A.C. and the North Middlesex A.C. have resolved to become associated with the R.A.C. at the expiration of the present affiliation agreement.

The R.A.C., under date of the 5th inst., has published the official circuit times of the cars competing in the recent Four-Inch Race in the Isle of Man.

THE AERO CLUB.

MESSRS. WILBUR AND ORVILLE WRIGHT have been elected members of the Aero Club of the United Kingdom, which has awarded its gold medal for 1908 to them for the remarkable achievements made in aerial flight.

BROOKLANDS.

AT Brooklands on Saturday M. Bablot, driving Mr. Clement Hobson's Grand Prix Brasier, beat the 60-h.p. long distance record by covering the ten laps from a standing start, about 27½ miles, at a speed of 101.778 miles per hour. On the previous day, on the same 60-h.p. Brasier car, he improved upon Resta's short-distance flying start record in the 60-h.p. class by 5 m.p.h. Some fine performances have been accomplished in record attacks at Brooklands track. On Friday of last week, F. Newton, on a 90-h.p. Napier, drove for half a mile from a flying start at the approximate rate of 117 miles per hour, which beats the record.

DERBY.

AT the committee meeting of the Derby and District A.C., on the 29th ult., it was reported that on the question of affiliation replies in connection with the postal vote were still coming in, but that to date the result stood:—For the Royal A.C., 55; for the Motor Union, 36; for neither, 5; for either, 1 (out of a total membership of 183).

The hon. secretary also read a letter from the Midland A.C. as to a conference of provincial clubs on this question at Birmingham on November 14th, asking for the names of delegates from the Derby A.C. These matters were discussed, and, as the members were so divided, it was resolved that the club be represented at the meeting in question, and Dr. Copestake, Messrs. A. Ford and E. H. Fryer were chosen to attend. It was also decided to call an extraordinary general meeting on December 1st to discuss and definitely settle the matter of future affiliation.

A letter was read from Messrs. Duckham stating that, on account of the lack of interest taken by other clubs in the proposed lecture on "Oils," it had been abandoned.

SCOTTISH.

AT a meeting of the Executive Committee on Monday the Sub-Committee on Inconsiderate Driving submitted details of the action which had been taken by the Club with a view to the stopping of improper driving and excessive speeds, particularly in towns, villages, and populous places. Schedules were submitted showing that reports had been made by the special Club agents as to the driving of 1,562 cars, and a list was submitted of the cars comprised in that number whose owners had been communicated with on account of the speed of the car being greater than was considered by the sub-committee to be proper at the time and in the place where the observations were made.

A number of cases of inconsiderate and reckless driving, which had been reported by members of the Club and others, were considered, and the action which had been taken by the sub-committee thereon reported. The Secretary was instructed as to the finding of the meeting in each case, and as to the communication to be directed to the parties concerned.

Reports, verbal and in writing, were submitted from the delegates to the International Road Congress held in Paris from October 11th to 18th. It was agreed to invite the members of the Road Surveyors' Association to take part in a conference to be convened by the Club on an early date, when the principal points dealt with or the resolutions arrived at by the Congress might form subjects of discussion.

It was reported that the Buteshire County Council had agreed to ask for prohibition of motor-cars on the String Road in Arran, and it was resolved to offer strong resistance to the proposal.

It was intimated that conferences had taken place with the Provost and Magistrates of Dunfermline and with the Provost, Magistrates, and Town Council of Irvine with regard to proposals for speed limits in their respective areas, and that after discussion both these bodies had agreed to refrain from any such proposal meantime, the Club having arranged to erect certain notices and caution boards in each place.

THE Barnaleigh and District A.C. is supplying M.U. direction posts to the corporation of the town.

THE FLOW OF LIQUID FUEL THROUGH
CARBURETTOR NOZZLES.*

IN this paper the author continued certain investigations which were referred to in the one he read last year before the Society of Engineers. The action of a jet, as far as its properties of carburating air by means of liquid fuel are concerned, was considered, and its objects are set forth under the following heads:—1. To regulate the rate of flow of the fuel to suit the demands of the engine. 2. To disintegrate the fuel mechanically into the finest particles possible. The regulation of the amount of heat required to supply the latent heat of evaporation and the temperatures which are reached under different conditions are given. It was shown how a temperature of 10 deg. C. would be reached if the theoretical proportions of air and petrol were combined and evaporated in 1.40th second, the time taken for the mixture to flow from the carburettor to the engine.

The viscosity of fuels at different temperatures has been investigated by the author, who gave some tables, being results of experiments he has made by means of a special instrument and also with actual orifices of various sizes. The effect of the alteration of specific gravity, due to the rise of temperature, was also taken into account. The tables showed that the rate of flow of a spirit, such as petrol, is affected to a considerable extent by increasing its temperature. Comparative tables for benzol and petrol were given, which showed that with a small orifice or with a low pressure head the friction upon the fuel appears to be greater in the case of benzol than in petrol, but as the size of the jet was increased the two fuels behaved almost alike, certainly within the limits of experimental accuracy, the benzol being slightly more viscous.

The next matter considered was the relation between suction pressure and the air velocity, the paper being accompanied by curves which enable the ordinary user of liquid fuel to determine, by a simple calculation, the suction pressure at the carburettor jet in any specific case. Examples were worked out in the paper to demonstrate the application of this method, and the results were checked by actual experiment with a manometer. Cross checking was done by utilising the curves and tables which have been determined for the rate of flow of liquids through the orifices used. The tables make it apparent why extra air inlets are required in many types of carburettor, and show the effect of this extra air admission upon the system of carburation.

One of the most important features of the paper was the diagram of results of a large series of experiments upon the rate of flow of petrol through small orifices. A series of carefully constructed orifices was obtained, graded and drilled to 1.100th millimetre in diameter. These were in turn fitted to an instrument and the time noted for a sample quantity of fuel to pass through under various pressure heads. A table showed the rates of flow in gallons per hour under various conditions, which enables the diameter of the jet for any particular engine to be predetermined with some degree of accuracy. The author also pointed out that small aperture jets are somewhat erratic in their behaviour, which may account for some of the carburation disturbances in actual practice. An example of the rates of flow for a jet of 1.40 mm. diameter is 1.8 gal. per hour at 55 deg. Fahr., with a pressure head of 180 mm. of the fuel; but when the temperature of the fuel was raised to 70 deg. Fahr. the rate of flow increases to 2.14 gal. per hour. The pressure head corresponding to any given engine speed can be determined from the curve shown, and knowing the proportions of fuel to air required to give the best results, the size of jet can be read off from the curves. The paper showed how mean values for ordinary road conditions can be obtained by a simple system of cross checking.

The investigation was made with the object of clearly and graphically showing the action of a carburettor and the relations of the various dimensions, and their effect upon the resulting mixture of fuel and air. The author hoped that by means of simple reasoning the average user would be able to eliminate trial and error methods, and at the same time obtain a clearer understanding of the mechanical principles of a carburettor.

AUTOMOBILE ACCIDENTS.

AN inquest was held at the Sussex County Hospital, Brighton, by the Borough Coroner, Mr. J. E. Bush, into the circumstances attending the death of George Downes Whittle, aged 77 years, who was knocked down by a motor-car on the London road on Sunday last. After hearing the evidence the jury returned a verdict of "Accidental death," and attached no blame to the driver.

Two fatal motor-car accidents are reported from Birmingham on Saturday, a woman being knocked down in Suffolk Street by a car that was being driven slowly, the witnesses agreeing that the driver had no chance of avoiding the woman. She was conveyed to the Queen's Hospital, where she died. A few hours before another woman who had been knocked down by a motor-car died in the same hospital, and in that case, too, the car was said to be travelling at a moderate rate of speed.

THE business of the Oxford Street Motor Company is now being carried on under the new title of Automobile Markets, Ltd. The company have a large selection of second-hand cars on hand at their depot at 151, Oxford Street, London, W.

*Abstract of paper read by Robert W. A. Brewer, A.M.I.C.E., M.I.M.E., M.I.A.E., at the Society of Engineers on November 2nd.

CASES AGAINST MOTORISTS.

A PROPER DISMISSAL.

Miss L. L. Boustead, of Wimbledon, was brought before the local petty sessions on a summons for not stopping the machinery of a motor-car when stationary on the 9th ult. The police evidence showed that defendant, who was in charge of her father's car, left it in front of the London and County Bank, High Street, for three minutes without stopping the machinery. The Bench dismissed the summons, and the chairman (Mr. C. Tyrrell Giles, K.C.) said the case did not call for serious consideration at their hands or those of any other magistrates.

THE BROMLEY SPEED LIMIT.

At the Bromley Petty Sessions, several motor-car drivers were summoned for exceeding the speed limit of ten miles in certain streets in Bromley. Many of them complained that the notices were not sufficiently prominent. It was pointed out, however, that the notices were in accordance with the rules and regulations.

One defendant said that had he known there was a limit he should have gone slower. Inspector Vincent Coster said that the notices must be put where the limitation of the speed commenced. The Chairman added that no doubt attention would be drawn to the matter, and that if a notice was not in its proper place its position would be altered. Another defendant was fined £5 and 12s. costs, or in default one month's imprisonment. He had not sufficient money to pay the fine and costs, and left the court in custody.

a very serious thing to convict a motorist of driving to the common danger without more evidence than they had in this case of really careless driving. They also thought the man who was driving the cart was partly to blame, driving smartly and very likely not looking out. The case would be dismissed.

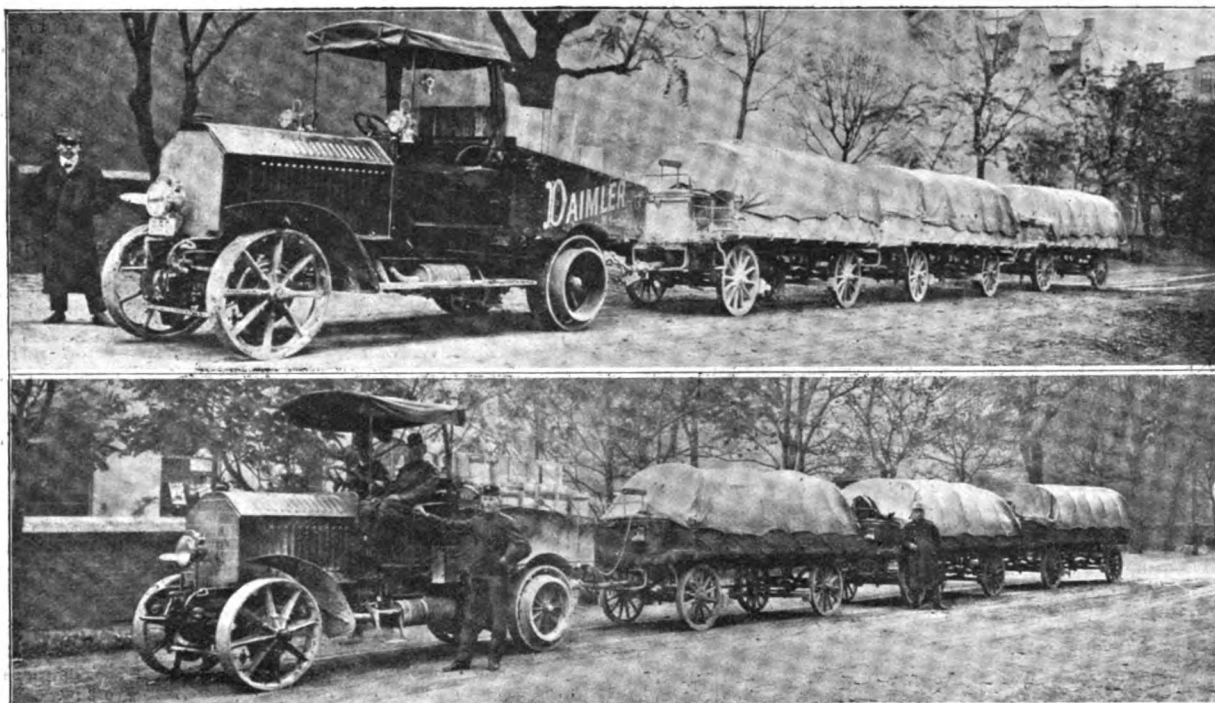
DRIVING IN CROWDED STREETS.

Captain H. W. Hill, of the Royal Artillery, appeared at the Thames (London) Police Court, on Tuesday, to answer a summons for driving a motor-car in a manner dangerous to the public.

Constable 939 K stated that on October 21st he was regulating traffic in the East India Road, and assisting children, who were leaving school, across the road, when defendant drove his motor-car on the off-side of the refuge, thereby knocking down two children, each aged 3½ years, both of whom had had to be medically treated. At the time the traffic was stopped, and Captain Hill now stated that he pulled up immediately. There was no traffic within 200 yards on the near side. He went that way merely to pass the traffic. Mr. Chester Jones said when defendant saw the line of traffic was on one side and he went on the other it was a very embarrassing thing for the public. In London, especially, cars had to be driven with great care, and it was clear defendant drove to the common danger. He would be fined £10 and 4s. costs.

AERONAUTICAL MATTERS.

THE matter of the Aero Club of Germany's decision to award this year's Gordon Bennett Competition Cup to the Swiss entrant *Helvetia*



Two of the Austrian Daimler Road Trains which took part in the recent Industrial Motor Vehicle Trials organised by the Austrian Automobile Club. *(Allgemeine Automobil Zeitung.)*

HEAVY HAULS.

During the last few days several motorists have been before the courts at Guildford (fines on one day totalling £70), one of the defendants being a lady; Cambridge (4), Kingston (4), Morpeth (2), Acton, Barnet (3), Wimbledon (5), Southend (2), Godalming, Haywards Heath (fines totalling £120 on Monday), Bromley, Kent (4), Garstang (2), Littlehampton (7).

A DISMISSAL AT HAYWARDS HEATH.

On Monday, at the Haywards Heath Petty Sessions, Albert Lewsey, chauffeur, was summoned for driving a motor-car in a manner dangerous to the public, at Stonepound Crossways, Hassocks, on October 22nd. Several witnesses having given evidence, Mr. C. H. Waugh, for the defence, said nobody regretted the accident which had occurred more than the defendant, but no evidence had been given to show he was to blame. Evidence of a collision was not evidence sufficient to convict defendant of driving to the common danger. Had the accident been avoided by an inch or two there would have been no charge preferred against defendant. The wheel marks showed the car to have been on its proper side, and if the car had been travelling at the speed alleged the cart would have been smashed to smithereens, whereas not a spoke of its wheel was damaged. All the damage was received by the motor-car.

The Chairman said the police were justified in thoroughly going into this case. The cross-roads were extremely dangerous, and anyone driving a motor-car should go past with great caution. He thought six miles an hour would be quite sufficient speed. At the same time it was

proceeds another stage, for the Aero Club of Great Britain and Ireland is forwarding a protest to the German Aero Club against its ruling. A meeting of the permanent committee of the International Aeronautical Federation is to be convened to discuss the question.

At the Caxton Hall, Westminster, on Tuesday, Captain W. G. Windham read a paper, under the auspices of the Civil and Mechanical Engineers' Society, on "Balloons and Aeroplanes." After pointing to the progress made with dirigible balloons, he dwelt at length on the recent successes with aeroplanes. With the aid of lantern slides he described the aeroplanes of Mr. Wilbur Wright and Mr. Farman, as well as the machines constructed for aerial flight by other inventors. He added that the Aeroplane Club that had recently been started in London had excited much interest, and 640 members had already joined.

THE Coventry Chain Company inform us that they supplied the chain for the drive of the eccentric shaft of the new Daimler silent engine.

THE County Chemical Company, Ltd., are just now experiencing a heavy demand for their "Chemico" and "G.B. Carbide," "G.B. Special" and "Searchlight" burning oils and other lines incident to the period of long evenings. In carbide alone, "Chemico" and "G.B." brands—without in any way considering the output of raw carbide—orders are just now claiming upwards of three tons daily.

FORTHCOMING EVENTS.

NOVEMBER.

- 10th (Tu.).—Meeting of the Incorporated Institution of Automobile Engineers to discuss the report of the Society of Motor Manufacturers and Traders on Horse-power Formulae of Petrol Engines.
- 11th (W.).—Prof. B. Hopkinson, at Institution of Automobile Engineers, on "A Complete Test of a Modern Petrol Engine."
- 13th (F.).—Inquiry into the application of the Surrey C.C. for ten mile an hour speed limits at Walton-on-Thames, and in certain thoroughfares in Woking.
- 13th-21st.—Olympia Motor Show, London.
- 14th (Sat.).—Thirty-third Annual Dinner of the Stanley Cycling Club, Hotel Metropole, London, S.W.
- 18th (W.).—Annual Dinner of the Motor Union.
- 20th-23th.—Stanley Show at the Royal Agricultural Hall, London, N.
- 25th (W.).—Annual Dinner of the Founder Members of the Royal A.C.
- 26th (Th.).—400-mile International Grand Prize Race of the Automobile Club of America.
- 28th (Sat.).—Opening of the Paris Motor Car Exhibition.

DECEMBER.

- 13th (Sun.).—Closing day of the Paris Salon.
- 23rd (W.).—Speed and reliability trials at Nagpur, Central Provinces.

JANUARY, 1909.

- 22nd-30th.—Scottish Motor Exhibition at the Waverley Market, Edinburgh.
- 26th.—Scottish Motor Trade Association Dinner at Edinburgh.

FEBRUARY.

War Office Fourteen-days' Trial for Light Tractors.

LIGHTING-UP TIMES—LONDON.

| | | | | | | |
|---------------|-----|-----------|-----|-----------|-----|-----------|
| Nov. 7th—5.23 | ... | 9th—5.18 | ... | 11th—5.15 | ... | 13th—5.12 |
| " 8th—5.20 | ... | 10th—5.17 | ... | 12th—5.14 | ... | 14th—5.10 |

To find the approximate lighting-up time in November for Birmingham 5 minutes should be added to the above times, 5 for Manchester, and 8 for Glasgow.

COMPANY NEWS.

In the case of New Companies the file number is given at the end of the particulars.

At a general meeting of Messrs. Charles Jarrott and Letts, Ltd., held last week, the recommendation of the Board that a dividend of 50 per cent. on the year's trading should be paid to the shareholders was carried, and such dividend has since been paid, the balance being carried to reserve. The various departments of the business include the handling of every type of car, from the light runabout to the powerful vehicle, and the fact of their having paid an average of over 50 per cent. each year of trading for the last five years is evidence of the excellence of the cars they are handling and the demand existing for them.

The Reliance Taxi-Cab Company, Ltd., has just offered 195,000 10 per cent. preferred participating ordinary shares for subscription by the public.

The twenty-second annual meeting of the shareholders of the London Improved Cab Company, Ltd., was held on Monday, with Mr. E. H. Bayley in the chair. Referring to the advent of the motor-cab, which had completely revolutionised the business, he said they had had a cab chassis specially designed for their purpose. This had been tried on the streets and had given good results. The chassis now proposed to be adopted has passed all tests, and it is proposed to commence with a supply of 150 of these vehicles. The company have eleven depots conveniently situated in various parts of London.

At the meeting of the Spare Motor Wheel of America, Ltd., at Birmingham, Mr. T. D. Drayton presided, and it was announced that owing to the strain put on the wheels by the roads in America, it was found necessary to make a stronger wheel than was used in Europe. The difficulty between the company and the Rim Association had been overcome, and the sales are now steadily increasing. Given time for development, the chairman assured the shareholders that they had a property that would, in the future, yield a handsome return.

POLICE "CONTROLS."

At Trumpington, near Chelmsford, the police have a measured quarter of a mile.

There is a trap on the London road at Rayleigh.

LANCASHIRE has several traps, notably on the Bolton and Chorley road and also the Chorley to Preston highway.

The police are watchful of motorists on the road between Rottingdean and Newhaven, and also between Lewes and Eastbourne.

MOTORISTS travelling from London to Surrey and the South will not only be interested in knowing that there is a furlong trap between Hammersmith Bridge and the "Red Lion," Barnes—cars generally being timed at thirty miles an hour—but that Putney Bridge is having tram lines laid over it, already half the bridge being lined with rails.

ROAD REPORTS.

HAMPSHIRE.—Several well-conducted provincial papers make a feature of giving reports as to the roads in repair in their localities from time to time. Among these is the "Hampshire Chronicle," from which we learn that among the highways now being dealt with by the authorities is the main road from Christchurch to Salisbury, that between Fareham, Drogham and Alton, the portion of the Portsmouth and Petersfield main road at Purbrook, and several important roadways in the Andover and Basingstoke districts.

HONITON.—The road about a mile east of Honiton, leading from Honiton to Monkton, is under repair, but the stones are rolled down each day before being left, so as to cause little inconvenience to traffic.

CROYDON.—The main Brighton road through Croydon has been up for repairs to the tramway track every night recently between West Croydon Station and the "Swan and Sugar Loaf," South Croydon. These repairs are expected to be completed to-day (Saturday.)

NEW L.C.C. BY-LAW.

THE new by-law of the London County Council referred to in our comments is as follows:—

I.—The acts and things specified in the following clause, numbered 13, are hereby prohibited and declared to be offences:—

13.—Drawing, driving, or propelling at a rate exceeding eight miles per hour, or so as to endanger the public, or drawing, driving, propelling, standing, or placing, on or across the ground or turf, on or over any footpath, or in any shrubbery, any gun or gun-carriage, limber or waggon-cart, carriage, van, velocipede, bicycle, tricycle, truck, wheelbarrow, or vehicle, or using for heavy traffic any road restricted by the Council to light traffic, without the consent of the Council in writing under the hand of its clerk, or learning or teaching the driving of any motor vehicle.

PUBLIC SERVICES.

THE Siddeley motor taxi-cab has been introduced into Capetown.

MR. HERBERT GLADSTONE (Home Secretary) states that on September 30th the licensed cabs in London numbered 11,122—namely, 2,273 motor cabs, 5,095 hansom cabs, and 3,754 four-wheeled horse cabs.

MOTOR taxicabs have been introduced into Dundee, the magistrates having approved of the proposal of a company to run these vehicles in the streets of the city. The fares to be charged are on a similar scale as those in operation in Edinburgh and Glasgow.

ON Monday the Vanguard motor omnibuses which had been running from Hampstead to Charing Cross and Victoria ceased to ply on that route.

BUSINESS NEWS.

MESSRS. C. E. WHITTAKER, LTD., inform us that purchasers of Imperia cars become at the same time possessors of a very useful document in the shape of a *passé-avant*, which frees them from customs formalities when entering Belgium.

MESSRS. GIBSON BROS., plate and sheet-glass merchants, 23, Duncan Road, London Fields, N.E., are making a speciality of plate-glass for use in the wind screens of motor-cars. The glass is supplied in all shapes and sizes and in thicknesses from $\frac{1}{8}$ to $\frac{3}{4}$ in.

THE Lanchester Motor Company, Ltd., Birmingham, have just issued a very exhaustive descriptive manual of their 20-h.p. and 28-h.p. cars. The work, which is exceedingly complete and fully illustrated, should prove indispensable to users of these vehicles.

LEYLAND MOTORS, LTD., have sent us a copy of the new catalogue they have just issued; this gives very complete particulars and illustrations of their well-known steam and petrol industrial motor vehicles, motor-buses, &c. Included in the list is a description of the Leyland factory, particulars of some good tests carried out with their steam wagons, and some useful diagrams affording a ready means of transforming kilometres into miles and *vice versa*.

IN addition to the gold medal awarded in the class for machine appliances at the Franco-British Exhibition, Messrs. Hans Renold, Ltd., were awarded a similar distinction in the class for apparatus for the transmission of power.

THE carelessness of a few motorists has raised such a storm of protest everywhere that the general public are beginning to imagine all owners of motor vehicles are their enemies and should be dealt with in a really drastic manner. This unfortunate idea has been increased by the misleading statements of people, who should be better informed, to the effect that motor vehicles are a luxury of the rich. The fact that motor vehicles are in constant use for trade purposes, and an increasing number of professional men, doctors, and others are using automobiles, seems to be entirely lost sight of. An enquiry at the London and Paris Exchange Agency, Ltd., has disclosed the fact that a number of second-hand private cars are daily being converted into delivery vans, &c., which in itself is a proof of the growth of the motor for business purposes. When it is realised that more motors are used for commercial purposes than otherwise, the storm of protest will cease, and attention be paid to the actual evil.

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NOTICE.

Comment will doubtless be expressed at the absence of "The Motor Car Journal" from its familiar place at the Motor Car Exhibition at Olympia. This, however, is from no fault of our own, application for space having been made in the early part of August, and on several subsequent occasions; but, according to the latest information from the responsible management, there is no space available; and so "The Motor Car Journal" has no *locale* at Olympia this year.

COMMENTS.

Trials in 1909.

WITH regard to the R.A.C.'s programme for 1909 we understand that the Expert and Technical Committee have decided that, should a trial of Tourists' Cars be proposed, suggestions which have been placed before them by Mr. Worby Beaumont shall be considered. The committee have decided to recommend the award of the Club's silver medal for the best Speedometer submitted for test during the coming year, and a sub-committee has been appointed to consider the programme of Trials and Competitions. In this connection the debate which took place on Monday under the auspices of the Society of Road Traction Engineers with regard to the value of organised trials from the commercial users' point of view is of interest. At the end of a two hours' discussion the resolution moved by Mr. Percy Frost-Smith to the effect that their value was *nil* was lost; the general opinion being in favour of such events. This is in direct opposition to the views of the makers of touring vehicles so far as the 1908 long-distance event was concerned.

The Wolseley 1909 Programme.

SOME of the new models of the Siddeley cars were submitted to the critical inspection of a number of members of the motor press at the depot of the Wolseley Company at Westminster, S.W., on Tuesday. Interest principally centred round the 20-30-h.p. six-cylinder *modèle de luxe*, full particulars of which will be given in our next issue. Mr. J. D. Siddeley briefly explained the Wolseley programme for 1909, which was to produce vehicles of moderate horse-power but of the highest grade of construction. Although their cars had not been entered in public competitions during the past year, they had an extensive experimental department at their works, and were always experimenting with the view of improving their vehicles. Hitherto the construction had been carried out in two factories—one at Adderley Park, Birmingham, and the other at Crayford, Kent. It had, however, been decided to concentrate the manufacture under practically one roof at the first-named

place, where extensions are in hand, and where the power plant is being increased to the extent of 500-h.p. In connection with several burning topics of the moment in the motor world, Mr. Siddeley expressed the view that the valves on a modern petrol engine give so little trouble that they may be considered as non-existent. As for the question of stroke in relation to bore, he did not think it made much actual difference whether motors were made thin and long or short and fat; the latter was, however, the lighter in weight for an equal amount of power developed.

Criminals and Motorists.

In a previous issue we alluded to the evident excess in the number of police in the rural Metropolitan area, and the paucity of constables in the town districts, as evidenced by the number of undiscovered crimes. At Kingston, on the occasion of the summoning (reported on another page) of Sweeney by the Commissioner of Police, there were ten constables and one inspector in uniform in the small court most of the day, apparently doing nothing. Such a state of affairs should appeal to the ratepayers, and, as we understand there are numerous bodies of Metropolitan tradesmen banded together to keep down the rates, the above fact should be noted.

The Dust and the Car.

THE report of the Dust Committee of the R.A.C. for the year that is now closing has just been issued, and deals exhaustively with the tests that were carried out at Brooklands in the summer. Some conclusions will be of special interest; notably the official endorsement of the view that the tar treatment of roads, instead of being additional to the ordinary cost of maintenance, will so preserve the surfaces that the life of the metalling will be greatly prolonged, with consequent saving to the ratepayers. The improvement in this direction is becoming general throughout the country, but this, of course, in no way reduces the necessity for further investigation with a view of such modifications in the shape of car bodies as will prevent the dust that is always present on any road surface from being disturbed. On this point the committee has come to the conclusion that cars with the very small body clearance of 6 in. from the road surface are found not to disturb or to raise any dust from a thick coating laid between cleanly swept wheel tracks up to speeds of forty miles an hour. It is therefore practically certain that the dust nuisance arises entirely from the action of the air currents caused by the movement of the cars through the air, on the dust which has been previously raised to a moderate height by the wheel tyres.

Conclusions.

THE result of the experiments leads to the following conclusions:—"Hard tyres are better than soft ones, narrow tyres than broad ones. Armoured tyres are sometimes better and sometimes a little worse than plain ones. Plain tyres vary very slightly among themselves, except that old worn tyres appear to raise more dust than new ones. Casing in the spokes so as to produce disc wheels causes some, but hardly

noticeable, improvement." With regard to the fitting of a plain, flat, rectangular, smooth casing under the car, this is said to produce good results so far as minimising the dust-stirring properties of the cars themselves. It can be so easily applied to existing vehicles that the committee emphasises this feature as being capable of being fitted by most owners at small expense. They, in fact, go so far as to say it is certain that any car owner who drives a car of average clearance, but which has irregularities such as those caused by large fuel tanks or silencing arrangements projecting below and interfering with the regularity of the under surface, is continuing to use a car which the committee find in most cases is practically certain to be a public nuisance.

The Rating of Engine Power.

LAST week's meeting of the Commission appointed by the R.A.C. and the Institution of Auto. Engineers to report upon the rating of motor-car engines was adjourned to a date yet to be arranged. Meanwhile, while the Rating Committee of the latter body is in substantial agreement with the S.M.M.T. as to the desirability of amending the present R.A.C. formula, they have, after considering a variety of reports, come to the conclusion that the experiments submitted in the report of the society do not justify the proposal of a new formula. It is, therefore, suggested that a new committee be formed to discuss the exact nature of the tests to be made in order to supply data for accurate comparison by formula.

North to South.

THE trip which Mr. J. H. Paterson has just taken from Aberdeen to London on an 18-24-h.p. Peugeot car was decidedly an excellent performance. It was under the observation of the Scottish Automobile Club, and of course the legal limit was not exceeded. The run from Aberdeen, via Perth, Stirling, Edinburgh, Berwick, Newcastle-on-Tyne, York, Doncaster, Stamford to London, was one of 550½ miles, and occupied 27 hours 58 minutes in all from the evening of Tuesday, the 3rd inst., to nearly midnight on the following day. The engine did not stop from the commencement to the finish of the trial; the petrol consumption was equal to 16.18 car miles per gallon, and 31.146 ton miles per gallon or .032106 gallons per ton mile. During the journey three gallons of lubricating oil and half a pint of water were filled into the tank, and the only stops on the road were voluntary ones, for lighting lamps, &c.

M.P.'s v. Motorists.

LAST week the anti-motorists in the House of Commons held a meeting which was attended by fourteen or fifteen M.P.'s, who, on Monday, commenced their campaign, which, for the present, will consist of a series of questions hurled at the Local Government Board and the Home Office. Mr. Harold Cox led the way, and called attention to the increase in the number of accidents which had occurred in which motor vehicles were concerned. Mr. Gladstone, while recognising that the number of accidents was serious, pointed out that it was almost inevitable with the great growth of motor traffic, while the figures which have been so freely bandied about have included the returns for casualties in which tramcars were concerned. Supplementary questions were asked by five other members, all calculated to impress the public with the heinous crimes of which motorists are said to be capable. Replying to a suggestion that Germany had a speed limit of nine miles an hour in all villages, Mr. Burns was able to reply that "as one who was in Germany last year, I can only say I did not see that speed limit." An important point was raised by Mr. Pickersgill, who drew attention to the cases which have occurred of late, in which owners of vehicles had rebuked the police when their chauffeurs have been stopped for driving a car at an excessive speed. The Commissioner of Police is, according to the Home Secretary, consider-

ing individual cases of this kind, and will be prepared to proceed against the owner for abetting, should the circumstances in his view justify such a course.

Speed in London.

THE Conference of Representatives of the Metropolitan Borough Councils which met the other day to consider the speed of motor traffic in London was scarcely unanimous, and the decision in favour of limiting the speed of motor-omnibuses within the four miles radius of Charing Cross to eight miles per hour was only arrived at by fifteen votes to ten. Councillor J. E. Taylor, of Wandsworth, made a strong protest against the undue restriction of the speed of motor vehicles plying in the public service as likely to lead to a restriction of a growing industry. The demand of the public was for accelerating the pace as compared with the age of locomotion which London has tolerated in the past; and hence to thwart and hamper the new locomotion was an undesirable thing to do.

The Traveller-Motorist.

ON Monday night the committee stage of the Licensing Bill in the House of Commons was brought to a close, the final discussion being concerned with the schedules. Mr. J. Hope had put down a new schedule which was concerned with a bona fide traveller. As the Bill stood any person who has travelled six miles from the place of his previous night's lodging can claim to be a "traveller," no matter how the distance has been covered. Mr. Hope proposed to draw a distinction between a pedestrian and different classes of riders. His proposed schedule was thus worded:—

Minimum distances for bona-fide travellers:

For a person proceeding entirely on foot, six miles.

For a person proceeding any part of the way in any vehicle drawn by animals, fourteen miles.

For a person proceeding any part of the way by any cycle other than a motor-cycle, eighteen miles.

For a person proceeding any part of the way by any motor-cycle or motor-car within the meaning of the Motor Car Act, 1903, thirty-six miles.

The discussion was, however, brought to a conclusion before the amended proposal was reached. Had it been subjected to debate, vigorous opposition would doubtless have been made to a suggestion which differentiated between pedestrians and motorists but took no notice of railway travellers. Why, too, did not Mr. Hope consider the likelihood of the aeroplane upsetting his calculations?—not so great an improbability, judging from the confident tone of the speakers at the inaugural meeting of the club whose formation is recorded elsewhere in the present issue.

Cars Registered this year.

By the favour of the Chief Constables of some of the leading cities and towns we are able to place before our readers exclusive information with regard to the motor-car registrations and licences lately issued to drivers. At Newcastle-on-Tyne seventy-one cars were registered during the year ended September 30th, as well as 148 motor-cycles; 760 licences were issued to drivers. At Coventry the numbers have, of course, been larger, and from the beginning of January to Saturday last 321 cars and 212 motor-cycles were registered, while 852 drivers were licensed. During the first ten months of the year 449 cars, 234 motor-cycles and 2,330 drivers were authorised in Manchester; for the year ended September 30th last 896 new licences to drive motor vehicles were issued at Birmingham, where 325 cars and 285 motor-cycles were registered in the same period. The Public Control Committee of the London County Council report that for the three months ended September 30th last applications for the registration of 1,806 motor-cars, fifty-three heavy motor-cars, and 373 motor-cycles had been dealt with

bringing the total number of these vehicles up to 23,717, 1,980, and 9,211 respectively. The number of general identification marks issued was twenty-five; 124 duplicate licences were granted, and 407 copies of entries in the Council's register were furnished to the public. Changes of ownership in 1,452 cases had been dealt with, the total number of such changes since the beginning of the Council's administration being 6,740 cars and 4,102 cycles. The number of licences to drive motor-cars and motor-cycles issued was 6,489, bringing the total number up to 89,604.

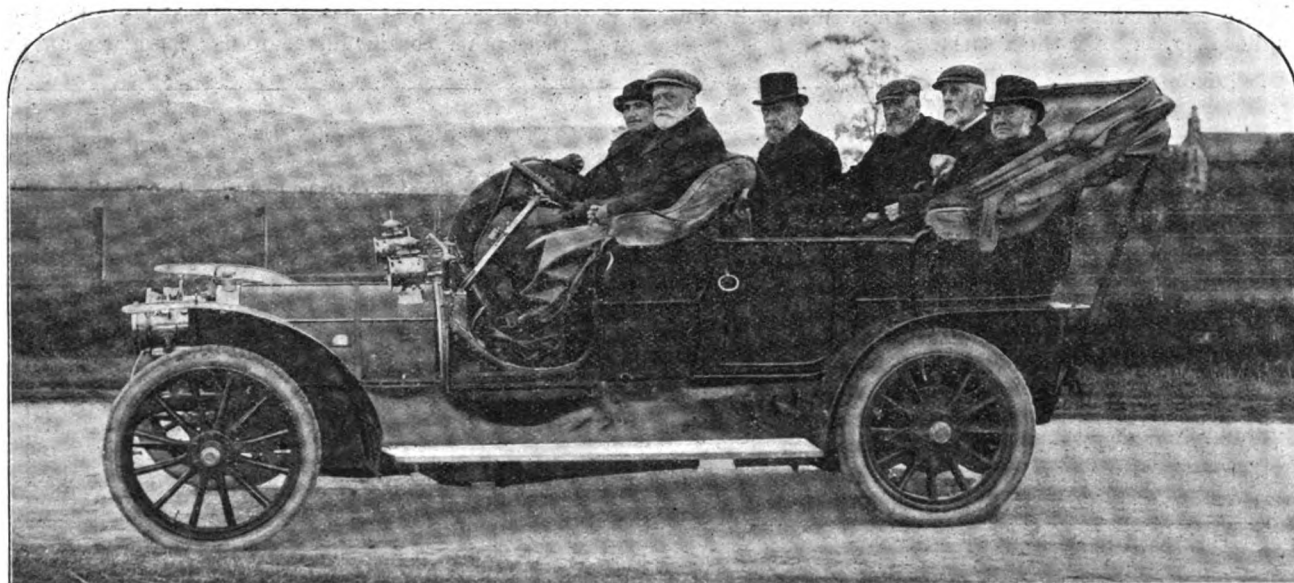
Theory and Practice.

IN face of the large amount of space the daily newspapers are just now devoting to automobiles, consequent on the opening of the Olympia Show, it is difficult to believe that it is only about two months ago that many of them opened their pages to a general attack on motorists and motor-cars. There were many who feared that the prolonged discussion would have a serious effect on the motor movement, but fortunately, like most "silly season" topics, it has passed away with no more result than having supplied the newspapers with column after column of "copy" at a time when general news of attrac-

ciated by all Englishmen, and it would be interesting to know what difference there is in a high speed race against time as against a race between two cars. Dangerous racing, according to Mr. Edge, must be a matter of speed and horse-power in view of the fact that he allowed his entry to stand for the 'Four-Inch' race in the Isle of Man even after his public withdrawal from racing, and if such is the case I cannot see how he can reconcile his action in sending a 90-h.p. car to break records at Brooklands at a speed of 115 miles an hour. Perhaps Mr. Edge has found out that high speed racing in some form or another is vital to his business, and if such is the case it is interesting to see how quickly he is capable of changing his opinion."

One, Two, Three.

POSITIONS are reversed with regard to the cabs in the metropolis, and instead of motor vehicles being now attracted by three shrill blasts, one call is to be sufficient. Such is the Order that has issued from New Scotland Yard over the signature of Sir E. R. Henry, who says, "In view of the large and increasing number of motor-cabs now plying in the streets, it is considered that it will meet the convenience of the public generally if, instead of the usual three blasts of a whistle for a



The photograph reproduced above depicts a party of five gentlemen, all over seventy years of age, who were recently taken for their first motor trip by Mr. W. H. Cox, of the Clydesdale Garage, Lanark. Over 100 miles were covered, the elderly passengers being delighted with their experience.

tive interest was extremely scarce. There was one incident in the discussion, however, to which great importance was attached at the time, so much so that even the "Times" founded a leading article on it. We refer to the letter issued by Mr. S. F. Edge, in which, "in deference to public feeling," he announced his intention of withdrawing Napier cars from all dangerous competitions. The announcement was, however, coupled with a claim for liberty to qualify "this declaration of my withdrawal from abnormal contests" and "lead the way again if I have mistaken the trend of public feeling." While the majority of the public has probably forgotten all about Mr. Edge's letter or the discussion which led to it, there are those in the motor trade who, having been criticised for not adopting a similar policy, are naturally not inclined to let its sequel pass unnoticed. Among them is Mr. Charles Jarrott, who in the course of a letter received from him a few days ago draws our attention to the fact that "one of Mr. Edge's cars driven by one of his drivers has during the last few days been breaking records at Brooklands at a speed of over 100 miles per hour, which could only be accomplished by risking the neck of the driver and must therefore be considered dangerous according to generally accepted ideas." Mr. Jarrott adds, "Sincerity is a quality appre-

motor-cab, one blast be substituted, three blasts being the call for a four-wheeled cab. On and after November 8th, 1908, therefore, the code is to be:—

| | | | | |
|--------------------|-----|-----|-----|----------------|
| For a motor-cab | ... | ... | ... | One blast |
| For a hansom | ... | ... | ... | Two blasts |
| For a four-wheeler | ... | ... | ... | Three blasts." |

Thus does the motor-cab obtain recognition of its early rise to popularity.

TO-DAY (Saturday) is the anniversary of the Motor Emancipation Day, 1896.

MESSRS. MESTRE AND BLATGE have secured temporary offices at 15, Blythe Road, Hammersmith, W., where they will have a display of their motor specialities during the week of the Olympia Show.

AS it is somewhat difficult at night-time to ascertain easily whether a taxicab is engaged or free, Mr. H. S. A. Foy, of Bush Lane House, E.C., suggests that a small coloured light under the flag, which would tell at once, according to its colour, whether the vehicle is available or not, might be employed. The same movement which turns down the flag could change the light, and, of course, the illuminating power is a simple matter.

MOTERING ACROSS AUSTRALIA.

FROM ADELAIDE TO PORT DARWIN.

(Concluded from page 763.)

THE sandy spinifex desert extends for about 500 miles. We crunched across the silent country with varying fortunes. Sometimes our pace was beaten down by exasperating successions of natural obstructions to ten miles per day; at other times we made good with a seventy mile run for the day. At one place we took three hours to do five miles. Sturt's Plain is seventeen miles across. "Lakes Woods" is here marked on the map. No doubt it is a big swamp in the winter time, but when we struck it it was dry, and the bottom was pitted with horrible holes hidden under rank grass. We bounced across the place somehow, and blundered into a mass of thick scrub, wherein it was impossible to see a way fifty yards ahead. The branches broke the lamp off the car. Plenty of niggers were seen hereabout, but they were all poor and skinny, and apparently too weak to harm anybody. But now we began to notice a change in the temperature. The nights were warmer, and from Catherine River on to Pine Creek the track became fair. We did sixty miles a day for a stretch. Crossing the Catherine and Lucy Rivers, we simply raced the car into the water, and the momentum carried her through before the engines got properly wet. We took the precaution, however, to cover them with canvas.

We picked up the old car, in which we made the previous attempt to cross the continent, at a spot between Barrett's Creek and Tennant's Creek. All the winter's rain and months of glaring sunshine had played upon the old car in her open-air garage without doing much more damage than to warp the wood-work. The tyres were still inflated. We switched a battery on to the mechanism, and it started off at once. Mr. Allchurch joined us at Alice Springs, and came through the rest of the journey with Mr. Dutton on the old car, whilst I went on in front with the newer one. They did us well at Port Darwin, and I am not appalled in any way at the prospect of another trip.

Of the country he crossed Mr. Aunger does not speak with great enthusiasm. For two months—January and February—thirteen inches of rain falls. And that is an end of it. Immediately the sun gets to work, and in a marvellously short time grass springs up to four feet in height. But it is hard, useless stuff—no use to cattle. It remains stark and blackened on its stalks well into the blighting summer, till a furnace-blast of wind sweeps it all away, and the country is bald desert again. "Maybe such land can be turned to some use," says the motorist, "but it will take a long time."

The utility of such a journey may perhaps be questioned by the man in the street, who asks for results in season and out of season. At least it may be claimed that the trip proved the wonderful strength of modern motor vehicles. The journey will rank with other continental tours like those across Asia and the



Motoring Across Australia.—Two typical views of the country passed through by Messrs. Dutton and Aunger.

At Pine Creek, the southern terminus of the Northern Territory railway, we were told it was simply impossible to go any further, and were advised to truck the car on to Port Darwin. But we had not gone that far to be defeated. We pushed on for eight miles to Union Town, and further to Bridge Creek, which was a misnomer, for we had to get out and prepare a crossing for ourselves. Here the tropical jungle fairly swallowed us up. We simply had to roll the car upon it. The growth was dense, and as the branches swished down above us myriads of abominable insects were scraped off the foliage and dropped upon us. The jungle is alive with green ants—yes, positively green, and in untold millions. As numerous and gay are the spiders with red and yellow tails. They dropped upon us like rain for miles. It was one of the nastiest experiences of the trip. The creatures did not bite, but it was abominable to have them crawling all over one. The jungle extended forty miles, and then, on August 20th, we broke out, hot and happy, upon the main road leading into Port Darwin—our task accomplished.

Our car had come through the trip with no more serious mishap than the breaking of a couple of the springs, to which we fitted new leaves, and the tyres sustained only three punctures. At least one of these was caused by a sharp-pointed native fire-stick, many of which the blacks leave strewn about the country at their various camping grounds. The front tyres never called for inflation during the whole trip.

Sahara Desert recently reported. And certainly Messrs. Dutton and Aunger have opened up possibilities of a grand motor-car route which will one day link up Northern and Southern Australia, leading to trade development and settlement and a shortened route to Europe.

THE Wilkinsburgh A.C. (S.A.) has passed a rule urging its members never to pass a disabled automobile without stopping and offering assistance, and suggesting that "every car should carry a manilla rope, 25 ft. long and $\frac{3}{4}$ in. thick, for emergency."

SINCE aviation has become well within the reach of practical politics the phrase "in the air" bids fair to lose all its old visionary aspect. Certainly some remarkable achievements have been accomplished quite recently in France, the country which fostered so assiduously the development of the motor-car. Considerable interest is now being evinced in the exploits of M. A. Clement, a leading light in the French automobile industry, and vice-chairman of Clement-Talbot, Ltd. The fine new Clement-Bayard airship, with its engine of 120-h.p. and carrying six people, made its first trial last week in the immediate vicinity of Paris with great éclat. Since then M. Clement has carried out quite a number of lengthy trips, and he contemplates in the near future a series of journeys from Paris to the large provincial towns, commencing with one to Lille and back, a distance of some 290 miles. Afterwards a trip to London may be undertaken.

GOSSIP FROM PARIS.

“Is there a crisis in the automobile industry?” is the heading given to several articles which have appeared here in daily political newspapers as well as in technical journals. The reply found for it may be summed up in a few words, which confirm what I stated in the *M.C.J.* many weeks ago. A transformation is being operated, and if there has been a crisis it was chiefly due to the over-production of big cars with heavy bodies, not only costing dear to purchase but also entailing heavy expense for fuel and upkeep. Consequently the sale of these big touring and town cars has fallen off very considerably, but, on the other hand, the demand for vehicles of moderate horse-power has become so great that, if only the manufacturers know how to take advantage of it, their continued prosperity will be insured for a long time. According to official statistics there are only about 30,000 persons in France possessing independent means of £2,000 a year and upwards, and there are already close on 40,000 high-powered automobiles in the country! The demand of the rich for such cars is therefore fairly well supplied, and now the makers must turn their attention to the needs of the middle classes, hitherto too much neglected. What they want is a good reliable chassis of comparatively low horse-power.

RECENTLY a Paris journal sent a circular round to all the principal provincial motor-car agents asking what type of vehicle was in the greatest demand. Eighty per cent. of the replies indicated cars of from 8-h.p. to 10-h.p., costing between £180 and £240. Almost all the leading automobile manufacturers have understood this so well that the Salon to be opened on the 28th inst. will contain next to no novelties in the way of big cars, while new types of small vehicles will be found on almost every stand. The exhibition of 1908 will be “The Small Car Salon.”

M. BARTHOU, the French Minister of Public Works, who was taken to task so roundly for his bill on automobile traffic, went to the Committee of the Chamber last week, saying that after all he did not think any further legislation on the subject was necessary for the time being. The Minister is organising an International Conference to discuss the question, and he asked the Committee to leave things stand as they are till the Conference had reported. He promised he would then present to Parliament a complete bill regulating the traffic on roads of all descriptions of vehicles, carts, carriages, wagons, &c., as well as automobiles. The Committee thought, however, that it must do something. So, when the Minister had withdrawn, it decided it would send in its report to the Chamber with as brief a delay as possible, demanding the adoption of the two clauses which are all that now remain of M. Barthou's famous bill against which such an outcry was raised. If the motophobes in the Chamber and Senate do not succeed in modifying them, or in introducing into the measure any of the vexatious stipulations eliminated from the draft bill by the committee, motorists will have no reason to complain. Clause 1 of the proposed measure stipulates that the driver's licence can only be withdrawn temporarily or definitively by a decision of the correctional police court or by the appeal court, and Clause

2 enumerates the officials legally qualified to draw up a “procès verbal” concerning a breach of the traffic laws and regulations. Though he did propose to defer the public debate for a few months, M. Barthou, who has become untiring in his professions of solicitude for the automobile industry, now says the above clauses must be regarded as nothing but the preface to the complete reform of the highway laws he will present to the Chamber after the close of the International Conference.

NOVEMBER 5th was already an historical date in the annals of Parliament by the discovery of Guy Fawkes's plot to blow up the British House of Commons, but for the future it will be yet more celebrated. When transit will be commonly effected through the air, November 5th, 1908, will be remembered as the day on which a parliament first recognised the conquest of the ethereal realm as an accomplished fact. It was M. Barthou, the French Minister of Public Works, who, in reply to an interpellation from M. d'Estournelles de Constant, proclaimed in the French Senate that the French Government and Parliament could not remain indifferent to the “marvellous progress of aerial locomotion.” His speech, which occupies more than four columns of the “Journal Officiel,” testifies to the importance the

public powers in France attach to this newest of the new means of locomotion, destined perhaps to revolutionise society, and, if the hopes expressed by the Minister and applauded by the whole House without distinction of political party be realised, “to create greater harmony among the peoples of the world and to insure peace between nations.” To demonstrate the impossibility of setting a limit to the future of aerial navigation, M. Barthou reminded the Senate that only a few years ago an eminent member of the Academy of Sciences declared it was “absurd” to talk of “setting” the problem of steerable balloons, because it could not even exist. “Well,” added the Minister, “that problem has not only been set, but



Touring in the Ardennes.—A Halt at Dinant.

[D's Auto.]

solved, and aviation has entered definitively into the phase of practical realisation.” M. Barthou rightly claimed for France her share in this marvellous progress, which he said would “profit the whole human race,” but he did not forget to pay a graceful tribute to the Brothers Wright. He said, “It is my duty to remind you that at the other extremity of the world, in South Carolina, two energetic men were found who during five or six years, in the face of indifference, lies, and even suspicion, realised one of the most marvellous inventions of the human genius.” He could not have admitted more gracefully and candidly that, if the French aviators were the first to ride the wind publicly, the Americans had in private solved the problem of aerial navigation several years before.

MARNEY.

LEYLAND MOTORS, LTD., are at work on the construction of a light steam single-deck motor-bus. Except for the boiler, engine, and absence of change-speed gear-box, the new vehicle is similar to the 35-h.p. petrol chassis manufactured by the same firm. The boiler is placed in the front part of the chassis behind a condenser. The engine, which has three vertical single-acting cylinders capable of developing nearly 60-h.p., is located underneath the driver's seat.

D

CONTINENTAL NOTES.

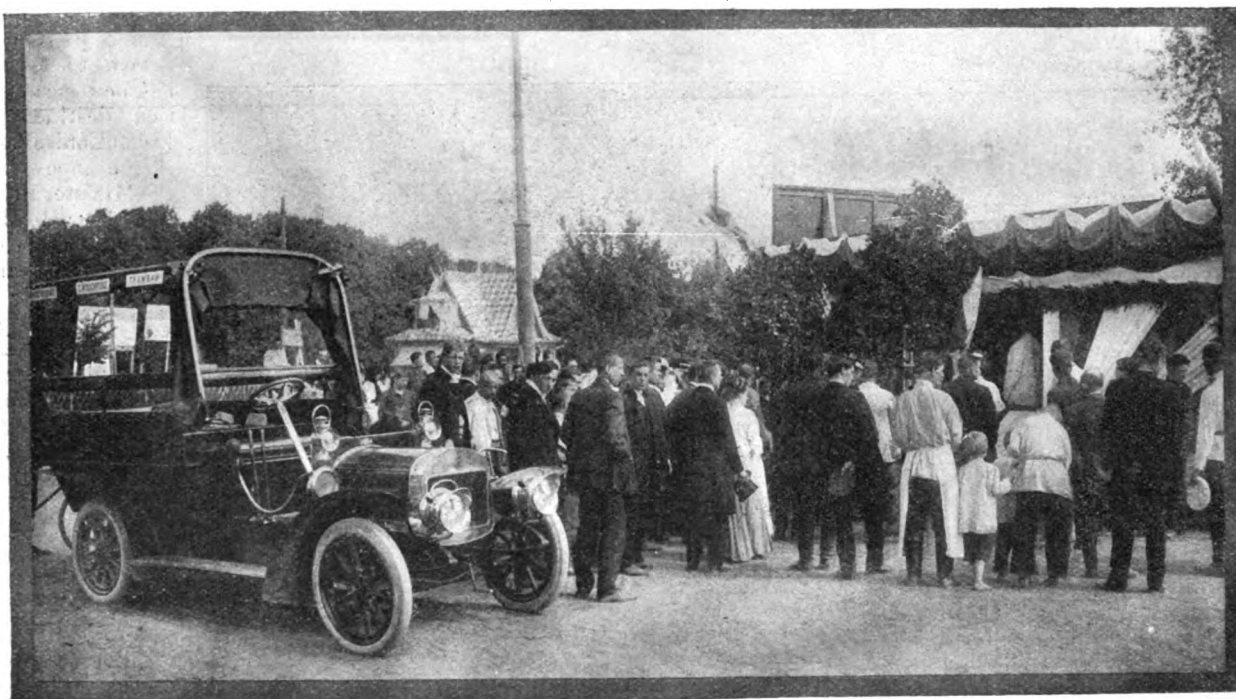
Motor Traffic Regulations in Holland.

The Upper Chamber of the Dutch Parliament has recently adopted a new automobile law which authorises local authorities to limit the speed of motor-cars within their jurisdiction to 10 kilometres ($6\frac{1}{4}$ miles) per hour. Hitherto motorists in Holland have enjoyed great liberties with regard to speed, there being no definite speed limit, but the driver was held responsible in case of accident. Every effort was made by the automobile organisations of the country to prevent the passage of the new law, but without avail; thus, for instance, a series of speed and brake tests were arranged at Scheveningen in the presence of a member of the Cabinet and numerous representatives. The limit of ten kilometres per hour can, however, be enforced only in communities where there are special local conditions rendering higher speeds dangerous.

German Motor-car Imports and Exports.

A very quiet state of affairs continues to prevail as regards the imports of motor-cars into Germany. The arrivals of plea-

at Toury. After three short flights a gust of wind caught the machine at a critical moment, and it fell to the ground and was completely smashed. M. Bleriot, however, fortunately escaped without injury.—In the French Senate last week, M. Barthou, Minister of Public Works, referred to the great progress which aviation had made in France, and added that he had a sum of £4,000 at his disposal, which he would put to the best possible use towards the development of the art of flying.—A prize of no less than £4,000 is being offered by the International Sporting Club of Monaco to aeroplanists who, on three separate days, accomplish a flight from Monaco across the water to Cap Martin and return. The competition will be open from January 24th to March 24th. The aeroplanist who is classed first will get a sum of £3,000, the second will be awarded £600, and the third £400. Each machine is to be provided with means of floating on the water in case of accident. The distance from Monaco to Cap Martin and back is about seven miles.—The French National Aerial League has also just announced that it has been entrusted with the founding of another valuable prize, a challenge cup of the value of £2,000. This will be awarded



The Inauguration of a Public Motor-Car Service in Russia.

A public service of Laurin-Kleiment cars was recently started in Moscow. The scene at the inauguration, by means of a religious ceremony, is depicted in the above illustration.

sure and industrial motor vehicles and chassis into the country during the nine months ending with September last only attained a value of £547,600, as compared with £749,000 in the corresponding nine months of 1907. On the other hand, the value of the similar exports from Germany during the same periods advanced from £530,600 to £535,650.

Aeronautical News.

On Thursday, last week, a banquet was given by the Aéro Club de France in honour of Mr. Wilbur Wright. M. Barthou, the Minister of Public Works, presided, and among the numerous aeronautical experts present was M. Cailletet, who presented the brothers Wright with the gold medal of the Aéro Club. Mr. Wright, in thanking France for the unexpectedly warm greeting which he had received, recalled the scepticism which attended the earlier feats of flying. He had even himself, as late as 1901, remarked to his brother that men would not fly in the next fifty years, and two years later he and his brother had flown themselves. In these circumstances it was particularly unwise to prophesy as to the progress of aviation in the near future.—M. Bleriot's aeroplane met with another accident on the 5th inst.,

every six months to the aviator holding the record for the best flight on an aeroplane in a straight line. At the end of three years the cup will be definitely awarded to the record-holder. The League also offers a prize of £800 for the winner of a contest over a fixed course of 20 kilometres at the aerodrome at Savigny-sur-Orge.—A new aeroplane known as the Antoinette, built to the designs of Messrs. Levavasseur, Gastambide and Mengin, is now being tested at Issy-les-Moulineaux.—M. Maurice Farman, brother of the now famous Henry, is engaged on the construction of a new aeroplane.—On Saturday last the Crown Prince of Germany made a trip in the Zeppelin airship and remained in the air about seven hours.

Miscellaneous Items.

The German military transport department is at present engaged in testing the motor vehicles of such firms as are desirous of receiving Government subventions in 1909. The trials will last three weeks, the daily distances being fixed at from 120 to 140 kilometres, on the Berlin-Dresden-Gotha-Cassel-Magdeburg-Berlin routes.—The annual Belgian Motor Car Exhibition is to be held in the Palais du Cinquantenaire, Brussels, from January 16th to 25th next.

THE SOCIAL WHIRL.

THE KING celebrated his sixty-seventh birthday on Monday at Sandringham. Early in the morning his Majesty with the Queen and the Prince and Princess of Wales motored to Gayton, the residence of the Earl of Romney, where they inspected the Royal West Norfolk Hounds, and afterwards halloed them away to the Gayton coverts. They followed the Hunt for a short distance in their car, and then returned to Sandringham House.

LAST week I was able to anticipate the motoring programme of the Princess of Wales whilst a guest of the Marquis and Marchioness of Londonderry, at Wynyard Park, Stockton-on-Tees. Other members of the motor party were the Duchess of Devonshire and the Earl of Shrewsbury.

SIR CHARLES E. SHAW, M.P., whose name appeared in the King's birthday honours list, is a keen automobilist, and a member of the General Council of the R.A.C.

SEVERAL bishops having been presented with motor-cars, similar honours are about to be accorded to lord-lieutenants. A movement has just been initiated in Warwickshire to acknowledge the services rendered to the county by the Marquis of Hertford, and it is suggested that the presentation should take the form of a motor-car. Among motorists interesting themselves in the movement are the Earl of Warwick and the Marquis of Northampton, while Lord Willoughby de Broke is also among the subscribers.

SEVERAL social events have taken place this week. On Wednesday, the Society of Motor Manufacturers and Traders held a dinner at the Hotel Metropole, the principal speakers being Lord Ribblesdale, Sir West Ridgway, Sir Marcus Samuel, and Col. H. C. L. Holden, R.A. On the previous day Mr. Samuel Samuel, of "Shell" spirit fame, gave a dinner, at which Mr. Joynson-Hicks, M.P., said it was an open secret that the Chancellor of the Exchequer had made up his mind to put some additional taxation upon motor-cars. Speaking for himself he (Mr. Hicks) said if the revenue were devoted to the improvement of the roads it would be better than devoting it to iron-clads. The Motor Union's annual dinner next week will gain in importance from the presence of Mr. T. McKinnon Wood, M.P., the Under Secretary for Foreign Affairs.

THE Rev. A. C. Oliver, vicar of Barlaston, has been appointed hon. secretary to the committee of Stoke-on-Trent motorists who are protesting against the Town Council's application for a ten mile limit on the road from Stoke to Trentham. The Duke of Sutherland, K.G., president of the R.A.C., will probably give his support to the local motorists.

So much having recently been said as to the reason for the attitude of the M.P.'s who are agitating against motorists the letter which comes to the M.C.J. office from Mr. Arnold Herbert, who represents the southern division of Buckinghamshire, will be of interest. He is a good sportsman, fond of country pursuits, and believes "That what gives most ground of complaint against motorists is that they in effect claim to use the roads without reference to traffic which is already on them, and that they habitually drive at a pace unjustifiable in the circumstances of this country. It is astonishing to me that motorists allow their chauffeurs to drive with a want of consideration which no gentleman ever would have allowed his servants in charge of his horses to be guilty of." I do not accept Mr. Herbert's suggestion that motorists as a body are indifferent to other traffic on the road; but the point of view is so general that they may take warning and exercise care on every occasion they are on the roads.

MR. HERBERT will be interested to know that the Legal Committee of the R.A.C. have drawn up a form to assist the General Committee in dealing with the expulsion, or otherwise, of members who are proved guilty of inconsiderate driving.

LOLLIUS.

HERE AND THERE.

THE Edinburgh Corporation is in the market for the supply of an 18-24-h.p. chassis suitable for an ambulance.

THE Companies' Diary and Agenda Book for 1909 comes from Messrs. Jordan and Sons, Ltd., in its familiar and useful form.

A SPECIALLY fitted 16-h.p. motor ambulance wagon is being supplied by the Albion Motor Company to the Newstead fever hospital.

As a result of the great progress that has recently been made in flying machines in France a movement is on foot to organise an "Aeroplane Salon" in Paris in May or June next.

ACCORDING to the Under Secretary for the Home Department 1,095 motor-omnibuses are at present licensed by the Commissioner of Police for the Metropolis, and of these 595 are reported to be of foreign origin.

MESSRS. LEVER BROS., LTD., of Port Sunlight, have just placed an order for eight large motor-van chassis with Commercial Cars, Ltd., Luton. The vehicles are to be fitted with specially designed bodies, and are intended for service in the London district.

At the last meeting of the Brentford Urban Council, Mr. J. Clements, who, on behalf of the Council, attended the recent conference at the Mansion House on motor traffic, reported that the meeting was the most unfair he ever attended. He said that everyone who wanted to say anything in favour of motorists was howled down.

MESSRS. BROWN BROS., LTD., have sent us a sample of a new ignition wire terminal—the Duco—they are introducing. This is British made, and the part that fastens to the sparking plug is slotted to permit of it being slid under the milled nut of the plug without screwing the latter right off. The ends are turned so that the terminal cannot slip off, and if the milled nut is screwed tight, the ends also act as a kind of lock nut.

We learn that the London and Parisian Motor Company, Ltd., of 87, Davies Street, W., have secured the sole concession for the sale of "Delage" cars in the United Kingdom, and have arranged that a model shall be shown on their stand at Olympia. The car is of the voiturette type, and is manufactured with either one or four cylinder engines. It will be remembered that the Grand Prix des Voiturettes in July last was won by a Delage machine.

FROM Mr. H. G. Dryden, of the North-Eastern Railway Company, comes a copy of the new issue of the Directory of Manufacturers and also importers and exporters on the N.E.R. system. There are about 27,000 entries in the list, including references to motor-car engineers and motor body builders as well as the various trades incidental to automobilism. The Directory will be of considerable interest to all engaged in trade in the extensive district covered by this railway.

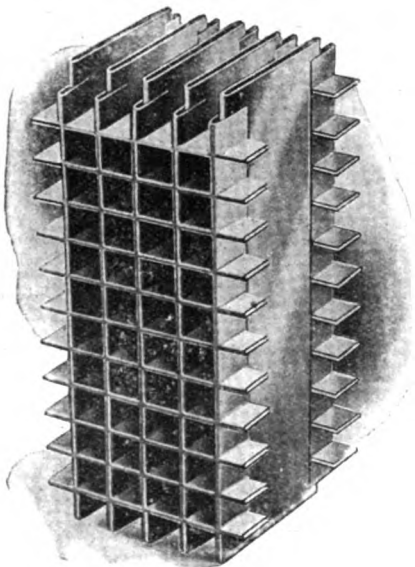
As alcohol is now so much in demand for industrial purposes a new source of supply in the Colony of Queensland is worth noting. The Minister of Lands in Queensland, the Hon. J. T. Bell, stated last September that he had concluded arrangements with a company or syndicate who proposed to exploit parts of the Darling Downs to obtain alcohol from the grass tree, and he had let them have some 400 miles of country by about 100 miles in depth along the coast, commencing at Caboolture. "Prickly Pear," a cactus pest, is also to be used for this purpose.

MANY motorists now systematically repair their tyres as defects present themselves, and, being thorough in their methods, frequently prefer a vulcaniser that will repair the inside of the tyre as well as the outside. Although Messrs. Harvey Frost and Company, Ltd., have several trade appliances that will do this, they had not, until recent times, a vulcanizer for the use of the private motorist with which interior as well as exterior tyre repairs could be executed. The H.F. Garage Vulcanizing Equipment, which completely meets the requirements of the private car owner, has conveniently filled the breach, and, as most motorists appreciate the importance of looking after the fabric of a tyre, as well as its exterior, this vulcanizing equipment is now in good demand.

"MOTOR-CARS have ruined my trade," said a saddle-tree maker who appeared at Shoreditch County Court the other day on a judgment summons issued by a Walsall firm. "Only last Tuesday," he added, "I was so'd up by the High Bailiff of this Court."

APPEARING at the Midhurst Petty Sessions charged with driving a motor-car at excessive speed at Cocking, a motorist has just offered to subscribe towards the purchase of a car in order to secure that the police shall be more experienced in the matter of motors. The offer has not been accepted.

THE Doherty Motor Components, Ltd., of Earl Street, Coventry, have lately brought out a new type of radiator for petrol cars known as the "Tubicomb." As will be gathered from the name and from the sectional illustration herewith, the object of the designers has been to produce a radiator which, while having the appearance of the honeycomb type, is so constructed that the possibility of leakage is almost entirely eliminated. The vertical flat tubes are fitted with interlocking vertical and horizontal strips on both the back and front; the whole is then tinned and so formed into a solid unit. The flat tubes completely do away with the core of hot water which exists in the case of round tubes, and are thoroughly protected by the interlocking honeycomb strips. The makers claim that the method of construction allows a very large number of the cooling tubes to be fitted in a comparatively small space, and that it is stronger than that of



the honeycomb, but that the principle of cooling the water is practically the same, and in appearance the two are identical. Furthermore the "Tubicomb" is lighter than the usual patterns, and, owing to its simplicity, the cost of production has been considerably reduced. The Doherty Company are also exhibiting at Olympia for the first time what they claim to be the most perfect form of carburettor ever placed on the market. They have been testing it for the past six months and pronounce it to be suitable for any type of engine. The chief claim made for it is that it gives the correct mixture at any speed of the engine; this is effected by a jet the size of which is varied by the raising or lowering of a tapered plunger connected to an eccentric on the throttle spindle. The control is thus by means of one lever only. The adjustment of the carburettor to any engine is particularly simple, being operated by a small thumb set-screw.

A MEETING of motorists was held at Stoke-on-Trent, on Tuesday, to protest against a proposal of the Stoke-on-Trent Town Council to impose a ten-mile limit on a portion of the route from Stoke to Trentham. Mr. A. Fielding, of Trentham, complained that some users of the roads went out of their way deliberately to hamper and inconvenience the users of motor-cars. It was decided to petition the Local Government Board against the step contemplated by the Stoke Council, and a committee was appointed to wait upon the Council and endeavour to get them to withdraw their proposed action.

AT the Guildford County Bench the driver of a horse-drawn vehicle conveying petrol has been fined 40s. for cruelty to his animal.

AN agreement has just been concluded between the K ngl Automobil Club, Stockholm, and the Royal Automobile Club. This agreement is of the same character as those at present in existence between the R.A.C. and other European clubs. H.S.H. Prince Francis of Teck has been made an honorary life member of the Swedish club.

A NOVEL means of starting has been adopted in the eight-cylinder petrol engine of the petrol-electric motor-car recently built for railway service by the American Locomotive Works and the General Electric Company. The engine develops 100-h.p. at a speed of 550 revolutions per minute. For starting purposes a special breech block mechanism is provided on one of the cylinders, in which a charge of black gunpowder is fired.

THE Public Control Committee of the London County Council report the receipt of the circular letter from the L.G.B., already published in the *M.C.J.*, and add that they are giving careful consideration to the points raised, but that, from a comprehensive report that has been prepared on the subject of regulating the traffic in question, it would appear that the Council's powers are very limited in the matter, and that fresh legislation will be needed.

THE Anglo-American Oil Company, Ltd., for many years located at 22, Billiter Street, E.C., have found that their growing business in Pratt's Motor Spirit and other petroleum products necessitates much larger accommodation than that afforded by their present head offices. Accordingly an important site has been chosen at Queen Anne's Gate, Westminster, for a fine new building which will afford accommodation for the large staff connected with the distribution of the varied products of petroleum.

WE hear that the Committee of the Marine Section of the Society of Motor Manufacturers and Traders has decided not to organise a marine display in connection with the Commercial Vehicle Exhibition at Olympia in March next. Motor-boat enthusiasts will, however, be glad to learn that arrangements are in hand for the inclusion of an exhibition of all classes of motor-boats, launches, &c., in the Gilbey Hall in connection with the Cordingley Show at the Agricultural Hall, Islington, in March next.

THE Stepney Spare Motor Wheel Company, Ltd., of Llanelli, have issued an excellent catalogue for 1909, from which we learn that more than 75,000 cars have already been fitted with the speciality of the company. The new catalogue contains illustrations and descriptions of the various accessories in connection with the Stepney wheel, together with the scale of prices and instructions for fitting the same. This well-printed list is a useful work of reference, and the order form which is included will enable prospective users of the spare wheel to know exactly the information that is required in order to secure the proper size, &c.

ACCESSIBILITY is as desirable in connection with the locale of business firms in the motor trade as in the parts of a car, a fact that is recognised by the Avon India Rubber Company, Ltd., who have now become installed as tenants of 35, Long Acre, London, W.C. This is well within the "motor zone" of the West End, and the company, whose works at Melksham, Wiltshire, are on a large scale, have wisely arranged to undertake small repairs on the premises for the convenience of motorists anxious to go on their way without hindrance. The establishment has a well-equipped basement and four floors above, all the latter being devoted to show-room and warehousing purposes. The selection of motor tyres on view is fully representative of the good qualities supplied, the main points of which will be dealt with in our report of the Olympia Show. Suffice it here to write that the Avon tyres are made with round or square treaded covers, with or without non-slipping grooves across the tread. A studded non-skidded tyre is also made, and the quality of the materials used is as conspicuous as the excellence of the system of construction. Mr. Ernest Bowden is the London sales manager, and business should quickly gravitate towards 35, Long Acre, W.C.

THE OLYMPIA SHOW.



SOME NEW CARS FOR THE 1909 SEASON.

ON the 13th inst. (Friday) the Motor-Car Exhibition at Olympia opens its doors and will attract considerable attention from the motoring public until the closing day, which is the 21st inst. The appearance of the Hall has now become familiar to frequenters of automobile shows, and many stands will attract the eye of the public from their own artistic appearance as well as from the mechanical improvements exhibited thereon. In the centre of the Hall the Daimler and White Companies are prominent, and the stands of Messrs. Jarrott and Letts, the Humber Company, Messrs. Donne and Willans, Ltd., the Deasy Company, and other notable motor firms are not far away. From the North of England comes the Hollingdrake Company, Ltd., with the "La Buire" cars, and familiar names like Ford, Adams, Napier, Darracq are scattered about. On one side the Rutherford steam car is shown, and in the annexe Messrs. Galloway and Co. are also present with one of similar motive power. There, too, the Hillman-Coatalen have a stand as well as Messrs. Mann and Overtons with their Unic and Brasier vehicles. The motor body building firms are well to the fore in this section of the Exhibition.

A preliminary inspection of Olympia while preparations were in progress on Tuesday confirmed our view as to the display being very much like its predecessors, and in the Gallery many firms occupy their familiar places, such names as Dunhill, Gamage, Bleriot, Rotax, Doherty and others testifying to the continued enterprise of many of the pioneers of the motor industry. Last week we referred to many of the leading features in the cars for the new season, in our present issue the report is continued, and in the next two numbers we shall conclude our full review of the automobile industry as revealed by the present Exhibition.

The Delaunay-Belleville Cars.

Now that no less than five four-cylinder and four six-cylinder models are being turned out by the Delaunay-Belleville factory, it may safely be stated that the British sole agents, the BURLINGTON CARRIAGE Co., LTD., are in a position to cater for all classes of motorists. The

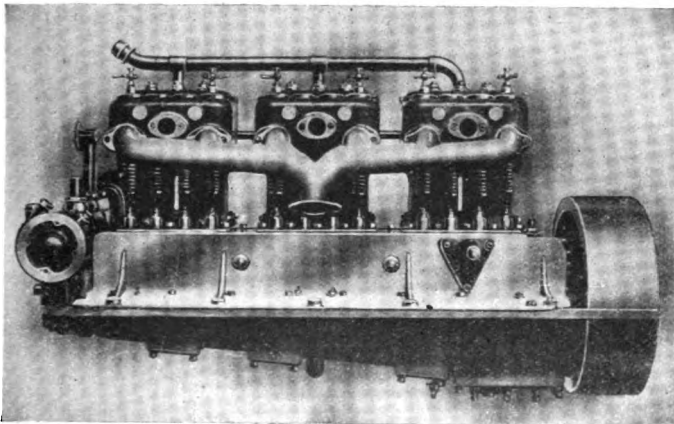


Fig. 12.—The Delaunay-Belleville 25-h.p. Six-Cylinder Engine.

four-cylinder vehicles are of respectively 10-h.p., 15-h.p., 20-h.p., 28-h.p., and 40-h.p., while the six-cylinder types are of 15-h.p., 25-h.p., 40-h.p., and 70-h.p. Devoting our attention more particularly to the new designs for 1909, these are the 10-h.p. four-cylinder and a 25-h.p. six-cylinder. One of the main features of the small car is that the four cylinders (85 mm. bore by 120 mm. stroke) are cast in one piece, even the inlet and exhaust pipes forming part of this casting, thereby reducing all water and compression joints to a minimum. The valves are all on one side, operated by a single cam-shaft driven by means of two gear wheels, which are completely enclosed in an extension of the base chamber. The cam shaft is made of a special grade

of steel, with the cams forming part of same cut out of one solid piece. The valve lifters are provided with a special spring to ensure the roller following exactly the profile of the cam. This method eliminates the major portion of the noise which is attributable to the cam shaft and valve motion. The high-tension magneto and the water circulating pump are fixed at the front of the engine and operated off a cross shaft. The magneto is made easily removable, and the water-pump can be detached without destroying the rubber joints. The cooling of the radiator surface is effected by two fans, one placed immediately behind the radiator tubes and the other situated on the periphery of the fly-wheel. The carburettor is of a special type, the jet being always visible

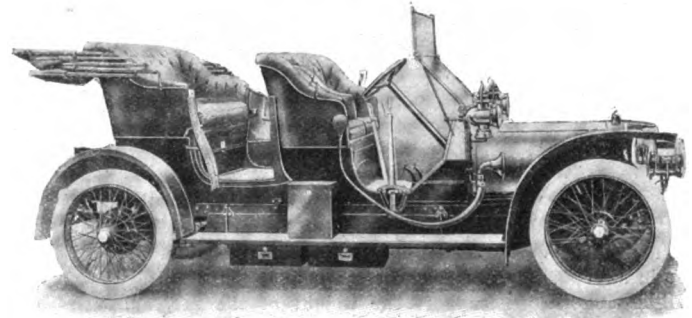


Fig. 13.—The 15-h.p. Six-Cylinder Delaunay-Belleville Car recently supplied by the Burlington Carriage Company, Ltd., to Mr. Arthur M. Haubury, of the London Motor Cab Company, Ltd. The vehicle is fitted with the latest "Burlington" light touring body and Rudge-Whitworth detachable wheels.

and easily accessible. The admission of gas is effected by a cylindrical slide valve, and the mixture is automatically regulated by means of a spring-loaded valve. The throttle slide valve is controlled both by hand and foot levers. Lubrication is on the well-known Delaunay-Belleville principle—that is, internally applied under pressure by means of a valveless oscillating pump. The crank shaft is formed of high tensile steel, and supported on three bearings. The engine and its component parts form a unit completely independent of the rest of the chassis. The valve timing, &c., is indicated on the periphery of the flywheel, and compression taps are fitted in the cylinder heads, these being so arranged that the position of the piston may be exactly determined at any time. The clutch is of the leather-faced cone type, fitted on the extension of the crank shaft. The pressure on the cone is by means of an enclosed spring, covered and protected by two telescopic tubes. The tension of the spring may be altered by means of a single nut, while the position of the clutch pedal can be varied to suit the driver by means of the adjustable connecting rod from the pedal to bell crank of clutch. The change-speed gear gives three speeds and reverse, with direct drive on top by means of a single sliding gear sleeve. A new method of assembling the gear wheels on the secondary shaft is now employed, by means of which all bolts, nuts, washers, &c., are dispensed with. The final transmission is by means of a propeller shaft, enclosed in a sleeve fitted at the forward end with a patent torque and shock-absorbing device. Provision is made for the oscillating movement of the back axle by the use of special bearings under the spring clips. The hand brakes on the back wheels consist of two shoes forming a circle operated by the action of a cam. The adjustment of the brakes is extremely easy, and can be carried out without removing the wheels. The foot brake is situated directly behind the gear-box. The adjustment is facilitated by means of a special method of securing the two cast iron shoes. The adjusting screw may be reached either through the floor boards or through a special opening in the mud-protecting shield. The chassis is supported on two longitudinal springs at the front and a set of three springs at the back, two longitudinal and one transverse.

Passing now to the new 25-h.p. six-cylinder car, this has been introduced to meet the demands of those motorists requiring something between the 15-h.p. and 40-h.p. models. In general arrangement it follows the usual Delaunay-Belleville lines, the patent system of lubri-

cation (internal pressure), the improved leather cone clutch, the patent system of live axle suspension and spring attachment all being incorporated. The cylinders of the engine (Fig. 12) (98 mm. bore by 122 mm. stroke) are cast in pairs. The crank shaft runs on four bearings, supported in the upper portion of the crank chamber, so that the lower half can be completely removed to allow the big ends to be readily inspected. As will be seen, the valves are all on one side, and actuated by a single cam shaft. The high-tension magneto and water pump are driven by means of shafts at right angles to the crank shaft. A half-compression device is fitted to enable the motor to be easily started. The change-speed gear gives three speeds, with direct drive on top. The front axle

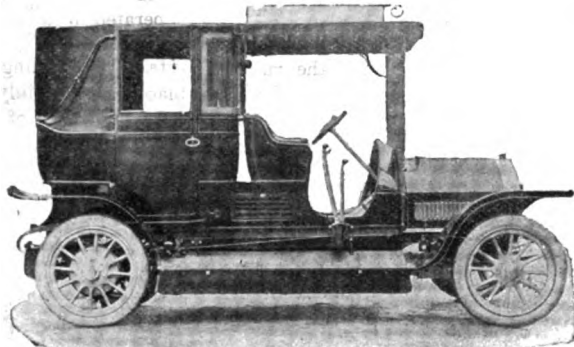


Fig. 14.—The Beeston-Humber 28-h.p. Landulet.

has unbreakable forged steel ends and is of H section. The pivots are also in unbreakable steel forged from a single piece with the axle arms. Ball-bearing thrusts support the weight of the car, and all friction points are provided with bronze bearings well lubricated by oil.

The vehicles on view comprise a 10-h.p. four-cylinder, 15-h.p. and 25-h.p. six-cylinder chassis, a 15-h.p. with a limousine body, specially designed for combined town and touring use, a 28-h.p. with a landulet body, and a 40-h.p. six-cylinder finished as an open touring car. The Burlington Carriage Co., Ltd., have a long-standing reputation as carriage builders, which will be well maintained by the high-grade body work to be seen at their stand. The touring body on the 40-h.p. chassis is an entirely new departure; the panel curves, whilst bearing traces of the older type of Roi-des-Belges body, have been improved, and the sweep of the curves has been extended to embrace that part of the carriage work which formerly constituted the boot. The painting is of a soft shade of French grey, relieved with a darker shade of French grey on the mouldings, and the wings and wheels are picked out to match. A double extension Cape hood of improved design and a Banks' patent double-folding wind screen are fitted, the whole appearance of the vehicle being very striking. Another attractive body is a single landulet on the 25-h.p. chassis, the panels of which are all curved and of hand-hammered aluminium. The back seat is constructed to seat three persons comfortably; there is also an emergency seat for a fourth person, this having a back rest which folds against the door of the car and prevents the occupant falling out should the door by any chance be opened. The interior is upholstered in rich dark red leather, with silk laces to match. The painting is a beautiful shade of deep lake, relieved with black lines, and the pillars are made to fold down, thus making an absolutely open car when required. An adjustable wind screen is fitted to the dashboard, which can be set to any angle, so that the driver has a clear view even in rain or snow.

The Vinot Cars.

Messrs. T. J. HARMAN AND Co., the British agents for the Vinot cars, are showing a new model of these increasingly popular vehicles. It is of 16-h.p., and is fitted with a four-cylinder engine, 80 mm. bore by 110 mm. stroke. The ignition is by Bosch high-tension magneto, and the mixture furnished by a carburettor of the Claudel automatic type. The control of the motor is by a single lever acting on the throttle, the ignition being fixed. The Vinot patent clutch and gear box are fitted, the latter giving three speeds. The final transmission is by a propeller shaft and bevel gear to a live axle of strong design. The motor is claimed to not only be economical—the petrol consumption being 30 miles to the gallon—but extremely flexible, it being able to drive the car on top gear at any speed from 5 to 45 miles per hour. Other cars on show include a 16-h.p. suitable for doctors and town use, a 16-h.p. side-entrance car, and a 24-h.p. chassis fitted with a special body enclosing the driver.

The Humber Cars.

The consolidation of the HUMBER business in the great works at Coventry has now been satisfactorily accomplished, and its products will be inspected by both trade and public. The following is a complete list of the cars which are on view:—A six-cylinder double phaeton. A 28-h.p. landulet. This is a new type, the engine being 100 mm. bore by 150 mm. stroke; otherwise the chassis is the same as the 30-h.p. Beeston Humber. A Beeston Humber 20-h.p. standard five-seated double phaeton. A 22-h.p. double phaeton body, painted cream and carmine. This is another new model; it is fitted with a four-cylinder engine, 90 mm. bore by 140 mm. stroke. The chassis, otherwise, is similar to the 20-h.p. Beeston Humber. A 15-h.p. standard Coventry double phaeton. A 12-h.p. Coventry Humber standard car with the four cylinders cast in pairs. An 8-h.p. two-seater, a new model, and a 12-h.p. doctor's landulet with twin-cylinder engine. All 1909 cars are being provided with forced lubrication, thus giving a clear dash, while thermo-syphon cooling and detachable wheels will be fitted without extra charge. Another point which will meet with general approval is that heavier tyres are now being fitted.

Taking the models separately, the six-cylinder follows the lines which has made it so successful during 1908. The new 28-h.p. takes the place of the 30-h.p. of the past two seasons in all respects save the engine dimensions. The motors of the 22-h.p. and 28-h.p. cars give great power for their size, this having been attained by following the results of experiments carried out with the object of determining how best to fulfil the laws governing the efficiency of petrol engines. An automatic system of forced feed lubrication is fitted to the crank case, actuated by a small gear-driven pump, which obtains its supply of oil from a sump in the bottom of the crank case. The 20-h.p. Beeston Humber double phaeton follows the lines of the 1908 model, while the 15-h.p. Coventry Humber practically remains the same. Two noticeable alterations in this model are the fitting of a new carburettor and a high-tension distributor, the better

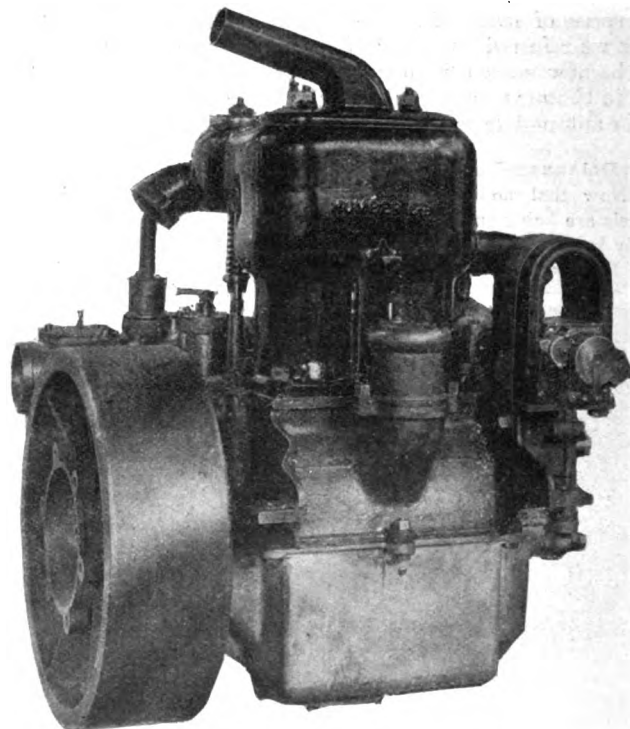


Fig. 15.—The Humber 8-h.p. Two-Cylinder Motor.

synchronisation of which adds to the power and makes the car a more pleasant one to drive. The new 8-h.p. Humber is perhaps the principal novelty, and will be viewed with interest by a large section of the public. The vehicle differs somewhat from the usual Humber practice; simplicity and accessibility are among its leading points, so that any one can handle it without special knowledge of motor-cars. The engine has two cylinders, and dual ignition is fitted. As will be seen from Fig. 15, the valves are all on the side, and the flywheel is arranged to act as a fan. The lubrication is as on the 28-h.p. and 22-h.p. cars. The crank case is filled with oil by means of a combined filter and filler which also acts as an air vent when the engine is running.

From here it is pumped to all the bearings of the motor. An oil level indicator is fitted, whereby one can tell how much oil is in the engine, and an indicator on the dashboard indicates whether the oil circulation is working or not. This model will only be made as a two-seater.

The Sheffield-Simplex Cars.

For some time past we have known that the SHEFFIELD-SIMPLEX MOTOR WORKS, LTD., had a surprise in store for the 1909 season, but were not at liberty to publish any particulars of the same. The secret is now out, however, the surprise being the production of a chassis for use in connection with open touring cars, in which the orthodox gear-box has been dispensed with, its place being taken by a two-speed gear, with reverse motion, contained in a neat and small oil-tight case at the live-axle end of the torque-resisting member, which, in the Sheffield-Simplex cars, consists of the cardan shaft casing. The departure, which is all the more interesting in that it has been achieved without in any way departing from existing and tried principles, has resulted in reducing the number of parts in the transmission by about 150, and in lessening the weight of the chassis to the extent of no less than 3 cwt. At the same time, it effects a great increase in the efficiency, 99 per cent. of the running being done on the top direct speed, lessens

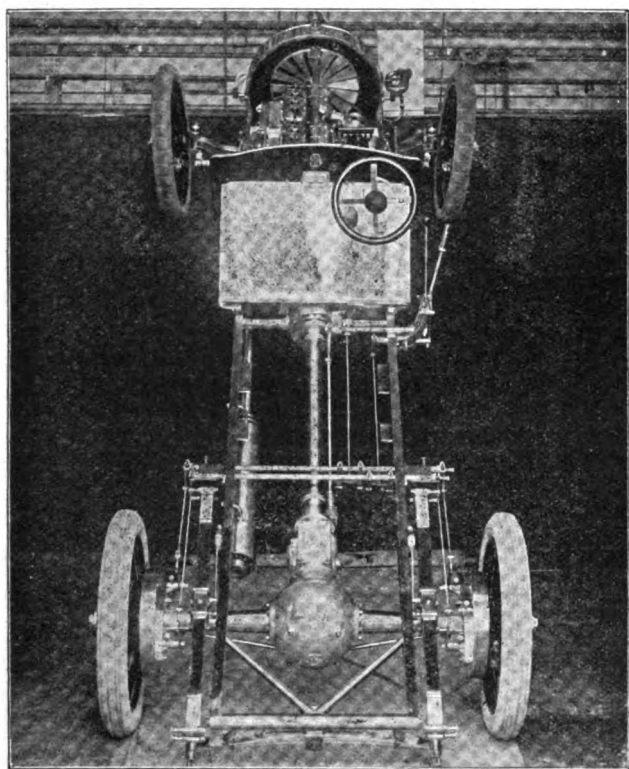


Fig. 16.—View of Chassis of Sheffield-Simplex 45-h.p. Gearbox-less Car.

the first cost of the car without sacrifice of quality, and reduces the cost of maintenance. Leaving for the moment any reference to the engine and clutch, &c., which are the same as in the company's standard design, and confining our attention to the new arrangement of the change-speed gear, the neat and compact way this has been carried out will be observable from the illustrations (Fig. 16 and 17). As has already been mentioned, it is mounted in a small case surrounding the bevel pinion shaft at the rear end of the propeller shaft; details of the arrangement are given separately in Fig. 18, from which it will be noticed that the low and reverse speeds are obtained by spur pinions of the sliding type, fitted on two short subsidiary shafts. On the top speed, on which the bulk of the running is done, the usual direct drive, with a gear ratio between the engine and live axle of three to one, is obtained. The low speed, which gives a ratio of six to one, is, as a matter of fact, only brought into use for starting, for getting out of bad places, and on excessively steep hills. The new car has been thoroughly tested before being put on the market, for Mr. Percy Richardson, the managing director, informs us that the first vehicle of the improved type has been subjected to a road trial of over 5,000 miles, in which it was driven over all the different classes of roads that could be found, extending from the south of England to the north of Scotland, including the most difficult part of the Scottish Reliability Trial route—a trial

in which it proved itself capable of doing all that one with a gear-box could do, taking all ordinary hills with gradients up to one in twelve quite easily on the top speed, with an ample reserve for slowing down and picking up speed again; on the low gear climbing and re-starting on such steep hills as Amulree (which has a reputed gradient of one

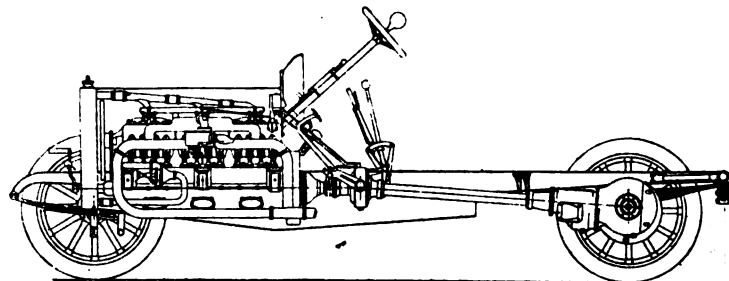


Fig. 17.—Elevation and Plan of Sheffield-Simplex Six-Cylinder Car without Gear-Box.

in three and a half), and Porlock (one in four), and maintain a speed up to the legal limit. The new gearbox-less model is being supplied for open touring car work only; it has a wheel base of 10 ft. 8½ in., and is being fitted with Rudge-Whitworth detachable wheels. For use in conjunction with landaulets, limousines, and other covered bodies, the chassis with the standard type of three-speed gate-controlled gear-box is being retained, road wheels of the wooden artillery type being used on this model.

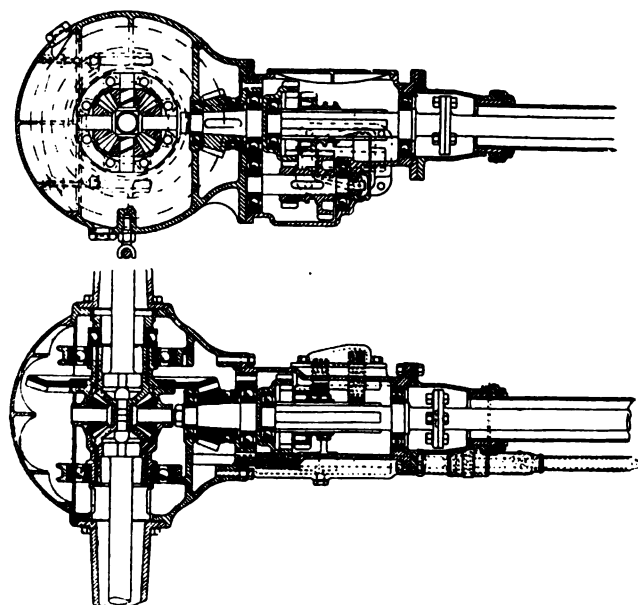


Fig. 18.—Sectional Elevation and Plan of Two-Speed Gear combined with Back Axle on the new Sheffield-Simplex Six-Cylinder Car.

Reverting now to the features which are common to both types, and dealing first with the 45-h.p. six-cylinder engine, which is the only size the company are manufacturing, it will be seen from Fig. 19 that the cylinders (4½-in. bore by 4½-in. stroke) are cast in pairs, with the valves all located at one side. The carburettor is of a special automatic type,

in which an air-tight float chamber is employed. Connection is made between the upper part of the chamber and the admission pipe, so that the suction of the engine acts both on the float chamber and the jet. In this way not only is an economy in fuel effected, but a more perfect mixture ensured. Two systems of ignition are provided, the latest type of Bosch dual magneto and coil arrangement being employed. Attention may also be drawn to the high-tension ignition wiring; the wires for the six cylinders are all moulded together in insulated material, and encased in vulcanite, an arrangement which is at once neat and practicable, obviating the danger of short circuits and the worries attendant on a number of loose wires. The water circulation is maintained by

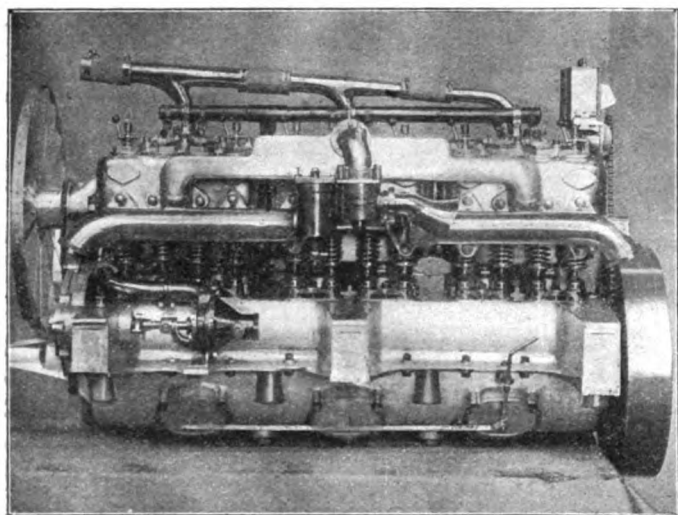


Fig. 19.—View of Valve Side of Sheffield-Simplex 45-h.p. Six-Cylinder Engine.

a gear-driven pump of special design; it is located on the valve side of the motor, and can be easily detached. The control of the engine speed by means of a lateral-moving pedal, as introduced on the Brotherhood car, is retained. A special feature of the engine is that ball-bearings are fitted not only to the crank shaft, but also to the cam shaft—in fact, it may be said that they are used throughout the car. The clutch is of the multiple-disc type, running in oil, the pedal operating it being connected to the foot brake. The first portion of the travel of the pedal disengages the clutch, the further movement applying the brake. The whole of the cardan shaft is enclosed in a casing which fulfils all the functions of the usual torque and radius rods. The forward end of the casing terminates in a steel globe, which not only forms a shield and oil case for the joint, but allows for movement of the back axle in all directions. A support for the globular joint is carried by a cross member on the frame. The back axle is of the arched type, allowing the wheels to be played as in chain-driven vehicles. The differential casing is provided with a large detachable cover at the rear; this can be removed by undoing four bolts, so exposing the main bevel wheel and the bevel-pinion differential gear. The weight of the car is carried on the axle casing, the axle driving the road wheel hubs through dog clutches. The brakes of the Sheffield-Simplex cars are also of an interesting design. Both the foot and the hand-controlled brakes operate on concentrically-arranged drums attached to the hubs of the rear wheels, and are of the internal-expanding type. The pressed steel frame, which is quite straight, the front and rear ends being tied together by cross-bars, is supported on five springs, which are of the type introduced on the Brotherhood car—i.e., they are provided with means of lubricating each leaf. Special attention is drawn to the lubrication, an interesting form of mechanical lubricator being fitted to the dashboard. There are a series of small pumps in the lubricator, actuated by a chain-driven cam shaft, the pumps being connected to the engine, the gear-box, and to the universal joint of the cardan shaft. From the latter the oil flows through the cardan casing to the differential case, and thence along the axle to the road wheels. Although our description of the features of the Sheffield-Simplex cars has already run to great length, there are many other interesting details worthy of careful examination, the display being one which illustrates in a striking measure the great progress that has been made in British automobile design and construction in recent years.

The Darracq Cars.

Not only have the prices of Darracq cars been reduced for the 1909 season, but further improvements have been introduced in the details which should help to maintain the popularity of these vehicles. Several new types are to be seen at the stand of Messrs. A. DARRACQ AND Co., LTD., notable among which is the "Four-Inch" model, the outcome of the excellent showing made by the Darracq cars in the 1908 Tourist Trophy race. An inspection of the polished chassis shows that the four cylinders of the engine are cast in pairs, with inlet and exhaust valves on the same side. The bore is 100 mm., the stroke 120 mm. (R.A.C. rating 25.6-h.p.). Two ignition systems are available—high-tension magneto and coil and accumulator. The water circulation is maintained by a gear-driven pump and gilled tube radiator with fan. The clutch is provided with a special spring-drive device to take up the load without shocks on the transmission. The leather-faced clutch is still adhered to, the company considering that nothing simpler or better has yet been devised. A new type of gear-box is fitted, giving four forward speeds, operated through a gate quadrant. On the top speed the drive is direct. The gear shafts are carried on ball bearings of large diameter. The pressed steel frame is narrowed in front to allow a good steering-lock, and raised at the rear to allow the body to be hung very low. The chassis has been designed to take either an open or closed side-entrance body. A new model, which will appeal to those who are on the look-out for an attractive and speedy two-seated car at a moderate price, is the new 8-10-h.p. two-cylinder, in which are incorporated all the latest improvements of the larger cars. The vehicle is fitted with a two-cylinder motor (90 mm. bore by 120 mm. stroke). The ignition is by high-tension magneto, and the carburettor is of the well-known Darracq pattern, with automatic air intake. The gear-box, which provides three speeds, is controlled by a lever under the steering wheel. The gear shaft runs on ball bearings, as in all Darracq models. The steering, of the worm and sector type, is a particularly strong feature of the car, and is provided with adjustment for taking up any slackness due to wear. The front axle is of H section, and is an exact replica on a small scale of the front axles on the 25-35-h.p. and 50-h.p. models. Internal expanding brakes are provided, these being compensated and capable of action in either direction. The wheels are of the artillery pattern, fitted with 750 by 85 Dunlop grooved tyres. A polished chassis of the 14-16-h.p. four-cylinder vehicle next attracts attention. This follows the usual Darracq lines, except that the four cylinders are cast *en bloc*, the dimensions being 85 mm. bore by 100 mm. stroke (R.A.C. rating 18-h.p.). High-tension magneto ignition is fitted as the standard, but a secondary ignition can be provided at a slight extra cost. The gear-box has three speeds forward, the top speed being direct. The transmission is by cardan shaft, with a special universal joint at each end. The back

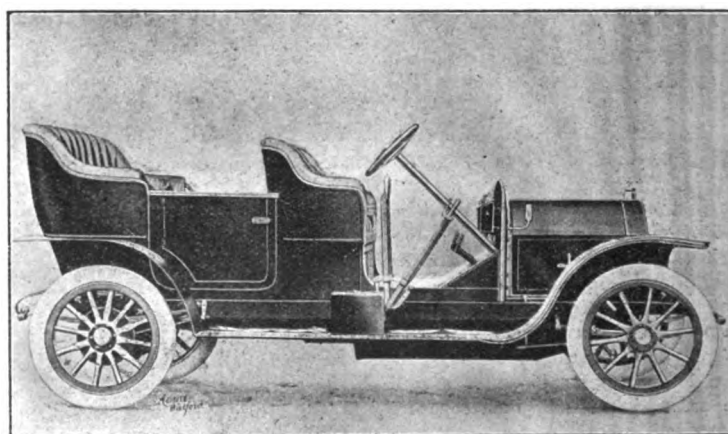


Fig. 20.—The Darracq 1909 14-16-h.p. Car.

axle runs on large double-cage ball-races. The clean design and the absence of unnecessary parts is particularly noticeable in this chassis. The 25-35-h.p. Darracq, owing to the satisfaction which it has given during the past season, has not been materially altered for 1909. The engine (120 mm. bore by 120 mm. stroke) remains the same, and the four-speed gear-box, with gate control, has not been modified. Many improvements have, however, been added, among which may be mentioned a new automatic lubricator positively driven by a connecting rod from the cam shaft, and the adoption of three-quarter elliptic

springs for the rear suspension. With regard to body work, all the cars except the 8-10-h.p. two-cylinders can now be provided by English-built bodies, those on view including a 25-35-h.p. limousine, a 14-16-h.p. side entrance double phaeton (Fig. 20), and a "Four-Inch" touring car.

Messrs. J. Keele, Ltd.

Messrs. J. KEELE, LTD., 72, New Bond Street, W., are showing one of the new 14-16-h.p. Belsize cars, in which a number of improvements on the 1908 model have been effected, notably longer bonnets,

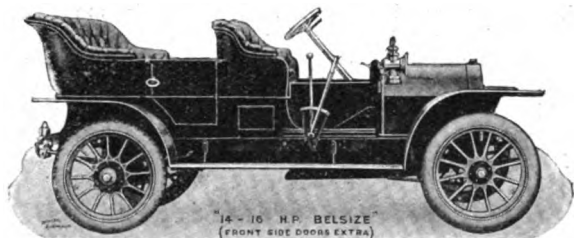


Fig. 21.—The Belsize 14-16 h.p. Car.

larger radiators, improved front wheel bearings and back springs. Among the complete cars are a standard side-entrance double phaeton, a landaulet, a two-seater, built low, with the petrol tank behind the seats, and a side-entrance car, the back half being detachable, enabling a sloping tool box to be fitted in its place. Messrs. Keele are also exhibiting three 1909 Darracq cars, including one of the "Four-Inch" touring models, one of the new 14-16-h.p. four-cylinder vehicles, and one of the 1909 10-12-h.p. type. We may add that Messrs. Keele are the London wholesale and retail agents for the Belsize and Darracq cars.

The S.C.A.T. Cars.

Examples of high-grade Italian automobile construction are to be found in the S.C.A.T. cars, exhibited by Messrs. NEWTON AND BENNETT, LTD., Manchester. The new models are the 14-h.p. and the 22-h.p. (four-inch). The engine (Fig. 22) of the smaller car is 85 mm. bore by 120 mm. stroke, while the dimensions of the 22-h.p. have been increased from 100 mm. by 120 mm. to 101½ mm. by 140 mm., larger inlet and exhaust valves being also employed. Among the changes that have been effected one of the most important is in connection with the lubrication of the engine. This is now effected by a rotary pump mounted on the rear end of the exhaust camshaft, which forces the oil to all the bearings of the engine, and along the hollow crankshaft, up the connecting rods to the gudgeon pins and cylinder walls. The pump is so arranged that any special gear drive is dispensed with,

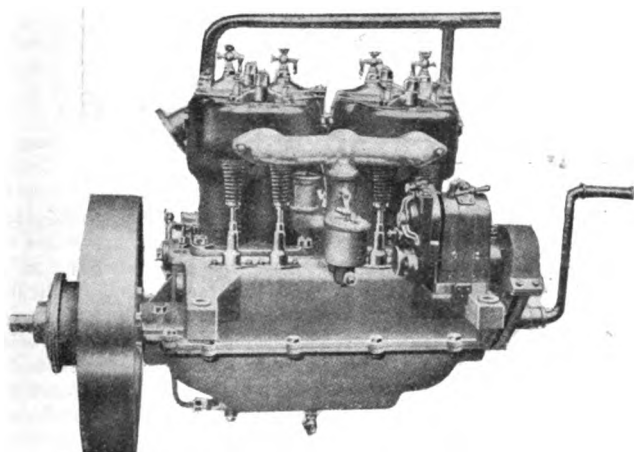


Fig. 22.—The S.C.A.T. 14-h.p. Motor.

and that it may be instantly dismantled from above. The clutch is of the multiple disc type, the steel discs having a broad surface. A universal detachable coupling on the shaft enables the clutch to be completely dismantled without disturbing the gear-box. The latter is adapted to give four speeds, and is operated by a gate lever. The whole of the striking gear is placed inside the gear-box, the locking device being accessible from the outside. Large ball bearings are fitted throughout, while the gear wheels slide on castellated shafts. An improved form of irreversible worm and wheel steering gear has been

adopted, the feature of which is that not only is the entire mechanism enclosed and working in grease, but it may also be removed from the chassis by taking out a few bolts and without disturbing any other part. Attention may also be directed to the S.C.A.T. self-starting device, which is on view. The arrangement, which is the invention of Mr. R. O. Harper, the firm's works manager, consists of a neat air-cooled pump, driven off the crankshaft by a ball bearing eccentric, and maintaining a supply of air under pressure in a reservoir, whence it can be delivered to the engine as desired. The self-starter proper comprises a casting mounted over the valve caps replacing the usual yoke pieces and retained by two nuts only. This casting contains a rotary valve drilled with air holes for the passage of the air to the cylinders for starting. The control is by a pedal conveniently situated beside the clutch pedal, so that it is always possible to start the engine from the driver's seat. The pump may also be used for inflating the tyres, a coil of flexible tube with gauge being supplied for this purpose.

The Crossley Cars.

Messrs. JARROTT AND LETTS, LTD., have, as usual, an interesting display of the Crossley cars, which are now being built in a spacious new factory that has been erected close to the Crossley Gas Engine

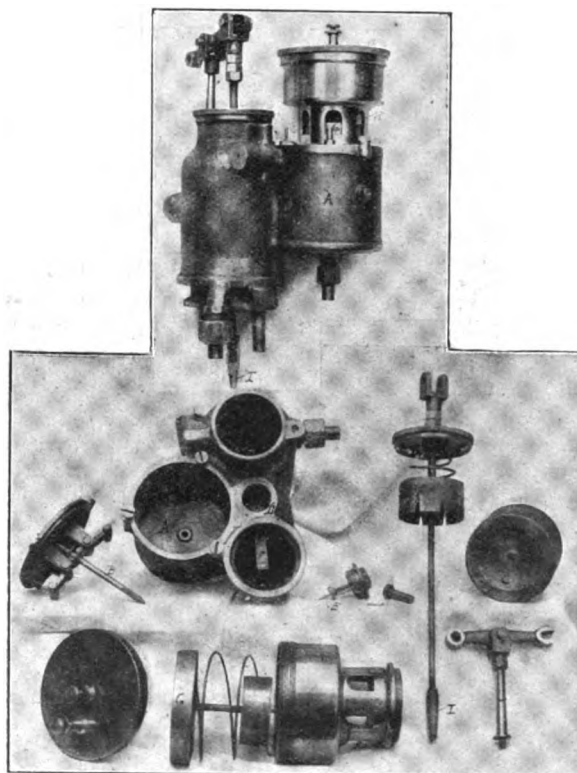


Fig. 23.—General View and Details of New Crossley Carburettor.

Works in Manchester, and equipped with the latest machinery. While the design of the well-known 40-h.p. model is, generally speaking, similar to that of this year, a number of modifications in the details have been made. One important difference is a material reduction in the selling price of the chassis, which has been rendered possible by the facilities afforded by the new factory. As regards the constructional features of the car, these include low-tension magneto ignition, metal-to-metal clutch, expanding inside the flywheel, live axle, and direct drive on the top gear. The carburettor is of an entirely new design, which has been adopted after twelve months' trial, and which is situated in a novel place at the top of the induction pipe. The new device, which is illustrated in Fig. 23, is entirely automatic and controlled by one throttle lever. The throttle, which is of tubular design, and thus unaffected by the engine suction, works vertically in a chamber which is well water-jacketed. The float chamber A is of large proportions and of the usual type, with needle valve spindle mounted vertically and controlled by a free copper float C through small levers. The petrol is supplied through a single orifice jet D. Vertically mounted in the latter is a finely-tapered needle E, by the raising or lowering of which the size of the jet hole is increased or

diminished. A small lever F communicates the movement of the air dash-pot valve to this needle. The action of the suction of the engine on the carburettor is to draw down the air valve against a spring which is steadied by a dash-pot arrangement. As the valve is drawn down the air ports H are opened, and at the same time the taper needle is lifted up in the jet. Thus more air and more petrol are proportionately delivered and a correct mixture ensured at all suction pressures. The immediate response of the engine to any movement of the throttle is claimed to be a very noticeable and valuable feature. Petrol is not wasted, yet on the other hand is not stinted, and the maximum power of the engine is always available, while the mixture is so nicely supplied that the motor can be kept running dead slow when the car is standing. An extra air device is provided, so that although the carburettor is automatic a supply of extra air can be admitted under control of the driver by simply opening the throttle to its fullest position. The action of this is to raise a taper plug I, which moves with the throttle spindle in a hole centrally below the throttle in the induction pipe. The hole is thus gradually enlarged and more or less extra air admitted. By this means the driver can always obtain the best or most economical mixture, whatever the state of the weather, the altitude, or the quality of petrol in the tank, and thus have the engine working under the most favour-

The Bentall Cars.

The Bentall cars, made by Messrs. E. H. BENTALL AND CO., of Heybridge, Maldon, Essex, are staged in two types, the 11-h.p. having two cylinders and the 16-h.p. with four cylinders, the first mentioned being shown fitted with a touring body, having a detachable top. The 16-h.p. is exhibited both as a chassis and with three types of bodies, one being a landaulet, one a two-seater, and the others side-entry touring cars. In main features of design but little alteration has been made from the 1908 models. The low-tension magneto form of ignition is retained, the makers claiming that the Bentalls are the lowest-priced high-grade cars fitted with this system on the market, and that there are less complications in it, and that fewer adjustments are necessary than in the high-tension magneto or accumulator system. The clutch, which is of the internal-cone type, faced with hard fibre running in oil, is claimed to constitute a clutch soft in action, even if carelessly oiled, of ample gripping power, and yet never fierce. It is dustproof, and fitted with Hoffmann ball bearings, which take the thrusts on all points. A feature of the change-speed gear control is the sliding lever and ratchet gate. The side-plates of the gate open out against a spring action in response to a side pressure on the lever, and when so pressed the latter can be moved only one speed at a time, so that it is impossible

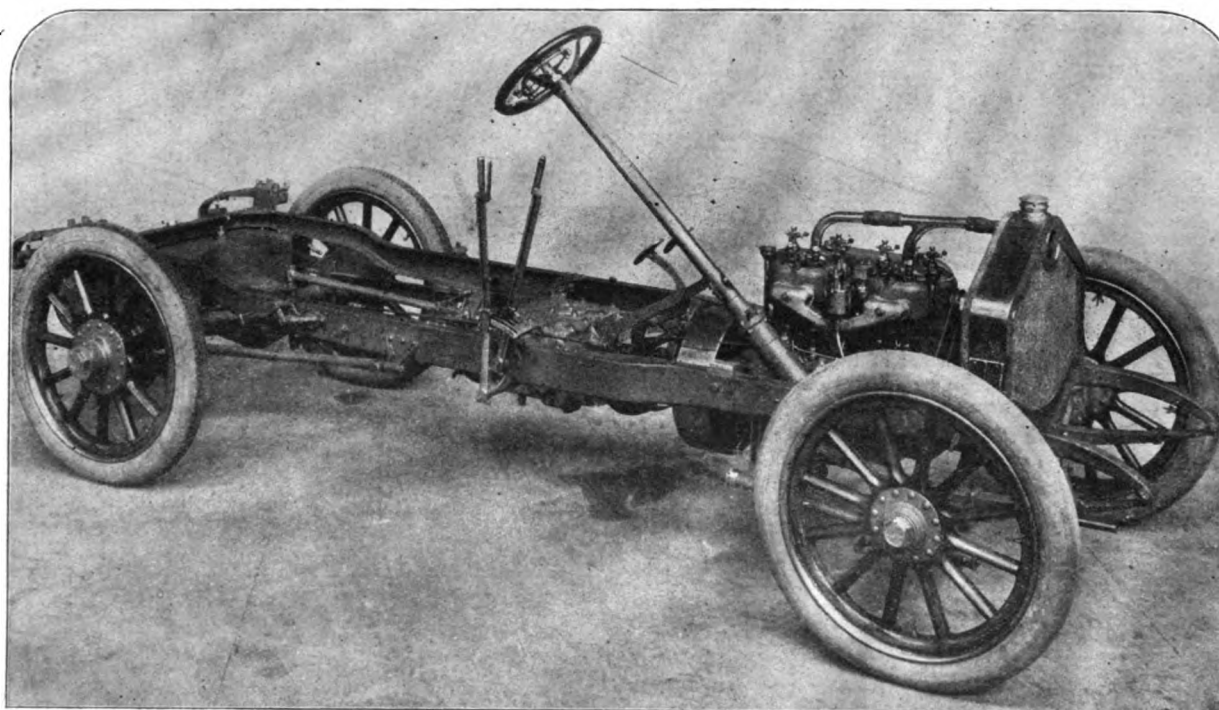


Fig. 24—Chassis of the new Crossley 20-25-h.p. Car.

able circumstances. A special point about the design of the Crossley cars is the individuality of the component parts. Each main component of the chassis, such as the engine, clutch, gear-box, or rear axle, can be dismantled or replaced without in any way disturbing the adjacent parts. As an illustration of this it may be mentioned that the gears can be removed from the chassis without taking down the gear-box, and the main bevel wheels and back axle can be dismantled without removing the casing. This feature is of great advantage to both manufacturer and user, for it means much saving in time and money when repairs are required. In addition to the 40-h.p. Crossley a new live-axle model of 20-25-h.p. is being introduced for the coming season. The engine has the four cylinders cast in pairs, with large water jackets, the bore and stroke being 4 in. by 5 in. On this model high-tension magneto is adopted, and provision is made for fitting a forced feed system of lubrication, if desired, at a small extra cost. The carburettor is of Messrs. Crossley's own design on the Gillett-Lehmann principle, a description of which was given in a recent issue. The clutch is of the Crossley expanding metal-to-metal type. The change-speed gear is adapted to give four speeds with a direct drive on the top, the gears being actuated by a lever working in a "gate" sector. The exhibit comprises a 40-h.p. show-finished chassis, a 40-h.p. with elegant limousine body and a chassis of the new 20-25-h.p. car.

to unintentionally overrun the gear desired. Another speciality of the design of the Bentall cars is that the gear-box and back axle are rigidly coupled together by means of radius-rods. The gear-box has at its front end a stout steel tube, which rests in a trunnion ring, the trunnions being supported in bearings attached to one of the transverse members of the main frame. This allows both members considerable freedom of movement; it is the only point at which the gear-box is attached to the main frame, the other end being supported by the radius-rods, which are bolted to its sides, and pass back to the rear axle, where they terminate in sockets provided for that purpose. There is also a tubular casing over the propeller-shaft, flanged at each end, and bolted both to the gear-box and back-axle casing, which materially increases the rigidity of the whole design. The foot and hand brakes are all centred on drums connected with the hubs of the rear road wheels.

The Bell Cars.

Messrs. BELL BROTHERS, Ravensthorpe, Yorks, display examples of their 16-h.p. and 20-h.p. vehicles, including one with a two-seated runabout body. So far as regards the details, these are very much on the lines of the 1908 models, the improvements being confined to small matters. A clutch of the multiple disc type is now employed, while a universal joint has been introduced on the shaft between the motor and the gear-box.

The Buick Cars.

BUICK MOTORS, of Great Marlborough Street, are displaying three Buick 15-20-h.p. cars, these comprising a chassis; a standard three-seater, two bucket seats in the front, with detachable seat at the back; and a new model fitted with a smart double phaeton body, capable of comfortably seating four passengers. The engine in the Buick vehicles is of the four-cylinder vertical type with overhead valves, the cylinders, which are cast in pairs, having a bore of $3\frac{1}{2}$ in. and a stroke of $3\frac{1}{2}$ in. The control of the motor is by two levers conveniently placed on the steering wheel. The clutch is of the cone pattern, while the change-speed gear is of the epicyclic or planetary

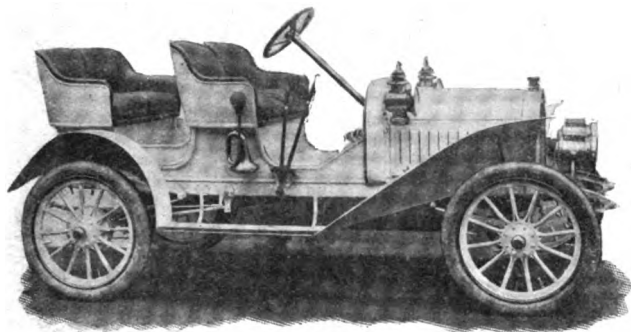


Fig. 25.—The Buick 15-20-h.p. Four-Seater Car.

type, giving a direct drive on the top gear to the live axle. The 1909 modifications include the provision of magneto in addition to coil and accumulator ignition, an increase in the length of the wheelbase, and the fitting of larger-sized tyres. A special point of interest to be noticed on the Buick cars is the accessibility of all the working parts, enabling adjustments to be made with the least possible trouble.

The Swift Cars.

THE SWIFT MOTOR CO., LTD., Coventry, are exhibiting three different types—10-12-h.p. two-cylinder and 15-18-h.p. and 18-24-h.p. four-cylinder. They are all fitted with coil and accumulator ignition, leather-faced cone clutch, three-speed gear-box, direct drive on top, and transmission by cardan shaft and bevel gear to a live axle. The latter has only the driving effort to withstand, the weight of the car being taken by the axle-casing on which the rear road wheels are mounted. The bore and stroke of the various engines are 10-12-h.p., 102 mm. by 111 mm.; 15-18-h.p., 85 mm. by 102 mm.; and 18-24-h.p., 102 mm. by 111 mm. Several improvements have been effected in the 10-12-h.p. two-seater car. The radiator is of a new type, having flat tubes, while retaining the appearance of the honeycomb pattern. The motor has been re-designed, with the view of increasing the accessibility of the valves, there being now nothing in front of them. A platform is also provided for quickly fitting gear-driven magneto when required. The universal joints of the cardan shaft are of the same type as in the 1908 type 18-24-h.p. Swift, and are neatly enclosed in dust-proof grease-retaining metal cases. A spring drive is now employed instead of radius rods as before. The wheelbase of this chassis is now 7 ft., and the springs have been lengthened. The clutch, while of the same type as hitherto, has been altered in detail so as to be a little more accessible. The "gate" type of change-speed gear control is retained, but the lever and actuating tackle have been altered from a sliding to a rocking movement. The 15-18-h.p. is an entirely new model. The four cylinders of the motor are cast in pairs; large valves are fitted, while the crank shaft, which is supported in the top half of the base chamber, is slightly *desaxé*—that is, slightly out of line with the centre of the cylinders. A gear-driven pump ensures a steady supply of oil to all parts of the engine. The gate-controlled gear-box gives three speeds, with a direct drive on top to the live axle, which runs on ball bearings.

The Dennis Cars.

Considerable interest is being taken in the new popular priced 18-h.p. (R.A.C. rating) car, which is being shown by Messrs. DENNIS BROS., LTD., who have introduced it to meet the growing demand for a car of reasonable horse-power and with an inexpensive upkeep. The complete vehicle weighs less than one ton, and is fitted with a body capable of carrying four persons. The engine is of the four-cylinder type, and is fitted with magneto ignition. The gate-controlled gear-box gives four speeds, with direct drive on the third and geared up fourth speed. The back axle is of the well-known worm-gear driven type, and the road wheels are of similar construction to the larger model, but made lighter—in fact, the whole machine is built to meet

the requirements of a light and yet strongly-constructed vehicle. The frame is made raised towards the back and brought low in the centre to facilitate entrance. Another new model is seen in a 40-h.p. car, of which a polished chassis is displayed. It is fitted with a four-cylinder engine (127 mm. bore by 130 mm. stroke), which by the formulae recommended by the S.M.M. gives 47.3-h.p. The lubrication is effected by a geared pump located in a sump cast in the base chamber. The oil, which is forced under pressure to all the bearings, is supplied from a tank placed in a convenient position on the exhaust side of the motor. The water circulation is maintained by a centrifugal pump fitted on a bed cast with the crank case and in direct mesh with the timing wheels, which are cased in and run in oil. The pump driving wheel has a bearing on each side, as has also the high-tension magneto, both being driven direct off the timing wheels. All the half-time pinions are made of metal throughout, and so cannot under any conditions swell or become untrue. The commutator or high-tension distributor is mounted on the upper end of a spindle driven from a spiral gear fitted on the half-time shaft, which makes it particularly accessible, and with this high-tension distributor practically three systems of ignition are available—one being magneto, another electric, using the magneto as a distributor, and a third using the high-tension distributor and independent synchronised trembler coil and accumulators. The clutch is of the leather-faced cone type, the dogs for releasing it being encased in a grease-tight metal casing. A loose joint is provided between the clutch and gear-box, the latter being gate-controlled and of the four-speed variety, giving a direct drive on the third speed and geared up fourth speed. A very important feature is the free-wheel gear-box, which allows the gear to be changed at any speed at which the car may be travelling without having to wait until it slows down to the speed corresponding to the gear. This improvement is brought about by introducing a free-wheel clutch, which allows the engine to drive the gears, although the latter cannot drive the motor except on the third and direct drive when the engine is coupled up direct, with no gears in mesh, to the back axle. The cardan shaft, which is parallel with the ground, meshes through a square joint with the worm pinion. The latter is supported on compound ball bearings at the rear and single journal bearings at the forward end. The worm wheel is made of phosphor bronze and the pinion of hardened steel. The live axle has merely to transmit the drive, as the weight of the vehicle is supported on the sleeve inside which the axle revolves. The road wheels are fitted with

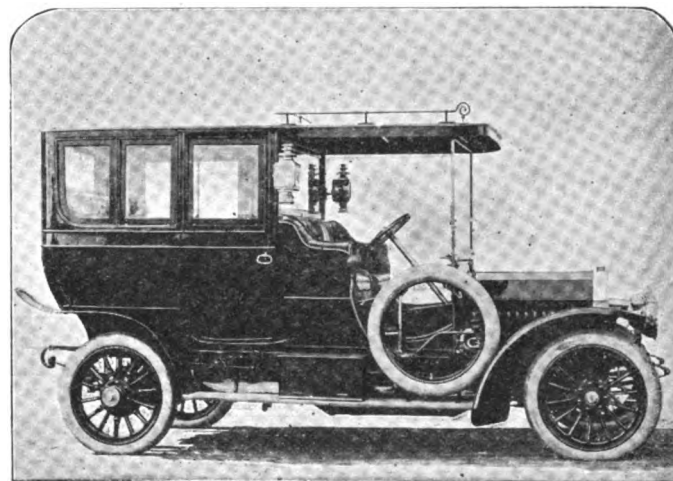


Fig. 26.—The Dennis 35-55-h.p. Limousine.

The body is painted in dark blue with black mouldings and fine white lines. The interior, which has accommodation for five persons, is trimmed in drab cloth; the back seats are adjustable to any width required.

staggered spokes and each revolve on four rows of ball bearings. The other cars on view to which the above specification applies, with the exception of the engine, which has a bore of 120 mm. by 130 mm. stroke, include a 35-h.p. landaulet, which is made to entirely fold down, with a detachable front over the driver; a 35-h.p. limousine, fitted with the Dennis patent extending rear seats, electric light, driver's communicator, glove rack, &c.; a 35-h.p. touring car, with low and light-constructed body and Cape cart hood of a neatly-folding design; and a 35-h.p. vehicle fitted with Ideal body, which includes leather folding hood entirely covering the back seats and meeting the requirements of a closed carriage.

The Singer Cars.

For the 1909 season the SINGER MOTOR CO., LTD., Coventry, are building three sizes of cars—viz., 12-14-h.p., 16-h.p., and 20-25-h.p. vehicles, examples of all of which are on view. The 12-14-h.p. car (Fig. 27) is of the type which did so well in the 2,000 mile trial, only a few detail alterations having been made. The engine comprises four cylinders, 80 mm. by 90 mm. bore. A high-tension magneto is now being fitted, in addition to coil and accumulator ignition, while the method of lubrication has been improved. The gate-controlled gear-box gives three speeds, the top one being a direct drive to the rear axle. The car can also be provided with four speeds, with the direct drive on the third. The 16-h.p. is an entirely new model. The engine comprises four cylinders, cast in pairs, 85 mm. bore by 110 mm.

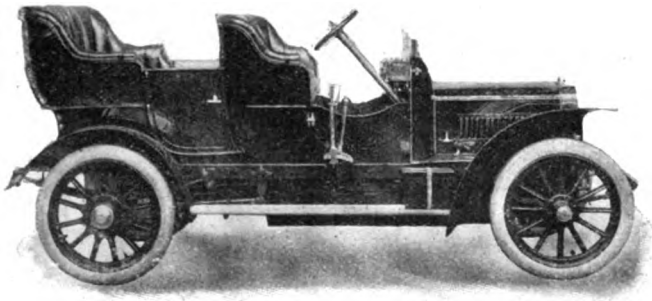


Fig. 27.—The Singer 12-14-h.p. Side-Entrance Car.

stroke; two ignitions—magneto and accumulator—are fitted, while the lubrication is effected by a small pump located in the base chamber. As regards the water circulation, this is on the thermo-siphon system, the pump having been dispensed with. The gear-box is adapted to give four speeds, the direct drive being on the third. Another new departure in Singer practice is in the brakes, which are all now centred in the rear wheels. The front axle is a solid forging of H section. The wheelbase of the chassis is 8 ft. 6 in., enabling a roomy side-entrance body to be fitted. The 20-25-h.p. car, which may be regarded as the Singer "Four-Inch" model, remains very much on the lines of the 1908 type. The bore and stroke of the four-cylinder engine are 100 mm. by 110 mm. Two ignitions are provided. As in the 16-h.p. vehicle, the direct drive of the four-speed gear-box is on the third and not on the top speed. The "gate" lever is of an improved rocking, self-centring type. Both the foot and hand brakes work on drums connected with the hubs of the rear wheels, the drums being arranged

20-h.p. Vauxhall chassis is given in Fig. 29, from which an idea of the "clean" and pleasing lines of the design will be obtained. In the first place, it may be mentioned that the four cylinders of the engine (3½-in. bore by 4½-in. stroke) are now cast in one piece, and that the thermo-siphon system of water circulation has been adopted. The valves are all located on the left side of the motor, and operated off a single cam shaft, the tappets and valve stems being enclosed, with the view of

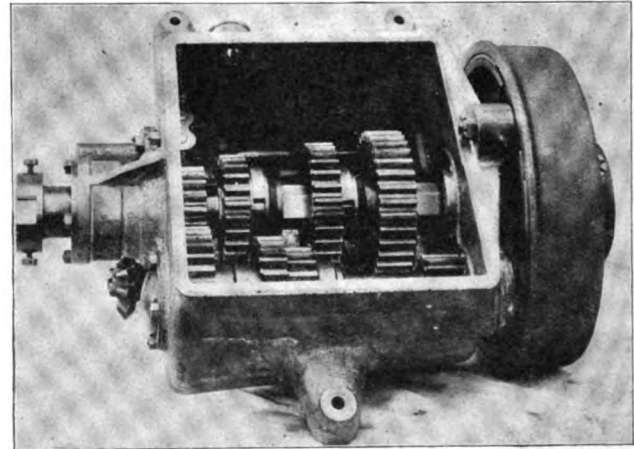


Fig. 28.—View of the Vauxhall Gear-Box.

increasing the quiet running of the motor. The cam shaft is driven by silent, enclosed spur-gearing, the front cross-member of the frame being dropped so that the cam shaft, complete with bearings and half-time wheels, may be withdrawn for purposes of adjustment or timing. A feature of the Vauxhall design is the lubrication of the engine, which is so arranged that all smoky exhaust due to too much oil is obviated. At the rear of the crank case cover is a sump from which the oil is drawn by means of a cam-actuated plunger pump, and forced under pressure into the main bearings, and through the hollow crank-shaft into the big-end bearings. The ignition is by Bosch high-tension magneto, the point of firing being fixed, while the mixture is furnished by a carburettor of the automatic type, the throttle of which is entirely controlled by a pedal. The power is transmitted through a metal-to-metal cone clutch, running in oil, and so arranged that it can be dismantled without disturbing either the engine or gear-box. The latter is gate controlled, and is adapted to give four speeds with direct drive on top. The teeth of the

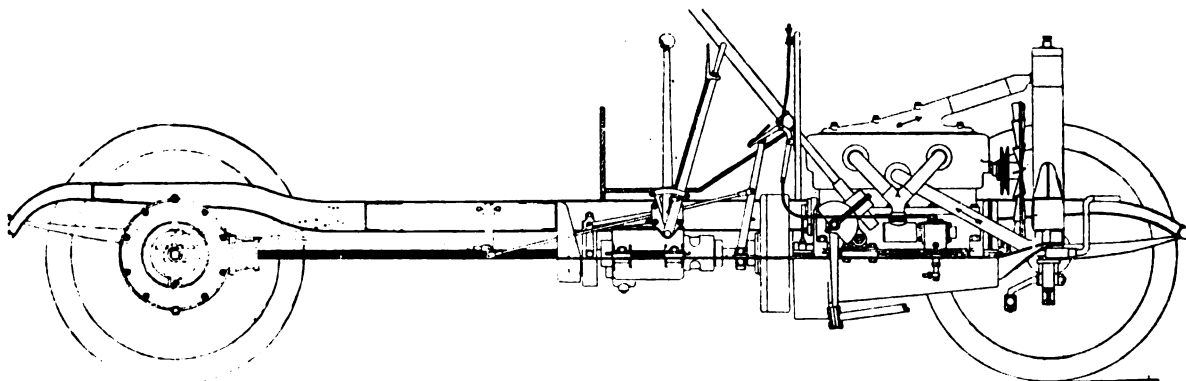


Fig. 29.—Chassis of Vauxhall 20-h.p. Car.

concentrically. The frame, which is supported on three-quarter elliptical springs at the rear, is narrowed at the front to increase the lock of the steering wheels, and raised at the back to give clearance for the differential casing. The wheelbase of the chassis is 9 ft. 9 in., so that it is well adapted to receive large limousine or landaulet bodies.

The Vauxhall Cars.

Among the cars which have come to the front during the past season owing to their excellent performance in open competitions and in the 2,000 miles trial are those of VAUXHALL MOTORS, LTD. The vehicles on view include a 20-h.p. polished chassis, a 20-h.p. with double landaulet body, a 20-h.p. five-seated touring car, and a 16-h.p. two-seater with semi-racing type body. An elevation of the latest

gear-wheels are of ample width, and the wheels themselves of large diameter. The shafts are of nickel steel, as short as possible, to eliminate all springing, and are supported on ball bearings. Packing glands are fitted to make the shafts perfectly oil-tight. The gear-box itself is fixed by three bolts to the underframe, giving it a three-point suspension. The final drive is by a cardan shaft—having universal joints at both ends—and bevel gear to a live axle. The differential gear, which is of the spur-pinion type, is enclosed in a stout casing, from each end of which project two steel-tapered tubes, upon which the rear road wheels are supported. Squares are formed on the ends of the internal rotating shafts, which fit into corresponding squares in the hubs, so driving the back wheels. The bevel pinion can readily be removed by swinging the propeller shaft clear, and removing four nuts on the front

of the casing. It is supported by two large ball-bearings, which render any spring in the pinion shaft impossible. The chassis is made in two lengths—one having a wheel base of 9 ft. 7 in. and the other 10 ft. 3 in., the wheel track in both cases being 4 ft. 6 in. The 16-h.p. car, which is a new model for the 1909 season, is, in general design, similar to the 20-h.p. above described. The engine dimensions are 3½-in. bore by 4-in. stroke; the gear-box gives three forward speeds, while the wheel base is 8 ft. 9 in.

The Talbot Cars.

Four different models of the well-known Talbot cars are on view on the stand of CLEMENT-TALBOT, LTD.—viz., 12-h.p., 15-h.p., 25-h.p., and 35-h.p. These are all equipped with four-cylinder engines, a new

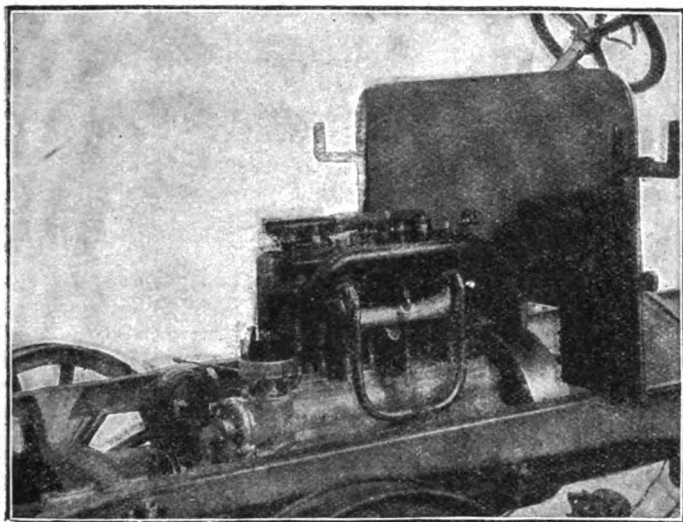


Fig. 30.—View of Engine of Talbot 12-h.p. Car.

feature of which is the fitting of a simple arrangement for rendering them practically noiseless. Although Talbot motors have never been at any time considered noisy, nothing but a faint purr can now be heard when the engine is running, and this only from the half-time gear-wheels which drive the cam shafts, pump, and magneto. It must be pointed out, however, that the silencing of the engine is done without in any way detracting from its power, or, indeed, affecting its working in any way. Dealing with the chassis in the order mentioned above, the engine of the new 12-h.p. car has a bore of 80 mm. by 120 mm. stroke, which, according to the R.A.C. rating, gives 15.8-h.p. The cylinders are cast in pairs; both inlet and exhaust valves are on the left side, and are operated from one cam shaft. The carburetor is on the right, and is of the usual Talbot type, automatically adjusting the quality and quantity of the mixture according to the speed and suction of the engine. The ignition is by high-tension magneto, supplemented with accumulators, being operated off the same distributor and controlled by a lever on the steering wheel. The magneto is placed forward of the engine in a very accessible position, and may be readily dismantled by undoing two nuts. An accelerator pedal is fitted in addition to the usual hand throttle control. The oil for lubricating the engine is circulated by means of a gear-driven pump, forced through sight feeds on the dashboard to the three main bearings and to a pipe which conveys the oil to troughs formed in the base chamber, one under each connecting rod. The big ends of the latter are provided with scoops which gather the oil from the troughs and lubricate the big end bearings, at the same time throwing oil on to the cylinder walls and gudgeon pins. Any excess of oil overflows into the sump below the troughs, and is filtered and conveyed to the pump again. The water circulation is by means of a centrifugal pump driven by a cross shaft from the half-time gear. The clutch is of the self-contained, leather-faced cone type, six springs being inserted under the leather surface to ensure easy engagement. The gate-controlled gear-box gives four speeds forward, with direct drive on top speed. All the gear shafts run on ball bearings. The propeller shaft is enclosed in a tube or sleeve, which acts as a torque rod, it being rigidly bolted to the rear axle casing. The back axle is enclosed in sleeves, which take the weight of the car and also carry the road wheels, so that the axles themselves have only to transmit the drive. Ball bearings and ball thrust bearings

are fitted to all parts where necessary. The 15-h.p. car is similar in nearly all respects to the 1908 type, this having proved itself both efficient and reliable. The engine cylinders are, however, now cast in pairs instead of separately as hitherto, and an accelerator pedal interconnected with the hand throttle control is fitted as standard. The following details will briefly describe this model:—Bore and stroke, 90 mm. by 117 mm., four-cylinder engine, cylinders cast in pairs, dual ignition—Bosch high-tension magneto and coil and accumulators working through a common distributor. Lubrication is by exhaust pressure. Four-speed gear-box, direct drive on top. The 25-h.p. Talbot (105 mm. bore by 120 mm. stroke) is similar in all respects to the 1908 type save for the addition of an accelerator pedal interconnected with the hand throttle control. Another feature of this model is the fitting, when required, of a new disconnecting clutch. The operation of the latter is as follows:—Internal teeth are cut in the clutch sleeve and corresponding teeth are mounted on the gear-box shaft. When declutching these teeth are disengaged, and consequently no effort or effect is transmitted to the gear-box shaft by the spinning clutch. This attachment renders gear-changing an exceedingly simple operation, and makes it practically impossible to scrape the gear wheels. In the 35-h.p. car the general construction of the chassis remains unchanged. There are, however, one or two modifications of minor importance, among which may be mentioned wider springs to the front wheels and bow type of front axle. Instead of the jaw for pivoting the front wheel spindle to the axle being formed on the end of the main front axle forging as hitherto, it is now on the pivoting end of the axle which carries the road wheels. A slight alteration has also been made in the bearings of the front wheels. On the inner side of each wheel there is a double row of ball bearings, which arrangement is particularly well adapted for resisting heavy thrusts as well as taking the load. On the outer side of the wheel a single row of ball bearings is fitted. The live axle casing has been slightly altered in shape, and now increases in diameter towards the differential casing—an improvement which aims at increased strength. Each of the rear road wheels runs on two double rows of ball bearings, and additional thrust bearings have been fitted to the differential to relieve the ball bearings, on which the inner ends of the live axle run, from side thrusts. Altogether the live axle now runs on eight rows of ball bearings, which renders it exceptionally strong and steady running. Other details of the chassis are as follows:—Dual ignition—Bosch high-tension magneto and coil and accumulator, both systems working through entirely separate distributors. Lubrication is by force pump in the base-chamber forcing the oil through sight feeds on dashboard to main bearings of engine, which are drilled

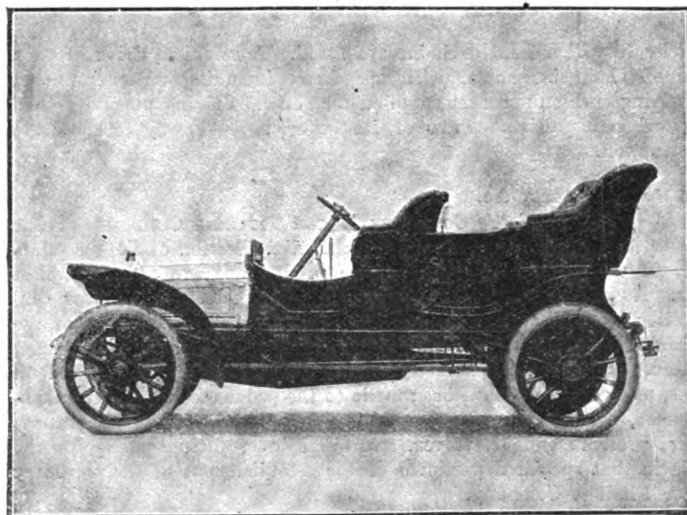


Fig. 31.—The Talbot 15-h.p. Car with Standard Side-entrance Body.

through, as is also the crank-shaft. The crank pins are also drilled, thus lubricating under pressure the big end bearings of the connecting rods. An oil-tank is also provided in the usual position on the chassis, to which a bye-pass from the exhaust is connected and oil is forced up through the sight feeds on the dashboard; this can, however, be shut off at will, and is quite independent of the force pump feed. An extra hand pump is also provided.

ACCESSORIES AT THE SHOW.

Brown Brothers' Specialities.

The central feature of the automobile accessories section of the exhibit of Messrs. BROWN BROTHERS, 22-32, Great Eastern Street, London, E.C., is the Autoclipse lamp, which has so recently been illustrated and described in these columns that further details are unnecessary on the present occasion. In view, however, of Parliamentary inquiries concerning the dazzling lights on motor-cars, motorists should examine its features for themselves. The Gabriel horn, actuated by the exhaust, is also shown, as well as the new "Raybestos" brake lining, composed of asbestos woven with brass wire, and now employed by most of the leading motor-car companies. A full range of the well-known "Duco" specialities completes the very complete exhibit of this well-known house.

The Renold Chain.

Messrs. HANS RENOLD, LTD., of the Progress Works, Manchester, are showing their three main types of driving chains, viz., silent chains, with pitches $\frac{1}{2}$ in. to $1\frac{1}{4}$ in., and with breaking loads of 2,000 lbs. to 87,580 lbs., for high speed driving; roller chains for medium speeds, with pitches $\frac{1}{2}$ in. to 5 in., and breaking loads of 1,750 lbs. to 86,000 lbs.; and block chains for slow speeds. The silent chains are of the improved type with the recently introduced patent bearing, which doubles the life of the chains. They include the size so largely used on London motor-buses, and others which are being adopted for the final drives on motor-cars, as illustrated in Fig. 32. Among the roller chains are all the sizes used on the fifty different makes of motor

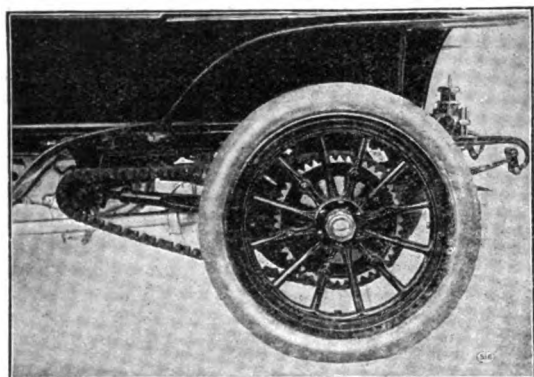


Fig. 32.

vehicles to which Renold chains are fitted. A complete drive of each type of chain is shown, with sprockets, including an example of the spring cushion sprocket supplied for general driving purposes when the load is impulsive. Part of its cover is cut away to show the construction.

C.M.F. Radiators, &c.

At the stand of the COVENTRY MOTOR FITTINGS COMPANY, of Far Gosford Street, Coventry, is a comprehensive selection of the manufactures of this well-known firm, whose productions are of the highest class. A special display is made showing the latest methods of construction in radiators of the genuine honeycomb type, as well as of the horizontal and vertical gilled type and C.M.F. patent honeycomb gilled pattern. Petrol tanks, bonnets, silencers, under sheets, wings and oil tanks, most of which have been made to the order of well-known manufacturers, are also on view, as well as many varieties of lubricators, filters, pressure gauges, valves, and other brass fittings made for the trade in that special department of the establishment of the Coventry Motor Fittings Company.

Dunlop Tyres.

The DUNLOP TYRE COMPANY's exhibit includes the well-known grooved tyres, such as were used by Resta when he made the record at Brooklands. There are also shown at their stand the Dunlop steel-studded tyres, similar to those on the Hutton car which won the Four-Inch race; the Dunlop detachable rim, which is extremely light and neat in appearance; as well as a selection of Dunlop inside and outside gaiters, improved security bolts, valves, spare tyre covers, tube bags, rim paint, inflators, tyre testers, tyre levers, and tyre manipulators.

The Lee-Trigwell Skidless Band.

On the stand of Messrs. A. W. GAMAGE is being shown by the Automobile Contract Company, Ltd., of 51, Conduit Street, London, W., the Lee-Trigwell patent detachable skidless band and tyre protector, illustrated in Fig. 33. From a preliminary demonstration of the merits of this device we anticipate it will prove one of the most decided novelties in the Gallery. As will be seen, the band is of the familiar kind, and is made from specially-prepared chrome leather. The tread

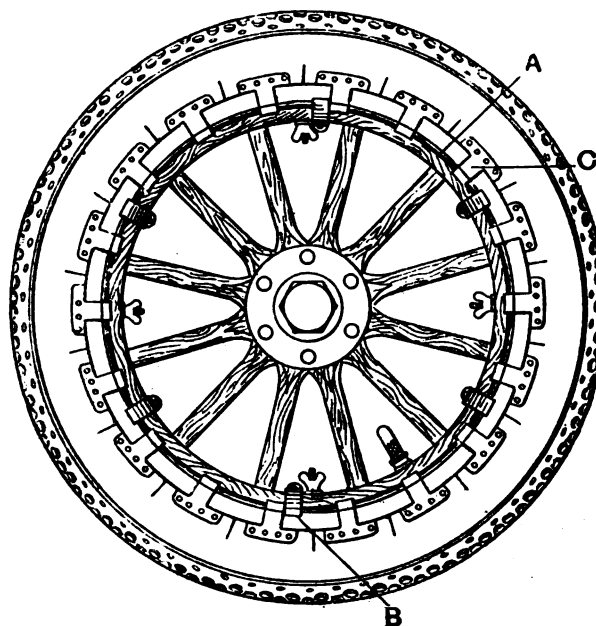


Fig. 33.—The Lee-Trigwell Detachable Skidless Band.

is composed of toughened leather, in which are riveted hard steel studs, easily renewable should occasion require. The unique feature of the device consists in the method of attaching and fixing the band, which can be done quickly and without interfering with the cover of the tyre. When fixed there is a notable absence of creeping, and the Lee-Trigwell band will really help the preservation of the tyre. In Fig. 33 C is one of the hooks, which are placed, as will be seen, at regular intervals, and riveted on each side of the band. They pass round the outside of the lip of the endless metal rim A, and after passing below the lip, turn outwards to receive endless rings, to which they are attached. The rings being thus brought into the proper position, the adjustable clips

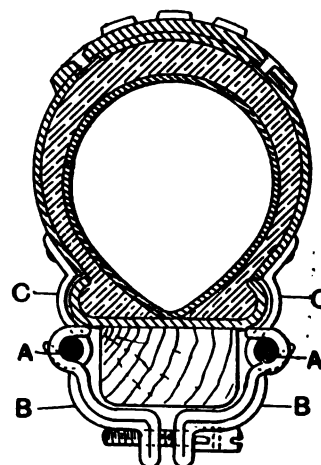


Fig. 34.—Section of Tyre Rim and Wheel Felloe, showing Adjustable Clip.

shown at B are placed over them, and a secure fastening obtained, which is quite independent of the tyre. This is performed by a screwdriver, the only tool required, as will be seen in Fig. 34, which shows the adjustable clip B. It should be noted that when the tyre is inflated the edge of the leather band is drawn inwards tightly, and a perfectly safe fitting is ensured. The method of detachment is so simple, easy, and

rapid that any moisture which may get between the cover and the band can be sponged clean without more than a few minutes' delay—a point of value in estimating the life of a cover. This facility of detachment is an important feature, and we anticipate much will be heard of the Lee-Trigwell band during the coming season. The band can be fitted with new studs when required, and the Automobile Contract Company, Ltd., have evidently given the device much careful study. It is a matter of interest to recall that the names now associated with this excellent band were also identified with an original patent for non-skid bands taken out in 1892.

The Avon Tyres.

The AVON INDIA RUBBER COMPANY, LTD., who have now a London office at 35, Long Acre, W.C., are represented by a display of their motor tyres, and a full demonstration of their ability in the direction of meeting the requirements of owners of cars. Three types are exhibited—viz., those with round-tread covers, square-tread covers, and studded non-skid covers. The two former patterns are constructed with and without the non-slipping cross-grooves cut right across the tread of the tyre. These Avon tyres have proved their imperviousness to puncture, and their good quality in that respect is universally recognised. The excellence of the rubber employed and the fact that the treads are moulded and vulcanised to the tyres under hydraulic pressure secure a really high-grade tyre. With regard to the Avon non-skids, which should be carefully scrutinised by those interested in their safe passage through the streets, we may mention that the steel studs are of extreme hardness, produced by a new process, and are securely riveted into a tread of rubber and fabric, which is vulcanised to the tyre casing under steam pressure. The protecting band is placed between the base of the studs and the casing, well securing the latter from any risk of injury. The Avon India Rubber Company's works at Melksham are replete with modern appliances, as is evident from their exhibit at Olympia.

Harding's Varnish Revivers, &c.

Messrs. A. T. HARDING AND COMPANY, LTD., of Stepney, London, E., have a display of their utilitarian specialities, such as varnish revivers for motor-car bodies, patent leather splashboards, and varnished goods of every description. This, too, will effectually remove mud marks and enable the work to be polished and restored to its original degree. The firm are also showing their "Blackall" varnish for touching up the iron and wood work of motor-cars as well as their "Stainless" preparation for removing dirt and grease from the lining of cars and for the cleaning of Cape cart hoods, cloth, twills, &c. All these specialities are distinguished in the trade by the mark of the "fish and the ring brand."

The H. F. Vulcanizers.

Motorists will, of course, visit the vulcanizing display in the gallery of which Messrs. HARVEY FROST AND COMPANY (39, Great Eastern Street, London, E.C.) are organisers. It will there be seen that no drastic changes have been made in the standard H.F. devices, but that the careful regard to maintain the premier position which Messrs. Harvey Frost have always shown is again proved by the many little improvements which have been made in their vulcanizers. Thus the "Baby" vulcanizer is now fitted with a burner of larger capacity than formerly; the "Car" vulcanizer has both sides flat instead of one being concave, while it is also supplied with detachable faces to fit all types of tyres; and the re-treading plants are now provided with re-designed burners which require less gas than heretofore, thus securing economy with efficiency. At the firm's stand is also exhibited the H.F. heat localizer, by means of which the heat is absolutely restricted to the repair itself. A new device is seen in the tube tester, consisting of a net attached to two rims. The tube to be tested is then placed within the net and the two rims are clipped together. The tube can then be blown up to 110 lbs. per square inch pressure without risk of injury and immersed in a specially designed and constructed water bath. With regard to other specialities of the firm, whose members have raised the art of vulcanizing to a very high degree of excellence, we may mention that the Standard A vulcanizer remains as before, as does the "Garage" equipment, which has been found to so well meet the requirements of garage proprietors that no improvement has been suggested. Vulcanising materials, canvas moulds for use with the H.F. retreader plants, and tools are all on view, as well as the H.F. wet proof paint for treating slight defects in covers in cases of emergency and in the absence of a vulcanizer.

Smith's Speed Indicators.

Messrs. S. SMITH AND SON, LTD., 9, Strand, W.C., are well known in connection with their speed indicators, which have saved many of their users considerable fines in police courts. At the Show they are demonstrating three methods of drive on a small chassis, so that intending purchasers can see for themselves the advantages claimed for each system. We illustrate the friction and the belt drive from the cardan

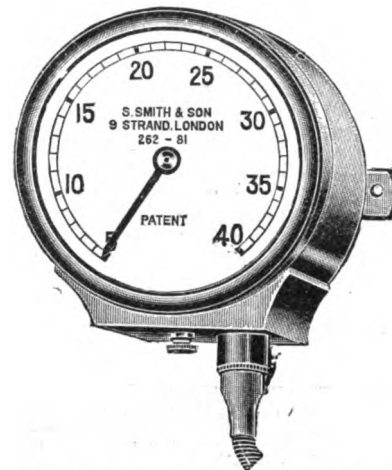


Fig. 35.—Smith's Speed Indicator Without Mileage Recorder.

shaft respectively, which are the methods recommended by Messrs. Messrs. Smith and Son. In the latter the belt drives from a split pulley on the cardan shaft. Among the specialities is a Speed Indicator, new dashboard milometer. Recently, when emphasising the advice of Prince Francis of Teck to motorists to adopt speed indicators, we illustrated several excellent devices brought out by this firm, so that their features are well known to our readers. At the Show some of the improvements we then noted are observable, notably the introduction of a Trip Recorder into the Popular Indicator and the fitting of a locked maximum hand into other instruments without extra cost. Their type 13 has been improved by the addition of a furlong scale round the mileage dial and the arrangement of that type in com-

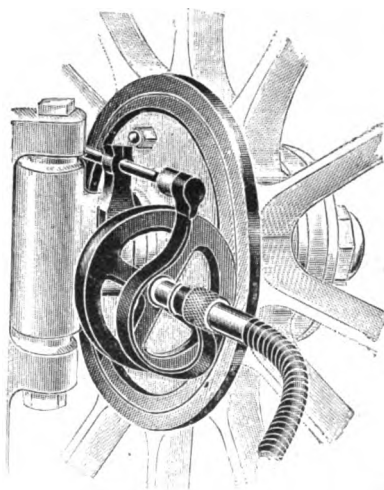


Fig. 36.—Friction Drive for Smith's Speedometer.

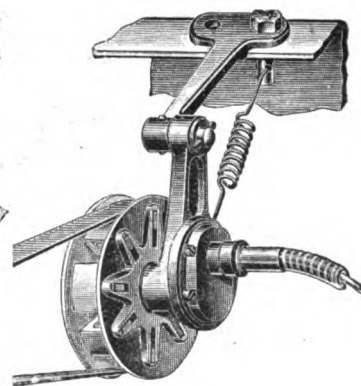


Fig. 37.—Belt Drive from the Cardan Shaft.

bination with a watch or watch and communicator. Messrs. Smith and Son regard their "Perfect" speed indicator as having greatly influenced the award of a Diploma of Honour to the firm in connection with the Franco-British exhibit. These instruments are made to the greatest nicety of adjustment, and can be relied upon for accuracy as well as durability. Not only is this the case with the higher-priced indicators, but equal precision and excellence are incorporated into those for motorists with cars of moderate size and cost. The "Runabout" type, made by the firm, is typical of that class of instrument. This will record speeds accurately up to 40 miles per hour, and a total mileage of 10,000 miles, the mechanism being identical with that which operates the "Perfect" type, while the scope of the indicator renders it a very suitable fitment for any of the small cars now upon the market, and which, according to the views of agents, are most in demand.

(To be continued.)

Correspondence.

[Letters to the Editor should be addressed to the offices, 27-33, Charing Cross Road, London, W.C.]

M.U. AND R.A.C.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—As one who has, from the commencement of motoring in this country, taken the greatest interest in the movement, I have watched with much regret the split which has gradually taken place between the organizations on which we depend for protection and help, and it is with added feelings of regret that I have read the new Royal Automobile Club Scheme for a association.

It is an obvious attempt to wreck a useful and active body which has done much, and is doing much, for the development and protection of the interests of motorists in this country. I feel sure many who, like myself, have been actively interested in motor politics in the past, but have wearied of the continual strife, and have retired from the struggle, will see in this new scheme an endeavour on the part of the R.A.C. to bring about a return of the unfortunate position in which the provincial clubs found themselves prior to the resuscitation of the Motor Union in 1902.

A representative body, the Committee of the R.A.C. Associates, passed at Norwich, I believe, a resolution in favour of a joint scheme

pretext against a policy which can only have the effect of spreading dissension in the ranks of the provincial clubs, and thereby weakening our forces.—Yours truly,

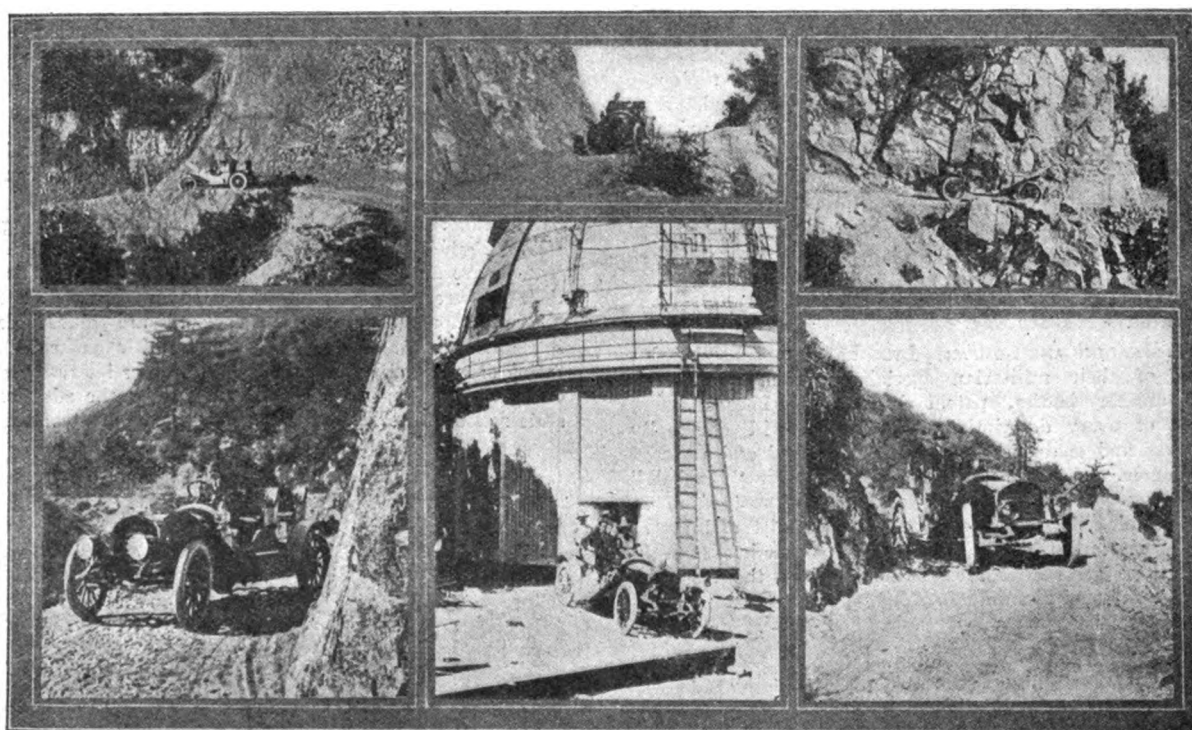
J. A. COLE.

MOTOR-CARS OF THE FUTURE.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—As a medical man practising in Devon, may I be allowed to give my ideas as to my, or, may I say, our wants? They are, a car of not more than two and preferably one cylinder, not less than 12-h.p., to seat four, the length overall not exceeding 10 ft., with the shortest wheel base possible, speed need not exceed 20 m.p.h. I have been driving an 8-h.p. Da Dion for the last three years. It will go anywhere or almost anywhere it is required to go, but at what a cost of energy to the driver! There are three routes, all good surfaces, leading out of the town in which I reside, and my gears have to be changed five times in one case, eight times in another, and four times in the third, all within one mile!

A four-cylinder car is to my mind simply a piling up of troubles,



A new Observatory is being erected on Mount Wilson, California. Professor Ritchey, who is in charge of the work, has to make frequent journeys to the summit, which is nine miles from the nearest town, the road rising no less than 5,300 ft. in that distance. At first he travelled on foot, but, a road having been built up the hill, the trip is now made by means of a motor-car. Some snapshots of the vehicle en route to the Observatory are reproduced in the illustrations above. [New York Motor World.]

of affiliation to both the R.A.C. and the Motor Union, and, possibly owing to my not following the reports of meetings closely, I cannot understand how a resolution so passed comes to be utterly and completely reversed by the Committee of the R.A.C. It was this unfortunate autocratic conduct on the part of the Club Committee which led to the trouble in the past.

I feel sure that the Associate members of the R.A.C. never for an instant thought that the Norwich resolution would result in the scheme now put forward by the club, but they are apparently powerless to prevent the inevitable disaster (probably amounting to extinction as regards some of the clubs) which this scheme threatens to bring about.

I have not attended any meetings this year, but I gather that the Motor Union has offered to agree to any generally approved scheme of joint affiliation, and that this offer has been finally declined by the R.A.C., as of course the club has a perfect right to do; but surely it should stop there and leave the provincial clubs to affiliate to each body separately, should they desire to do so.

I am a member of both the R.A.C. and the Motor Union, and I freely admit that several things have been done by both bodies of which I do not approve, but there is a considerable balance of good and useful work standing to the credit of each of them, and it is because I am sure that there is ample scope for each body to continue to do useful work on behalf of the motoring community, that I am led to

ignition and other, and a "long wheel base side entrance luxurious tonneau" is quite out of place in the tracks which are called by tourists Devonshire lanes. I am not complaining of the work my little car has done, and is doing, but I have often wished on a wet, pitch dark night, that it would plough through inches of mud without asking me to drop my gears so often. My short experience shows me that cars generally have more body than their engines can pull. Conceivably a pony might trot away with a brougham on a good road, but the brougham would soon do for the pony in the lovely lanes of the South Hams. Personally, when I scrap my staunch little friend I shall try a steam car without gears.—Yours truly,

W. N. EDMOND, M.B.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—With reference to this question I find a decided demand at the present time in Herefordshire and the district for a car about 15-h.p. With regard to improvements I should say that the greatest improvement now required in a car would be a reliable self-starter. I do not think that the recent outcry against motoring has affected our sales locally in any way, except it be that this has created the demand for the 15-h.p. car instead of a larger power.—Yours truly,

JAMES F RYER.

AERIAL FLIGHT.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—The recent successes of the Brothers Wright, Mr. Henry Farman, M. Delagrange and M. Bleriot have attracted the attention of the whole world, and signs are not wanting that a wide-spread interest is now being taken by all classes of the community in this country in aviation. This being so, it may safely be predicted that Englishmen will not long be content to remain behind their Continental brethren in the study and practice of flight, and there is little doubt but that special difficulties which beset the path of the pioneer in this country are to blame for the fact that our countrymen have hitherto not been in a position to compete for the many valuable prizes which have recently been won by aviators across the Channel.

With a view to remedying this state of things, the Aero Club of the United Kingdom wish to make it more generally known that it is willing and anxious to lend its support and assistance to any aviator in this country, and my committee hope that in this manner many of the difficulties which confront the inventor at the present time may be overcome. The complete and responsible organisation of the Aero Club, and its close relations with the aero clubs of other countries, have placed it in a position to be of real service to the cause, and the terms of personal friendship existing between our members and all the leading aviators on the Continent cannot but be of considerable value in the early days of the movement in this country.

As the public are aware, considerable money prizes are still open, and in addition the Aero Club of the United Kingdom, provided reasonable support be forthcoming, is willing to offer prizes of a national nature, open only to British aviators. The conditions attached to these prizes will be of a less onerous nature than those of the existing prizes.

The Aero Club, of 166, Piccadilly, London, W., intends to organise a competition for aeroplanes in this country during the year 1909, particulars of which will be announced at a later date.

In conclusion, I may say that my committee are arranging to provide a suitable and private practice ground, with sheds, &c., and they hope that British aviators who may be confronted with any difficulties will communicate with the Aero Club.—Yours truly,

HAROLD E. PERRIN.
Secretary.

A TALE OF A TRIFLE.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—Your correspondent "H." in the issue of the 31st ult., in his letter "A Tale of a Trifle," breathes into his remarks a spirit of criticism which is apt occasionally to lead motorists beyond the bounds of fairness.

Apparently, in the case quoted, there was justification for putting the blame on the makers, but one so frequently hears similar omissions unfairly attributed to them.

As an instance, in the cars manufactured under my supervision all the bolts, except where other methods are suitable, are fitted with split pins, but I have on more than one occasion seen that the majority of these have been removed either by the owners or their drivers, for the reason perhaps these pins may sometimes catch the cloths when cleaning down.

In the case of any of these bolts at some time becoming loose, I am afraid it is too much to expect the owner to remember that the split pins were removed after the car left the maker.—Yours truly,

E. A. RAINER.

MAGISTERIAL METHODS.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—These extracts are interesting:—

"Daily Mail" Nov. 3rd.

Motorist's £40 Fine.

"Fines and costs amounting to £120 were imposed at Haywards Heath Petty Sessions yesterday, on motorists summoned for excessive speed."

John Charles Dawes, of 40, Bathurst Mews, London, who was summoned for two offences, and against whom there was a previous conviction, was fined £40 and costs; and Ernest Sayers, of Hove, who also had been previously convicted, had to pay £20 and costs, his licence being endorsed."

I was present at the Haywards Heath Petty Sessional Court on the Monday, and was regaled with a course of procedure which can only be stigmatised as a travesty of justice, whilst the levity of many of the participants was disgusting in the extreme.

There were some nine or ten chauffeurs arraigned for exceeding the speed limit, not, as it noticed, for driving to the common danger. They were placed in the box and the stereotyped notes of a sergeant read. An evident source of amusement to the magistrates, they were asked, "Do you want to be sworn?" "Have you any witnesses?" "Do you want to make a statement?" A few did make statements, only to be haughtily brushed aside by the clerk. The magistrates then retired for a

few minutes and came back with the various penalties and costs bunched together.

The trap was one of 8½ miles between Pyecomb and Bolney, on the Brighton road. The summonses had been received by registered post two days before the trial. Needless to say the penalties were atrociously heavy and out of all proportion to the wrong committed.

Road-hogging, scorching on frequented roads, and driving to the public danger cannot be sufficiently reprehended and punished, but surely, Sir, some fairness should be meted out to these men who have their living to get. It may be urged that the master pays the fine, but he cannot erase the endorsement on the licence. The only remedy is for motorists to boycott the roads, and the Brighton road especially. The loss to the towns and villages en route, and to Brighton, the terminus, would be enormous, and for this loss these petty and spiteful magistrates would be responsible.—Yours truly,

FRITZ MUHLENKAMP.

SOME PRACTICAL TIPS.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—As I have come across many useful tips in the *M.C.J.*, I venture to send you a few I have met with in my experience, in the hope they will be of use to some of your readers. The following is an engineer's dodge that is not known to many drivers. If a metal rod is held in the mouth and the end placed against the engine whilst running, and the ears closed by fingers, all the movements can be distinctly heard, and a knock, squeak, or grind can be located.

I frequently wonder why it is that the contents of so many tool-boxes hardly have anything more than a few spanners, a jack, tyre-levers, some



Touring in Ceylon.—A Road Scene in Colombo.

string and copper wire and some stray bolts and nuts that never fit, and a file with all the "cut" gone. Some drivers remind me in this respect of the shipwrecked mariners of whom Kipling says, "And all they had was one split pea," and some drivers do not even carry a split pin. I remember one driver who got stuck up in an out-of-the-way spot through a burst rubber connection to the water pipe, and he was put to hours' delay in getting a piece of hose to fit. Other drivers carry a spare valve but not a spring. I remember once I had the exhaust valve spring break on a 45-h.p. Mercedes; on these, one end of the spring fits into the valve slot, and it broke off at the end; not having another spring, I rigged up a cotter out of the blade of a penny screwdriver, filing this into shape, and it stuck up the remainder of the run.

Some engines, though tuned up properly, will not run at low speeds without spluttering and misfiring. I cured this in the case of a four-cylinder car by fitting springs to take up the slack in the control mechanism. There was a good deal of shake both ways in the contact breaker, and also the throttle valve and air control. With these parts moving under vibration the engine could not be expected to run uniformly. Fitting light springs to keep each control device in one direction quite overcame this difficulty and made a most pronounced improvement in the running of the engine at low speeds.

One of the most curious makeshift dodges I have heard of was that of a friend of the writer's who drives a delivery van. The engine stopped and he found the petrol pipe had broken off at the union to float chamber. Not having anything to effect the repair, and being some miles from a motor depot, he stopped the bottom of the float chamber up and filled up with petrol. Then, filling an oil feeder with petrol, he got his companion to sit on the dash and feed the carturettor with petrol through the hole at the top of the float chamber. This enabled him to reach a motor depot, after two stops to fill the feeder with petrol.

An unusual cause of "knock," after new rings had been fitted to a

piston, was due to the rings catching against the ridge worn by the old ones in the cylinder walls. This is caused by the new rings reaching slightly further up in the cylinder than the old ones, due to wear in the grooves. The trouble can be cured by placing a thin layer of tin or aluminium beneath the cylinder flange.

With a pressure-fed carburettor trouble sometimes occurs through a leak in one of the pressure pipes or joints. Generally, this occurs through vibration having loosened one of the joints, and in one case I knew it was due to a pin hole in the pipe. Dirt getting under the check valve controlling the pressure would cause trouble, as it prevents this valve seating properly. The valve should be taken out at intervals and cleaned. The best way to find a leak is to cover the pipes and connections with soap suds. The leak would show itself by bubbles the repair being then a simple matter.—Yours truly,

S. I.

RUSTY TYRE RIMS.

To the Editor of *The Motor-Car Journal*.

SIR,—Having had a bit of trouble through the rims of my wheels rusting and injuring the covers, I have wondered if any of your readers could suggest an economical and effective preventative. I suppose silver plating would be effective but not economical, even if possible, and would galvanizing the rims be possible or of any use? or, again, would it be possible to insert a strip of very thin sheet lead between the cover and the edge of the rim where the pinch is so sharp? My trouble is, that the edge of the rim gets rusty and practically cuts the bead off from the cover long before the tread is worn out; no doubt others have had the same trouble, and if they have found a remedy I should be very glad to profit by their experience and very grateful into the bargain.—Yours truly,

TRI-CAR.

[The rims of motor tyres should be occasionally inspected, for in the operation of changing tyres the paint is liable to be worn away at various points, and if these are not attended to rust will ensue. The plan usually recommended of dealing with the matter is to thoroughly clean the parts from which the paint has been removed, and then apply a good coat of air-drying black enamel.]

STORING PETROL.

To the Editor of *The Motor-Car Journal*.

SIR,—Referring to the letter in your issue of the 7th inst., "Cycle Mechanic" may keep up to 60 gallons of petrol in 2-gallon tins if kept in a storehouse such as is described in the regulations made by the Secretary of State under Section 5 of the Locomotives on Highways Act, 1896. These regulations are fairly generous, but if "Cycle Mechanic" cannot comply with the regulations and has to fall back on the local authority for a licence Heaven help him if he has to apply to the L.C.C. for one. His trouble will then commence.—Yours truly,

A MOTOR MECHANIC.

A SUGGESTION TO MOTORISTS.

To the Editor of *The Motor-Car Journal*.

SIR,—Below I send you a copy of a letter in reply to one appearing in a Cardiff paper. Possibly similar letters have been published in other papers throughout the country, and I would suggest, if anyone who has the interests of motorists at heart replies to any such letter, much of the prejudice and ill-feeling against motorists would be allayed.—Yours truly,

F. C. SHACKEL.

[COPY.]

THE MOTOR PERIL.

To the Editor of the "Western Mail."

SIR,—In your issue of to-day appears a letter from the Secretary of the Highways Protection League, which on the face of it implies an alarming state of affairs. With all respect to Mr. Barnes, the secretary referred to, I for one, as a motorist and one who takes a great interest in anything pertaining to this new industry, cannot allow such a misleading letter to pass without making a few observations on the same. To begin with, Mr. Barnes' statement that the number of accidents "is still upon the increase" is incorrect and apt to mislead, as Mr. Barnes has not mentioned the fact, which must be apparent to him, that the number of motor-cars on the road this year is very much greater than last year. Therefore I emphatically state that Mr. Barnes' "alarming increase" is one of decrease, thus showing that both motorists and the public are more careful. Mr. Barnes further states that out of the 100 fatal accidents, verdicts of "Accidental death" were brought in in thirty-six cases, and goes on to add "I have received no reports giving the verdicts in the remaining cases." I now suggest to Mr. Barnes that for the future he is more correct in his facts before making such extravagant statements, and I have much pleasure in informing him that in the very large majority of fatal accidents verdicts of "Accidental death" have been brought in. With the immense number of cars on the road, I maintain that the percentage of accidents is very small. This is not the first time that I have had to correct Mr. Barnes in his extravagant statements, and until he prepares his statistics more carefully it will not be the last.—Yours truly,

F. C. SHACKEL.

THE STORAGE OF PETROL.

SEVERAL correspondents having lately made inquiries re the storage of petrol, we give the following regulations of the Home Office:—

Where a storehouse forms part of, or is attached to, another building, and where the intervening floor or partition is of an unsubstantial or highly inflammable character, or has an opening therein, the whole of such building shall be deemed to be the storehouse, and no portion of such storehouse shall be used as a dwelling or as a place where persons assemble. A storehouse shall have a separate entrance from the open air distinct from that of any dwelling or building in which persons assemble.

The amount of petroleum spirit to be kept in any one storehouse, whether or not upon light locomotives, shall not exceed sixty gallons at any one time.

Where two or more storehouses are in the same occupation and are situated within 20 ft. of one another, they shall, for the purposes of these regulations, be deemed to be one and the same storehouse, and the maximum amount of petroleum spirit prescribed in the foregoing regulation shall be the maximum to be kept in all such storehouses taken together. Where two or more storehouses in the same occupation are distant more than 20 ft. from one another, the maximum amount shall apply to each storehouse.

Any person who keeps petroleum spirit in a storehouse which is situated within 20 ft. of any other building whether or not in his occupation, or of any timber stack or other inflammable goods not owned by him, shall give notice to the local authority under the Petroleum Acts for the district in which he is keeping such petroleum spirit, that he is so keeping petroleum spirit, and shall renew such notice in the month of January in each year during the continuance of such keeping, and shall permit any duly authorised officer of the local authority to inspect such petroleum spirit at any reasonable time. The regulation shall not apply to petroleum spirit kept in a tank forming part of a light locomotive.

TECHNICAL EDUCATION.

FROM the examiners' reports on the results of the examinations in connection with the City and Guilds of London Institutes, 1908, we take the following extracts relating to those in motor-car engineering:—

"The most common fault is neglect to confine the answer to the question asked. Indefinite statements such as:—'would cause inefficient running,' 'upsets the mixture'—are far too common. In spite of the general improvement the answers in steam were bad. The general low standard of actual knowledge in this branch is indicated by the fact that frequently the Albany type gear pump and even gravity systems were commonly used as means of boiler feeding. 12 per cent. of candidates used the low tension distributor or commutator for distributing the battery current to the four coils, and an incorrect order of firing was frequently given. In a question on locating faults, the answer should have described a ready method which could be used on the road without the use of special apparatus. The tests which are most easily applied should be made first, such as pulling the engine over to test compression and holding down trembler blades to determine which particular cylinder is missing fire. The fault should be located before any attempt to correct it is made. How often a motorist thoroughly upsets his ignition and carburation when the trouble is merely a broken valve cotter or cracked plug! Many answers, such as 'Examine the insulation of the high tension wires'—are crude and generally unpractical. A student should be able to locate the fault without seeing it, and say, for instance, that if the high tension wire to No. N cylinder has a poor spark at the cylinder and a good one at the coil then that high tension lead is faulty. With regard to the question on automatic carburettors, many students state that the automatic device is in order to maintain a constant vacuum on the jet; others attached great importance to the almost negligible effects of variations of atmospheric temperature, pressure, and humidity."

IN connection with the new engine the Daimler Company have adopted for their 1909 cars, and which has recently attracted so much attention, they inform us that, "Although it is manufactured under Letters Patent, and consequently, in common with all patented articles, carries no guarantee whatever as to its suitability for the purpose for which it is sold, we have no intention of evading responsibility on this purely legal ground. On the contrary, we guarantee in the fullest terms the 1909 type Daimler engine in respect of its principle of working, the material of which it is composed, and the workmanship employed in its construction. The only condition we make is that our responsibility is limited to doing the following things at one or other of our depots within a period of two years from the date of the sale of the engine:—(1) Thoroughly repairing any such engine which, after proper examination by us, is found not to be working satisfactorily. (2) Replacing any parts found to be defective in breach of our guarantee. (3) Replacing at a customer's option any such engine with one of our late mushroom valve type engines. We do not, of course, take responsibility for any contingent or resulting liability or loss arising through any defect, and our guarantee does not relate to defects caused by wear and tear, dirt, misuse, or neglect, but this proviso is of a character usual in the trade, and in our opinion does not detract from the real value of our guarantee."

CLUBS AND ASSOCIATIONS.

ROYAL.

THE present strength of the R.A.C. is as follows:—Members, 3,884; nineteen clubs directly associated, 4,362; thirty-six clubs associated through the Auto-Cycle Union, 2,565; individual associates, 814; total, 11,625.

On the recommendation of the Organising Committee it was resolved to send a communication to the committee of the Clubs stating that the General Committee was absolutely in accord with the decision the R.A.C. had recently come to respecting the question of joint affiliation.

On the report of the Organising Committee it was agreed that it would be a distinct advantage to arrange to hold an annual dinner for members of the associated clubs and all the motorists included in the scheme of association. Thursday, January 14th, was provisionally fixed as the date for the first dinner.

COMMISSION ON HORSE-POWER AND RATING FORMULÆ.—The first meeting of the Commission appointed to consider and report upon horse-power and rating formulæ took place on Wednesday (the 4th inst.) at the Institution of Mechanical Engineers. Mr. Berridge, M.P., presided, and the Commission consisted of members nominated by the Royal Automobile Club and by the Institution of Automobile Engineers. Mr. G. H. Baillie and Mr. Mervyn O'Gorman read papers entitled "Horse-Power Formulæ" and "The Various Uses of Rating" respectively. In the subsequent discussion speeches were delivered by Messrs. Legros, Russell Clarke, Rosenheim, Beaumont, jun., and Beavor. The discus-

August and September were actually booked for transport through the Touring Department of the R.A.C.

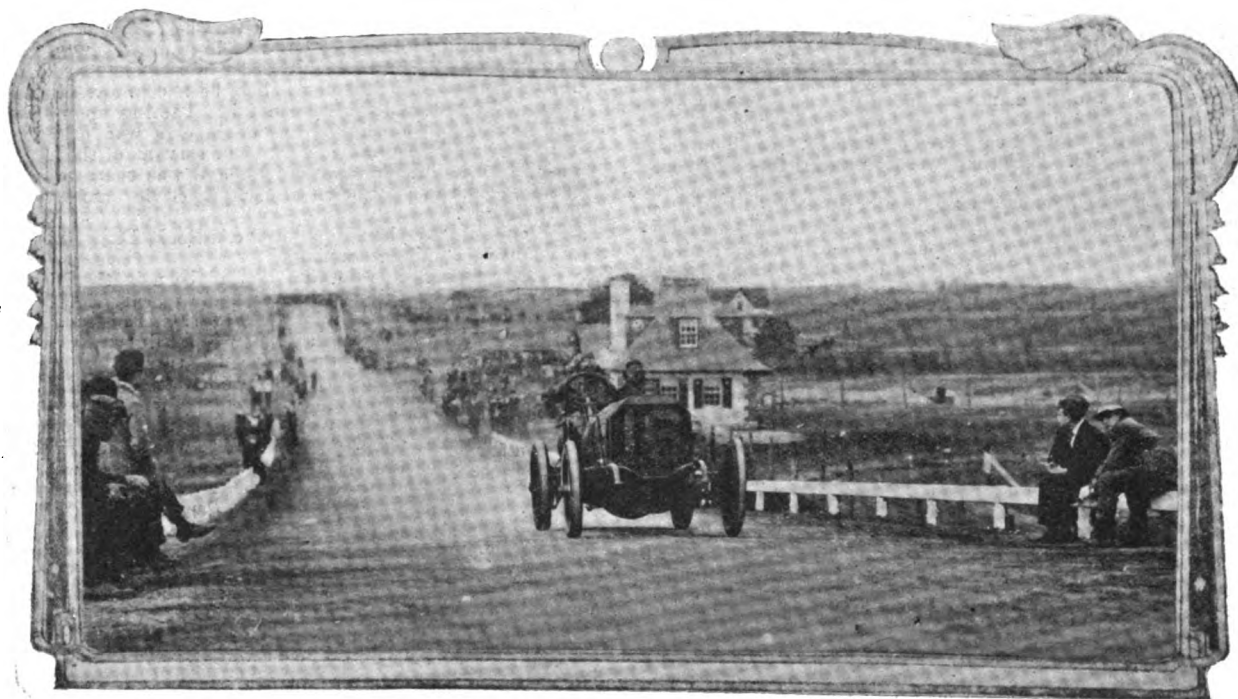
The Roads Improvement Association has received from the Royal A.C. a cheque for £75 as the club's contribution to the funds of the Association. Thanks have been conveyed to the Club for its support.

The New Forest A.C. and Hants M.U., which will in future be known as the Hampshire A.C., has become associated with the R.A.C. The Somerset A.C. has also signified similar adherence.

THE MOTOR UNION.

BEFORE next year's touring season the Union hopes to have appointed a recommended hotel and repairer in every centre likely to be visited by motorists. During October forty-seven hotels and thirty-eight repairers were given Motor Union appointments by the Touring Committee, bringing the aggregate number of both classes of appointment to 863.

At Oswestry last week Mr. M. Blewitt, of Birmingham, solicitor to the Motor Union, prosecuted a farmer for assaulting the wife of a member by striking her with a whip while she was sitting in a car. The Bench, after nearly an hour's consideration, announced that they were not unanimous, and that as there was a slight doubt the defendant would be given the benefit. This is the eighth prosecution for assaults on motorists undertaken by the Motor Union, and in seven cases it has been successful in securing convictions.



The Vanderbilt Cup Race.—Robertson on the winning Locomobile Car on a portion of the Motor Parkway.

sion was adjourned, the exact date of the next meeting being left to be fixed by the Royal A.C.

At the meeting of the committee of the Club on Wednesday, last week, Colonel H. C. Holden, R.A., F.R.S., on behalf of the club's delegates, reported the proceedings of the International Conference held on October 19th at Paris. The delegates of the Club were able to induce delegates of other clubs to fall into line in the matter of reducing the bore of the cylinders of cars taking part in international competitions during the year 1909, thus reducing the horse-power of competing cars. The Club hopes to still further reduce the horse-power at the conference next year.

It is satisfactory to find that the work of the Touring Department has been heavier for the time of the year than in any previous year. An agreement has been signed with the R.A.C. of Spain by which the R.A.C. will shortly be able to issue triptyques for Spain. Arrangements have been made through the Roumanian Consul-General by which triptyque Customs papers for the entry of cars into Roumania will be issued by the R.A.C. from January 1st, 1909. Steps are being taken to obtain triptyque Customs papers for Portugal. Arrangements have been made with the Pacific Steam Navigation Company for the appointment of a club representative in La Rochelle to assist members arriving in that port in connection with the various formalities. Similar arrangements will shortly be completed in connection with the Great Western Railway, for the appointment of an agent in Brest. A return has been obtained from His Majesty's Custom House according to which one-fourth of all cars taken over from England to France during June, July,

THE INCORPORATED INSTITUTION OF AUTOMOBILE ENGINEERS.

COVENTRY.

THE first meeting of the committee of the Coventry Branch of the Incorporated Institution of Automobile Engineers was held on Tuesday of last week, at Hertford Chambers, Coventry.

Mr. A. Craig, M.I.M.E., was elected chairman of the committee, and Mr. W. Morgan (Daimler, Ltd.) was elected honorary secretary. The other members of the committee present were:—Messrs. T. C. Pullinger (Humber, Ltd.), A. S. Hill (Coventry Chain Company), and J. S. Napier (Humber, Ltd.).

It was resolved to proceed forthwith with the formation of a graduates' branch in Coventry, and a general meeting of the pupils, apprentices and junior draughtsmen employed in the motor industry in the district will be held in the beginning of December.

BIRMINGHAM.

THE first meeting of the committee of the Birmingham Branch of the Incorporated Institution of Automobile Engineers was held on Tuesday, last week, at the Grand Hotel, Birmingham. Mr. Max. R. Lawrence (Wolseley Tool and Motor Company, Ltd.) was elected chairman of the committee, and Mr. B. J. A. Shaw (Sunbeam Motor Company) was elected honorary secretary. The other members of the committee present were Messrs. A. A. Remington (Wolseley Tool and Motor Company, Ltd.), and E. E. Baguley (B.S.A.). It was resolved to

proceed forthwith with the formation of a graduates' branch in Birmingham.

BRITISH MOTOR-BOAT.

SEVERAL members of the club have already made definite arrangements as regards their boats for the 1909 season. One member has purchased "Mercedes IV.," one of the fastest craft of four seasons ago. In 1904 she was regarded as the most advanced type of racing craft, her most notable success being the winning of the famous Cross Channel race. Her new owner will fit her with an engine of a make not yet decided, of moderate power, but sufficient to give her a speed of about twenty knots.

MANX.

THE garage of the Manx A.C., which has proved of great convenience to the members of that organisation, is composed of three separate stalls of wood and galvanised iron. The ground around has been rented by the club and is useful to members in connection with the washing of cars. It will also be utilised for more stalls should the development of motoring in the island demand such accommodation.

No attendant is kept, but each member of the club has a key and can have the use of the garage whenever required. When in the town of Douglas on business, motorists find it a great convenience, as some of the livery stable people do not care to take in motor-cars, and, even when they do, the results are not always satisfactory.

THE CYCLE AND MOTOR TRADES BENEVOLENT FUND.

AT the November monthly meeting of the Executive Committee Mr. E. M. Mayes was in the chair, and the hon. treasurer reported a balance of £1,058 18s. 3d. in the bank. Thirty subscribers, fourteen members, one governor, two life members, and three life governors were elected.

Ten applications for assistance were considered. In five cases pecuniary grants were made. The others were referred to the Emergency Committee for inquiry and action.

Mr. A. J. Wilson, the hon. secretary, would be glad to hear from any reader of the *M.C.J.* who may have influence in obtaining employment for a member whose health will be impaired by continued residence in London, and who has been recommended to the climate of the Canary Islands.

A suggestion that the Fund should have a table devoted to it in a corner of Olympia was not approved. At the Stanley Show the office of the Fund will be in the same position as last year, No. 153 in the Arcade entrance.

The reports that have been published of the recent banquet appear to have aroused very widespread interest, and opened the eyes of a great many people in the motor trade to the importance and value of the Fund.

AEROPLANE.

A MEETING of persons interested in the science of aviation was held at Claridge's Hotel on the 6th inst. to consider the desirability of forming an Aeroplane Club for Great Britain. Lieutenant-Colonel Mark Mayhew, who presided, remarked that so far not very much had been done in this country to advance the science of what, for lack of a better word, he described as aeroplaning, whereas in foreign countries, notably in France, great strides have been made, especially during the past six months. By getting together all the available stock of knowledge a club composed of people with means and time at their disposal could do a great deal for this new science. He therefore proposed that measures should be taken by those present to form a club devoted to the development of aerial navigation by machines heavier than air exclusively.

In the course of the discussion which followed objection was taken to the term "aerial navigation," and preference was expressed for "aerial flight." The prophecy was also ventured that in the future dirigible balloons rather than aeroplanes will be used for purposes of freight, but it was generally agreed that the balloon principle is being gradually but surely deposed by machines of the heavier-than-air type. In support of this contention it was mentioned that there is now a firm in Paris which guarantees to deliver within three months aeroplanes with a certified 10 kilometre flight.

It was decided that the newly-formed society shall be called "The Aeroplane Club," of which Captain Windham, the acting hon. secretary, announced that the Jam of Nawanager, Prince Borghese, Prince Serge, and Prince George Bolotoff, the Earl of Plymouth, Admiral Sir William Kennedy, Major-General Sir Alfred Turner, Colonel Tempier, Lieutenant-Colonel F. Ponsonby, Sir Joseph Dimsdale, Sir Claude de Creepigny, Sir Charles Wittewronge, Sir Horace Marshall, Mr. Percy Thornton, M.P., and M. Delagrangé have signified their willingness to act as vice-presidents. In nine weeks there has been obtained a membership of 720, of whom 300 have agreed to become district hon. secretaries, while no less than sixty have inventions relating to heavier-than-air machines.

THE Polack Tyre Company, Ltd., will shortly establish a factory in England for the manufacture of the Polack solid tyre.

MOTOR SCOUTS AND THE POLICE.

AN important case affecting the employment of "scouts" to warn motorists on the highway was heard before the Kingston County Bench on the 6th inst., when Sydney Sweeney, in the employment of the Automobile Association, was summoned under the Prevention of Crimes Act, 1885, for obstructing the police in the execution of their duty whilst engaged in timing motor-cars on the Portsmouth road at Thames Ditton on October 5th.

Mr. Muskett prosecuted on behalf of the Commissioner of Metropolitan Police, and Mr. Marshall Hall, K.C., with whom was Mr. Rowland Harker, appeared to defend.

Mr. Muskett, in stating the case, said P.C.'s Beck, Davis and Smith were proceeding to a motor trap or control on the Portsmouth road at Thames Ditton on October 5th when they saw the defendant, wearing the yellow armband of the A.A., standing at the side of the road. The defendant followed them, and when they reached the trap he took up a position about thirty yards away from the officer who was stationed at the beginning of it, and as motor-cars approached and the officers made preparations to time them, the defendant gave a signal to the drivers of the cars, with the result that they slackened speed and passed through the trap at a slower rate. Finding their efforts frustrated, the officers changed the position of the trap so as to time the cars going in the opposite direction, whereupon the defendant followed the officer who gave the signal, and stationing himself about the same distance from him outside the trap, warned approaching cars in the same way. This shifting about went on for some time, the direction of the trap being changed five or six times and the defendant shifting his position to the warning point on each occasion.

The case, added Mr. Muskett, was different from "*Bastable v. Little*," heard at the Croydon Bench in March, 1906, under the same section of the Act, in which the case was taken to the High Court, and it was declared that no offence had been committed. In that case the person charged was a private individual acting upon his own initiative, and it was not shown that any of the cars was breaking the law. In this case the defendant was the paid servant of the Automobile Association, acting under their orders, and was there to give warning to members of the association who displayed the association's sign in front of their cars.

Evidence was then given by P.C.'s Beck, Davis and Smith in support of counsel's opening statement.

The defendant, who said he had been in the Metropolitan Police for twenty-five years, was then called, and said the rules supplied to all scouts stated that they were to show their badge to all cars that were going at an excessive speed. This was his duty, and it was all he did. He did not know that there were police traps at these places, and he did not see any of the officers give signals to time cars. The two officers, Beck and Davis, were never a furlong apart. He never did anything to warn motorists that there was a trap in the neighbourhood.

Several roadmen were also called, who said the officers seemed to be close together and running up and down the road on their bicycles.

Mr. Marshall Hall said the police were no doubt annoyed by the action of motor scouts, whose duty was to warn all motorists against travelling at an excessive speed. Every citizen, he held, had a right, as the defendant had, to warn motorists who, he thought, were going too fast.

The magistrates having retired, the chairman said they were unanimous in convicting, and the defendant would have to pay a fine of £5, with £5 4s. costs.

Notice of appeal was given.

GENEROUS ACTION BY A MOTOR COMPANY.

RECENTLY an abortive action was brought against the Daimler Motor Car Company by Albert Gebbels, a Customs House officer, who was knocked down and injured by one of the Daimler Motor Company's cars, but in the action it was proved to the satisfaction of Judge Willis that the car was not being used by defendant's employees at the time in the course of their employment. Judgment was given for the company, with costs. Mrs. Gebbels subsequently went to the Daimler Company's premises and broke some very valuable plate glass windows, and the husband has since been found wandering about and had been an inmate of an observation ward. On the 5th inst. his Honour was informed that the Daimler Company had agreed to forego their costs, and had paid £47 for the benefit of this man and his family. Judge Willis highly commended the kind action of the motor-car company. Gebbels deserved much sympathy. The case showed that the very highest principles had actuated those who had control of the Daimler Motor Car Company.

MR. J. A. RYLEY, of 234, Martineau Street, Birmingham, will not be exhibiting at the Motor Show this year, but will be pleased to make appointments with his customers in London or Paris.

In connection with their exhibit at Olympia, Messrs. Humber, Ltd., have issued a little card giving a number of useful notes for visitors. In addition to showing the position of the Humber stand and briefly describing their exhibits, some handy particulars as to the best way to get to Olympia are included. A copy of the card will be sent free to anyone applying to Messrs. Humber, Ltd., Holborn Circus, E.C., or 60-64, Brompton Road, S.W.

CASES AGAINST MOTORISTS.

THE USE OF IDENTIFICATION PLATES.

Mr. George Cotterell, of Hungerford, was summoned before the Wokingham County bench for alleged fraudulently lending a motor-car identification plate to Mr. Gooch on October 6th. Police evidence was given to the effect that a car, presumably on a trial run, passed through Maidenhead and Wargrave on the day named with the number BL801 painted on a piece of cardboard attached to it. Enquiry revealed the fact that this was registered in the name of Mr. George Cotterell. On the same day he had sold a car to Mr. Gooch and used his own number to convey the chassis to Hungerford to have a new body built on it. The solicitor on his behalf admitted that a technical offence had been committed, but the magistrates, recognising the explanation, dismissed the case on payment of costs.

DISMISSALS.

James Boots, of Muswell Road, Fulham, was summoned, at Kingston, for driving a motor-car in Mark Lane, Kingston, which was prohibited to motor-car traffic on account of its narrowness. Defendant, who was driving a motor-van, said he saw the warning sign at the end of the road, but mistook it for a danger sign. The Bench dismissed the summons on payment of costs.

At Camborne, Richard Frank Davis, of Plymouth, was summoned for driving a motor-car to the danger of the public at Gwithian, and pleaded not guilty. After hearing evidence the magistrates dismissed the case.

SPEED IN THE PARKS.

At Bow Street Police Court, before Mr. Marshall-Hall, K.C., has been summoned for driving a motor-car in the Green Park at a greater speed than ten miles an hour—to wit, 18 miles an hour. Park-keeper Ford, who stopped the car, said that Mr. Marshall-Hall, who was sitting inside, stood up and shook his fist at him. Mr. Marshall-Hall, giving evidence for the defence, said that his car had followed behind a horse and trap from Hyde Park to the place where they were stopped, and they had not once overtaken it. It was not going so fast as eighteen miles an hour. In reply to the magistrate, he said he thought that his car did not exceed ten miles an hour; he should say that as near as possible they were travelling at ten or twelve miles an hour. He denied that he shook his fist at the park-keeper, but he thought he did use an epithet when the keeper told him that he was overtaking the trap he had been following. The magistrate remarked that Mr. Marshall-Hall had himself admitted that his car was exceeding the legal limit. He fined the defendant 40s. and 2s. costs.

SUMMONS AND CROSS-SUMMONS.

At Aldershot, on the 6th, Mr. J. D. Sturrock, of Kensington, was summoned by Colonel Willoughby Verner on charges of having driven a motor-car to the danger of the public, refusing to stop when requested, obstructing the free passage of the highway, and common assault. There was a cross-summons against Colonel Verner of assault taken out by Mr. Sturrock. Colonel Verner was driving in a dog-cart. He said his horse was restive, and that he put his whip up to cause the motorist to reduce his pace, which was forty miles an hour. Mr. Sturrock gave evidence that he was travelling at less than twenty miles an hour, and that he slowed down. Colonel Verner struck him with the whip as he passed. He followed the dog-cart and demanded the Colonel's name, the Colonel again slashing him with the whip. Colonel Verner told the Court that it was not true that he struck Mr. Sturrock as the car passed; but he did slash him with the whip when he seized the horse's head and made it rear, and when he assumed a threatening attitude. The magistrates fined Mr. Sturrock £2 10s. for failing to stop when called upon, and Colonel Verner £5 for assault. The charge of assault against Mr. Sturrock was dismissed.

COMPANY NEWS.

In the case of New Companies the file number is given at the end of the particulars.

The new companies recently registered include Messrs. Wayman and Matthews, Ltd., of 1, Albemarle Street, W., with a capital of £5,500; the Imperial Brake Block Company (of Great Britain and Ireland), Ltd., with a capital of £20,000, and offices at 15, Cross Street, Manchester; the Motor Barge Syndicate, Ltd., and the Jones Motor and Cycle Company, Ltd., of Mold, these latter two with registered capitals of £25,000 and £2,000 respectively. Bennier's Motor Garage, Ltd., and the Bryanston Garage, Ltd., 15, John Street, Edgware Road, London, W., has been registered, with a capital, in each case, of £2,000.

At the annual general meeting of the Standard Motor Company, held on Tuesday, a dividend of 20 per cent. was declared and paid.

An application in the Chancery Division of the High Court of Justice on Tuesday for the appointment of a new liquidator in connection with the winding up of Argylls London, Ltd., was dismissed with costs by Mr. Justice Neville.

MESSRS. JOSEPH KAYE AND SONS, LTD., of Leeds, and 93, High Holborn, London, who have already supplied over 25,000 of their patent Seamless Serrated oil cans to H.M. Navy, have again secured the contract from the Admiralty for the whole of the future supplies for the ensuing three years.

ROAD REPORTS.

MIDLANDS.—A conference of Midland town councils at Birmingham has decided to take preliminary steps towards carrying out a road-making scheme between Birmingham and Wolverhampton, to cost from £50,000 to £150,000.

FARNBOROUGH.—The Farnborough Parish Council have complained to the Bromley Rural District Council of the excessive speed at which motor-cars pass through Farnborough, which is on the main road from London to Hastings. Furious pace, they alleged, was on the increase, and they recommended that application be made for a speed limit of ten miles an hour through Farnborough and Green Street Green.

EAST SUSSEX.—The Roads and Bridges Committee of East Sussex County Council recommend that application be made to the Local Government Board to impose a motor speed limit of ten miles an hour on the main roads in the village of Hartfield, on the London to Lewes main road, in the East Grinstead urban district, on the road in the parish of Worth leading from Crawley, and on the main road in the parish of Salehurst.

KINGSTON.—A correspondent suggests that something might be done by the authorities to lessen the danger to traffic at the bend of the road at the corner of Surbiton Park Terrace and Surbiton Road.

BRISTOL.—At Monday's meeting of the City Council at Bristol, the Watch Committee recommended that an application be made to the L.G.B. for an order limiting the speed of motor vehicles in Bristol to ten miles per hour. Eventually it was decided to request the Watch Committee to report again.

EAST SUSSEX.—Among the roads in East Sussex under repair are those between Muddles Wood and Sayers Common, Crawley and Handcross, The Dicker and East Hoathly, Cooksbridge and Chailley, Brighton and Falmer, Brighton and Rottingdean, Sedlescombe and Clipp's Corner, and that between Peasmarsh and Rye.



Even in the Hawaiian Islands motoring has now become very popular. Our illustration depicts a number of natives enjoying a trip near Honolulu.

New York Motor World.

SCOTLAND.—Road repairing is actively proceeding in the Dundee, Arbroath and Cupar districts, the surveyors making known through the press the particular stretches that are being dealt with each week.

SURREY.—At a meeting of the Surrey County Council, held at Kingston, it was decided to apply to the Local Government Board asking them to issue regulations prohibiting the driving of motor-cars at a speed exceeding ten miles an hour at the following places:—Station Road to Weybridge Bridge, Weybridge; from Bridge Road to Church Road, Weybridge; through the village of Shere to the railway arch at Gomshall Station; from Boxhill Station to the Drill Hall, Dorking; and from West Street to the Workhouse, Dorking.

AUTOMOBILE INSTRUCTION IN SCOTLAND.

Two important courses of lectures have been announced. In the Heriot-Watt College, Edinburgh, Professor Stanfield, M.I.C.E., M.I.E.E., will deliver a course on motor-car engineering intended especially for owners, users, and drivers of motor-cars, with laboratory demonstrations, commencing on Wednesday, November 11th, and in the Glasgow and West of Scotland Technical College, Glasgow, Mr. James Gunn is delivering the first series of a course of lectures on the same subject. The Scottish Automobile Club silver medal is to be awarded for the best examination results in both of these classes.

ALTHOUGH the business of Weigel Motors, 1907, Ltd., has lately passed through certain vicissitudes, we learn that manufacturing operations are being carried on at the works at Olaf Street, Latimer Road, Notting Hill, W. The 1909 models of the Weigel cars which are now on view at Olympia will be found to comprise various detail improvements.

FORTHCOMING EVENTS.

NOVEMBER.

- 13th (F.).—Inquiry into the application of the Surrey C.C. for ten mile an hour speed limits at Walton-on-Thames, and in certain thoroughfares in Woking.
- 13th-21st.—Olympia Motor Show, London.
- 14th (Sat.).—Thirty-third Annual Dinner of the Stanley Cycling Club, Hotel Metropole, London, S.W.
- 17th (Tu.).—Agents' Dinner in connection with the S.M.M.T.
- 18th (W.).—Annual Dinner of the Motor Union.
- 20th-28th.—Stanley Show at the Royal Agricultural Hall, London, N.
- 25th (W.).—Annual Dinner of the Founder Members of the Royal A.C.
- 26th (Th.).—400-mile International Grand Prize Race of the Automobile Club of America.
- 28th (Sat.).—Opening of the Paris Motor Car Exhibition.

DECEMBER.

- 3rd (Th.).—R.A.C. Lecture by Mr. H. M. Wyatt on Magnetos.
- 13th (Sun.).—Closing day of the Paris Salon.
- 23rd (W.).—Speed and reliability trials at Nagpur, Central Provinces.

JANUARY, 1909.

- 14th (Th.) (provisional).—Annual Dinner of clubs associated with the R.A.C.
- 22nd-30th.—Scottish Motor Exhibition at the Waverley Market, Edinburgh.
- 26th.—Scottish Motor Trade Association Dinner at Edinburgh.

FEBRUARY.

War Office Fourteen-days' Trial for Light Tractors.

LIGHTING-UP TIMES—LONDON.

| | | | | | | |
|----------------|-----|----------|-----|----------|-----|-----------|
| Nov. 14th—5.10 | ... | 16th—5.6 | ... | 18th—5.2 | ... | 20th—4.59 |
| " 15th—5.8 | ... | 17th—5.4 | ... | 19th—5.0 | ... | 21st—4.59 |

To find the approximate lighting-up time in November for Birmingham 5 minutes should be added to the above times, 5 for Manchester, and 8 for Glasgow.

AUTOMOBILE ACCIDENTS.

A VERDICT of "Accidental death" was recorded after an enquiry at Hammermith with reference to the death of John Jones, aged sixty-four years, who was knocked down by a motor-car while crossing Walham Green Broadway. One witness deposed that the car swerved in order to avoid the deceased, who, according to an observer, if he had had the presence of mind to stand still, would not have been hurt.

A TERRIBLE collision between a railway train and a motor-car occurred at Northwich on the 5th inst., causing the death of Mrs. Le Neve Foster, of Bollindene, Wilmslow, and injuries to Mr. F. W. Pennyfather, Colbinston, co. Wicklow, and Frederick Talbot, chauffeur, Wilmslow. The party had come from Manchester, and at a point near Northwich Station, where the road is intersected by a level crossing, the car was overtaken by a goods train of nineteen wagons and engine. The chauffeur had pulled up the vehicle almost to a standstill, but the guard's van of the train, which was being backed, caught it and pushed it on to the line, pinning it against a heavy wooden fence. The wooden structure gave way, and the car was flung down the line, the occupants being pitched out. The car was smashed, and Mrs. Foster was killed instantaneously. Mr. Pennyfather sustained cuts on the head and bruises, and the chauffeur a scalp wound.

THE coroner's inquiry into the circumstances attending the death of Mrs. Le Neve Foster, who met her death in the collision between her motor-car and a goods train at a level crossing near Northwich, as related above, was opened at Northwich on Saturday, and adjourned *sine die* after formal evidence had been given.

PUBLIC SERVICES.

ALTHOUGH the first case heard at Brighton against the driver of a motor-cab for leaving his vehicle unattended has been dismissed, the Mayor has warned drivers that such a result will not follow future prosecutions.

THE general manager of the Royal Express Motor Company, of Chiswick, is Mr. Johnston Montgomery, with Mr. H. Grigg as works manager. The garage and repair shop is open night and day.

THE ease with which the little O.T.A.V. voiturette can be handled is illustrated by the recent experience of Mr. E. Thompson Willows. Having only taken delivery of his car a few hours previously, Mr. Willows started to drive the vehicle on the morning of the 1st inst. from Watford to Cardiff, leaving the first named place at 8.30 a.m., and arriving at the latter at 8 o'clock the same day. Mr. Willows had never before driven an O.T.A.V., but he got through the journey in remarkably good time. The manner in which this voiturette is being inquired for in distant parts of the world is best explained by the fact that during the last few days the Junior and O.T.A.V. Cars Company, Ltd., have received enquiries from South Africa, New Zealand, Singapore and other places.

MOTOR REPAIRING PLANT FOR INDIA.

OFTEN have we referred to the development of automobilism in India, where the improvement in the national highways is apparently keeping pace with the popularity of the motor-car. Many of the native princes have thoroughly equipped garages with workshops and all conveniences for keeping large studs of cars in running order, and now we learn that the authorities of the Morvi State, in the great Dependency, have erected an extensive motor repairing depot which will deal with the fifty to sixty motor-cars and lorries owned by the State.

This is being fitted up by Messrs. Drummond Bros., Ltd., of Ryde's Hill, near Guildford, and amongst the series of special tools, milling machines, &c., are included two of the firm's special motor repairing lathes, one of the medium light type 5 in. self-acting, sliding, boring, surfacing and screw cutting lathes, and one of their new heavy high speed all geared head, self-acting, sliding, boring, surfacing and screw cutting lathes. This latter tool is being fitted with quite a novel form of turret, which, when affixed to the saddle, converts the lathe into a full self-acting hexagon turret lathe, capable of rapidly producing any work required in quantities, such as standard bolts, studs, pins, &c., which cannot be procured up country in India. The establishment of such a works is a notable proof of progress, and Messrs. Drummond, Ltd., are well able to supply a plant that will enable the innovation to prove a success.

POLICE "CONTROLS."

THE Moortown trap on the Harrogate road is in active operation. MOTOR traps are being laid at Harraby, a village on the main road south from Carlisle.

POLICE-TRAPS are often in operation at Windlesham, near Chertsey. THERE are three and four mile traps on the Great North Road in the vicinity of Grantham.

THE police at Crawley are timing motorists in the 10 m.p.h. limit.

BUSINESS NEWS.

MESSRS. J. KEELE, LTD., of 72, New Bond Street, W., inform us that they have been appointed authorised agents for Renault cars, and that they have one of the new 50-60-h.p. six-cylinder Renault chassis on their stand in the Annexe at Olympia.

WE learn from Messrs. W. and G. Du Cros, Ltd., that all the cars exhibited on their stand (No. 36) at Olympia are fitted with coachwork designed, built, painted, upholstered and trimmed at the Panhard-Levassor Works, Acton Vale, W. Further than this, the stand itself and the company's accessories stand in the gallery were both designed and constructed entirely at their works.

THE Reo Motor Company are not showing at Olympia, but are holding during the coming week a special display at their showrooms, Broad Sanctuary, Westminster, where Mr. J. Lambie will be pleased to explain the features of the 1909 Reo models.

THE petrol used by Mr. J. H. Paterson, of the Caledonian Motor Company, Ltd., on the occasion of his run from Aberdeen to London last week, was the "Shell Spirit," "Vacuum" lubricating oils being also used.

THE litigation between the Argylls Motors, Ltd., and its liquidators and the Society of Motor Manufacturers and Traders, Ltd., with regard to the allotment of space at Olympia has been heard by Mr. Justice Neville, who dismissed the motion with costs, nothing having "happened to prevent the management committee from acting in the way they had done on the discretion which the rule (No. 1) gives them."

MR. T. UNDERWOOD, who has held a responsible position on the selling side in connection with the Wolseley Company for several years past, has resigned his appointment to take up a similar one with Clement-Talbot, Ltd. On leaving the Wolseley Company his old colleagues entertained Mr. Underwood to dinner at the Waldorf Hotel on Saturday last, and presented him with a handsome silver cigarette case as a token of their esteem.

TO CORRESPONDENTS.

All communications intended for insertion in this Journal or relating to Editorial matters should be addressed to THE EDITORIAL DEPARTMENT, MOTOR-CAR JOURNAL, 27-33, Charing Cross Road, London, W.C., and must be written on one side of the paper only. Letters must in all cases be accompanied by the name and address of the writer, as no notice will be taken of anonymous communications.

To insure insertion communications and contributions must be in the Editor's hands by Tuesday forenoon of the week in which the same are intended to appear. Disappointment may be caused by non-compliance with this rule, and to avoid this earlier receipt, if possible, is necessary.

THE Motor-Car Journal.

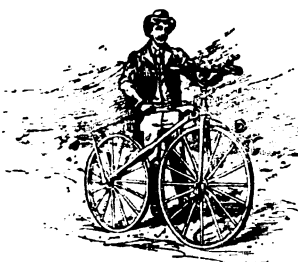
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COMMENTS.



ERE the Motor Show at Olympia has run its course the Stanley Cycling Club's annual exhibition at the Agricultural Hall, London, will open its doors to the public. This will be in progress till the 28th inst., and was preceded by the annual dinner of the Stanley Club on Saturday last, under the chairmanship of Mr. Robert Todd, the speakers including Alderman C. S. Elliott, J.P., Mayor of Islington, Mr. G. H. Radford, M.P., Mr. E. A. Lamb, Mr. M. Wyatt, Mr. E. P. Hewkin, and Mr. C. Sangster. In proposing the toast "The Stanley Show" the latter, referring to the exhibition question, said that from his knowledge of the inner working of the present Motor Exhibition he believed there was much to be said in favour of shows being run on independent lines.

The Motor Trade.

THERE were nearly 300 members and guests of the Society of Motor Manufacturers and Traders, Limited, present at the dinner held last week at the Hotel Metropole, London. The loyal toasts having been honoured, Sir Marcus Samuel, Bart., proposed that of "The Motor Industry" and gave a reassurance as to the supply of petrol being sufficient for the demands of any expansion that the industry may anticipate. Mr. E. Manville, the president of the Society, responded to the toast and referred to the advance which had been made in many directions during the year. Particularly was this seen in connection with the design and construction of vehicles. He appealed to motorists generally to second the efforts of those organisations which are endeavouring to suppress the small minority of people who are disinclined to consider others upon the road. The attendance of Prince Pierre d'Arenberg, who is the president of the Federation of the Automobile Clubs of France, gave Mr. Manville an opportunity of congratulating France upon the success of the recent International Road Conference, while the presence of Herr Gustav Vischer, president of the German Motor Trade Association, suggested to the speaker an equally complimentary reference to the motor enterprise of that country. Other speakers included Lord Ribblesdale, Sir West Ridgeway, G.C.B., and Col. H. C. L. Holden. An excellent musical programme followed, for which Mr. Frederic Coleman was responsible, his efforts to further the harmony of the evening being warmly appreciated.

An M.P.'s Reason.

SEVERAL meetings have lately been held in the House of Commons committee rooms with regard to motoring matters, and much discussion has arisen in consequence. In our correspondence pages Mr. W. E. B. Priestley, M.P. for East Bradford, explains the reason that led them to the resolution which has been finally adopted to the effect that the President of the Local Government Board and the Secretary for Scotland be urgently requested to issue a general notice that

when a local authority makes application for the fixing of a speed limit not exceeding ten miles per hour in any town or village under Clause 9 of the Act of 1903, the application will be granted provisionally until good reason is shown to the contrary. Mr. Priestley is not an anti-motorist in the sense that many of his fellow legislators are, and we agree with him as to the superiority of "just administration" over "repressive legislation." But we do not enjoy "just" administration under the present Motor Car Act.

A Police Omission.

IN a London police court the other day occurred one of those little incidents which bring the law into disrespect among motorists. Mr. W. Mosenthal was summoned for exceeding the legal limit and fined 40s. Then appeared a police-constable with the certificate of a previous conviction, and the following dialogue took place:—

Defendant (intervening): And it cost me £200 in law expenses to have the conviction reversed.

Mr. Staples Firth (who was present in court engaged in another case): Yes; I appeared for him. It was proved that deliberate lies were told.

The Magistrate: How is it the police produced in evidence the certificate of a conviction that had been quashed on appeal?

Inspector Belderson: It has been supplied by Scotland Yard.

The Magistrate: But surely they have information of a quashed conviction?

Inspector Belderson: Yes; I cannot account for it.

The Magistrate: They should be informed of the circumstances.

Really the police are so sternly exacting whenever a motorist is in the wrong that such omissions should not be tolerated; but for the fortunate corroboration of the solicitor who happened, by a providential accident, to be in court the defendant might have been put to considerable inconvenience.

Dazzling Headlights.

IN view of the early time which is now necessary for lighting up, motorists will do well to give heed to their lamps, an observation that is emphasized by the care with which the police are stopping cars whose rear lights are out of order. In the House of Commons, too, attention has been drawn by Captain Murray to the subject of the dazzling headlights employed on motor-cars, and asking that motorists should be compelled to use appliances designed to reduce to a minimum the excessive glare. Mr. Burns, in reply, said that if the matter could be dealt with by Local Government Board regulation he would see whether early opportunity could be found to deal with the matter. Such an utterance will give a new interest to some of the exhibits now on view in the Gallery at Olympia. The R.A.C., too, has resolved to endeavour to abate the nuisance. At the meeting of the Committee of the Club last week there was a discussion on the subject, the outcome of which was the passing of a resolution expressing the opinion that the use of any dazzling lights on motor-cars and motor-cycles was unnecessary and objectionable within the London County Council area, and that they should be prohibited. To bring the matter to a practical issue the Club proposes to hold a Headlights Trial in January or February, with the object of promoting the use of headlights that are efficient, but not dazzling.

Motor-car Imports and Exports.

A VERY marked decline took place during October last in the importation of foreign-built motor-cars and parts into this country. Of complete cars 222 were imported during the month, of the value of £73,548. The number of chassis imported was 249, valued at £79,912, while parts were responsible for £110,074, giving a combined total for October of only £263,534, as against £349,672 in the corresponding month of last year. The gross imports of cars (3,522 in number), chassis (2,795), and parts during the first ten months of the current year amounted, however, to only £3,619,688, as contrasted with £3,960,498 in the corresponding period a year ago. Turning now to the section relating to the exports of British automobile productions, these again show a slight decrease—from, in the aggregate, £156,416 in October, 1907, to £143,589 last month. Altogether 290 complete cars (£105,815) and 13 chassis (£5,580) were despatched from this country during October, as well as parts to the extent of £32,194. The gross shipments during the ten months ending with October are returned at only £1,027,557, which contrasts with £1,092,170 in the similar period of last year.



A Churchyard as a Motor Garage.

During the course of the recent Vanderbilt Cup Race, so great was the number of cars that lined the course that even the churchyard of the church at Woodbury was brought into requisition. The sexton, it is stated, has thereby added not an inconsiderable amount to the church funds.

Level Crossings.

THE danger of level crossings on roadways has been again emphasised by a fatal accident, and motorists would hope that steps will be taken to minimise the possibility of danger where they cannot be wholly dispensed with. With regard to the crossing where the recent accident took place a local correspondent writes:—"The road from Knutsford narrows considerably just before Northwich is reached, so that there is only just enough room for two vehicles to pass. It is at about the middle of this narrow stretch that the railway, a single line, crosses the road. To anyone approaching the town from Knutsford there is, apart from the flagman standing at the crossing, no means of telling that any crossing exists there or of seeing any train that may be about to cross the road in either direction, for all view of the line is cut off—on the left by high black boards that flank the road, on the right by houses and other buildings. The crossing has white gates. They do not, however, open across the road, but in the other direction. A motorist who was not well acquainted with the neighbourhood would, therefore, on driving towards the crossing in the direction of Northwich, see before him nothing to suggest the presence of a railway line except a man with a flag, and, as these are commonly used for other purposes on main roads, he might be very likely

not to catch the warning's true significance for a few moments."

London Traffic.

THE report of the London Traffic Branch of the Board of Trade, which has just been issued, has some facts of interest to motorists. It is computed that the total average number of journeys taken last year by people in the Metropolitan area was 300; doubtless increased by the substitution of motor for horsed traction. In 1906 there was a net decrease of 840 horse-drawn licensed vehicles, and in 1907 a net decrease of 1,582 as compared with the previous years; while in mechanically propelled vehicles (licensed) the increases were 891 and 1,421 respectively. The substitution of motor for horsed omnibuses has been marked. In 1905, 3,484 of the latter were licensed as against 241 of the former; in 1907, the numbers were 2,557 as against 1,205. In 1907, 297 motor-omnibuses presented for licence were rejected, a very high standard being insisted on by the special committee of three persons (not attached to the public carriage department) appointed by the Commissioner to advise him in this matter. And in 8,508 instances motor-omnibuses were, under the strict supervision and inspection which prevails, reported to be "unfit" after licensing, and were the subject of a notice "not to use till fit." Many of the vehicles were thus reported several times.

Technical Instruction.

FROM the City and Guilds of London Institute we have received an advance copy of the report of the work of the Department for the last session. We notice that gratifying progress has been made with regard to the classes in motor-car engineering in association with the Department of Technology. Not only was there an increase in the number of classes and students, but the examiner noticed an improvement in the quality of the papers submitted by the 158 candidates in the examination. The passes numbered 100 from the thirty centres which were represented. Although the improvement has been most marked, it is still evident that many who present themselves for examination have not a sufficient knowledge of general engineering or of the ordinary methods of machine drawing and sketching. A suggestion is made that local manufacturers could render useful service to the cause of technical instruction if they gave the worn and broken parts of fittings which have been spoiled during the manufacture, and other articles which they have dismantled and for which they have no use, to the teaching institutions that are now handicapped by the want of an adequate selection of car parts. Last week we made reference to facilities for automobile instruction in Scotland.

Dealing with Offenders.

AT the last meeting of the Automobile Association the important and significant step was taken of calling for the resignation of certain members of the Association, it being alleged that they had been guilty of driving in a way that was not regarded as seemly. This action should have a very salutary effect, for it places on record the fact that the automobile organisations have no sympathy with those who take great risks and incur danger to others. It has often been said that the adoption of resolutions against inconsiderate driving has been useful as a deterrent. We do not agree wholly with such a view, but we welcome the "expulsion policy" of the A.A. as testimony to the reality of the desire to establish a real regulation of motoring traffic on the road by the associations connected with the automobile movement.

So far as we can learn the agitation against motoring has not led to any undue prejudice in the Bristol district, nor has it interfered with the sale of vehicles.

A LADY MOTORIST'S VIEW OF THE OLYMPIA SHOW.



The Past.

ONCE again the glitter of brass and electric lights greets one's eyes at Olympia, and, to those endeavouring to put their impressions on paper, the same bewilderment at having to find the best out of such a plenitude of good. However, I was looking for novelties, so naturally my first endeavour was to get a glimpse of the new engine, but, instead of fighting a way through the crowd round the Daimler's exhibit, I went to the Minerva stand, and from thence to the Luca-Daimlers, where sectional 38 and 22-h.p. Knight engines can be seen more peacefully than at the Coventry makers. It is quiet in running, and the control is all that should make it desirable to drive; but, owing to our want of much real knowledge of its inward parts, it is, at present, more suitable for lady motorists who keep a good chauffeur. In this category might also be placed two other makes, which from their great originality of design forced themselves upon my notice: one, the Valveless, has been much improved since last year, when it was shown for the first time. It is very economical in petrol, and extraordinarily so in oil, owing to the patent lubrication system. The shape of the engine, which is now placed under the bonnet, allows of the body being brought well forward, thus giving plenty of room inside, as demonstrated by the limousine exhibited. The second unique design that struck me as specially interesting was the 28-h.p. "Dolphin" manufactured by the Two-Stroke Engine Company. It would take too long to describe the technical details, which are worthy of a special article; suffice it to say that accessibility and comfort have been well considered. A little detail that should be appreciated is the arrangement that enables the starting handle to be placed in nearly any position to start the engine, which greatly eases this tiresome process. The position of the steering wheel and column is adjustable, which makes it a comfortable car for people of all lengths and sizes to drive.

Another striking novelty is the Sheffield-Simplex, "the car without a gear-box," a welcome catch-phrase! This motor has been tried on the severest Scotch and English hills, and the absence of an orthodox gear-box has not been felt; it takes all but exceptional hills on the direct top speed, but when necessary to resort to a change there is a small sliding spur gear at the live axle end of the cardan shaft, actuated by the usual hand lever, this gives a low enough gear for any rational requirement.

The Napier stand is even more interesting than usual, as there is a departure from their 1908 design, and the introduction of a new scheme of business for this firm, namely, the building of small, moderately-priced models. In the 10-h.p. two-cylinder car the flywheel is placed in front of the engine, giving a better balance, while the final drive is by worm gear. It is just the car suited to feminine motorists who like an easy control. The N.E.C. is a firm that has always been associated with an original design. This year they are showing a particularly attractive model, a 40-h.p. open touring car; as the coachwork is in rich dark brown, and the interior upholstered in a pretty fawn leather, the colour scheme is charming. Owing to the four-cylinder horizontal engine being neatly stowed away beneath the driver's seat, there is an extraordinary amount of room in the car, it being possible to seat eight people inside and one beside the driver. The engine is not in the nature of a "freak," being merely an ordinary petrol motor, with the cylinders placed horizontally, instead of the vertical position. It is quite accessible, as the front seats are hinged and can be turned back, exposing all that is necessary to be touched. Not far from the N.E.C. exhibit is an absolute novelty in two-seaters. I refer to the 9-h.p. Pilgrim; it is a remarkably light machine, and with the even distribution of weight, by the driving mechanism being on the front axle, the wear on tyres, I am told, is marvellously small. The hand

brake is arranged to act on the back wheels and the foot-operated one on the front axle, through the differential gear.

The most notable development of this year's show is the production of medium-powered cars by firms long associated with cars of high horse-power; for instance, the Delaunay-Bellevilles are showing a 10-h.p. chassis; that it is just what the average motorist wants is proved by the orders which are being placed with the Burlington Carriage Company for this model. I was exceedingly pleased with it, and for a lady driver it is hard to beat. Those who have neither sufficient money nor nerve to buy a large racing car, yet want something with a smart and sporting appearance, should visit the Singer stand, where one of the most up-to-date looking two-seaters in the show is exhibited. It is a 12-14-h.p. four-cylinder chassis; the mechanical details are similar to the standard type, but a special rake is given to the steering wheel, lending a racing look. This also better suits the driver's comfort when ensconced in the low-seated though comfortable body. It is finished in a delightful shade of French grey, with black lines, and upholstery of a beautiful coloured red.

Of course, I have left many cars unmentioned that have interesting new details, for to describe them all would fill a volume, especially from the feminine point of view, as the latter-day bodywork is as absorbing a topic to the many as the engineering discussions are to the few. However, I cannot close without particularising one other make—a newcomer, and specially worthy of welcome, being a relative of our world-wide-admired friend, the Mercedes. It is known as the Royal Austrian-Daimler car, and has the distinction of being the choice of the engineers and experts who were commanded to select an automobile for His Majesty the Emperor of Austria. The chassis shown is a 20-30-h.p., the only type the company is at present turning out. Nearly every tiny detail is on sound motor-car engineering principles. Any feminine motorist wanting a motor that she can place sufficient confidence in to take out for long drives unaccompanied by a mechanic should make a point of inspecting the new model. Among other cars that I specially noticed as suitable for lady drivers to manage by themselves were the following:—The 20-h.p. Ariel, 15-20-h.p. F.I.A.T., 15-h.p. Rover, if fitted with touring body, and the 12-h.p. Humber, which is quite a marvel of cheapness.

C. B.



The Present.

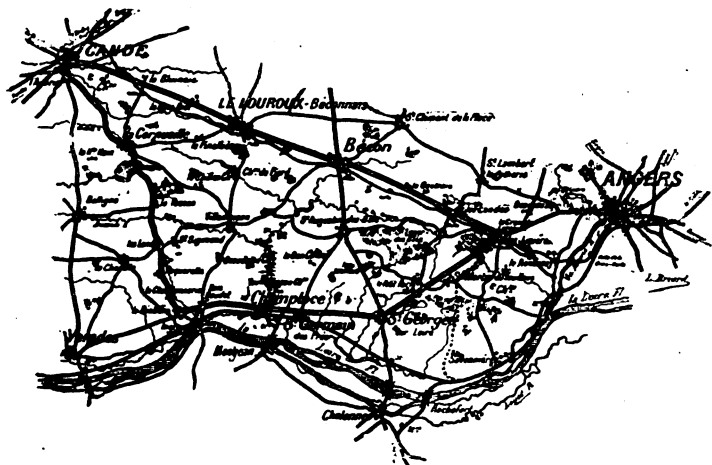
In a recent Swiss case, the court, in estimating the sum payable to the family of a person killed by the negligence of the driver of a motor-car, included the claims of the deceased's fiancée. The driver had exceeded 60 kilometres (about 37½ miles) an hour. The sentence was one month's imprisonment, 2,000 francs fine, 373 francs costs, and 16,850 francs damages.

MESSRS. DENNIS BROS., LTD., Guildford, have sent us a photograph of one of the four 3-ton mail vans they have just completed to the order of Messrs. McNamara and Co., the Post Office contractors, Finsbury, who are running them between Portsmouth and London, and also between Southampton and London. The vehicles are fitted with a Dennis 35-55-h.p. four-cylinder engine, magneto and accumulator ignition, four-speed gear-box with gate control, giving a direct drive on the third speed, and geared up fourth-speed to reduce petrol consumption. The back axle is of the Dennis well-known worm-driven type, and the road wheels are shod with 5 in. De Nevers tyres. Messrs. Dennis are building some smaller vans to feed these large vehicles from the outlying districts, and the whole service starts on the 1st prox.

B

GOSSIP FROM PARIS.

THE efforts of the good people of the Maine-et-Loire have been crowned with success. The Anjou circuit has been officially accepted by the Sporting Committee of the A.C.F. for next year's Grand Prix. And the municipality of Angers means to make the most of it. The subscription for the subvention of £4,000 required for the great international competition has been more than covered, but the list has not yet been closed, because the money in excess of that amount is to be employed in a prize for the race, and especially for the organisation of a series of fêtes during the week which will culminate in the great event. The local committee has not yet arranged all the details, but the fêtes will comprise auto-boat races, balloon and aeroplane competitions, a Venetian fête on the Maine, &c. I learn from a member of the A.C.F. Sporting Committee that the 74 kilometres 322 metres (close on 46½ miles) of the circuit are in a fairly good condition, and that the Ponts et Chaussées engineers have undertaken to put the roads into a satisfactory state of repair by January 15th next. The circuit constitutes an irregular triangle, of which the base, extending from Candé to La Croix de Lorraine, a distance of about nineteen miles, is virtually straight. There are two other fairly long straight stretches, one of 6½ miles from La Croix to Saint Georges, and another of 2½ miles from Saint Georges to Saint Germain des Prés, where the grand stands are



Route Map of the Anjou Circuit on which the A.C.F. Grand Prix Race will be run next year.

to be erected. That stretch is, however, prolonged by seven miles, because on passing the stands in the direction of Candé the racing cars will have before them a good, if not quite straight, road as far as Riotière, where the first bad corner will be met with. Then, after following the rather difficult winding road for twelve miles, they will reach Candé. Here speed will have to be slackened considerably, owing to an especially dangerous turning. The same thing may be said of the turning at La Croix de Lorraine, where the road constitutes an acute angle.

THERE is one important question connected with the Grand Prix still remaining to be settled. Are detachable wheels to be permitted as well as detachable rims, or are both to be forbidden? So far as the French manufacturers of detachable rims are concerned they pretend to be indifferent to the idea of their suppression if the wheels remain prohibited. And most of them say they have no objection to the detachable wheels being permitted so long as their rims are not excluded. Far from having been made exclusively or even principally for racing purposes, the rims were invented for the convenience of tourists. But I am not quite sure the professed indifference to the raising of the interdiction of detachable wheels is absolutely sincere. I think experience concerning the advantages of detachable wheels, their lightness compared with the rims, and the rapidity with which they can be changed, have had considerable effect. However that may be, the drivers who will figure

in the Grand Prix hope sincerely that detachable rims or wheels or both of them will be permitted, because the work of changing the tyres would otherwise be too exhausting. Their drive of 743 kilometres will be quite enough. So far as I have been able to gather in conversations with members of the A.C.F. Sporting Committee, the French officials are likely to pronounce in favour of permitting the use of both the rims and the wheels, and if that is done no one will have any reason to complain.

EXTRAORDINARY activity prevails in what is called the "Monde d'Aviation." Dozens of inventors are busy building aeroplanes with which each of them is convinced he will win a good portion of the £47,780 already offered in prizes. Their ardour is yet more stimulated by the knowledge that the Aviation group of the Chamber has demanded the inscription of a subvention of £40,000 in the budget of 1909 for the encouragement of aviation. They perhaps naturally hope to participate in that windfall, though they do not yet know exactly how. In addition to all this and the numerous other prizes which will most surely be created before long, the Aero Club of France has decided to apply for the permission, which will doubtlessly be granted it, to issue a big lottery calculated to produce a profit of £200,000, to be expended in the creation of a fleet of steerable balloons and aeroplanes for the defence of the country. Such confidence, not only in the future of aviation as a means of locomotion, but in its immediate possibilities, is so boundless in France that many of the newspapers have already published the list of the large flat roofs in Paris which they think might be used as landing places for aeroplanes. I confess, however, that the aviators, who are the most capable of judging of "the immediate possibilities," are less ambitious. They will be quite satisfied if landing places for aerial vessels are provided outside the gates of cities and large towns. At any rate a great many improvements will have to be introduced into the existing machines before they can be made to alight with safety on the limited space of a flat roof, and then, so to say, hop off again like a sparrow. Several of the practical aviators to whom I have spoken are somewhat alarmed at the great expectations raised by the recent performances of Wilbur Wright, Henry Farman, and Bleriot. They are convinced that much greater things will be done before long, but they fear the disappointment which may follow the discovery that a good long time will probably elapse before the aeroplane can be made, as has been predicted, as practical for every day use as a bicycle will result in a lull in the enthusiasm and hinder the development of "the newest of the new means of locomotion."

MARNEY.

AN examination in connection with the Driving Certificates Department of the R.A.C. has been held at the Navy Employment Agency Motor Schools at Portsmouth.

So many questions have lately been asked in Parliament with regard to the skidding of motor-buses that it is satisfactory to learn from some of those responsible for the motor-bus services of London that the evil is undoubtedly being minimised, the drivers being now well accustomed to their work. The reduction of the rate of speed has also been a factor in this direction. In fact, the peremptory orders of the three leading companies in the Metropolis have been so well carried out that the accident staff has been reduced by about 20 per cent.

THE Motorists' Advisory Agency has been established at 12-14, Beak Street, London, W., with the view of assisting all interested in the automobile world. A system of monthly and quarterly inspections of cars is being carried out by qualified engineers, and those clients requiring repairs will be advised as to reliable firms with well-equipped establishments, and who charge on a reasonable tariff. A second-hand sale and exchange department has been established in which accessories as well as cars will be included. The hire department has several touring cars and landaulets at its service, and the rate of charges which appears in the explanatory pamphlet issued by the agency appears to be marked by a financial moderation which should assist in placing the Motorists' Advisory Agency well to the front among motoring concerns.

MY FRIEND GILFILLIAN AND HIS 6½-H.P.

By "Rus."

MY friend Gilfillian had a motor, though a small one with only a single cylinder and two seats and 6½-h.p. It is a motor of spirit—a stormy petrel; it can go well when its mind and Gilfillian's concur in that end, but, taken all over, I should say the motor has much more to say in such matters than Gilfillian.

I am motorless, and Gilfillian often asks me to join him to take the vacant seat, which I do sometimes just to please him and to endeavour to overcome a congenital timidity; besides, I am a doctor and he is my best patient.

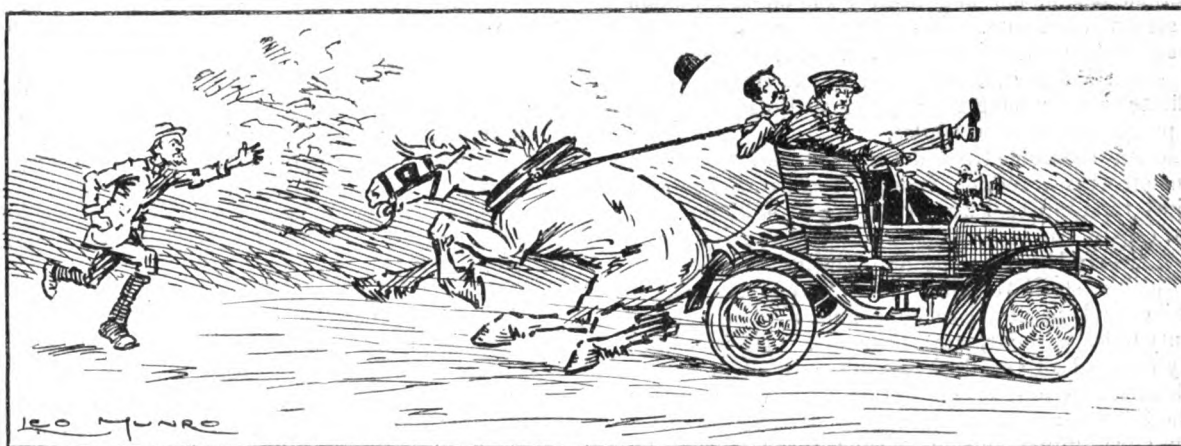
Gilfillian is not a born engineer. He is an experimental philosopher, a searcher after truth. He tries all the levers and clutches one after another with nervous haste to find out which is the right one to effect his purpose; his great mind can rarely remember such mundane things from one trip to another. He knows the starting handle, however, and he has grand wrestles with it à la Hackensmidt. Brilliant expositions of both the "Græco-Roman" and "Catch as-catch-can" styles can safely be counted on. He could make money by doing it in an enclosure and charging 2s. 6d. per head, free list unnecessary—in fact, the reporters would tender their half-crowns, feeling that even the privileges of the Press should not be pushed too far; and so the small boy and his smaller sister and our neighbourhood generally

and giving vent to wild ejaculations like Chinese warwhoops, but there is no movement; apparently he has mistaken my great toe for the clutch pedal, and I mildly, but firmly, told him if he didn't desist I would throw him out among the spectators. I would have done it, too, even though to do so would be to violate the great and sacred laws of hospitality—laws which I have had and shall always have the greatest respect for—provided the other supplies the hospitality in a reasonably open-handed manner, and the more lavish the hospitality the more sacred will those laws ever be to me. I am still free for Christmas.

Gilfillian, taking my meaning, ejaculated the Ah! of discovery and struck the clutch with his foot; in it went with a click and off went the car "on the full jump," and so did the folk in front, and just in time to escape having the obverse side of a honeycomb cooler tattooed for life on the reverse of their several anatomies.

At the corner he nearly deprived the police force of one of its brightest and most substantial ornaments. The ornament contributed a shrill and sudden solo on his whistle, but it was as useless to try to whistle back that 6½-h.p. as would have been the fishmonger of the story whistling for his "partin" when run off with by the farmer's dog.

Tootling everyone, including some hitherto our friends, out



"The horse kicked and fought and gyrated this way and that."

gets a gratis entertainment every Saturday afternoon which keeps them hilarious till Monday—church hours not excepted.

When the handle has at length beaten its own previous record of jiu-jitsu throws and arm-racking back fires it closes its innings, so to speak, and consents to transmit Gilfillian's last desperate effort to the cylinder.

Gilfillian then jumps into his seat, jamming his elbow into my chest. Voiturettes are, as a rule, not too wide in the seats for two big men. I am big, but Gilfillian is bigger; but, as I am on board the car as a non-combatant, I have no reasonable excuse for returning such attentions, not being called on to do anything active but only sit in awe, if not admiration, at Gilfillian's lately acquired knowledge of motoring mechanics.

The now vibrating and buzzing bonnet seems all agog with energy, but Gilfillian is pulling levers and stamping on my feet

of the way, we went madly along the main street, Gilfillian trying all kinds of throttles and levers to check the speed, but without effect.

Policemen held up their hands to stop, but they had to skip as we approached. I saw note-books taken out, so let a rug hang over the back. It did not help the policemen to read the number and indeed was not meant to do so.

When we got into the country a bit our riotous 6½-h.p. consented at last to be more docile, so along we went smoothly for some ten miles or so until we came to Westbank, the house of a distant relative of Gilfillian's, who has a very nice place and two ditto ditto daughters. Everybody in the neighbourhood knows Mr. Espie and the Misses Espie. Gilfillian often goes there, and rumour has it that there will soon be one Espie less and one Gilfillian more.

We stopped, went in, were welcomed by all three, and stayed to tea. Gilfillian was eloquent on motors, and after tea led the way to explain to the young ladies the wonders of the mechanism of the 6½-h.p. An ordinary mechanic's explanations are marred by his plainness of speech and his very limited powers of illustrative and historic parallels, but not so Gilfillian. He is a widely-read philosopher, and so was able to bring home to their minds his meaning in a way which, if not so clear as a mechanic's, was of far more educative and impressive effect, as the pretty "Oh mys!" "Oh dears!" "How wonderfuls!" abundantly testified.

He even took bits out and put them in again. It was all so new to them, as their anachronism of a Pa still believed in the pre-historic horse, that they were much interested. Besides, they are still uncertain which Gilfillian wishes.

"Now," said he proudly, "we will get started"; so, after shaking hands and "See you soon again, I hope," and so forth, we got on board to a duet of sweet "Ta-Tas," but no, it wouldn't go off, it was again refractory. Out got Gilfillian, off with the bonnet, tried the plug, examined the commutator, and shifted things about generally; now it was, "This will be all right," on board again, new good-byes, but again no response from the ungallant engine, and so on and so on. It began to get dark and cold. Shouldn't the girls go in? Not they, they want to see the last of us. After about an hour and a half spent on the machinery it was discovered that the tap to the petrol feed was the cause of all the trouble, having got round to "closed" somehow; so, after all the time wasted on the machinery, we got away at last to the nineteenth or twentieth good-bye.

All went well for a few miles till the car slowed down and with an expiring gurgle or two the engine stopped altogether, and all Gilfillian's great skill and resource could not persuade it to start again. It was now quite dark.

A farmer's man taking home a horse from work providentially appeared about this time, and a bargain was struck that for a consideration the horse should tow the car to the nearest railway station, two or three miles off, where we could leave it and get home by train.

So the towage began, the man leading the horse, Gilfillian steering and I seated beside him. The road was rather hilly, and in the darkness Gilfillian couldn't see the tow rope, which caused him in going down hill to overrun it and get it mixed up in the wheels, infinite trouble being required to get it disentangled. Still we made progress—between whiles.

All of a sudden the engine tired of refractoriness, re-asserted itself, and went off with a sudden snort of recuperated power. Gilfillian had just time to steer clear of the horse's hind-quarters, and, passing it, caused the tow-rope to come right over the car and against me, nearly bisecting me and causing the horse to slue round with his stern to ours. Now came a struggle between machine and beast. Everyone knows that a horse cannot go twenty miles an hour, stern foremost. He isn't built that way—any steward of the Jockey Club will tell you that. So the horse kicked and fought and gyrated this way and that till at length he fell down a bank at the side of the road, dragging the 6½-h.p. and Gilfillian and me on the top of him, with his powerful legs beating wildly about. According to the Accident Assurance actuarial tables we should have been injured for life, at least, but somehow or another got clear; the horse, however, got in his revenge on the car by smashing the body so that its builder wouldn't have been able to recognise it—possibly he wouldn't wish to. Passages of—1, vituperation; 2, diplomacy; and 3, compensation took place between the man and Gilfillian, and we left the wreck of the car in charge of a roadman who lived close by.

We footed it home about six miles in pitchy darkness, having missed the last train, Gilfillian remarking that we were rather in luck, as the last time he was out he got stranded with ten miles to walk and pouring rain.

(To be concluded.)

SOUTH WALES has evidently not been affected in any degree by the outcry against motor-cars.

THE RECENT OUTCRY AGAINST MOTORING.

IT will be remembered that when the recent outcry against automobilism was at its height, and when, in the Silly Season, newspaper columns had to be filled somehow, many attacks were made upon motorists. M.P.s were worried by post and editors were pestered with letters. Some of the organisations concerned became alarmed and were inclined to regard the matter quite seriously. On the other hand, those of us who had watched the progress of automobilism in this country from the early days of the modern revival of the motor-car were not disposed to treat the attack so seriously—a view that received endorsement in the utterances of many leading motorists that found their way to our columns.

Now that calmer counsels are likely to prevail, we have endeavoured to ascertain whether the view we then expressed was justified by events. How nearly the actual position was gauged is seen in the following reports which we have received from correspondents in leading centres of the industry.

Should any of our readers have any criticism to offer with regard to these reports, we shall be pleased to hear from them and to give those who may have other views on the subject an opportunity of expressing their opinions.

NORFOLK.

The recent outcry against motoring does not seem to have adversely influenced the trade.

We do not think that the popular outcry against motorists (which comes and goes in spasms like any other form of madness) is affecting the outlook very greatly. No doubt the fear of a heavy tax being shortly placed on cars in proportion to their weight or h.p. has tended to turn the attention of people from the bigger class of car, but we do not think that it has affected the number of cars which will be sold this season.

KENT.

We do not think that the natural growth of the industry will be affected by the recent outcry, but we trust and believe that the agitation will have the effect of making motor owners more careful than ever not to offend a reasonable public.

PERTSHIRE.

The local complaints against reckless driving have caused an occasional police trap to be set, which, owing to the presence of scouts who have shouted "Trap" where there were no traps, have resulted in a large number of cars in the far North being needlessly sent home by rail, instead of by road. This caused a considerable reduction in the number of tyres sold during the month of October from the Perthshire depots—to say nothing of petrol and oil.

BERKSHIRE.

The county outlook has not suffered by the recent agitation against motorists, an agitation which is mainly to be attributed to the dust problem, and perhaps the inconsiderate driving of a few scorchers who, in tearing through the country, help largely to inflame the feeling which no doubt exists amongst other users of our roads who are not motorists.

DEVONSHIRE.

We do not think the recent outcry against motor-cars is lessening the local demand in any way. Fortunately motorists are not troubled to any extent by the police in the Exeter district, and it is only in the case of accidents, or extreme cases of fast driving, that they are brought before the magistrates and to the notice of the public.

CORNWALL.

Apparently there are a number of people in Cornwall who have been somewhat scared by the hostility of the police, and also by the rumours which seem to have been persistently circulated in that corner of the country as to the likelihood of increased taxes being imposed on cars in the near future.

THE SOUTH.

Combined with a persistent and rather too particular attention on the part of the police, the agitation has adversely affected the demand in Sussex and some parts of Surrey.

THE paper on the new "Valveless" engine read before the Royal Automobile Club by Mr. Chas. Y. Knight has been reprinted, and copies can now be had direct from the Daimler Motor Company, Ltd., Coventry.

AT Bournemouth eighty-nine cars and fifty-four motorcycles were registered, and 445 drivers' licences were issued during the first ten months of the present year.

THE employees of Messrs. Jackson Bros., of the Central, Station Road, and Imperial Garages, at Blackpool, have just had a motor run to Liverpool—by way of a change.

MESSRS. FRANCIS AND SON, of Pontardawe, in the Swansea Valley, have a motor vehicle—a 30-36-h.p. Commer car—which is much in requisition at this season of the year for football teams.

TO the show at Olympia eight motor bodies have been contributed by Messrs. R. and J. Shinnie, of Aberdeen, who from March till the recent dull days were building to order an average of five motor bodies per week at their works in the Union Row.

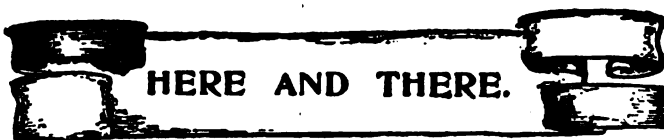
ON a recent visit to the Panhard-Levassor Works in Acton Vale, London, W., we found that Messrs. W. and G. Du Cros, Ltd., have again added to their accommodation. Two of the "bays" have been considerably extended, while the company are now putting down new power plant of a capacity of 150-h.p.

WHILE many centres of industry have lately experienced bad times, such cannot be said of the automobile business of Aberdeen. Work in that direction has been plentiful and the leading motor firms in the city (the Caledonian Motor Car Company, Ltd., Claud Hamilton, Ltd., the Rossleigh Motor-car Company, Ltd., the Arcade Motor Garage, Ltd., and Messrs. Campbell, Ltd.) report a good year.

ONE of our South American readers reports that within the last two or three years the motor movement has made remarkable progress in Buenos Ayres. There are at present, according to various estimates, from 1,000 to 3,000 automobiles in the city. The latter figure is evidently much exaggerated, but it is quite safe to put the number at about 1,500. It is a pretty sight, especially on Sunday, to see the long lines of fine cars in the park of Palermo, the aspect reminding one forcibly of the Bois de Boulogne in Paris.

THE Boilerine Manufacturing Company, of 885A-897, Old Kent Road, S.E., is finding its speciality attaining well-deserved popularity in connection with the preventing of incrustation in the water system of automobiles. Boilerine is mainly of organic origin, and the solution possesses the property of precipitating the salts of lime and other hardening substances, rendering the water soft, so that the formation of hard scale is reduced to a minimum. It has no deleterious effect on metals, and by using Concentrated Boilerine incrustation or scale is prevented, with consequent advantage in the running of a car. Several well-known motorists speak enthusiastically of its merits in this direction.

Now that classes in connection with motor-car design and construction are being organised at all the principal polytechnics and technical institutes throughout the country, instruction books of various kinds intended for the use of those who attend such lessons are beginning to make their appearance. Among them is that entitled "Notes on and Drawings of a Four-Cylinder Petrol Engine," which has just been published by Messrs. Longmans, Green and Co., 39, Paternoster Row, E.C. The book, which has been compiled by Mr. Henry J. Spooner, M.I.Mech.E., principal lecturer on motor-car engineering at Regent Street Polytechnic, comprises a set of working drawings of a 20-h.p. four-cylinder petrol motor. After a brief description of the method of operation of a petrol engine of the four-cylinder type, the author gives complete references to the various parts comprised in a modern motor, which, taken in conjunction with the drawings, should be of material assistance to those students who aspire to become draughtsmen in automobile engineering works.



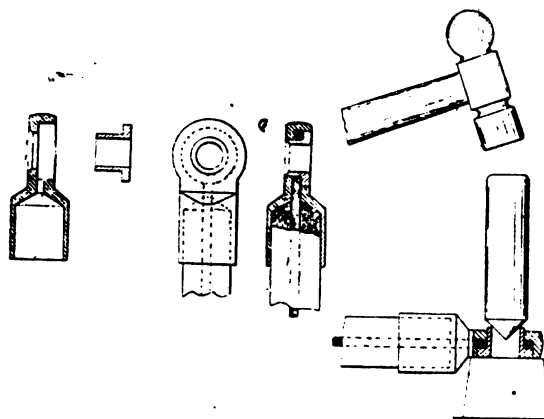
GLASS engine bonnets fitted with interior electric lights for displaying the motor to public view are said to be growing popular with American motor-car agents, as a means of attracting attention to their demonstrating cars.

THE latest addition to the various makes of motor taxi-cabs in service in New York is the Humber, which are being imported by the Humber Import Company of that city.

THE commissionaire of the Fiat Company in Long Acre, W.C., was successful, with the aid of a dozen "Era" fire extinguishers, in overcoming an outbreak of fire which occurred the other day in the showroom of a carriage builder opposite.

IN a case heard at Reading recently, witnesses for the prosecution of a motor-car driver variously estimated the speed of the car in question at a mile a minute, 50 m.p.h., 30 m.p.h., and 20 m.p.h. The defendant was certain he never exceeded eighteen miles per hour.

WE illustrate herewith a new terminal for high or low tension cables which has lately been brought out by the Bosch Magneto Company, Ltd., 23, Store Street, W.C. The device is of novel construction and extremely light. In fitting it to a cable end the insulation must be of the same diameter as the bore of the thimble in the terminal. The insulation has then to be stripped off a sufficient amount to enable the twisted copper conductors to spread round the tubular washer. After the end of the wire is placed in position, as shown in the accompanying



sketch, the tubular washer is pressed into place and riveted over with a blunt centre punch, making a joint which is absolutely firm, yet which requires no soldering. The sleeves of the terminal are sufficiently long to give ample support to the cable by means of the insulation, so that none of the weight is carried on the conductor itself. A joint is by this means made which is extremely durable and entirely unaffected by vibration.

THE value of the motor-cars and parts exported from the United States during the nine months ending with September last only amounted to £856,545 as against £992,777 in the corresponding period of 1907. The United Kingdom heads the list with a total of £308,296, Canada being second with £199,576.

A GERMAN consular report calls attention to the growing use of motor-cars by the postal authorities in Spain for the transportation of mails. The following lines have already been established and others are contemplated:—Avila-Bejar, Avila-Penaranda de Bracamonte, Avila-Segovia-San Ildefonso, San Esteban de Pravia-Vega de Rivadeo, and Deva-Motrico-Ondarra-Berriatua-Plaza-Lequeitio.

FOLLOWING the success of their car department, the London and Paris Exchange Motor Agency, Ltd., have recently opened a motor accessory department with a stock of accessories at 55, 57, and 59, Shaftesbury Avenue, London, W.C. With a view of introducing this favourably to the notice of motorists a capital catalogue has been issued, and within its fifty pages are illustrated many standard accessories, as well as several novelties of importance to all who own cars.

CONTINENTAL NOTES.

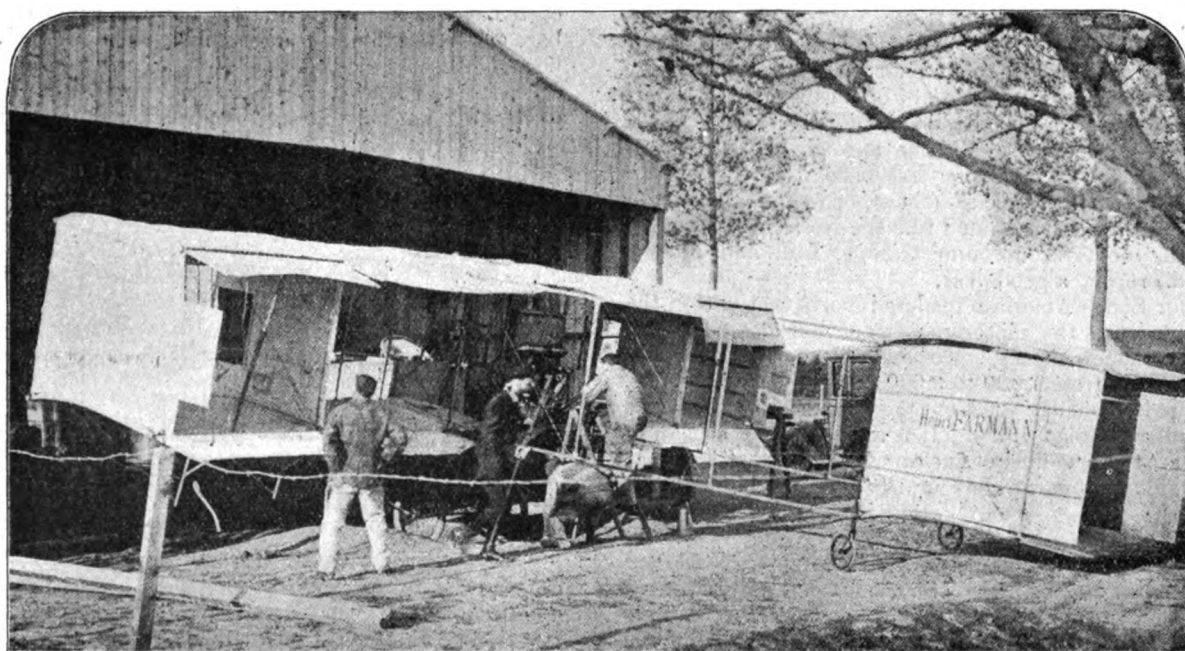
Accidents in France.

The commission instituted by the A.C.F. to inquire into the truth of the alleged accidents caused by automobiles is already doing good work. Many cases of newspaper reports of accidents which never occurred have been exposed, and a yet greater number of accidents described as due to the furious driving or carelessness of motorists have been shown to have been caused by horse-drawn vehicles. Then, again, when the driver of a motor-car sacrifices himself, as he so often does by turning right off the road into a hedge or ditch or against a tree or milestone to avoid injuring a pedestrian or persons in a carriage, he is frequently described as having been the victim of his own imprudence. In this connection the statistics of the accidents in the Department of the Sarthe, furnished by the Sarthe Automobile Club, are very interesting, as they demonstrate once more that the self-propelled vehicles are much less "homicidal," as they have been called so often, than the "moteurs à crottin." During the month of October twenty serious accidents caused by horse-drawn vehicles occurred in the Sarthe, three persons being killed and seventeen others injured. During the same period four serious automobile

only £310,720. The biggest falling off is, of course, in the case of the United Kingdom, but the exports to the United States, Russia and Algeria have also declined. On the other hand, trade with Germany, Belgium, Switzerland, Austria, Italy, Brazil, and the Argentine Republic has increased.

Aeronautical News.

The Automobile Club de France has decided to concern itself with aviation as coming under the category of mechanical locomotion.—The prizes to be won by successful aeroplanists continue to multiply, the latest being one of £4,000 for a competition to be organised in the Brescia Circuit next August or September by the Italian Aero Club.—The "Petite Gironde" of Bordeaux is offering a prize of £400 to be competed for under the control of the Aero Club du Sud Ouest for the first aeroplanist who flies round the steeple of Celon Church and returns to the starting point in the Place de Quinconces, at Bordeaux, a distance of about five miles.—The new Aerodrome at Savigny-sur-Orge, France, was inaugurated on the 10th inst., when M. Delagrangé made several trial flights.—On Friday, last week, Wilbur Wright won the prize of £40 offered by the Aero Club of the Sarthe for the first aeroplanist



Mr. Henry Farman Preparing his Aeroplane for a Flight.

accidents resulting in the death of one person and the injury of three others. From October 1st, 1907, to October 31st, this year, the total number of accidents caused in that department by horse-drawn vehicles was 337. By these no fewer than forty-three persons lost their lives and 328 others were injured. On the other hand, during the same thirteen months only twenty-five accidents were caused by motor-cars, resulting in the death of two persons and the injury of twenty-three others.

French Motor-car Imports and Exports.

Returns just issued show that the value of the foreign motor-cars and parts imported into France during the nine months ending with September last amounted to only £222,160, as compared with £269,520 in the corresponding period of last year. As regards the exportation of French motor-cars and parts, the aggregate shipments during the nine months recently ended only totalled £4,047,120, as contrasted with £4,357,840 in the similar period of 1907. The shrinkage is entirely due to the quietness in the early part of the year, for during the past five months the exports have shown an increase over those of last year. This is shown by the fact that, whereas the decline in the exports at the end of May last was £517,360, it now stands at

flying at a height of a hundred feet. He also accomplished a flight without making use of the catapult for giving his machine a start.

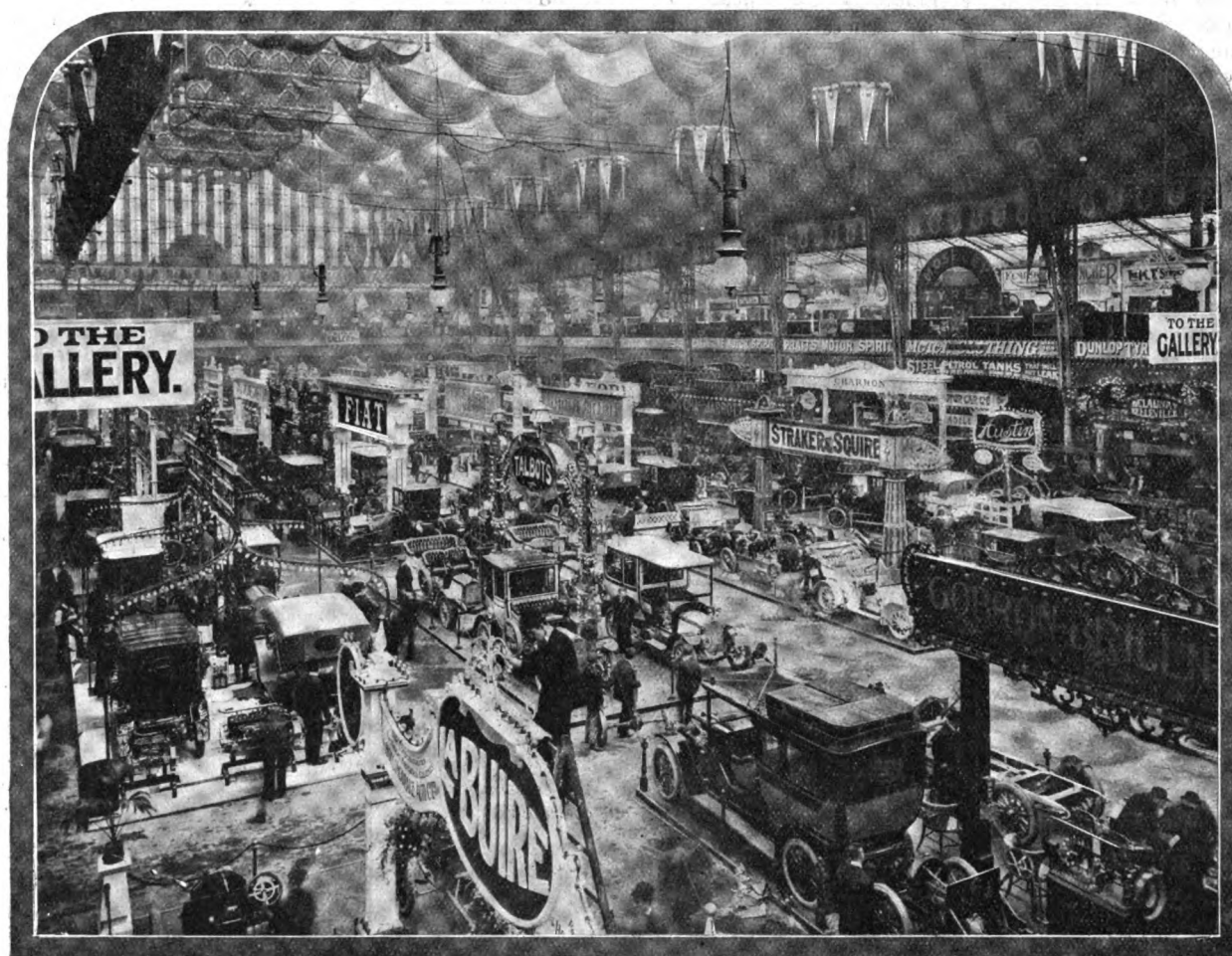
The Nice Week.

The Nice Automobile Club is busy arranging the programme for the forthcoming automobile week; it will include a flower fete, a carriage body competition, an excursion to Saint Raphael, and a hill-climbing competition on La Turbie.

Miscellaneous Items.

Motor-cabs are about to be introduced into Brussels.—A company has just been formed in Naples to introduce a service of motor-cabs in that town.—The Swiss military authorities propose to hold a reliability trial of motor vehicles suitable for military purposes in June next year.—The Swedish Imperial Automobile Club has decided to organise a reliability trial of industrial motor vehicles during the coming spring.—A company has just been formed in Gothenburg, Sweden, to introduce a service of motor-cabs in the town.—The French post and telegraph authorities are at present inviting tenders for the transport of the mails between Vernon and Gisors by motor vehicles.

THE OLYMPIA SHOW.



General View of the Show.

SOME TENDENCIES OF DESIGN.

IT is difficult to imagine, as one walks round the Olympia Show and examines the beautiful specimens of modern automobile construction, that it is only twelve years since the motor-car became a legalised form of locomotion in this country. Were it possible to once more bring together the pioneer vehicles which took part in the memorable processions—the twelfth anniversary of which occurred on Saturday last—they would present a sorry spectacle in comparison with their modern prototypes. Yet those archaic machines were the result of years of much thought and study of a few capable engineers, whose labours have resulted in the up-building of an industry that is rapidly becoming one of the most important of the country. And yet, even with such quiet, easy running and reliable cars as are being turned out to-day, he would be a bold man who would venture to say that finality has been reached. If proof were needed to negative any such statement, it is to be found in the many new developments which have been brought under the public gaze during the present week. The Knight engine, with its cylindrical slide valves, has, of course, found many critics, but those who have adopted it may be credited with at least an average amount of business acumen. The more familiar type of motor is, of course, a distinct improvement, from all points of view, on that of even a year ago. It has, however, been demonstrated that there are more

ways than one of building a highly efficient engine working on the Otto cycle, and, now that the ball has been set rolling in another direction, quite unexpected developments are not at all improbable. It may be, too, that the two-cycle engine will within a not distant period enter on the scene with a blaze of light behind it that will eclipse the motor that is at present enjoying the favour, not only of the public, but also of automobile engineers. We firmly believe that if only one half the experimental work had been centred on the development of two-cycle engines that has been devoted to the four-cycle, the advocates of the former would not be confined to the couple of firms exhibiting cars with such engines at Olympia, but their numbers would be almost if not quite as great as those showing motors working on the four-cycle system. Another noteworthy feature of the Show is the indication it affords of the increasing attention that is being given to steam cars. Although the number of different types on view is only four—and consequently bears but a slight proportion to the petrol machines—it is the largest that has hitherto been seen at Olympia.

With regard to the general tendencies in what may be termed the petrol automobile world, these are of so varied a nature that they cannot be summed up in the proverbial nutshell. The six-cylinder engine is in somewhat of an anomalous position, for while the oldest advocate thereof has again added four and even two cylinder cars to his output, others continue to confine their attention to the six and yet others have given them up entirely in favour of the "four."

The reports that have been current during the past season of a decline in the general demand for cars of high power are substantiated by the production by old-established firms of vehicles of smaller power than hitherto turned out, the result being a large increase in cars of from 15-h.p. to 25-h.p. So far as concerns the details of petrol motors, it may briefly be said that the practice of casting the four-cylinders *en bloc* appears to be growing in favour, while high tension magneto ignition is by far the leading system employed, the great improvement which has been effected in these machines during the past two years having done much to ensure their present popularity. By careful attention to carburation, size of valves, &c., what is perhaps erroneously termed the "flexibility" of petrol engines has been vastly increased, and at the same time they leave little or nothing to be desired in the way of quietness of operation. One prominent feature of all modern motors is the improved methods of lubrication; in the majority of vehicles this is now positively effected by a pump in conjunction with arrangements for preventing any excess of oil passing to the engine, and, consequently, any emission of obnoxious smoke.

Glancing now for a moment at the transmission, and taking first the clutch, it will be found that the struggle for supremacy between the modern multiple disc type and the older leather-faced cone pattern is still waging. As for the change-speed gear, the gate control, with its series of selecting

rods each connected with its respective sliding sleeve in the gear-box, is now being fairly generally used on small cars, while on the bigger vehicles it is *de rigueur*. For the final transmission the cardan shaft drive is far and away in the majority, such old advocates of the chain drive as Panhard, Mercedes and Fiat now turning out live axle cars as well as those with side chains. It would seem that the next battle will be between the bevel and the worm drive, for the latter has lately secured one or two new and notable adherents.

As for the bodies of motor-cars, these continue to show great improvement. For a long time complaints were rife that the carriage builders had not kept themselves abreast of the times, but now that the automobile is no longer used for pleasure purposes alone, but is slowly yet surely driving the horse-drawn carriage out of existence, and even threatening the railway train as a means of conveying people long distances, they have at last realised a new era has dawned for them, the opportunities of which they have seized upon in a way which reflects the greatest credit on the whole carriage building industry.

With regard to prices, while there is undoubtedly a wider selection of medium power vehicles available, there is no marked tendency towards reduction in first cost, the efforts of manufacturers being apparently not to turn out cheap cars, but to supply much more reliable vehicles, or, in other words, to give greater value for money than hitherto.

ARCANUM.

The Lorraine-Dietrich Cars.

The Lorraine-Dietrich cars are exhibited by LA SOCIÉTÉ LORRAINE-DIETRICH on two different stands, the Continental-built vehicles being displayed on one, while the other is devoted to British-built vehicles. Dealing first with those which hail from across the Channel, it may be stated that three models are on view, these including a 15-h.p. landaulet, a 20-h.p. landaulet-phaeton, and a 30-h.p. limousine. As regards the mechanical details of the chassis, which, with the exception of the 15-h.p., are all of the chain-driven variety, the changes that have been introduced are relatively slight, intended to increase the accessibility of the various parts, notably the oil and water pumps. Taking the 20-h.p., of which a polished chassis is shown, as typical of the type, we find the four cylinders, 110 mm. bore by 130 mm., are cast in pairs, with the valves on opposite sides. The ignition is by low-tension magneto, with automatic advance according to the speed of the engine. At the

side shaft to a separate bevel on the differential. There are thus three pairs of bevel wheels in connection with the driving gear. Special attention has been devoted to the brakes, those working in drums on the rear wheels being supplemented by two brakes on the differential shaft operated by a single pedal. A new model Lorraine-Dietrich 10-h.p. two-cylinder live-axle car fitted with two-seated runabout body is probably now on view, but had not arrived at the time we visited the stand. Turning now to the English-built model, this is a 20-h.p. live-axle car, comprising many interesting features. The engine has four cylinders cast in pairs, 110 mm. bore by 130 mm. stroke, fitted with low-tension magneto ignition. The lubrication is automatic; it is operated by means of a mechanical pump, which forces the oil up to a

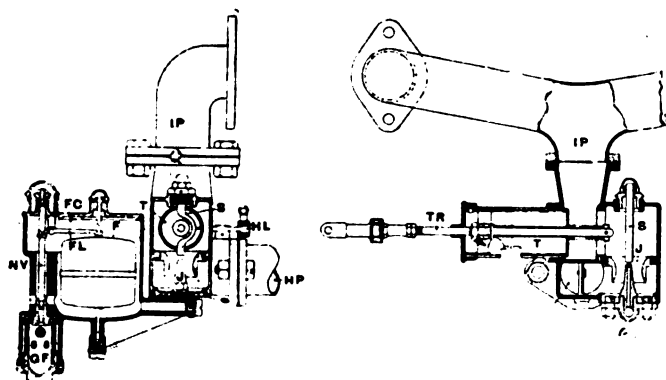


Fig. 38.—Sectional Views of the Lorraine-Dietrich Carburettor.

same time, a hand control is fitted, so that the firing point can be set to any desired position. The lubrication of the motor is maintained by a pump driven off the cam shaft, this forcing oil through two feeds to the base chamber, in which a certain level is maintained, any excess passing over the overflow back to the oil tank. A clutch of the metallic disc type transmits the power to the gear-box through a universal joint, which allows for any slight distortion of the frame whilst travelling over rough roads, and also permits the clutch to be dismantled without disturbing the engine or gear-box. The latter, which is "gate" controlled, provides four speeds forward and one reverse. By a special arrangement the third and fourth speeds are driven direct from the engine to the countershaft. The main shaft carries at its rear end two bevel pinions, each meshing with corresponding bevel wheels concentrically mounted on the differential shaft. On the first, second, and reverse speeds the power is transmitted through a bevel pinion on the

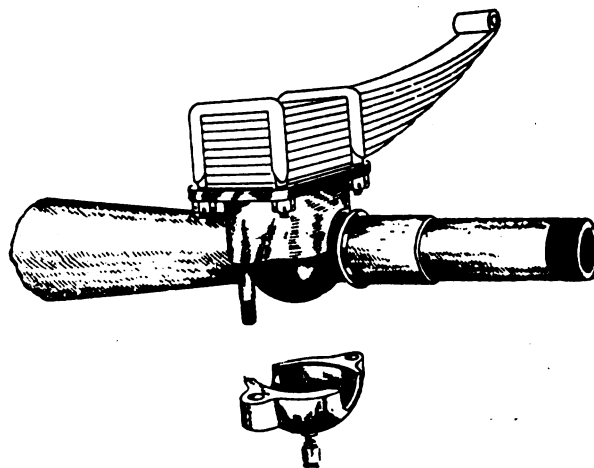


Fig. 39.—Details of Spherical Bearing on the Lorraine-Dietrich Live Axle Cars, by which the Spring-carrying plate is attached to the axle.

sight-feed lubricator on the dashboard, it being afterwards pumped under pressure to the various bearings. A feature of the engine design is the employment of a ball-bearing at the forward end of the crank shaft. Two sectional views of the carburettor are given in Fig. 38, from which the simple arrangement of the few working parts and the somewhat unusual position of the needle valve in relation to the float is noticeable. The petrol supply passes through the small wire gauze filter G F, neatly arranged below the needle valve N V. The needle valve is enclosed in a small chamber quite separate from the float, the connection between the two being by a cross lever F L. A small coil spring in place of the ordinary weights, situated outside the chamber, keeps the needle valve in position. The jet is of the single type, the spray of petrol being broken up by a small cranked (to clear the throttle spindle) rod S, which is placed directly over the orifice of the jet. Hot air is delivered

through the port H P, and its varying volume governed by the butterfly valve H V, which is automatically coupled to the throttle spindle H L by means of an adjustable slotted tie rod. The gear-box provides four speeds forward and one reverse, operated by a "gate" controlled lever. The drive is transmitted to the live axle by means of a cardan shaft, which is supported by a cold-drawn taper steel tube, the latter acting as a torque rod. The rear axle is very strong in design, is oil-retaining, and fitted with ball bearings. The two halves of the live axle are each coupled to the differential gear by an excellent ball-bearing universal joint, which enables the rear road wheels to be splayed as in chain-driven cars. The drive is taken through inverse dog clutches engaging with the outside ends of the road wheel hubs, in which similar clutches are provided. The ball bearings of the hubs are mounted upon the axle casing, so that the live axle itself has only the driving effort to withstand. The bevel casing is formed in two parts, joined horizontally; the top half is made of cast aluminium, whilst the bottom portion is of cast steel. From these drawn steel sleeves extend to spring brackets, the construction of which is shown in Fig. 39. It will be seen from the latter that to allow for the motion of the springs a spherical joint is fitted inside the spring bracket; by this device the twisting strain upon the spring and the wear of the shackle bolts is much reduced. The complete cars on view include a 20-h.p. chassis fitted with a Mulliner cabriolet body, and another with a special enclosed "all-weather" body by Salmons and Sons; this vehicle is arranged to be driven from the inside, and can be open or

(the chains being enclosed in gear-cases), are of the live axle type. In connection with the transmission, we note that the leather-faced cone clutch is retained. The gear-box is of an entirely new design, its feature being its compactness and correspondingly short shafts. The rear end of the clutch shaft is furnished with an externally toothed pinion for driving the lay-shaft and internal teeth for the direct drive. The shaft is made hollow to receive the corresponding half of the coupling belonging to the third and fourth speed sliding member. When the direct drive is out of action the coupling separates, and telescopes inside the end of the clutch shaft. When the direct drive is in use corresponding economy of length is obtained by telescoping the third-speed gear wheel inside the second-speed gear wheel. To avoid unnecessary wear and insure silence in the gears the reverse pinion is arranged to be brought into mesh radially by an eccentric motion, so that when not in use it is at rest. The "gate" lever is of new design, provided with a locking device on each of the speeds. The cardan shaft has universal joints at both ends; the live axle is provided with a pressed steel casing continuous from end to end, the enlargement for the differential and bevel gear being covered by a detachable aluminium plate. A new departure is the fitting, without extra charge, of detachable wire or wood wheels, as may be selected by clients. The Daimler Co. inform us that they have satisfied themselves that detachable wheels offer greater advantages than those of any other type, and consequently they have adopted them as a standard practice, except in the case of the 48-h.p. model, where the chain drive method

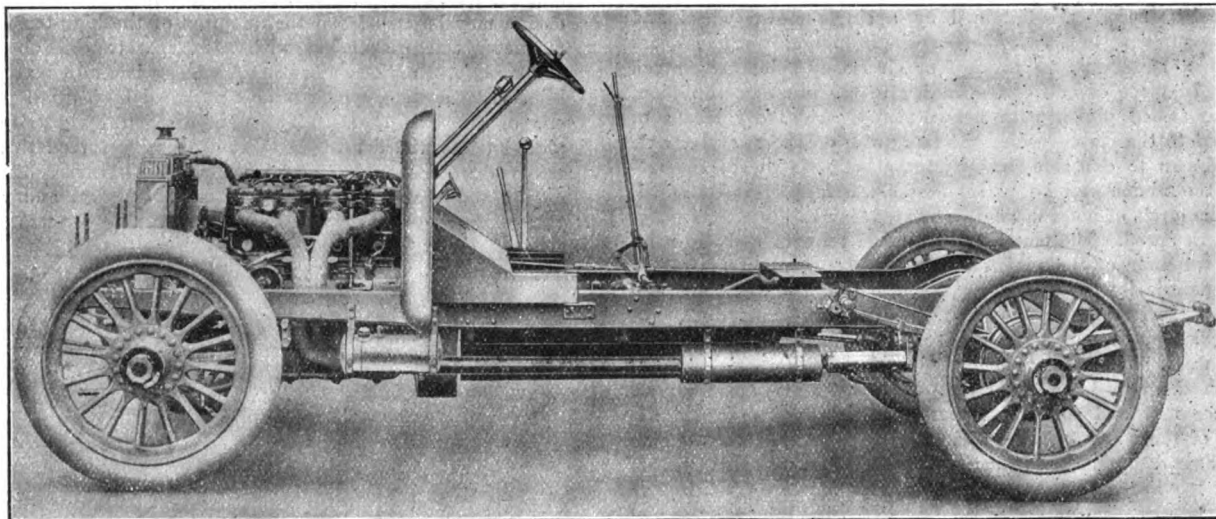


Fig. 40.—Chassis of Daimler 38-h.p. Car with new Silent Engine.

closed as desired; the style is quite novel, the vehicle having an attractive appearance.

The Daimler Cars.

Needless to say the stand of the DAIMLER MOTOR CO., LTD., has throughout the week been thronged with visitors anxious to examine the new Knight engine, of which so much has been heard recently. As this novel motor was fully described and illustrated in our issue of the 19th September last, it is unnecessary to refer to it again in detail. Briefly stated, the feature of the new motor lies in the fact that two sliding slotted sleeves, interposed between the cylinder and its piston, and actuated by an eccentric shaft, replace the old mushroom valves and their operating mechanism. Absolutely positive, the new practice is claimed to be not only lighter, but infinitely more rapid than the old method of induction and exhaust actions; at the same time, the arrangement gives positive valving, a spherical explosion chamber, direct ingress and egress of gases, and efficient cooling propensities, as well as comparatively light weight and accessibility of parts. The new motor is so startling a departure from the usual practice that it has not unnaturally met with much criticism; the Daimler Company have, however, convinced themselves of its merits, so much so that they have entirely abandoned the old type for the new one, which is being fitted to all the four models they are turning out for the 1909 season—22-h.p., 38-h.p., 48-h.p. four-cylinder, and 57-h.p. six-cylinder, the cylinder dimensions being respectively 96 mm. by 130 mm., 124 mm. by 130 mm., 140 mm. by 150 mm., and 124 mm. by 130 mm. All the cars, with the exception of the 48-h.p., which has side chain drive

of transmission, and the cases protecting it, render the fitting of these wheels a matter of some little difficulty. The complete cars on view include a 38-h.p. chassis with "Coventry" type landaulet body, painted green, with black mouldings, and lined light green, and a 48-h.p., fitted with "Nottingham" limousine body, painted ultra blue, with black mouldings, and fine red lines.

The Nameless Car.

A new four-cylinder car of British manufacture is that shown in the Annexe by the NAMELESS MOTOR-CAR CO., of Hendon, of which Mr. W. P. Lindsay, A.M.I.M.E., is the manager. The vehicle is fitted with a White and Poppe engine, 80 mm. bore by 90 mm. stroke (15.9-h.p., R.A.C. rating). The change-speed gear is gate-controlled, giving three speeds, the lay shaft being idle on the top direct drive. A useful feature is seen in a positive locking device, by means of which no two gears can be in mesh at the same time. The final drive is by propeller shaft and bevel gear to live axle. Special attention has been given to the brakes; the foot brake consists of two cast-iron slippers, with a compensating toggle action, working on a drum at the back of the gear-box. The rear brakes are of the compensated internal double-expanding type, there being two cams to each drum. The front axle is of H-section steel, having a slight forward rake, which is adjustable, and also provided with centre-pivoted hubs, which permit a simple form of rack and pinion steering to be employed. The silencer is of special design, consisting of a number of small but long tubes, and giving, it is claimed, a quiet exhaust with no back pressure. The car, which is fitted with ball bearings throughout, has a wheel base of 8 ft. 6 in.

The Humphris Car and Gear.

For some time past reports have been current with regard to the introduction of a car fitted with a somewhat novel departure in the way of change-speed gear. The new vehicle is now shown to the public for the first time by the HUMPHRIS GEAR AND ENGINEERING COMPANY, LTD., of Eastleigh. As in the Sizaire-Naudin cars, there is no gear-box in the ordinary sense of the word, the driving and the change-speed mechanism being all contained in the back axle casing, a direct drive being obtained on all the forward speeds. There is this difference between the Humphris and the Sizaire-Naudin cars, that whilst in the

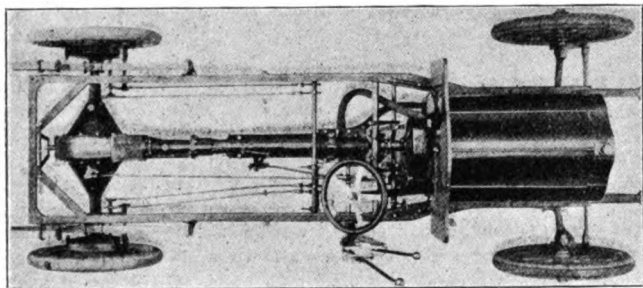


Fig. 41.—Plan of Chassis of Humphris 15-17-h.p. Car with special Change-Speed Gear.

latter the various speeds are obtained by a single crown wheel and different-sized pinions, in the former a single pinion works in conjunction with a large disc on which four circles of holes are formed on the face. In place of and corresponding to the usual bevel pinion, there is a six-armed pinion with helmet-shaped arms. By means of rods connected to the clutch pedal, the large disc on the rear live axle can be withdrawn to one side, and by means of rods to the change-speed lever the pinion can be pulled across the face of the disc till opposite to the circle of holes desired, corresponding to the first, second, third, or fourth speed. The clutch pedal is then released and the holes of the disc and arms of the pinion brought into mesh. It is claimed that slip is practically eliminated by the shape of the arms and the holes, and that as it gives a true rolling motion, there is a great gain in efficiency, strength, and absence of friction, and a corresponding reduction in wear. The whole gearing, reverse and differential, is contained in a casing very little larger than that of the average-sized live axle. Another new and somewhat startling departure is seen in the arrangement of the whole of the working parts, which from the engine to the back axle are enclosed in a rigid casing formed of parts bolted together, the motor itself being supported on trunnions, on which it is free to follow any movement transmitted to it from the back axle, and ensures a perfect alignment between the two parts. The clutch transmits its power by a long shaft enclosed in a rigid tube to the patent driving gear. The suspension of the frame is also on special lines, the usual semi-elliptic springs at the front and three-quarter-elliptics at the rear being supplemented by a compensating transverse spring connected with the axle casing and the frame in such a way as to some extent relieve the live axle from shock when travelling over bad roads. The chassis on view—a plan of which is given in Fig. 41—is of 15-17-h.p., being fitted with a four-cylinder engine 85 mm. bore by 100 mm. stroke. Although the new gear is quite a new idea in power transmission, we are assured by Mr. O. F. Mundy, of 4, Albany Court-yard, Piccadilly, W., who has secured the British selling rights, that the car has been submitted to severe and lengthy tests with entire satisfaction.

The Fiat Cars.

Among the cars which deservedly enjoy a high reputation in this country are the Fiat. Two new models are to be seen at the stand of FIAT MOTORS, LTD., the first being a 12-14-h.p. live axle machine, in which there are many points of interest. The four cylinders of the engine are cast in one piece, and are 80 mm. bore by 100 mm. stroke. The ignition is by high-tension magneto. The carburettor is of the Fiat Company's own design, it being water-jacketed and fitted with an automatic auxiliary air valve. A small gear pump is provided to force the lubricating oil through the hollow crank shaft and connecting rods to the main bearings. The water circulation is maintained by a gear-driven pump and honeycomb radiator, the arms of the fly-wheel being arranged to act as a fan in drawing air through the latter. The transmission is through a clutch of the well-known Fiat steel disc type

running in oil, and a gate-controlled three-speed gear-box. The cardan shaft is enclosed in a casing which forms an extension of the rear axle sleeve, the forward end terminating in a forked bracket hinged to the gear-box. The car has a wheel base of 8 ft. 4½ in. The second new car, of which a polished chassis is exhibited, is a 40-50-h.p. live-axle machine, in which all the special points of the Fiat design are incorporated. The bore and stroke of the engine is 130 mm. and 150 mm. High-tension magneto ignition is fitted, as also a forced system of lubrication. In order to facilitate starting, the engine is provided with a half-compression device acting on the inlet valves. The carburettor is of a special patent type. The additional air supply and the throttle are controlled by the accelerator pedal, thus simplifying the control to a remarkable degree. Other exhibits at the Fiat stand include a 12-14-h.p. landaulet, 15-20-h.p. standard live-axle chassis fitted with a three-quarter landaulet body by Messrs. Maythorn and Sons; a 15-20-h.p. Victoria phaeton body by Messrs. Brainsby and Sons; a 28-35-h.p. polished live-axle chassis; and a 28-35-h.p. limousine with Maythorn body.

The Panhard Cars.

Four sizes of the well-known Panhard cars are displayed on the stand of Messrs. PANHARD AND LEVASSOR, of 14, Regent Street, and Acton Vale, W., these comprising three live axle models—10-15-h.p., 15-25-h.p., and 18-30-h.p.—and a chain-driven vehicle of 25-35-h.p. The motors are all of the four-cylinder type, the dimensions being respectively 80 mm. by 120 mm., 91 mm. by 131 mm., 100 mm. by 130 mm., and 110 mm. by 140 mm. Amongst the more important changes in the design may be mentioned the adoption of the high-tension direct spark magneto, this dispensing with the separate coil on the dashboard employed on previous models. A change has also been effected in the lubrication system, which is now operated by a small pump driven off one of the cam shafts. The pump is fed by gravity from a tank placed under the driving seat, the oil being forced through a pipe to two eight feeds on the dashboard and from thence distributed to the engine and gear-box. By this means a constant and regular lubrication is assured to both engine and gear. The appearance of the dash-

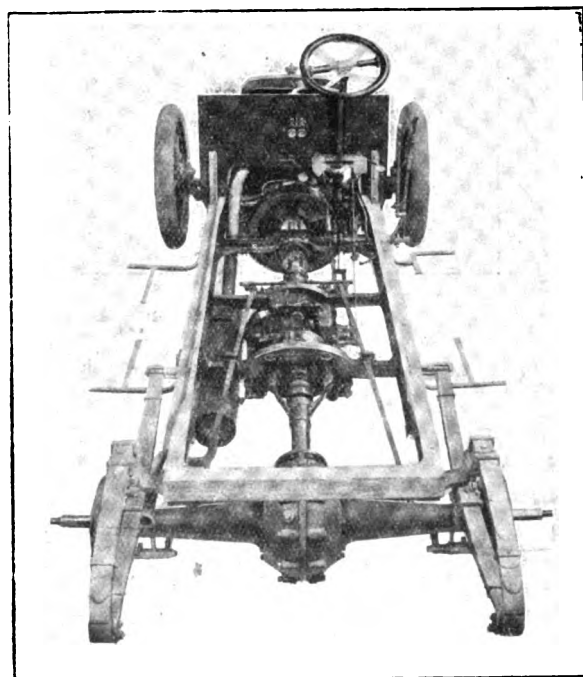


Fig. 42.—View of Chassis of the latest Live Axle Panhard Cars.

board is particularly "clean," as, with the exception of the two eight feeds previously mentioned, it is quite free from fittings. The novelty on the Panhard stand is, however, the chassis of the new 8-h.p. live axle model. The motor is of the two-cylinder type, with the valves all on one side. The magneto is carried in an accessible position, on a separate bracket. The engine control is by accelerator pedal, the steering wheel itself being quite free of any levers. The complete cars on view are all of the closed type, painted dark green, a particularly noticeable one being the six or seven-seated limousine on a 15-25-h.p. 9 ft. 6 in. wheelbase chassis.

The Armstrong Whitworth Cars.

Messrs. Sir W. G. ARMSTRONG, WHITWORTH AND CO., LTD., the well-known engineers and shipbuilders, are showing three vehicles—a 30-h.p. landaulet, an 18-22-h.p. chassis, and an 18-22-h.p. landaulet. The design of the 30-h.p. four-cylinder car is unchanged except in minor details from the 1908 model, which has proved extremely satisfactory. The 18-22-h.p. is an entirely new production for the coming season, and is an excellent example of modern automobile construction. The engine comprises four cylinders, 95 mm. by 120 mm. stroke, and although rated at only 18-22-h.p. it develops 27-h.p. at a speed of 1,300 revolutions per minute. The cylinders are cast separately, and have the valves on opposite sides. The ignition is by high-tension magneto, while the water circulation is by pump and honeycomb radiator. A pump operated from off the end of the exhaust cam shaft maintains a constant supply of lubricating oil to the engine bearings. The transmission is through a multiple plate clutch, four-speed gate-controlled gear-box, cardan shaft, and bevel gear to a live axle. The usual torque and radius rods are dispensed with, the torque of the back axle being taken by the propeller shaft casing. The live axle itself is so designed that by undoing eight nuts the differential gear can be lifted out, while the two halves of the axle may be withdrawn by simply removing the hub caps.

The Germain Cars.

The principal novelty at the stand of Captain Theo Masui is a chassis of the Germain new 20-h.p. six-cylinder car. The motor,

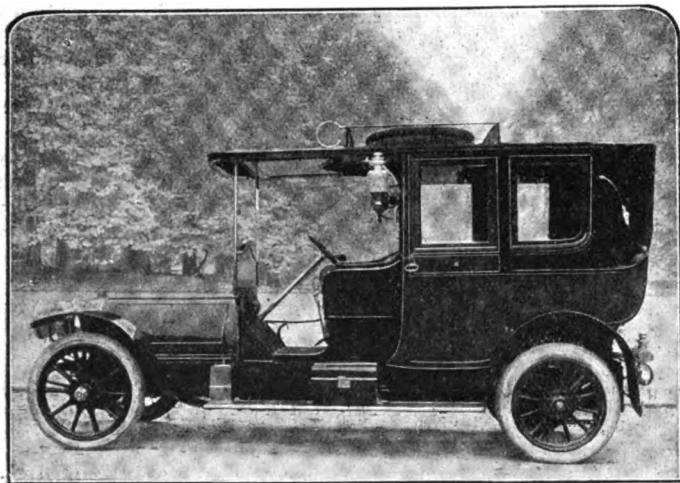


Fig. 43.—The Germain 28-h.p. Six-Cylinder Car with special Landaulet Body.

It will be noticed that there is hardly any leather at the rear of the side windows, which makes the interior of the car very light.

which has a bore and stroke of 86 mm. by 110 mm. stroke, comprises six separate steel cylinders, with brass water jackets; it is fitted with a Bosch high-tension magneto with automatic advance and retard. The carburettor is a special automatic one of the "Zenith" type, a description of which was given in the *Motor-Car Journal* of December 28th, 1907. The crank shaft is *desaxé*—that is, slightly out of line with the centre of the cylinders; the lubrication is effected by means of a worm-driven oil pump located in the lower half of the base chamber. The clutch is of a new metal-to-metal expanding type. A sectional view is given in Fig. 44, from which it will be seen that the new clutch runs on ball bearings. It is very much on the lines of a brake, a wide metal band expanding and contracting under the action of a cone, operated by the pedal and working between rollers mounted on levers connected with the band. The change-speed gear gives three speeds forward and reverse, and is controlled by a "gate" controlled lever. On the top speed the drive is direct. The chassis has been specially designed to be fitted with luxurious bodies for town use, the side members of the frame being lowered at the point where the side doors to the rear seats come, thus facilitating ingress and egress. A chassis of the Germain 28-h.p. four-cylinder car is also on view. Although similar in many respects to that introduced last year, various improvements have been introduced in the vehicle, thus bringing it thoroughly up to date. The bore and stroke of the engine is 120 mm. by 130 mm. This chassis can be supplied with either chain or cardan transmission, and comprises the following details:—Bosch high-tension magneto, automatic spark

advance, "Zenith" carburettor, three speeds forward and a reverse, positive lubrication by means of worm-driven oil pump, metal-to-metal clutch, "gate" change speed, direct drive on top speed, three-quarter elliptical springs, &c. The well-known Germain 18-h.p. light chainless car is also being shown. This vehicle can be supplied either with patent automatic "Zenith" or the Germain carburettor with variable lift to inlet valves. A noteworthy feature of the Germain cars is the entire absence of fittings on the radiator. Other exhibits at the

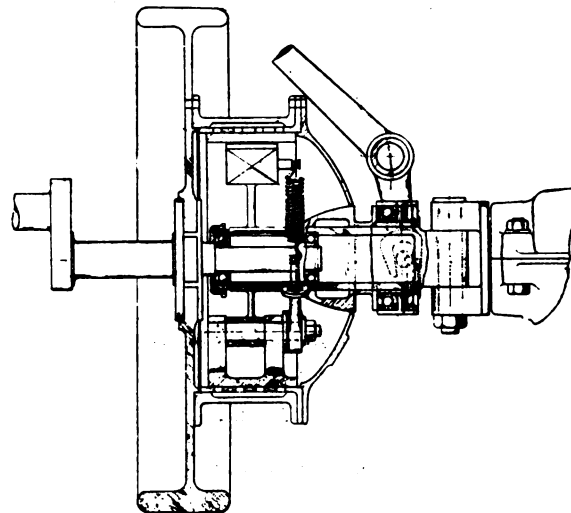


Fig. 44.—Sectional View of new Germain Metal-to-Metal Expanding Clutch.

Germain stand include a four-seated limousine by Van den Plas on an 18-h.p. chainless chassis and a double Royal phaeton fitted on a 14-h.p. chassis, which is identical to the 18-h.p., with the exception that the bore is 92 mm. instead of 102 mm., the stroke being 110 mm.

The Itala Cars.

The display of ITALA AUTOMOBILES, LTD., comprises a 45-h.p. chassis and a handsomely-finished limousine landaulet of similar power. As regards the mechanical details of the Itala vehicles, these remain practically the same as last year. The cylinders are cast in pairs, and the ignition is by low-tension magneto, the operating cams being located on the top of vertical rods which run up between each pair of cylinders. The throttle is controlled both by pedal and a hand lever on the steering wheel. The automatic carburettor is of the Itala Company's own design and construction, a notable feature being that the

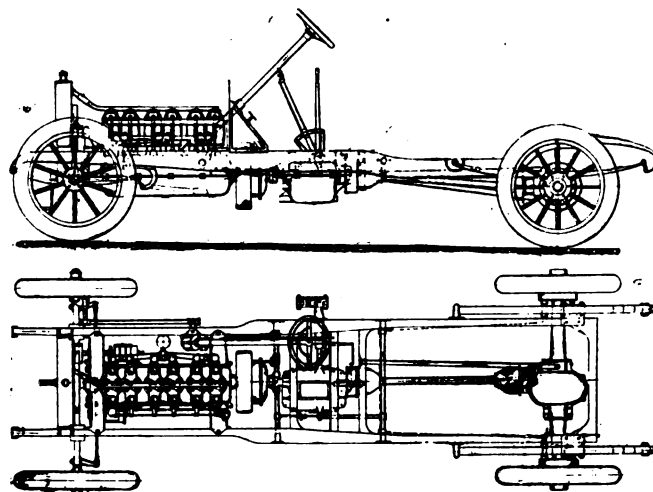


Fig. 45.—Elevation and Plan of Germain 20-h.p. Six-Cylinder Car.

induction pipes are provided with expansion joints. The clutch is of the metal-to-metal type, using flat discs, and is very sweet in action. A large but light ring universal joint is fitted between the clutch and the gear-box to allow for any want of alignment between the two parts. The transmission from the four-speed gear-box is by a cardan shaft and bevel gear to a well-designed live axle. The cardan joints have metal cup protectors, and ball bearings are fitted throughout.

The Standard Cars.

A car which, under the ægis of Mr. Friswell, has gained considerable prominence during the season is the Standard, built by the STANDARD MOTOR CO., LTD. For 1909 attention is being devoted to two models—20-h.p. six-cylinder, and a 16-h.p. four-cylinder vehicle, the latter being a new model. Dealing first with the six-cylinder car, the cylinders are cast in pairs, with the valves arranged all on one side; the dimensions are $3\frac{1}{2}$ in. bore by $4\frac{1}{4}$ in. stroke. The bottom half of the base chamber can be detached without disturbing the crank shaft bearings. The ignition is by Simms-Bosch high-tension magneto gear, driven off the same shaft as the water pump. A feature of the automatic carburettor is the ease with which the various parts can be de-

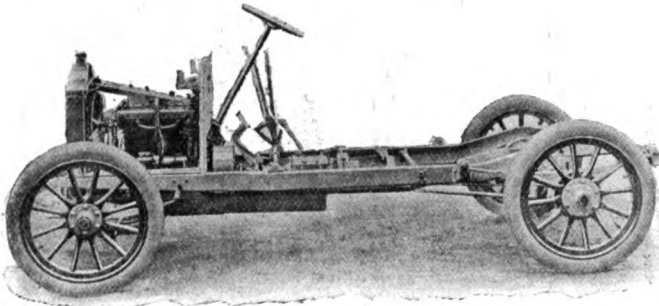


Fig. 46.—Chassis of "Standard" 16-h.p. Four-Cylinder Car.

tached for inspection without the use of any tools. The lubrication of the engine is effected by a pump fixed to the lower half of the crank chamber and driven by skew gear off the cam shaft. The central portion of the base chamber is made in the form of a well. The pump forces the oil through a filter to an indicator on the dashboard, and to a distributor, whence it passes to the different bearings of the engine, the surplus oil running back to the well. The dashboard indicator is a useful yet simple fitting; it consists merely of a small piston and piston-rod, normally kept back in its guide by a light spiral spring. When oil is circulating through the pipes the piston-rod is forced past the outlet in the guide to the distributor, its end projecting about an inch beyond the face of the cap of the guide. Thus so long as the rod is projecting when the engine is running, the driver is assured that the lubrication is being maintained. The clutch is of the metal-to-metal type, consisting of a single plate held between the flywheel and a floating ring, provision being made for easy adjustment. The gear box is very compact, reducing the length of the shafts to a minimum. The three speeds and the reverse are controlled by a lever working in a "gate." On the top speed the drive is direct through a cardan shaft to the live axle. The universal joints are of special design. Ball bearings are used to all parts except the engine. The chassis is of such a length as to permit of a large and roomy closed or open side-entrance body to be fitted. Various improvements have been introduced in the details; for example, the ignition wiring is more neatly arranged, and shock absorbers are now fitted to both front and rear springs.

Fig. 46 gives a view of the chassis of the new 16-h.p. model, which in general lines closely resembles the "twenty." The engine comprises four cylinders of the same size as on the six-cylinder model, the carburettor and oil pump being also identical. For the water circulation, however, the pump has been discarded in favour of the thermo-syphon system. As regards the transmission, the principal change in this model is that a clutch of the leather-faced cone type is employed; a double universal joint is provided on the shaft which connects it with the gear-box. The latter gives three changes of speed, the third being a direct drive to the live axle. The Standard vehicles are British built throughout, and are noteworthy for their silent and smooth running, as well as for their moderate price. The complete cars on view include a limousine, built to the order of Mr. Marshall Hall, K.C.; a collapsible coupé, of novel design, for Her Highness Princess Toussoun; and a standard side-entrance double phaeton.

The Vulcan Cars.

The VULCAN MOTOR COMPANY, LTD., Southport, have an excellent display of moderately-priced cars, ranging from 14-h.p. to 25-30-h.p., all fitted with four-cylinder engines. The 16-h.p. car is the company's latest production, and will well repay inspection. The engine has the cylinders cast in pairs, the bore and stroke being $3\frac{1}{2}$ in. by $4\frac{1}{4}$ in. The valves are arranged on opposite sides, operated off separate cam shafts,

and there are two systems of ignition—magneto and accumulators, both working through a synchronised distributor. A feature in connection with the ignition is seen in the means adopted for starting the engine on the switch. To this end, the distributor is arranged to move through a longer distance than usual, a quick to-and-fro movement of the ignition-lever on the steering wheel resulting in the firing of the charge in the cylinder, the piston of which has already commenced its downward stroke. The carburettor is of the automatic type, and comprises a new feature to keep the engine running steadily when working light—that is to say, when it is not driving the vehicle. When throttled down for this purpose, the mixture is entirely drawn through a small hole in the throttle. In front of the hole is a tongue piece like the reed of a motor-horn, so arranged that should the engine tend to race, the reed is, by the suction of the engine, attracted to the wall of the throttle, so covering the hole and stopping the supply of mixture. The engine is lubricated by a plunger pump worked off one of the cam shafts, a feature of the Vulcan system being that oil that has once been used is not again fed to the bearings, as is usual in other methods where the oil from the sump is pumped round and round. The big ends of the connecting rods dip into troughs in the base chamber, which hold just sufficient oil. The arrangement is such that all the oil is pumped to distributors on the dashboard; these are provided with regulating devices so that only the requisite supply is sent to the engine, any surplus which reaches the distributor passing directly back to the oil tank. The clutch is of the leather-faced cone type, and the gear-box, which is controlled by a lever working in a "gate," is adapted to give three speeds forward and a reverse, with direct drive on the third speed. The transmission is by a cardan shaft and bevel gear to a rear live axle. The latter has only the driving strain to withstand, the weight of the car being carried by the axle sleeve. The power is communicated to the hubs of the rear road wheels by dog clutches on the ends of the live shafts. The details of the vehicle are all on modern lines; for instance, a joint is provided between the clutch and gear-box to allow for any want of alignment between the two parts, and also to enable either to be dismantled without disturbing the other. A new point in connection with the universal joints of the cardan shaft is that the old leather grease-containing covers have been discarded in favour of a metal cap held up to its place by a light spring. The engine is

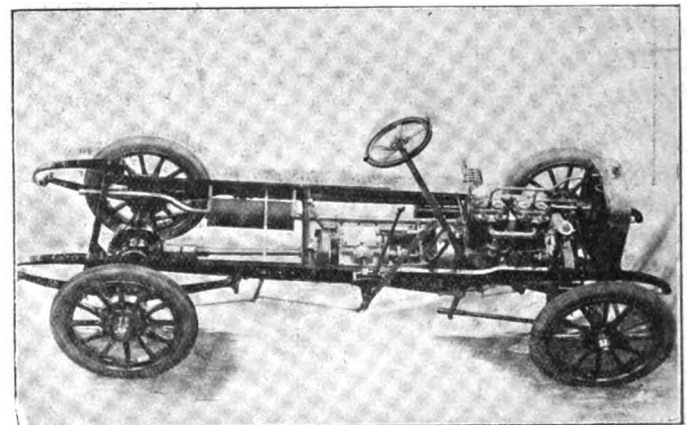


Fig. 47.—Chassis of Vulcan 16-h.p. Four-Cylinder Car.

provided with both foot and hand control, and the car is adapted to receive any type of carriage body. We may add that ball-bearings are used to all parts except the motor. The 14-h.p. Vulcan differs in but few respects from the 16-h.p.; the cylinder dimensions are $3\frac{1}{2}$ in. bore by $4\frac{1}{4}$ in. stroke. The complete cars on view include a 14-h.p. double phaeton, a 16-h.p. side-entrance touring car of special design, and a 25-30-h.p. landaulet. In the Vulcan cars the construction is such that each part of the transmission can be taken down without disturbing any of its neighbours. Altogether, the vehicles bear evidence of careful and well-thought-out design, and their moderate price should bring them many purchasers.

The Brooke Cars.

Messrs. J. W. BROOKE AND CO., LTD., Lowestoft, display examples of their two sizes of six-cylinder cars—viz., 25-h.p. and 40-h.p. These are of the live axle type, and while showing no startling deviation from the 1908 models, have been brought well up to date. The foot

brakes are now of the contracting type, in place of the internal expanding variety hitherto employed, while on the 25-h.p. model a forced system of engine lubrication has been adopted, the oil, which is contained in a sump in the crank chamber, being circulated by means of a pump driven by skew gear off one of the cam shafts.

The Mercedes Cars.

Admirers of the Mercedes cars—and they are many—will regret to find these well-known cars relegated to the Annex, especially as the exhibit is a noteworthy one in so far that the makers of the Mercedes vehicles, who have so long adhered to chain driving, are now turning out live-axle machines. Although the new 35-h.p. model (Fig. 48) made its appearance about the middle of the past season, it is now shown to the public for the first time on the stand of Messrs. DU CROS MERCEDES, LTD. Although a late comer, as it were, in the field of live-axle cars, the design of the new vehicle is such as to make an excellent impression at the first glance. The engine is of the usual Mercedes design; the bore and stroke being 110 mm. by 140 mm. The ignition is by low-tension magneto in conjunction with the Bosch magnetic plugs, which have already been illustrated in the *M.C.J.* A clutch of the multiple-disc type is employed in place of the coil pattern previously used in Mercedes practice. The gate-controlled gear-box is designed to give four speeds with direct drive on the top. The cardan shaft is entirely enclosed in a sleeve, which at its forward end terminates in a spherically-shaped casing, surrounding the universal joint, and independently supported on the frame. The sleeve thus acts as the torque rod, while the radius rods extend from the ends of the axle sleeve to

in one block. Simms-Bosch high-tension magneto only is fitted, while the carburettor is of a special type, differing from the 1908 model in that it has two jets, each being in a separate compartment and supplying one group of the cylinders. The clutch is of the multiple-disc type, with a cone clutch brake, the whole being contained in an oil-tight aluminium casing. The back axle is of the same design as used on the 1908 cars, except that it has been reduced in size in order to save weight. The rear suspension is by the La Buire patent double elliptic springs. A 24-h.p. polished chassis, fitted with a six-cylinder engine, (92 mm. bore by 120 mm. stroke) is also on view. The design of the engine, carburettor, gear arrangement, clutch, back axle and suspension are exactly the same as on the 16-h.p. chassis mentioned above. Another car to be seen is an 18-h.p. chassis, with rotund side entrance body. The latter has been designed to give the greatest possible comfort and at the same time decrease the weight and wind resistance. The chassis is fitted with a four-cylinder engine, bore 100 mm., stroke 130 mm., the cylinders being cast in pairs.

The Miesse Petrol Cars.

Two models of the Miesse petrol cars are staged by the MIESSE PETROL CAR SYNDICATE, LTD., Pelham Street, South Kensington, W.—viz., 14-16-h.p. and 24-30-h.p. The feature of these vehicles is the casting of the four cylinders together with the admission and exhaust pipes in one casting. The 14-16-h.p. engine has a bore of 80 mm. by 110 mm. stroke; the valves are located on opposite sides, while the high-tension magneto and water circulating pump are driven by worm-gearing. The carburettor is of the Zenith automatic type, of which a description has

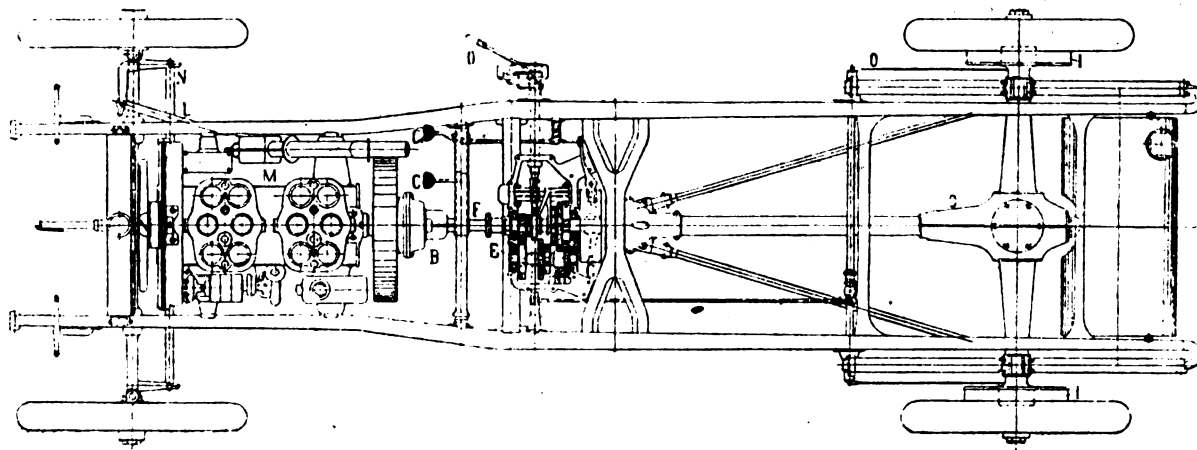


Fig. 48.—Plan of Chassis of Mercedes 35-h.p. Live Axle Car.

the spherical box. The differential gear is not mounted on the rear axle as is usual, but on a continuation of the bevel pinion shaft. The two halves of the live axle are thus driven through separate pairs of bevel wheels. The arrangement enables the live axle to be arched and the rear road wheels splayed as in chain-driven vehicles. A 15-20-h.p. car on similar lines is also being introduced for the 1909 season. Of the 45-h.p. chain-driven cars, a handsome limousine is shown with body, work by Lawtons. The engine has the valves arranged on opposite sides; the carburettor is of the piston throttle automatic type, while the ignition is by means of the Bosch "candle" or magnetic plugs. The side driving chains are enclosed in gear-cases.

The La Buire Cars.

The HOLLINGDRAKE AUTOMOBILE CO., LTD., the British agents for the La Buire cars, introduce two new models for the 1909 season. The first is a light 12-h.p. vehicle, designed for use as a private town carriage or for country station work. The engine comprises four cylinders cast in one block, the inlet and exhaust valves being on opposite sides. The ignition is by Simms-Bosch high-tension magneto, the La Buire patent carburettor being also fitted. A noteworthy feature of the chassis is that the clutch, brake, and gate-controlled change-speed gear are all contained in the same casing. The back axle is of a patent bridged type, and is of the same design as fitted to the other models mentioned below. A good deal of interest is being shown in the second new model, a 16-h.p. six-cylinder vehicle, of which a chassis is shown. This is being built with two different types of frames, one being under-swept at the back for landaulets, &c., and with the ordinary type of straight frame up-swept at the rear for touring car purposes. The engine, which has a bore of 80 mm. and a stroke of 120 mm., is similar in design to the other six-cylinder models, three cylinders being cast

already been given in the *M.C.J.* The transmission is through a clutch of the Hele-Shaw type, with corrugated discs, and three-speed gear-box, giving a direct drive on the top speed to the live axle. Ball-bearings are used to all parts except the engine. The 24-30-h.p. car has an engine comprising four cylinders, 110 mm. bore by 120 mm. stroke. The crank shaft, which is of nickel steel, has five bearings. The lubrication is maintained by a pump, which forces the oil to all the main bearings and connecting rods. All the gears on the cam and engine shafts are enclosed in a dust-proof case. The ignition is by a Simms-Bosch high-tension magneto, while the carburettor is of the Miesse special design, with gravity feed, and automatic air regulator. The clutch is of the multiple-disc type, running in oil, the change-speed gear is adapted to give three speeds with direct drive on top speed. The final drive is by a cardan shaft and bevel gear. The universal joints are of new design, and are provided with dust-tight grease cups. The back axle is of a strong design; it runs on large-diameter ball-bearings, ball-thrust bearings being also fitted to take the thrust of the wheels.

The Werner Cars.

MESSRS. BURGESS AND HARVEY, LTD., who have acquired the British agency for the Werner light cars, are showing a couple of the latest examples of the 9-h.p. type. The motive power is supplied by a De Dion single-cylinder engine, 100 mm. bore by 130 mm. stroke, fitted with improved carburettor and Bosch high-tension magneto ignition. The water circulation is on the thermo-siphon system. The transmission is through a special pattern of leather-faced cone clutch, and three-speed gear-box to a live axle. The vehicle, which is fitted with a two-seated body, has a neat appearance and, judging from the details, should prove a reliable little machine.

The Pilgrim Cars.

A new car of exceedingly novel design is the 9-h.p. "Pilgrim," exhibited by the PILGRIM'S WAY MOTOR COMPANY, LTD. The vehicle is fitted with a horizontal two-cylinder opposed air-cooled engine, $3\frac{1}{2}$ in. bore by 3 in. stroke, developing according to the R.A.C. rating 9-h.p.; the main feature of the design is that the power of the engine is transmitted to the front steering wheels through an epicyclic change-speed gear, giving three forward speeds in addition to the reverse; the front wheels thus support the whole of the weight of the engine and gear, the rear pair having only to carry the weight of the passengers. The car, which is provided with a two-seated runabout body, is mounted on 30-in. wire-spoked wheels of the detachable type, so that when a spare one is carried, and a puncture is experienced, a

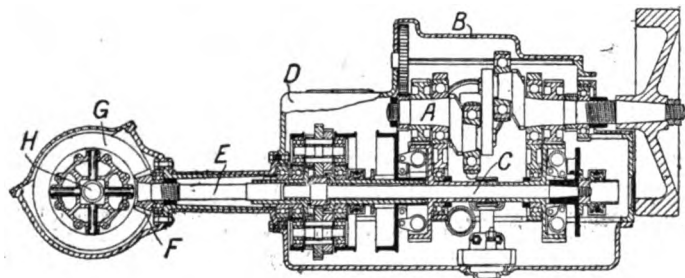


Fig. 49.—Sectional View of Engine, Change-Speed Gear and Front Axle of Pilgrim Two-Seated Car.

| | | |
|-----------------------|-------------------|-----------------|
| A.—Crankshaft. | D.—Gear-box. | G.—Bevel wheel. |
| B.—Base chamber. | E.—Driving shaft. | H.—Front axle. |
| C.—Shaft to gear-box. | F.—Bevel pinion. | |

complete new wheel and tyre can quickly be fitted in position. Another new departure is seen in the fitting of brakes on all four road wheels. The car, which has a wheel base of 7 ft., weighs, complete, only 6 cwt. The company is also showing one of their standard 32.4-h.p. (R.A.C. rating) "Pilgrim" chassis, with a three-quarter landaulet body of improved design; it is made with the rear seat wide enough to seat three persons, and well forward of the back axle, which, together with its easy springing, make it an exceedingly comfortable carriage. The engine, which is mounted in the centre of the frame, comprises four horizontal cylinders all located on the same side of the crank shaft. The cylinders, which are $4\frac{1}{2}$ -in. bore by 5-in. stroke, are cast separately but complete with water-jacket. The cam shaft is arranged so that it can be quickly detached, while the large inspection doors fitted to the crank chamber enable a piston to be withdrawn without it being necessary to dismantle the engine. The lubrication is effected by a valveless or oscillating pump located in the crank case, which forces the oil from the base chamber through a distributor to the different bearings, the oil returning to the tank to be repumped. The transmission is through an epicyclic type of change-speed gear, which runs on ball-bearings, and the pinions of which are all externally cut. The gears are automatically operated by one pedal and an indication lever, which can be set at any time to the gear required. By this means a depression of the pedal instantly brings the proper gear into use without any cessation in the pull of the engine on the car. The final drive is by a single central chain, which is enclosed.

The Stanley Steam Cars.

The number of steam cars on view is this year increased by those of the Stanley type, which are exhibited at Olympia for the first time by Messrs. W. GALLOWAY AND CO., of Gateshead, who have now a London depot at 13, West Street, Shaftesbury Avenue, W.C. Without finding it necessary to change the general system, the makers of the vehicles have introduced a number of detail alterations. In the first place the method of working the pumps has been largely altered for 1909; the former method, simple though it was, employed a considerable number of working and wearing parts in the shape of levers and links; these have been reduced in the new models to one quarter of the number, the whole being worked by one pair of strong links. A great saving of space is at the same time effected, the whole system of pumping water, fuel, and oil being now more compact and accessible. The copper engine cover is provided with inspection doors; and the lubrication of the running parts of the engine being now effected with otherwise waste cylinder oil after passing through the cylinders, it will seldom be necessary to remove the engine cover itself. The 10-h.p. car will perhaps be the most popular, providing at a popular price a noteworthy combination of comfort and power with absolute simplicity of control. The wheel base of this model has been lengthened, and the

incline of the steering column increased, adding greatly to the comfort of the driver and making the whole car ride more easily. In the body design alternatives are offered to purchasers of a luggage platform or single or double rumble seat at the back. Examples of the 20-h.p. four-seated double phaeton and a speedy 20-h.p. two-seater are also on view.

The Ford Cars.

Messrs. PERRY, THORNTON AND SCHREIBER, LTD., display examples of the latest models of the Ford 15-h.p. and 20-24-h.p. four-cylinder cars. The 15-h.p. shows very little change from last year. The 20-24-h.p. is a new model, in which the four cylinders, $3\frac{1}{2}$ in. bore by 4 in. stroke, are cast in one piece, with the valves arranged all on one side. The ignition is by low tension magneto, while the carburettor is of a special automatic float-feed type. The transmission is through a planetary or epicyclic type of gear-box and cardan shaft to a live axle. The suspension of this vehicle is on exceedingly novel lines, there being only two springs, both arranged transversely, one at the front and the other at the rear of the frame. The Ford cars are notable for the low prices at which they are put on the market, this being, it is claimed, only rendered possible by the absolute standardisation of the various parts and the very large outputs of cars, stated to be 25,000 per annum, from the Ford factory.

The Sheffield Simplex Cars.

We referred last week to the new features of the chassis of the Sheffield Simplex 45-h.p. six-cylinder car. A brief reference may be made to the complete cars on view, and particularly to what may be termed as a double limousine. The whole of this body, which was built by Messrs. Sir WM. ANGUS, SANDERSON AND CO., Newcastle-on-Tyne, is covered in, driver's seat included, while inside is a special arrangement whereby a bed can be pulled out so that the owner can lie comfortably at full length inside the car. This car is painted in a very conspicuous canary colour and upholstered in dark grey cloth, relieved by gold lace. Another Angus-Sanderson body on this stand is a two-seater of a novel design. The rear seat is made to fold up, so when out of sight the back portion looks like a large tool-box. When open, however, the seat is particularly comfortable and is well adapted for a servant, leaving plenty of room for luggage in front of his feet, for touring.

The Electric Vehicle Co.

An attempt is being made to popularise electric motor-cars by the ELECTRIC VEHICLE CO., LTD., who have on view an elegant victoria (Fig. 50), with folding spare seat at the rear. Outwardly the vehicle follows the general appearance of a petrol car, the space under the bonnet serving to accommodate thirty of the forty Tudor accumulators which supply the energy to drive the car, the remainder being carried at the rear. The battery, which weighs about 11 cwt., has a capacity of 200 amp.-hours at a five hours' discharge rate. The motor, which is located at about the centre of the frame, is of the series wound

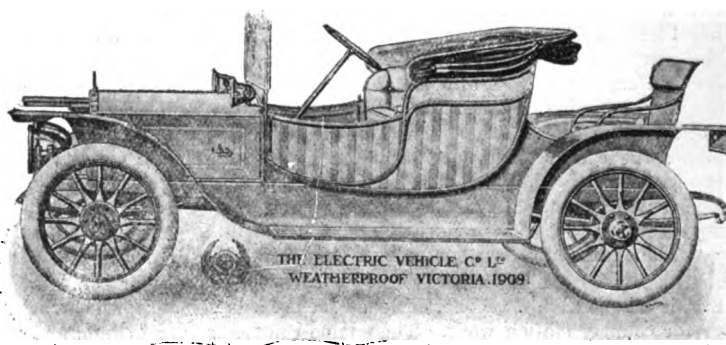


Fig. 50.—The Electrical Vehicle Company's Victoria.

type, and drives the rear live axle through a cardan shaft and worm gear. The controller, which is connected up to both the battery and the motor, is arranged to give nine forward and three reverse speeds: it is actuated by a lever on the steering wheel. The makers claim that the car can run a distance of from 80 to 100 miles on one charge, at an average speed of eighteen miles per hour, and that it is consequently well suited for touring purposes. We understand that the Tudor Co. are prepared to maintain the battery in perfect condition for £25 per annum. The car has an attractive appearance, and on account of its quiet and easy running will doubtless meet with the approval of many motorists.

The Rover Cars.

For the 1909 season the ROVER COMPANY, LTD., Coventry, are turning out no less than five models—viz., 6-h.p., 8-h.p., 12-h.p., 15-h.p., and 20-h.p. Except for detail improvements the 6-h.p. and 8-h.p. models, which are fitted with single-cylinder engines, remain on similar lines to those of the past year. The 12-h.p. car is fitted with a two-cylinder engine and three-speed gear-box, and is designed to receive a four-seated touring body, access to the rear seats being obtained by swinging round half of the front seat. The novelty at the stand in the new Rover 15-h.p. car (Fig. 52), which has many points of interest. The cylinders of the four-cylinder engine (85 mm. bore by 110 mm. stroke) are cast in pairs, with the valves all on one side. With the view of rendering the motor as quiet as possible, the valve

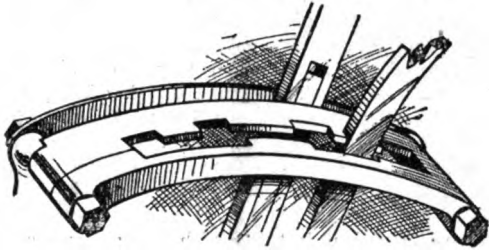


Fig. 51.—The Change-Speed Gear Quadrant for the Rover 8-h.p. and 20-h.p. Cars.

stems and tappet guides are enclosed by large detachable plates. Ignition is by coil and accumulators, provision being also made for the installation of a magneto; the lubrication is controlled by a pump, which forces the oil to all the main bearings. A feature of the motor is that it is designed to be used as a brake in descending steep hills. The cam shaft is of special design, and, in addition to lifting the inlet and exhaust valves in the usual way, is so constructed that it can be used to effect an engine or compression brake. By moving the cam shaft in a longitudinal direction by means of a pedal, the inlet valves are kept closed, while the exhaust valves are lifted twice to every revolution of the shaft, with the result that air is taken in from the exhaust pipe on every downward movement of the piston, compressed on the upward stroke, and then exhausted. The inlet valve being permanently closed, no gas is admitted to the combustion chamber, with the result that the engine is working under compression, which effectually retards its

tion to the ordinary slots corresponding with the respective gears, a stop is placed on the opposite side of the quadrant in order to prevent the incautious driver passing the desired gear. The lever itself is hinged near its fulcrum, and provided with a coil spring, the latter holding the lever to the gear notches. The slightest pressure sideways is sufficient to overcome the spring, when the lever can be moved along until arrested by the stop, when it automatically slips into the gear notch required.

The Alldays Cars.

Three different sizes of the Alldays cars are exhibited by Messrs. ALLDAYS AND ONIONS, Birmingham—viz., 10-h.p. two-cylinder and 14-h.p. and 20-h.p. four-cylinder. Of the first-named type of cars both two-seated and four-seated bodies are on view, the former being well adapted for the use of doctors and other professional men. A special two-seated car is also shown fitted with a four-speed gear-box, in which the direct drive is on the third speed; the control is by a single lever working in a "gate." The 14-h.p. car is fitted with a roomy side-entrance body, having accommodation for five persons, while the 20-h.p. landaulet is also a striking vehicle. As regards the changes in the mechanical portion of the chassis of the Alldays cars for the coming season, these are to a large extent confined to details. It may be mentioned, however, that all the different types are now being fitted with a gear-driven pump for the lubrication of the engines. Improvements have also been introduced in connection with the ignition contact-maker, while a useful fitting is a small lever near the starting-handle for flooding the carburettor.

The Sizaire-Naudin Cars.

The marvellous speed attained during several of the leading racing events of the past year has brought the little Sizaire-Naudin voiturettes into greater prominence than ever, the three vehicles exhibited by Messrs. JARROTT AND LETTS, LTD., the British agents, having been the centre of attraction throughout the week. The cars on view include a standard two-seater, a special two-seated touring car, with hood, glass screen, side doors, luggage platform, &c., and a standard four-seated car. The motive power of these machines is supplied by a 12-h.p. single-cylinder engine, 120 mm. by 130 mm. stroke. The carburettor is of the automatic float-feed type, and is so arranged that it can be dismantled by simply undoing one nut. The jet can also be readily taken out. An ingenious fitting is a button-ended rod which projects through the radiator and enables the air supply to the carburettor to

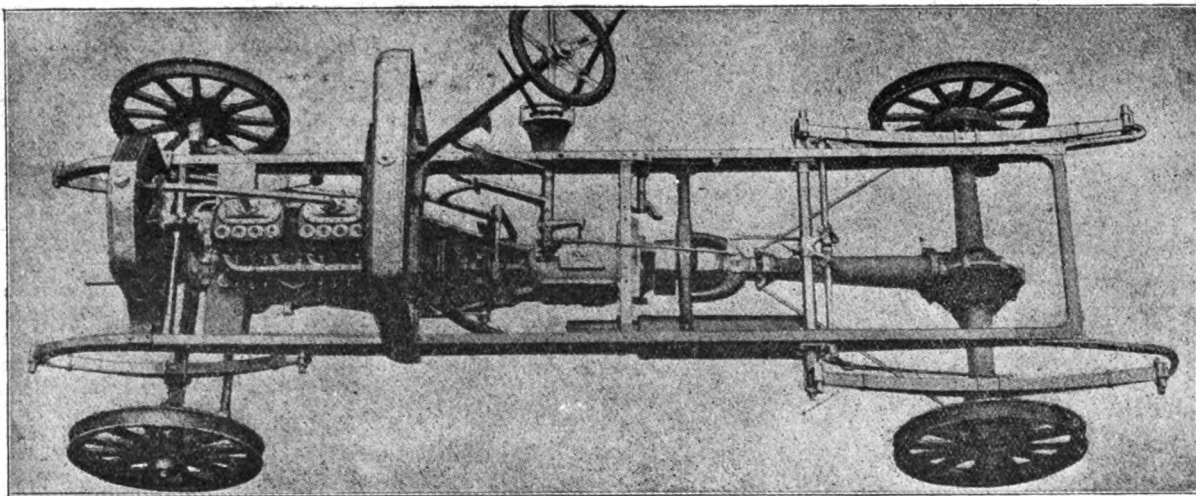


Fig. 52.—Chassis of Rover 15-h.p. Car.

movement, and at the same time it is being cooled. The arrangement has proved so effective in practice that it is claimed to be sufficient to hold the car, when the low speed is engaged, on almost any hill. The engine and gear-box are bolted together to form a unit. The clutch is of the Rover plate type, with easy means of adjustment. The gear-box is adapted to give three speeds, with direct drive on the top to the rear axle, to the design of which special care has been directed. The frame is supported on four semi-elliptic springs. The 20-h.p. car, which has a three-point suspension, shows but little change from last year. Fig. 51 shows the change speed quadrant, now employed on this model, as also on the 8-h.p. Rover. It will be seen that, in addi-

tion to the ordinary slots corresponding with the respective gears, a stop is placed on the opposite side of the quadrant in order to prevent the incautious driver passing the desired gear. The lever itself is hinged near its fulcrum, and provided with a coil spring, the latter holding the lever to the gear notches. The slightest pressure sideways is sufficient to overcome the spring, when the lever can be moved along until arrested by the stop, when it automatically slips into the gear notch required.

be shut off when starting up the engine. The ignition is by Bosch high-tension magneto, provision being made for a supplementary accumulator and coil system. The water circulation is on the thermosiphon principle, a circular horizontal water tank being fixed behind the radiator as a supplement to the latter. Transmission is through a single metallic-disc clutch and a special form of three-speed gear-box, giving a direct drive on all speeds. The change-speed mechanism forms a forward extension of the back axle casing, a new departure being the fitting of ball-bearings. The four-seated car has a slightly longer frame than the two-seater, semi-elliptical springs being also fitted at the rear instead of the customary Sizaire suspension.

The Renault Cars.

As usual, the display of Messrs. RENAULT FRÈRES is attracting considerable attention; the exhibit comprises examples of the 10-14-h.p., 14-20-h.p., 20-30-h.p., 35-45-h.p. four-cylinder cars, and one of the 50-60-h.p. six-cylinder vehicles, with Berlin limousine body arranged to be driven from the inside. So far as the details of the mechanism are concerned, these show very little change. The larger cars are provided with a self-starting device on the Saurer system, and shock absorbers of special design are fitted in connection with the springs, which are of the semi-elliptic pattern at the front and three-

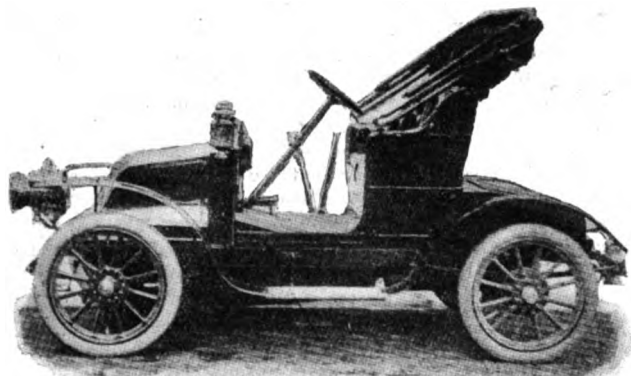


FIG. 53.—The Renault 8-h.p. Voiturette.

quarter-elliptic at the rear. For the 1909 season the Renault firm have brought out a new 8-h.p. voiturette (Fig. 53), which has met with much appreciation. The new vehicle follows in general arrangement very much on the lines of the Renault taxi-cab. The engine is of the two-cylinder type, 75 mm. bore by 120 mm. stroke. Ignition is by high-tension magneto, and, as in all Renault cars, the water circulation is by thermo-syphon in conjunction with a radiator fixed just in front of the dashboard. The transmission is through the usual leather-faced cone clutch and three-speed gear-box, giving a direct drive on the top to the rear live axle.

The Phoenix Cars.

A concern which makes its *début* at Olympia is PHOENIX MOTORS, LTD., of Blundell Street, London, N., who are showing examples of the Phoenix 8-h.p. and 10-12-h.p. cars. No alteration has been made in the 8-h.p. two-seater car (Fig. 54), the outstanding features of which are its moderate first cost and nominal upkeep. Briefly, the car is fitted with an 8-h.p. two-cylinder engine, which drives by means of Renold chain straight through to the epicyclic change-speed gear, whence the power is again transmitted by a similar chain to the back axle. On the

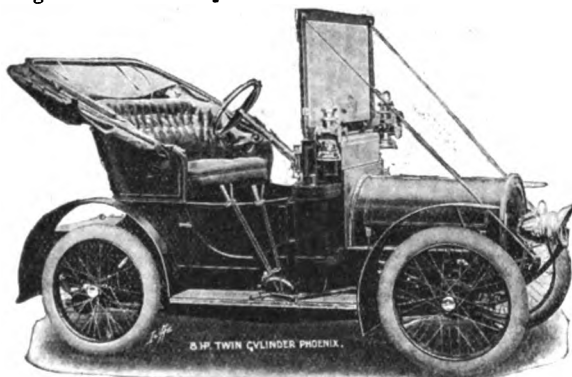


FIG. 54.—The Phoenix 8-h.p. Twin-Cylinder Car.

high speed the epicyclic gear is locked, and, this running on a ball-bearing countershaft, gives a straight through drive from engine to road wheels. The clutch is of the multiple plate type running in oil. Interest is being centred in the 10-12-h.p. car (Fig. 55), which the company have this year placed upon the market after twelve months' tests. The new model, which is provided with a four-seated body, is equipped with a two-cylinder engine, 90 mm. bore by 100 mm. stroke. The water circulation is by thermo syphon, ample radiating space being provided, obviating the necessity of a pump. The gravity supply petrol tank, which forms part of the dash, is provided with a gauge glass showing at a glance the amount of petrol in the tank. The clutch

is combined with the flywheel and is of the single plate type. The drive is taken by a Renold silent non-stretching chain from the engine to the ball-bearing three speed and reverse gear-box, the teeth of the pinions of which are no less than six pitch, giving an immense margin of strength. The drive is again taken from the gear by means of a similar chain to the rear live axle, the transmission being thus entirely by parallel shafts. Large internal metal-to-metal expanding brakes are fitted to the driving wheels, while a further brake operates on the drum of the differential. Hoffman ball-bearings are fitted to all running parts.

The Nagant-Hobson and Decauville Cars.

Three sizes of the Nagant-Hobson vehicles are displayed by Messrs. H. M. Hobson, LTD.—viz., 14-18-h.p., 20-30-h.p., and 35-40-h.p.—all fitted with four-cylinder engines. The 14-18-h.p. car is a new live axle model; the motor (90 mm. bore by 110 mm. stroke) is provided with mechanical lubrication, high-tension magneto ignition, and thermo-syphon water circulation. The crank shaft is slightly *desaxé*—that is, out of line with the centre of the cylinders, this being done to get a more vertical thrust on the explosion stroke. The clutch is of the multiple disc type, and the three-speed gear-box gives a direct drive on the top speed through the cardan shaft and bevel gear to the live axle. The 20-30-h.p. car (106 mm. bore by 130 mm. stroke) differs from the above in that it is fitted with two systems of ignition—low-tension magneto and coil and accumulators. The gate-controlled gear-box gives four speeds, and the final drive is by side chains. The car on view is fitted with an attractive form of five-seated landaulet body, and arranged to be driven from the inside. The largest-powered Nagant-Hobson chain-driven car is a 35-40-h.p., with special coupé-landaulet body, by Kellner, of Paris. The engine comprises four cylinders, 125 mm. bore by 140 mm. stroke, cast in two pairs, with

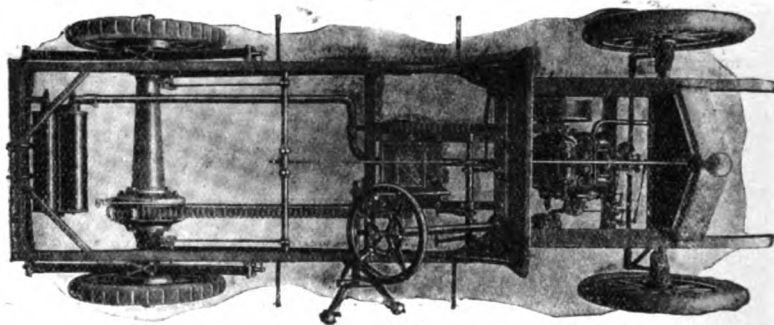


FIG. 55.—The Phoenix 10-12-h.p. Chassis.

the valves arranged on opposite sides. The ignition is by low-tension magneto, coil and accumulators being installed as a reserve. Turning now to the Decauville cars, two examples of these are to be seen. The first is a 12-16-h.p. four-cylinder side-entrance car. The engine is fitted with mechanical forced feed lubrication and both high-tension magneto and accumulator ignition. The transmission is through a leather-faced cone clutch, three-speed gear-box and cardan shaft to the Decauville standard live axle. The change-speed lever works in a push-through quadrant of new design, giving a positive stop against each speed, so that it is impossible to overrun the desired notch. A foot brake of the internal-expanding type has been adopted, and the rear part of the frame is now supported on three-quarter elliptic springs. The 16-20-h.p. car shown is very similar in general arrangement to the 12-16-h.p. car mentioned above.

The Deasy Cars.

The chief new departure on the part of the DEASY MOTOR-CAR MANUFACTURING COMPANY, LTD., is the introduction of a 15-h.p. four-cylinder car. The engine, which has a bore and stroke of 90 mm. by 120 mm., has all the four cylinders in one casting; the valves are operated off a single cam shaft, while the crank shaft rotates on ball bearings. The transmission is through a three-speed gear-box and bevel gear to a live axle. The sleeve surrounding the latter is of an entirely new design, being made of solid-drawn tubes, the flanges and casing for the ball bearings all being drawn in one piece. The Deasy 25-h.p. and 35-h.p. cars remain very much the same as in the 1908 models, the improvements being confined to details. The company's exhibit consists of a chassis of the new 15-h.p. type and one of the same power fitted with a landaulet body; a 25-h.p. touring car with Cape cart hood and windscreen; and a 35-h.p. cabriolet similar to the one recently supplied to Lord Fitzhardinge.

The B.S.A. Cars.

A new model of the B.S.A. cars for the coming year is a 14-18-h.p. vehicle, based on the same lines as the company's 18-23-h.p. machine. The engine comprises four cylinders, 90 mm. bore by 100 mm. stroke. They are cast in pairs, with the valves operated off a single cam shaft. The ignition is by high-tension magneto, and the water circulation is by thermo-syphon, no pump being employed. The transmission is through a leather-faced cone clutch, gate controlled three-speed gear-box and propeller shaft to a live-axle. A feature of the steering gear, which is made under the B.S.A. patent, is that all

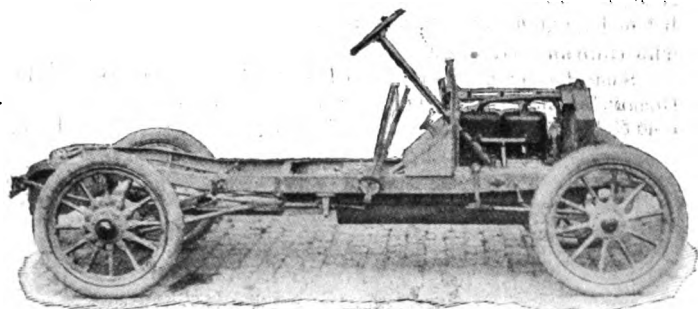


Fig. 56.—Chassis of the B.S.A. 18-23-h.p. Car.

the joints are by solid connections consisting of forked pieces and studs.

The 18-23-h.p. car (Fig. 56) is very similar to the 1908 model, the only alterations being that the frame is now pressed with the inner and outer members in one piece, while the wheel base has been increased from 9 ft. to 9 ft. 6 in., which gives more room for a side entrance body, with wide door, and will also be found very suitable for a roomy single landaulet body, with luggage extension and screen, and in every instance the engine has been found to have ample power for the load. The motor (98 mm. bore by 120 mm. stroke) remains exactly the same as last season, as also the disc clutch, gear-box and axles.

A new type of automatic carburettor has been fitted, which, whilst giving slow running, is claimed to afford a remarkably quick pick-up, with no tendency, even if the car has been running continuously in traffic, for the engine to choke. It is entirely automatic and free from any delicate adjustment or parts likely to cause trouble through wear.

The 25-33-h.p. car (bore 115 mm., stroke 130 mm.) is exactly the same as last year, with the following exceptions:—An improved automatic air valve to the carburettor; balanced differential brake (locomotive type), and a modified form of clutch of the multiple disc pattern, the plates being larger in diameter and of the different type as used on the 18-23-h.p. car. The details of the different models all bear signs of careful design and construction; accessibility has not been neglected, while provision is made for the rapid adjustment of the brakes and other components which may occasionally require such attention. Briefly, it may be said that the Birmingham Small Arms Co. mean that their cars shall earn as high a reputation as that enjoyed by their cycle productions.

The "F.N." Cars.

Among the cars of Belgian construction which have created a favourable impression since their introduction into this country are the "F.N.," built by the FABRIQUE NATIONALE D'ARMES. Two models are shown by the "F.N." Motor Agency on the stand of the Gobron-Brillie Co. Quite a new model is seen in an 8-12-h.p. chassis, designed to receive a side-entrance body. The motive power is supplied by a four-cylinder engine, 72 mm. bore by 90 mm. stroke, having the valves arranged on opposite sides and the crank shaft slightly *desaxé*. The water circulation is on the thermo-syphon system, while the lubrication is maintained by a small pump. The ignition is by high-tension magneto. The transmission is through a leather-faced cone clutch, gate-controlled three-speed gear-box and cardan shaft, to a live axle. Ball bearings are used to all parts except the engine. The control of the engine is by a single lever; the clutch pedal is, however, also so connected with the throttle that as the clutch is withdrawn the speed of the engine is cut down. Every attention appears to have been paid to the question of accessibility, while the matter of easy adjustment has not been overlooked. In this connection it may be mentioned that provision is made for adjusting the clutch and brake

pedal to suit different drivers. The "F.N." 14-16-h.p. car shows a few detail changes from the model which has already been described in these pages. The engine in this case is provided with a gear pump for the water circulation. The three-speed gear gives a direct drive on the top speed to the live axle, the lay or secondary shaft in the gear-box being then idle.

The Maudslay Cars.

Several very fine examples of these cars are to be seen at the stand of the MAUDSLAY MOTOR Co., LTD., Coventry, including a 25-30-h.p. live-axle vehicle, with landaulet body by Thorn; a 35-45-h.p. live-axle machine, with limousine body by Lawton; and a 35-45-h.p. chain-driven machine, with extended landaulet body by McNaughts. In order that the details of the Maudslay construction—one of the great features of which is the accessibility of the various parts—may be inspected, a polished chassis of the 25-30-h.p. live-axle model is also shown. Generally speaking the design has undergone but little change; a few detail improvements have been introduced, such as, for example, arranging the throttle and ignition control-lever section so that it does not move with the steering wheel.

A change has also been made as regards the brakes. Instead of both the brakes being contained in a drum mounted on the rear road wheels, as hitherto, the whole of this drum is now given up to the hand-controlled brakes, the foot brake acting on a drum mounted on the propeller shaft immediately behind the gear-box.

The engine is of the special design associated with the Maudslay Co., comprising four cylinders cast in pairs, with the valves all located directly in the cylinder heads, they being operated off an overhead cam shaft, which in its turn is actuated by a vertical spindle driven through gearing at the forward end of the crank shaft. The cam shaft is pivoted so that by loosening the retaining bolts it can be swung clear of the valves, allowing any of the latter, together with their springs and seatings, to be instantly removed. The base chamber is provided with detachable doors of such a size that not only can the crank shaft and big end bearings be readily inspected, but, if occasion arises, a complete piston and connecting rod can be withdrawn without it being necessary to dismantle the engine. With a view of furnishing a long cardan shaft so that the acuteness of the angle between the rear of the gear-box and the differential casing shall be reduced to a minimum, the gear-box itself is located close up to the clutch. The live-axle construction is of an interesting design. The axle sleeves and differential casing are all in one piece, and made from a single forging. The latter is first slit in the middle, and is then drifted out

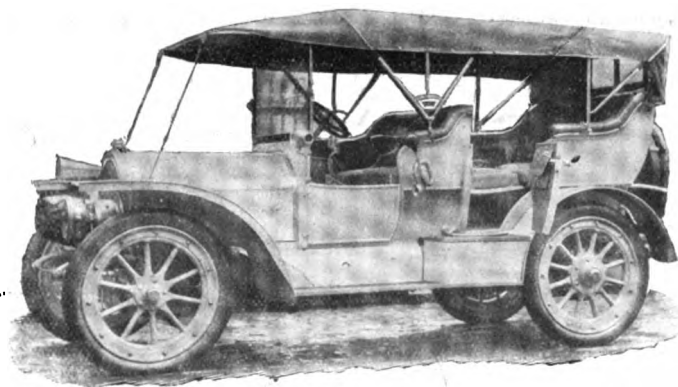


Fig. 57.—The Maudslay 35-45-h.p. Live Axle Phaeton specially built for a 12,000 miles tour Mr. G. Cecil Gaapp, the London manager of the company, is about to make through India and Ceylon.

A clearance of 12 in. is given from the ground and special arrangements have been made for extra radiation and carburettor adjustment. The body is upholstered in raton and the front seats are made to fall back and join up with the back seat, thus forming two 6 ft. beds. The vehicle is fitted with Shrewsbury Challiner rims, Avon tyres, Eloriot lamps, and the coachwork is by Messrs. Thorn.

to form a loop or bridle which can accommodate the driving and differential mechanism. The extremities are afterwards machined to circular form and bored through to accommodate the live shafts. The front and rear sides of the loop in which the differential is supported are closed by two light aluminium dished covers. By detaching the rear one and by removing the hub caps and slightly withdrawing the live shafts, the bevel pinions and the differential gear can be lifted out, enabling these parts to be readily inspected or the gear ratio changed without difficulty.

The S.K. Simplex Car.

The new "S.K. Simplex" light car, made by Messrs. SMEDLEY AND KENNEDY, LTD., Newcastle-on-Tyne, makes its first public appearance at the London Show, and, in view of its many interesting features, has attracted a large amount of attention during the present Olympia week. An illustrated description of the vehicle was given in the *M.C.J.* of May 30th last, but as several improvements and modifications have since been incorporated, the following particulars will be of interest. The frame, which is of pressed steel, is supported on three springs—a single transverse semi-elliptic at the front, and two long flat springs at the

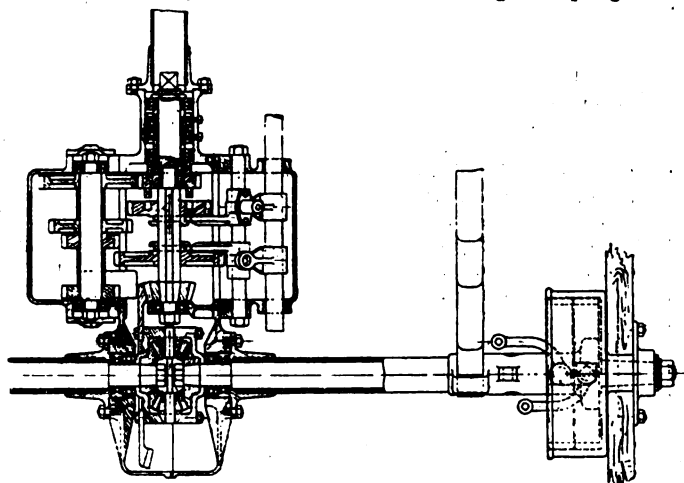


Fig. 58.—Part Sectional Plan of Gear-Box and Back Axle of S.K. Simplex Car.

rear. Four radius rods are also provided—two from the front axle and two from the back axle—these converging towards two central brackets. The motive power is supplied by an 8-10-h.p. two-cylinder engine, $3\frac{1}{2}$ -in. bore by $4\frac{1}{2}$ -in. stroke, the valves are actuated by an overhead cam shaft, the latter being driven by bevel gear and a vertical spindle. The cam shaft, which runs on ball-bearings, is enclosed in an aluminium casing; the latter is attached to the top of the cylinder casting in such a way that it may be instantly removed by slackening the hinged wing nuts. A point of interest is that both pistons are set to rise and fall together, thus giving a steady torque; the difficulty of balancing is got over by employing two heavy internal flywheels in addition to the external one.

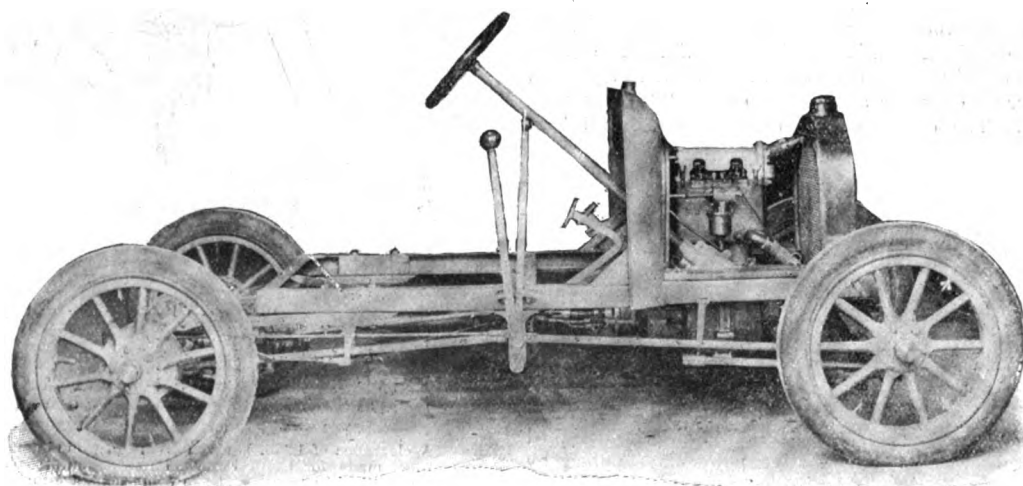


Fig. 60.—Chassis of S.K. Simplex 8-10-h.p. Car.

The water circulation is on the thermo-syphon system, no pump being employed. The cooling effect of the radiator is assisted by a fan formed in the engine flywheel. The ignition is by high-tension magneto, while the mixture is furnished by an automatic carburettor, this being bolted direct on to the cylinders. Passing now to the transmission, a clutch of the internal expanding metal-to-metal type is employed; the expansion is effected by a sliding cone, which allows of the use of a light clutch spring. The drive is conveyed by a cardan shaft to a combined gear-box and back axle (Fig. 58), which are fitted with ball-bearings throughout. Three speeds and a reverse are controlled through a "gate"

type of quadrant. Only a single selecting rod is used to obtain the various speeds. The torque is taken through a torque tube on to a ball-bearing mounted on the cardan shaft close up to the universal joint. The brakes are of the internal-expanding type. The makers prefer to take all braking strains at the point where they are required—viz., at the road wheels, both the foot and hand brakes working in drums attached to the rear road wheels (Fig. 58). The car is being supplied with a comfortable two-seated body (Fig. 59); the wheel base is 7 ft. 6 in., and the 760 mm. road wheels are shod with 90 mm. tyres. Altogether the new "S.K. Simplex" car is a noteworthy addition to the list of high-grade vehicles at a popular price.

The Gobron-Brillié Cars.

Some fine examples of the Gobron-Brillié cars are shown by the GOBRON-BRILLIÉ Co., including a 70-90-h.p. six-cylinder vehicle, and a 40-60-h.p. four-cylinder seven-seated limousine, the latter being one

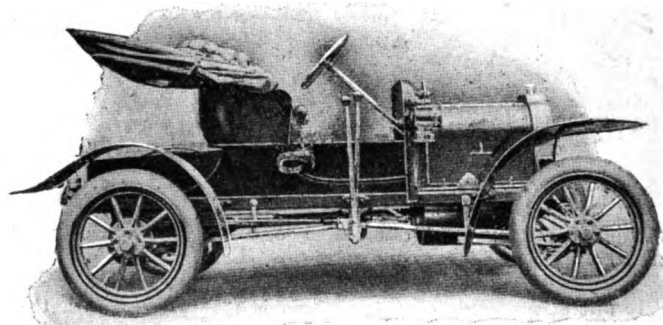


Fig. 59.—The S.K. Simplex 8-10-h.p. Two-Seated Car.

of the most highly-finished cars in the show. It will be remembered that the engine of these cars differs from the usual design in that there are two pistons in each cylinder, they being driven apart by the firing of the explosive mixture. Another point of note is in the clutch: these are of the compound or double type, the first engagement being between metal-to-metal surfaces, after which the leather cone clutch comes into action.

The Rothwell Cars.

Two chassis and an equal number of complete vehicles form the exhibit of the ECLIPSE MACHINE Co., LTD., Oldham, for whom Mr.

W. G. James is the London agent. For the coming season two sizes are being made—20-h.p. and 25-h.p.—both fitted with four-cylinder engines and live axles. The inlet valves are of the overhead type; the water circulation is by thermo-syphon, no pump being used; a current of air is drawn through the radiator by means of a fan formed on the periphery of the flywheel. The transmission is through bevel gear to a well-designed live axle. The clutch is of a special leather-faced cone type, rubber buffers engaged with apertures in the cone to allow of progressive engagement, and thus do away with any shock on starting.

SOME ACCESSORY EXHIBITS.

W. and G. Specialities.

From the Panhard Works of Messrs. W. and G. Du Clos, at Acton Vale, London, come a large selection of accessories and component parts.



Fig. 61.—The W. and G. Plug.

Included in the display is the W. and G. plug, the electrode of which is made of one solid piece of pure nickel—an important advantage so far as the durability of the plug as well as its efficiency is concerned. There is only one firing point, which invariably produces a blue-white spark of great intensity, firing the weakest charge with certainty. The plug has been well tested before being placed before the motoring public, and should have a good reception. At this stand, too, the W. and G. fire extinguisher, made in various capacities for motor-cabs, is another speciality deserving of inspection. Here, too, is seen the Summers wind screen, previously illustrated in the *M.C.J.*, as well as many other accessories which have proved acceptable to the experts at the head of this representative motor firm. They deal in all classes of specialities for the motor-car—lamps, accumulators, horns, lubricators, &c.—and are meeting the wishes of many motorists for engine and gear oils, these latter being known as the Panhard. The coach-building department also finds representation at one of the most comprehensive of the accessory stands in the Show.



Fig. 62.—Section of the W. and G. Plug.

Riches' Accessories.

One of the most comprehensive collections of accessories ranged in the gallery is that of Messrs. S. T. RICHES AND CO., LTD., the motor accessory dealers and factors, of 19, Store Street, London, W.C. Several of the specialities shown have been so recently described in our columns that they need not be referred to again on the present occasion, but we may mention that the firm keep a full range of genuine De Dion parts for all types. A special display is made of the Dietz lamps, which are shown in the side lamp, headlight, and tail lamp patterns, a particularly striking lamp being that known as the "Dainty" side light, which gives a good light of thirteen candle power, is finished in polished brass, with a ruby light at the back, and has all the parts detachable for cleaning. In connection with these lamps mention may also be made of the handy generators of the Dietz variety, which are worked on the dry principle and well controlled through the indicator and scale on the top of the device. A safety valve is provided, and there is also a two-way tap allowing for two lamps being run off the one generator. At this stand, too, is the Maxfield auto tyre inflater, the Clair silencer, the Froad brake linings, and a full range of Orno specialities, including foot bellows for use with horns or sirens, the special electric lamp-holder and reflector, and the foot glove. Another recent agency taken up by Messrs. Riches and Co. is the lubrimeter, for indicating the maximum and the minimum levels of the oil in the crank chambers. The exhibits also comprise a selection of the miscellaneous requirements, proving the capacity of the well-known Store Street firm to fulfil the demands of motorists in the most minute particular.

Wheels, &c.

The comprehensive selection of artillery motor wheels, axles, springs, &c., shown by Messrs. SMITH, PARFREY AND COMPANY, LTD., is a tribute to the facilities possessed by them for sound construction as well as proper design. At their works in Rannoch Street, Fulham Palace Road, Hammersmith, W., they have an electric welding plant of large capacity, and are able to undertake work of great variety. They will weld new gear wheels on to a solid shaft without disturbing the others; new parts to broken crank shafts; ends to broken steer-

ing arms, and, in fact, any material that is weldable. It will also be of interest to know that Messrs. Smith, Parfrey and Co., Ltd., have a process—a new system of brazing—by which they are able to repair cracked cylinders, combustion heads, water jackets and castings, &c. In addition to drawing attention to work of that description, the firm also make a display of gears and other machine work, forgings of various descriptions, mudguards in steel and bent wood, bent timber, &c.

Prowodnik Motor Tyres.

"Prowodnik" is a name that has become more familiar of late in this country, and its association with motor tyres has given it a good degree of popularity. In the gallery the PROWODNIK TYRE AND RUBBER COMPANY, of 63, Regent Street, London, W., have a large representation of their motor tyres—the red rubber instantly attracting attention. These tyres, judging from many testimonials given by experienced motorists, are of a high grade, with standard rims of the beaded edge type. They are made with both round and square treads, as well as with non-skid treads fitted with the familiar metal studs. Many exceptionally long mileages stand to the credit of the Prowodnik tyres.

Brooks's Coils and Luggage Carriers.

For the first time at a motor show, Messrs. J. B. BROOKS AND CO., LTD., of 61, Charles Street, Birmingham, who have also a depot at 11, Grape Street, Shaftesbury Avenue, London, W.C., exhibit other than their luggage-carrying specialities. We refer to the patent synchronised single trembler coil illustrated in Fig. 63. The first impression is one of compactness; the second the accessibility of all the parts. These have been reduced to occupy the smallest possible space, while the electro magnet being located in the trembler base, and the condenser being placed at the back of the coil units, enable the case to be somewhat shortened as compared with the ordinary pattern. With regard to the details, the trembler has been constructed to give efficiency at high speeds with a minimum consumption of current. The parts are instantly removable. The method of winding provides a distinctly reliable system of insulation, and altogether the new coil should prove a great advance. While the coil provides the novelty, the firm's luggage-carriers have the prominence in the display. These are well known, the general idea being to secure a maximum of area for luggage,



Fig. 63.—The Brooks Coil.

&c., in the least possible space. Thus an improvement on the ordinary circular form of tyre carrier for the roof of a car is exhibited, this being a rectangular-shaped box, the corner spaces being available for minor articles—thus securing a compact means of stowing away a goodly quantity of luggage, &c. Messrs. Brooks and Co. are able to estimate for a complete motor touring equipment, or to supply the simplest and smallest form of "Necessaire" for lady motorists. Grid trunks, as well as those for the roofs of limousines, are a speciality. Mention may also be made of the firm's combination foot-rest, tool-box, and spare petrol tin case—as neat a combination as has yet been produced by any English maker of touring accessories for motor-cars.

The "K.T." Tyre.

Naturally any new form of tyre is likely to arrest the attention of the motorist who recognises the difficulties of the present position. And when it possesses features the excellence of which is so readily demonstrable as is the case of the "K.T." tyre, special notice should be taken of its distinctive points. Proof against the ordinary ills that tyres are heir to, this excellent device is said to be as resilient as an ordinary pneumatic tyre, to render the driver immune to breakdowns, and generally to make pleasant and economical the path of the motorist. Fig. 64 gives the distinctive feature of the tyre, which consists of a series of pneumatic rubber studs joined in twos on the dumbbell principle, which project from a long flat strip of rubber. This is inserted in a circular rim, which is perforated to receive the studs. These "knobs" are the only portion of the rubber which appears beyond the rim. Beneath the studs are air spaces the bases of which are closed by means of steel discs or washers. This done, the steel rim in the rubber is forced over the flat binding rim of the wheel under compression. A few bolts are passed through the felloes and the binding rim then screwed into some of the washers—which are tapped to take the screw-ends of the bolts—so that an effective attachment is made without the bolts ever coming into contact with either the rubber or the steel rim. The construction of the tyre having thus been described, the advantages may

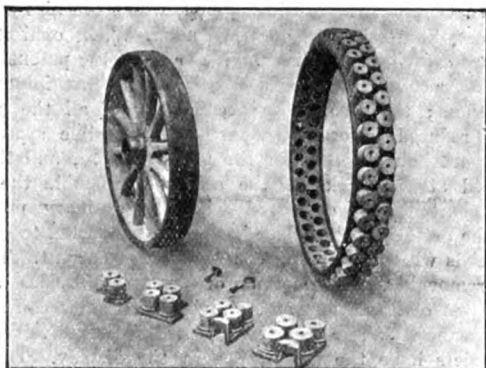


Fig 64.—The "K.T." Tyre.

be set forth. Every part of the rubber when attached remains in an elastic condition, the limit of which is never exceeded. The rubber, being well contracted when in contact with the ground, is rarely cut—a quality of importance. Creeping is prevented, and shock, when the tyre comes in contact with hard substances, is lessened owing to its dissipation throughout the whole circumference of the floating steel rim and the rubber underneath. The design is well calculated to avoid side slipping and its attendant dangers, and the fact that it does not throw mud in a lateral direction is a feature of considerable favour, especially with motorists who frequent narrow streets such as those at Mansfield, where complaints of the mud-bespattering of pedestrians by motorists are of frequent occurrence. The "K.T." tyre—introduced by the K.T. SYNDICATE, LTD., 52, Queen Victoria Street, London, E.C.—is also claimed to disturb the dust on the roads to but a slight degree, and not to lessen the speed of vehicles to which it is fitted. Having observed its features on the stand at the Show, we shall await the results of a road test with favourable anticipations.

The "Bleriot" Headlights.

Recent discussion with regard to dazzling headlights and their effects on users of the roads serves to give renewed interest to the display made by Messrs. BLERIOT, LTD., of 53 and 54, Long Acre, London, W.C. This includes their "Noglare" headlights and also a good selection of side and tail lamps for both open and closed cars. The new "Scout" horns are also shown. With regard to the "Noglare" lights, we may mention that they are used by the Queen on her car, and that they are becoming fashionable as well as of utilitarian import. The appearance of the lamp is of attractive form; and it is automatic in action, shutting off the glare from the eyes of anyone approaching the car from the front. The fact that it does not require the addition of levers or other devices to be operated by the driver is a great point in its favour. The special merit of the "Noglare" light consists in the construction of the glass shade. Very thin plates of glass are used in the construction of this. They are dull black on the top, thus absorbing all the light that, in the ordinary course, would rise; while being polished underneath the effect of the projection on the ground—where greatly wanted—is more powerful

than usual. To the person 200 yards away and level with the centre of the lamp there is no interference with the projection of the light by this plan; but as the lamp is approached there is a gradual diminution—not the sudden change that constitutes the great drawback of most other lamps.

The "H.P." Carburettor.

Several interesting exhibits find a place on the stand of the UNIVERSAL MOTOR IMPORTS, LTD., 10, Wilmington Square, N.W. Among these is the "H.P." carburettor, the production of the Moseley Motor Works, Ltd., of Birmingham. In this is a multiplicity of petrol jets and choke tubes, which, together with a special throttle device, secure an efficient, flexible and easily-controlled device. Both the quantity and quality of the gas supplied to the engine is exactly suited to the road conditions, as it is governed by the single throttle lever, which is opened or closed, according to the conditions of the power needed to maintain the speed of the car. In the front of the carburettor is a single control lever, which gives complete control over all petrol and air admitted through the multiple jets and choke tubes to the carburettor. At the same time it controls the engine so perfectly that by a graduated movement the car can be driven at its utmost speed or down to a walking pace on top gear, with perfectly even running. A further movement of this lever completely shuts off the gas, causing the engine to act as a brake, thereby reducing the wear and tear on mechanical brakes, tyres, &c. A still further movement of this same lever brings into operation the pure air valve which admits only pure air to the engine for scavenging purposes when coasting down hills, etc. Many useful accessories also find a place on the stand of this agency.

The Palmer Tyre.

At the stand of the PALMER TYRES, LTD., of 119, 121, and 123, Shaftesbury Avenue, London, W.C., the Palmer cording machine, which has, however, been improved since last exhibited, is an attractive feature. Of the tyres the 7-in. Palmer cord tyre has aroused much interest, while attention to the deflation alarms and pressure testers has also been general. The merits of the Palmer tyre are so generally known, that it will now suffice to refer to the efforts made by the makers to educate the motoring public with regard to the important subject of the inflation of tyres. In this connection a gauge has been designed for the purpose of testing the pressure contained in a pneumatic tyre. This is a small instrument on a flexible tube, which is screwed on to the valve. On the tube being bent the deflating pin of the valve is pushed inwards, and the dial can be easily read. A special point is made by Palmer Tyres, Ltd., of their security bolts, which have a moulded rubber covering, the edges of which are sufficiently thin and flexible to allow of them accommodating themselves to the contour of the cover and the rim. The shape is always retained, so that there is no danger of the tube blowing down between the bolt and the rim.

The "Bonhiver" Detachable Rim.

A new detachable rim, possessing distinctive merits, is that known as the "Bonhiver," and shown in the gallery by Messrs. A. GAAL AND Co., of 17, Hanover Square, London, W. This comprises a steel band solid with the wheel, in which are cut a number of helicoidal grooves. It is also furnished with a safety cam and a patented expanding driving member, producing an annular and progressing locking effect on the entire surface of the detachable rim. The other feature of the device is an ordinary movable rim furnished with steel studs, and on which is mounted a tyre with a long or short valve and security bolts with short screws. The mounting and dismounting of the rim is extremely simple, this being done by the simple operation of the sliding of the studs in or out of the helicoidal groove. The safety cam being turned round so as to unlock the rim and the driving member contracted, a slight pull is sufficient to pull it off.

White and Poppe Specialities.

A range of their two, three, and four cylinder engines, a new type of contact-breaker, a coil-testing machine, and their new silencer constitute the main features of the display of Messrs. WHITE AND POPPE, LTD., of Lockhurst Lane, Coventry. The W. and P. carburettor may also be mentioned. The engines shown vary in bore and stroke from the 80 by 90 mm. to 120 by 130 mm., the chief features being the clean and effective design, accessibility and interchangeability of parts and simple system of lubrication. The new four-cylinder 85 by 110 mm. engine is remarkably compact, with positively driven fan, oil pump, thermo-siphon water circulation, two ignitions, and self-contained starting clutch. In the contact-breaker, which is to be seen fitted to the

engines, the use of fibre in places where it is possible for it to wear has been entirely obviated. Contact is made by a hardened steel blade on hardened steel rollers—the whole running in oil. The feature of this contact-breaker is the ease with which the only part subject to wear—the blade—can be replaced. By the aid of the coil-testing machine, the exact position at which each unit of a coil fires can be accurately determined, and the trembler blades adjusted so that the spark from each unit will occur at the same relative point of the piston stroke. Messrs. White and Poppe have brought out a silencer which will effectively silence the exhaust without creating back pressure. The exhaust gases before leaving are baffled by a light plate which is held against a flange by a spring. The slightest compression of the spring permits the gases to pass out, and we are informed that at a distance of a few inches no sound can be heard.

Motor Jacks, &c.

Messrs. LAKE AND ELLIOTT, of the Albion Works, Baintree, are exhibiting a complete range of their Millennium motor-jacks, including the new garage model for workshop and washing use, and the new Millennium motor-skates for turning cars in small spaces. A fine set of samples of their wrought iron castings is also on view, with a show of tool kits, tyre levers, brazing lamps, the new valve-seat tools (which will true and re-face any valve seating, and, if necessary, re-bore for a larger valve), and some of the new sets of motor-key spanners.

Front Brakes.

The Allen-Liversidge Front Brake system, which we fully described and illustrated in our issue of the 7th inst., is being demonstrated on a car chassis by the ALLEN-LIVERSIDGE FRONT WHEEL BRAKE COMPANY, of 106, Victoria Street, Westminster, S.W. This system is destined to obviate side slip, and by greatly reducing the wear and tear on the driving mechanism of automobiles, obviates all shock during the application of the brakes. More efficient brake power is also assured, and the system is proving of great interest to the experts at the show.

Sternoline Specialities.

New introductions by the STERN SONNEBORN OIL COMPANY, LTD., of the Royal London House, Finsbury Square, London, E.C., include Sorewol, a liquid soap replacing the use of softsoap in engineering establishments for screw-cutting, drilling, turning, tapping, &c. The company is also placing upon the market a new preparation known as Universoline for use in the joints of motor-cars, &c. In addition, all their standard goods are shown in well-selected samples, these including the Sternoline chain sticks, Motosternol for water-cooled cylinders, Autosternol for air-cooled cylinders, Sternoline motor lubricant, and Cookoricid, the latter being particularly recommended for use in gear boxes and for bearings.

"New Era" Fire Extinguisher.

The value of the "New Era" petrol fire extinguisher has been so recently proved in connection with an outbreak of fire in Long Acre, W.C., that special interest may be said to attach to the stand of the VALOR COMPANY, LTD., of the Valor Works, Aston Cross, Birmingham, on the present occasion. Here are shown the "New Era" fire extinguishers, both for carrying on automobiles and for use in garages, as well as waste oil filters, spirit and oil storage cabinets, and similar specialities of the firm.

Calmon Tyres.

The CALMON ASBESTOS AND RUBBER WORKS, LTD., of 1, 2, and 3, Trinity Place, Tower Hill, London, E.C., are present with their Calmon motor tyres, in which the firm have such confidence that they are guaranteeing their plain tyres for 3,000 miles and those of the studded variety for two-thirds of that distance. In addition to the plain motor tyre is one with a square ribbed tread, much favoured by motorists, while the good quality of this and also of the steel-studded pattern are notable.

Vacuum Mobiloils.

Among the phrases that have gained significant popularity among motorists is "the oil that lubricates most." This is associated, as every practical driver knows, with the Vacuum Mobiloils, now stocked by 7,000 dealers in the United Kingdom, and used by the most successful competitors in contests both on the road and on the track. The VACUUM OIL COMPANY, LTD., has headquarters at Norfolk Street, Strand, London, W.C., and supplies its speciality in white enamelled cans sealed with a red label. So much for the external appearance; the oils themselves are guaranteed to be particularly suitable for the special purpose for which they are indicated. Thus the Vacuum

Mobiloils A, B, &c., are specially prepared for water-cooled engines, single cylinder water-cooled engines, and for gears respectively. The latter has a dark colour, but is absolutely free from foreign matter, and will remain interposed between the sliding surfaces of the metal in ball-bearing gears and thrusts longer than grease or oil of an inferior quality. Other grades are also made for various conditions of service, while special varieties are recommended for steam cars and for electro-mobiles.

The Jones' Speedometer.

Messrs. MARKT AND CO. (LONDON), LTD., of 6, City Road, Finsbury Square, London, E.C., have a full selection of the Jones' speedometers on view. Some of these have already been described in our columns, and in the issue of September 12th we illustrated Model 15, which is fitted with a maximum hand as well as with the season and trip mileage recorders. The Jones' speedometer was, as is well known, extremely successful in the Speedometer Trials nearly three years ago, since when it has proved in long use the merits demonstrated in the official test. In this device, the principle of centrifugal force is relied upon, the drive being taken from the front or steering wheels—a procedure which the makers recommend as securing absolute reliability. Where, however, motorists favour a drive from the cardan shaft or live axle, the instrument can be supplied with the necessary fittings. So far as the 1909 season is concerned, we may mention that Messrs. Markt and Co. have effected considerable reductions in the price of their speedometers without any changes in the method of construction or quality of materials—a fact which has evidently been appreciated by visitors to their stand during the week. This reduction is most notable in the case of the Model No. 22, which will indicate speeds up to 50 m.p.h., and is fully



Fig. 65.—The Jones Speedometer.

covered by the firm's guarantee as to accuracy, durability, rapidity of response to variations of speed, etc. A new range of models (27, 28, and 29) is also shown with the enclosed Jones' form of odometer, instead of the Veeder attachment, which is, however, retained in Models 20, 21, and 22. Attention may also be directed to the various combinations of these instruments with clocks, light attachments, and other means of adding to the convenience of those on the car. We illustrate in Fig. 65 a single speedometer with an electric-light attachment. The same idea is also incorporated in a "Triplet" combination with speedometer, an eight-day clock, and annunciator, the electric light being conveniently placed to illuminate the whole combination. In addition to the speedometers for cars, the firm are also showing similar instruments for motor-cycles, as well as a full selection of motor accessories for which they are agents. These include the "Teste" horns, the Marion baby auto torch, jacks, pumps, portable vulcanisers, and many indispensable tools for the motorist.

Lamps.

The COVENTRY MOTOR FITTINGS COMPANY, whose motor fittings have already been referred to, have a display of lamps of good design and construction. Their projector headlight is of a pattern that gives a steady and powerful light. It has a separate generator, and, being of light weight, is suitable for either large or small cars. They have also a self-contained headlight, which is constructed with an automatically-regulated water supply. The supply of gas is equally well under control. A good feature of the lamp is the condensing lens, which has the effect of collecting the light and throwing it in a perfect beam in the path of the car, thus being free from the vexation associated with so many glaring lights used by motorists.

The "Grose" Fixed Leather Treads.

Since the early days of motoring the Grose puncture-proof bands have been familiar to motorists, and have served to give fame to Messrs. GROSE, LTD., of Northampton. At the present show they are shown with a fixed leather tread, the economy of which is a decided advantage. The tread is made of chrome leather formed into the exact curve of the tyre for which it is intended, so that a thoroughly neat appearance is obtained. To the tread is attached a studded portion, which can be taken off and replaced when worn. The leather "body" is thus retained—a saving which represents about half the cost of the tread. None of the rivets on the tread come into contact with the rubber cover, and the device is a very effective preventive of skidding. Those who are not enamoured of the fixed vulcanised leather tread will be interested in the "Grose" detachable tyre protector with renewable studs. This is applicable to worn covers as well as to new ones, and will also be found an admirable substitute for rubber re-treading. An important point is that the clips by which the tread is affixed are nickled to prevent rust. Either of these devices will effectually and economically serve the purpose of the practical motorist.

The Simplex Speed-meter.

To some of the exhibits of the UNITED MOTOR INDUSTRIES, LTD., we shall revert on an early occasion. So varied is the collection that the space now available can scarcely do justice to such an interesting display. On the present occasion we illustrate the Simplex Speed-meter, shown in Fig. 66, which is a combination of speedometer, mileage recorder, and watch, the watch dial being an innovation on the same face as the speed-meter, and securing an economy of space

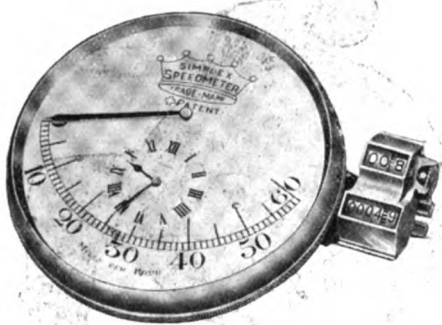


Fig. 66.—The Simplex Speed-meter.

that should be appreciated. A new radiator now exhibited is that known as the "L. and F. Sewn Radiator," the particular feature being the threading or sewing of the corrugated metal sheets so as to form a strong and durable combination without the use of solder—save at the ends, where it is necessary to give the device a familiar appearance and also serve its purpose. The Eisemann magneto of the new self-contained model is shown, all the range of Castle specialties, some effective wind screens, and a new carburettor known as the A.E.C., but fuller notice of many of these will be made on a later occasion.

Sirdar Tyres.

The SIRDAR RUBBER COMPANY has an attractively-arranged stand, whereon their specialties are shown. The company, whose London headquarters are at 21, Crawford Street, Baker Street, W., and whose works are at the Greenland Mills, Bradford-on-Avon, is well associated with the Sirdar non-nipping tubes. For these it is said that when the cover is fitted and the tube inflated, it is compressed both laterally and longitudinally. Then, when punctured, the tube closes up instead of stretching the hole open so that the air escapes. The time taken in fitting a pneumatic tyre with this patent non-nipping tube is considerably less than with the ordinary tube. In addition to this speciality the "Royal Sirdar" grooved solid motor tyres are shown, and attention drawn to the repairs of tyres undertaken by the firm. The Sirdar Rubber Co., Ltd., are able to undertake any class of repair work.

Stepney "Road Grip" Tyre.

At the stand of the STEPNEY SPARE MOTOR WHEEL, LTD., of Llanelly, are the many specialties associated with this device, which has established an universal reputation, having enabled many motorists to get home after trouble, where such would have been impossible, without delay. The exhibit which has most novelty at this stand, however, is the Stepney "Road Grip" Tyre, now shown for the first time. This is

a serious endeavour to offer a solution to the problem of skidding, and the performance of the new tyre on the road will be regarded with considerable interest. There is no tread vulcanised on the tyre, but the special feature is moulded in one piece with the tyre itself, the rubber projections of oval shape being transversely located. As these come in contact with the ground they would seem to secure an effective grip, while mud and foreign matter are allowed free exit from the groove that is formed between each two sections. The notion is an improvement on many of the ideas which have been realised in such devices, and the fact that the inventors were also identified with the "spare wheel" will give confidence to many motorists to adopt their new tyre.

"Coventry" Chains.

A representative exhibit of motor chains is made by the COVENTRY CHAIN CO. (1907), LTD., of Spon End, Coventry, whose specialties are also to be seen on some of the cars staged elsewhere. The display in the gallery consists of a full range from a miniature multiple speed actuating chain to a 2½-in. pitch roller chain, the breaking strain of which is 63,000 lbs. A chain lubricant bath, chain wheels, &c., are also included in the exhibit.

Notable Tyres.

Messrs. J. LIVERSIDGE AND SON, LTD., of 196, Old Kent Road, London, S.E., and 561, Old Kent Road, London, S.E., have four distinctly good features on their stand in the gallery, including the "Scott" non-skid treads, the "De Nevers" solid tyres, the "Vinet" detachable rims, and the "Sealomatic" non-puncturable inner tubes. The Scott non-skid treads are claimed to possess all the advantages of steel or rubber studded treads with none of their vices. The essential feature of the construction is the alternation of steel and rubber studs fixed upon a puncture-proof band. Into this band the rubber studs are moulded and the steel studs riveted; it is then vulcanised on to the cover to form the tread. As the rubber studs are slightly higher than the metal ones, they are the first to take the weight of the car, thus securing a resiliency not always present in such accessories. Experience has proved the durability of this system of construction, and the grip obtained of the road when starting the car is most marked. Messrs. Liversidge and Co. are also selling agents for the Sealomatic inner tubes, familiar to readers of the *Motor-Car Journal*. The distinction between Sealomatic inner tubes and those of the ordinary variety are two—one being a lining of a patented material and the other a second lining, also the result of a process, as to which the makers are naturally reticent. Demonstrations as to the non-puncturing qualities of the Sealomatic tubes are being made daily at the Show, and motorists are being educated as to the merits of the plan. The De Nevers grooved solid tyres are also on this stand. In this transverse grooves are cut from the surface of the tyre at certain intervals, so that the rubber can extend freely when under pressure. Owing to the segments twisting under the skidding action and allowing another segment to come into play any skidding tendency is checked. These features have given the De Nevers tyre such favour as, in addition to giving the comfort of pneumatics, side slip is prevented, any creeping action is avoided, and punctures are impossible.

The Kempshall Tyre.

Much has been heard of late of the new Kempshall ribbed non-skid tyre, and much, we venture to predict, will be seen of this excellent device upon the road in the near future. To secure a firm grip of the road and prevent the skidding associated with motoring in wet and greasy weather many devices have been tried, but only a few have succeeded to any real degree. For the 1909 season some real advance has been made upon the already well-known Kempshall tyre, notably in the way the walls are strengthened by extending the buttresses from the turrets of the tread to practically the edge of the bead. Thus a very effective strengthening is given to the tyre, rendering a burst almost impossible. Further, it is claimed that this manner of construction secures a continual cool current of air being forced on to the walls of the tyre with a cooling effect on the heat naturally generated by the friction of the road. It is one of the advantages of the Kempshall motor tyre that it can be successfully retreaded with the patent tread of the KEMPSTALL TYRE COMPANY OF EUROPE, LTD., whose headquarters are at 1, Trafalgar Buildings, Northumberland Avenue, London, W.C.

Terminals.

Although not directly represented, Messrs. F. S. NICKELLS, of Blackheath, take advantage of the occasion to keep their patent terminals and other specialties well before motorists by their exhibition on three or four stands in the Gallery.

Messrs. Alfred Dunhill, Ltd.

At the stand of Messrs. ALFRED DUNHILL, LTD., of Euston Road, London, N.W., a most comprehensive display of motor accessories and raiment is made, a visit to which will acquaint the motorist with the latest devices for convenience on the car. In horns we notice a new type, with the mouth in the shape of a serpent's head, so that it is a Mascot as well as a means of clearing the road. In the touring section many light boxes of compressed fibre, covered with waterproof cloth to harmonise with the colour scheme of the car, specially shaped to fit into any odd corners, are on view, and the "Everright" combined speed indicator, odometer, and trip recorder is also exhibited, as well as the Dunhill Annunciators, the "Saner" non-skid, the "Micro" map, the "Carbarton" garage stove, and many sundry devices that are in good demand. The section devoted to clothing is most complete, good models shown being the "Hillingdon coat," the "Rivermore," and the "Kingstown." The second named will be found suitable for either walking or motoring, and is eminently useful for those who only attire themselves occasionally for touring with motoring friends. A special section is devoted to ladies' wear, the "Castledown" coat being a garment which has a particularly stylish appearance. The firm of Dunhill are still to the front in most branches of the accessory business, and their present display gives proof of the exhaustive nature of their stocks.

Price's Oils.

Messrs. PRICE'S PATENT CANDLE COMPANY, LTD., of the Belmont Works, Battersea, London, S.W., whose motor oils have become standard preparations among motorists, have a full representation with their specialities. These include Motorine, Oleogine, Belmoline, Cruozene, and other oils and greases, while special attention is being drawn on the present occasion to "Curroleum," which has been prepared to preserve as well as to lubricate the leather of leather-faced clutches.

Ilo.

The well-known "Ilo" oils and greases placed before motorists by Messrs. EASTON AND MELVILLE, LTD., of 85, Shaftesbury Avenue, London, W.C., are being shown on the gallery stand of the British Motobloc Syndicate, Ltd., who are agents for these high-class goods. At this stand also is shown the McCord mechanical force feed lubricator for cars described in the *Motor-Car Journal* at the time of its introduction nearly a year ago.

Clothing.

As usual, Messrs. SAMUEL BROS., LTD., whose excellent styles of motor clothing have been previously illustrated in our columns, have a useful exhibit, in which their "Omne Tempus" rubberless rainproof cloth has a conspicuous place. The firm, whose showrooms are at 65-67, Ludgate Hill, London, E.C., were among the first of the leading tailors to recognise the needs of motorists in connection with their raiment; they were also pioneers in the recognition of the fact that such garments should be of such a character as could be worn, on occasion, when off the car. How well this idea has been carried out is apparent from the motor coats for both ladies and gentlemen which are to be seen on their stand. The "Omne Tempus" cloth is being subjected to the continual dripping of water to give ocular proof of its rain-resisting qualities, and it is also exhibited as made up into garments of fashionable style. A speciality is made of the "En-tout-cas" coat, which is a useful combination of rain coat, motor coat, and ordinary walking coat in one garment. Liveries for chauffeurs is another important section of the activities of Messrs. Samuel Bros., Ltd., who have also a department for automobile accessories. In this are stocked several good types of lamps, horns, goggles, and other requirements for the modern motorist.

"Shell" Spirit.

Many events in which the winners have used the "Shell" spirit have caused the BRITISH PETROLEUM COMPANY, LTD., 22, Fenchurch Street, London, E.C., to be widely known. It has certainly been adopted by leading motorists, and has enabled them to win distinction, as well as prove of real automobile service.

Components and Accessories.

Messrs. GAUTHIER AND CO. have a large display of components and accessories, many of which are so well and favourably known that extended notice is really unnecessary. These include the "Malicet and Blin" back axles, steering gears, &c., the Muirhead "high-tension" magneto, "Ossant" silencers, radiators, &c. The T. and M. multiple jet carburettors, synchronisers, and lubricators are also on this stand.

The new "sight feed under pressure" lubricator adopts the principle of interposing between the oil supply under pressure and the bearings which are to be lubricated a glass vessel filled with water or other suitable liquid. The oil enters the lower end of the vessel through a nozzle, rises drop by drop through the liquid by reason of its inferior specific gravity, and passes out at the top to the bearing, the liquid remaining in the vessel. In the T. and M. carburettor the essential features are the absolute and positive control by means of one lever only, the rapid acceleration, the perfect mixture, and the low fuel consumption.

The Claudel-Hobson Carburettor.

Among the new carburettors which are exciting considerable interest is the Claudel-Hobson device, introduced by Messrs. H. M. HOBSON, LTD., of 29, Vauxhall Bridge Road, London, W.C. This is claimed to give an economy of fuel up to 25 per cent. on a full load, and differs from other carburettors in the heating of the petrol before it leaves the jet. It has a spraying jet fitted with air injector, and the revolving throttle is combined with an air regulator of a special shape. The whole device, containing the float chamber, mixing chamber, petrol channels, and hot-water or hot-air channels, is of one casting. Petrol enters the float chamber by passing through a fine sieve or filter, its admission being checked by a float of the usual type, which is easily accessible for cleaning purposes. Petrol leaves the float chamber, passing through a rather wide channel, heated by hot water, proceeds through the patent jacketed jet in the usual way into the mixing chamber, and so on to the engine. The construction of the jet, and the way in which the throttle and control are cut and combined with the air regulator are interesting. The jet is covered by a tube drilled at the bottom with holes, and also at the top at the same level as the jet.

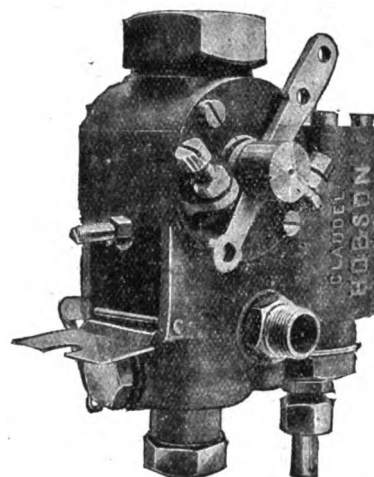


Fig. 67.—The Claudel-Hobson Carburettor.

When the throttle is shut, the upper part of the jet is in the mixing chamber, and the petrol is sucked through the top holes of the tube, whilst the suction is relieved by a proportionate quantity of air entering through the holes of the bottom of the jacketing tube, which is in direct communication with the atmosphere outside the regulator, thus ensuring a perfect spray and an accurate proportion of petrol passing into the mixing chamber, whilst the throttle and air regulator combined are so cut that, when opened—to whatever extent—for the engine to pick up, accurate proportions of air and petrol pass into the cylinders.

Messrs. BENTON AND STONE, of Birmingham, have a good showing of motor tyre-pumps, lubricators, pressure-pumps, &c. Their petrol filters have been adopted by most of the London cab companies. The "Heron" patent power pump for garage use, which has already been described in our columns, is also on view.

Messrs. HATTERSLEY AND DAVIDSON, of Norfolk Street, Sheffield, have a varied display of their motor accessories and tools, one of the most ingenious of the latter being the Schroeder ratchet spanner.

The exhaustive article we published on the 31st on the G.L. carburettor had undoubtedly prepared many visitors for their inspection of this notable device to save petrol by securing perfect carburation. It is shown on the stand of the MOTOR SUPPLY COMPANY, to whose specialities we shall be making further reference in an early issue.

On several of the stands in the Gallery the Ara vulcanising process is to be found—a simple means of assisting the motorist when in trouble on the road.

(To be continued.)

Correspondence.

[Letters to the Editor should be addressed to the offices, 27-33, Charing Cross Road, London, W.C.]

THE PARLIAMENTARY AGITATION.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—I did not know there was any "agitation in the House of Commons against motorists." There are a great many members, of whom I am one, who are afraid if our privileges are abused, and if some check is not put upon the reckless driving of many thoughtless owners-chauffeurs, we shall get public feeling against us to such an extent that restrictive legislation will have to be introduced. From my experience, and I have motored many thousand miles, the objection to motorists is the greatest in small market towns with narrow streets, and in villages with small gardens, and in many cases without causeways, so that the road is used by those who walk and by the children. If the rights of such people were properly considered, and their little gardens were not continually covered with dust (has not every motorist noticed the road carefully watered in front of some pretty cottage garden?) I think we should hear very little about the speed limit upon the broad highroad. It was with the idea of recognizing the rights of those who have to live by the roadside and to protect motorists from unreasonable legislation that



An Innovation in Ballooning.

Mr. Carl G. Fisher, of Indianapolis, U.S.A., tired of having his balloon hauled about in a farm wagon and he and his guests subjected to the discomforts of walking after an ascent, recently decided to do away with the ordinary basket and attach to the balloon a 25-h.p. Stoddard-Dayton car. The idea was put into practice recently and naturally attracted considerable attention. Every detail of the ascent was successfully carried out, and a landing was made about 100 miles from the starting point just before dusk; the balloon settled slowly to the earth, the car alighting on the ground so gently that the passengers did not rise from their seats until after all four wheels were on terra firma. It took but a few minutes to deflate the balloon, roll it up and start the car. Mr. Fisher is much elated over this novel experiment, and states that all his balloon trips in the future will be made with a hanging motor-car rather than a basket, it being so much more convenient to load up and go home than to hunt round the country for some one to take care of the balloon.

I seconded the resolution of which I send you a copy. I believe it is wisest to advocate just administration rather than repressive legislation.—Yours truly,

W. E. B. PRIESTLEY.

THE KNIGHT ENGINE.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—Referring to your recent description of the "Silent Knight" engine and to all articles which have appeared in the various journals touching the same, I would like to make a few remarks as one who knows a little about internal combustion engines, and who has run into the "sleeve" form of valve long before the advent of the "Silent Knight." Of course it is quite wrong to call this engine valveless, as it possesses just as many valves as any ordinary four-stroke engine, only, instead of being of the poppet type they are of the "slide" type. Now this type of valve is almost the oldest in existence, and was used by all the early builders of gas engines, except that they employed a small flat valve, or valves, while Mr. Knight uses sleeves completely enveloping the cylinder, though he only uses a very small fraction of the valve for the purpose of controlling the entry and exit of the mixture. Where the particular advantage is of employing 95 per cent. more valve surface than is necessary, I fail to see. As for the actuation of these valves by eccentrics instead of cams,

there is nothing new in this, as it has been done scores of times before; I myself used them more than ten years ago, and was severely criticised for so doing, though, provided the port area is sufficient, the slow opening and closing of the valve is of little consequence.

So far as the superior action claimed for this engine goes it can only be traced, if it exists, to the large port opening provided; the only reasonable claim which can be supported is that there is less cooled surface exposed to the heated gases of combustion, and in the case of high speed motors this is a very slender claim, particularly in the small sizes used on automobiles. The disadvantages of sleeves are very apparent. First there is the great expense, for they must be ground both inside and out to an exactness almost impossible of attainment. Many years ago there was an engine called the "Rotary Piston"; it was the invention of Mr. H. T. Dawson, and was built by the Dawson Gas Engine Company, of Clapham; in this motor the piston was a long sleeve within the cylinder and acted as both inlet and exhaust valve by being caused to rotate, so opening and closing plain ports in the sides of the cylinder which corresponded with ports cut in the sides of the piston sleeve. This was a far more practical and easy method, but in practice it was found almost impossible to attain sufficient accuracy. What, then, in a motor where there are three surfaces to be got to such a state of perfection? As the sleeves become worn at the ports there will be particles of carbon forced between the rubbing surfaces, and these will quickly cut the sharp edges of the valve openings away so as to prevent proper opening and closing of the valves or ports. Furthermore, what will become of the poor little countershaft when the engine is cold and the oil becomes stiff over the enormous surface of the sleeves? If we must have slides, then let us have the smallest slides we can.—Yours truly,

INCANDESCENT.

THE MOTOR-CAR OF THE FUTURE.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—The type of car that apparently is now in demand for Bristol and the West of England is a four-cylinder car, seating four persons, with an engine of about 18-h.p. actual.

Some of the points on which improvement is required are: more silent running engines, covering in of the mechanism of the car to keep mud and dust from it as far as possible, better clutches on the smaller cars, smooth-running vehicles for moderate speeds, and economical running cars rather than fast machines.—Yours truly,

J. S. WILLWAY AND SONS, LTD.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—We find we are usually asked in this district (Cheltenham) to supply a type of car with a four-cylinder motor and four-seated side entrance body, for which, frequently, with glass screen, Cape cart hood, lamps, &c., the prospective purchaser does not wish to pay more than £350, the size of engine required being, say, 18 to 22-h.p. R.A.C. rating. A car that could be turned out as above to sell complete at £250, which would run nicely, and made by a firm with a reputation for building a reliable and lasting article, ought to command a big market right away. At the same time there is a certain demand for larger cars, which, however, steadily diminishes with an increase of price, covered bodies, usually landaulets, being nearly always required for the largest cars.

Certain two-cylinder cars are to a considerable extent able to hold their own, presumably because they are substantially cheaper than nearly all the four-cylinder cars yet made by any of the better-known firms; even when second-hand they are very saleable. Besides the above types, we believe a big future awaits a car which, even with a four-seated body, can be sold at a figure a little over £100.

Personally we feel certain it is only a matter of time before such a car will be marketed, and successfully too, its essential points being simplicity, absolute reliability, ease of control, and lowness of upkeep, high power and unnecessary finish not being, of course, expected at that price.

Generally we should say that very much importance is attached to lowness of upkeep, especially by motorists of long standing, and that the prevailing feeling seems to favour British cars, which, apart from patriotic motives, we welcome on account of the greater ease with which business can be conducted.

We should say that any improvement in design which would tend to decrease the amount of attention and expenditure necessary to keep a car running would be very much appreciated. Very many makers would do well to look more closely into details on their cars which are apt to prove for some reason or other a source of annoyance to the buyer, especially when they in any way affect the "certainty of action" of any part of the car, or "ease of control." Absolute reliability should always be the watchword of every maker, and not only should the chance of a car being temporarily or totally stranded be reduced to a minimum, but the possibility of the car developing some wear or defect which will often unexpectedly necessitate a visit to the repair shop, perhaps just

when the car is most urgently required, should be so remote as to be almost entirely absent.

All parts of the car should be so designed and arranged that, in the event of any repairs or renewals proving necessary, any part can be easily taken down without disturbing other parts more than is absolutely essential, and those parts which from past experience have been proved to be the most likely to require attention should be so arranged as to be specially accessible.

We think it would be a great advantage if every maker were to imitate the practice adopted by some firms of turning cars out really ready for the road as regards the various accessories which are bound to be required, the price of the finished car to include the extra cost of these. It is a common source of disappointment to a beginner to find that, after having placed his order, he has to face an extra outlay for lamps, tools, horn, pump, jack, &c.—Yours truly,

H. E. STEEL, LTD.

RACING AND THE PUBLIC.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—The "Four-Inch" Race is supposed by some to give results that will establish the correct relation between bore and stroke. This is of course incorrect; limit this bore and more power will be obtained by increasing the stroke to an otherwise undesirable degree; limit the stroke and more power will be obtained by increasing the bore to an otherwise undesirable degree; either restriction produces freaks of a nature that are not useful to design as the results that racing may produce. There are many formulae of varying degrees of refinement that take into account both bore and stroke. Races under any of these will produce more useful results. The matter is well enough understood to furnish a formula that will make victory possible to a motor differing little if at all from the ideal engine for a motor-car.

There is another restriction the bearings of which on the development of the motor-car deserve very careful consideration. I mean the minimum weight. At first sight this appears a wise restriction, since it moves from the designer the temptation to increase speed and rapidity of getting up speed by ruthless cutting away of the vital parts of the car and its consequent safety. That it is possible to reduce weight by sacrificing reliability to the point of danger is indisputable, and for this reason the entry of any car should be subject to the veto of the ruling body, who would exclude any vehicle that in essentials was insufficiently strong. The ruling body should be technically sound enough for its decisions to be made without fear, and accepted without cavil; and such being the case the minimum weight limit should cease. Enormous reductions in weight would inevitably result, and in some few cases weak designs would be allowed to compete and disaster might result (though motor accidents appear remarkably harmless), but the ideal car would be brought much nearer realisation.

By the ideal car I mean the one that will with economy travel at a better average speed without at any point exceeding a certain limit (legal or otherwise). A light car means less reduction of speed uphill. It means a quicker increase of speed after a stoppage, and since the limit of speed depends on area rather than weight, the light car will not be able to reach an appreciably higher speed than a heavy one. Let us hope that these points (all of them points that directly or indirectly benefit the public apart from the motorist) will be borne in mind by the R. A. C., the body that rules our sport.—Yours truly,

JOHN PUGH.

CLEANING OUT ENGINES WITH PARAFFIN.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—Can you tell me the best and most thorough way to wash out the crank chamber of a motor with paraffin when replacing the old lubricating oil with new, without taking anything to pieces? It seems to me that merely turning the motor by hand would not splash the paraffin about sufficiently. Do you think harm would result if the motor were run a few times for five or ten seconds each time, at intervals of a few minutes, with paraffin only in the crank chamber? I refer to damage to wearing parts or risk of fire or explosion.

The alternatives which suggest themselves to me of putting the paraffin in at the top of a hill and letting the car drive the motor down it, or, failing a hill, of getting a tow by another car; both methods seem rather far-fetched and troublesome.—Yours truly,

THERMO.

[There is really no necessity to take so much trouble as "Thermo" thinks may be advisable when changing lubricating oil in a crank chamber. If the old oil be drained off and enough time allowed for the operation, there will only remain quite a small amount of matter requiring washing out, and this will be found at the bottom. Most of the particles are metal worn off the bearings and cylinders, &c., together with a certain amount of carbon from the oil, and, except when the motor is running, this will gravitate close to the drain cocks, whence it can easily be swilled by means of squirting some paraffin with a syringe in by the vent or oil filler that is usually to be found in the upper portion of a crank chamber. To run the motor with a paraffin bath would cause a dreadful smoke, but, if it were only done for a few seconds, it could not damage the engine as regards the wearing parts or cause an explosion. A little paraffin squirted into the tops of the cylinders is often recommended in order to keep the piston rings from getting clogged, and if this is practised in moderation it is a good plan.]

LOSS OF POWER.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—I am the driver of a 6½ h.p. two-seated Regal car with single-cylinder Astor engine, and I am troubled with loss of power when ascending hills. On the level I have no trouble whatever. I should esteem it a favour if you could kindly state the probable cause of the trouble and the remedy for the same. The fault is a new one, as the car used to work much better.—Yours truly,

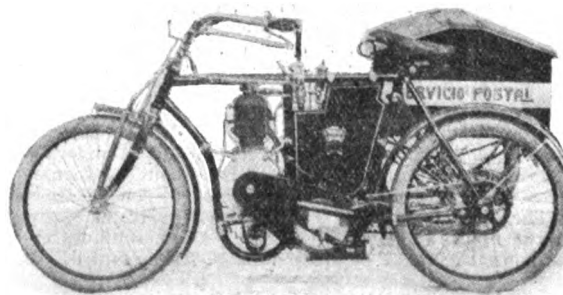
RICHARD MURRAY.

[We think it probable that in reality there is a loss of power in this case whether climbing hills or going along the flat; but it is very difficult to detect, unless the loss is very pronounced, except when going up an incline. There is but little doubt but what the fault will be found to have its seat in the engine, if everything about the transmission is free and the vehicle runs easily down hill. The compression is one of the first things to be suspected from the information before us, and it is more than possible that a thorough re-grinding of the valves may put the trouble right. If the engine is an old one it may want new piston rings. Sometimes a motor will "sulk" with a change of lubricating oil or a different brand of petrol. Have either of these been changed lately, or has the car only started to lose its hill-climbing capacity since the colder weather has set in? In the latter case a little alteration to the carburettor may set things right again, say by warming the air a little.]

CLUTCH TROUBLES.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—I have been troubled considerably with a slipping clutch of the plate type, and am wondering if it would be possible to fit a claw arrangement to the floating part of the clutch which would, when the clutch was fully engaged with fly-wheel, drop into slots therein and thus lock the fly-wheel and clutch and prevent any slipping. The jaw arrangement should of course be removed by the clutch withdrawing pedal before the travel of the latter commenced to lighten the tension of



One of the Motor-Cycle Carriers recently built by an Austrian firm for the Mexican Government.

the spring holding the plates up to their work. My car is a six-cylinder one. Perhaps some of your readers could advise me if such an idea is practicable, and if by any chance it is in use.—Yours truly,

W. ETHERINGTON.

[In this case it will be better for our correspondent to ameliorate, or "endure the ills he has, than fly to others that he knows not of." His idea of introducing a positive lock for the clutch has been tried before, with more or less disastrous results. It sounds feasible on paper, and even in practice it is possible to introduce a positive lock for the clutch which will work all right when perfectly adjusted, but once let it get a trifle too "previous" in its grip and away goes something, which may mean the purchase of a new crankshaft, or the best part of a new gear-box. A slipping plate clutch is not a difficult thing to remedy by less drastic measures than suggested; it is probably out of line, or the lubricant is at fault, or perhaps the springs are too weak. Anyway, unless the clutch is altogether a bad one, or not suitable for the power, it should not be an expensive or difficult matter to put right.]

MR. S. F. EDGE writes with reference to Mr. Jarrott's letter on his withdrawal from dangerous racing, "My letter to the 'Times' is dated September 22nd, and I have received a letter from the Brooklands Automobile Racing Club dated November 11th reading as follows:—

Brooklands Automobile Racing Club,
Carlton House, Regent Street, Waterloo Place, S.W.

S. F. Edge, Esq.
14, New Burlington Street, W.
November 11th, 1908.

Dear Sir,—In reply to your letter of to-day's date, I beg to say that no trace exists in our record-book of any records having been broken by you since September 18th.—Yours faithfully,

(Signed) KENNETH L. SKINNER.

This sets out clearly that I have not broken any records since September 18th. I trust that Mr. Jarrott will now withdraw his unsportsmanlike insinuations and will apologise for having made them, and I would advise him for the future to refrain from casting aspersions on business opponents until he is sure of his supposed facts."

CLUBS AND ASSOCIATIONS.

ROYAL.

THE Manchester A.C. and the Westmoreland A.C. have decided to become associated with the R.A.C. under the revised scheme.

THE AUTOMOBILE ASSOCIATION.

At the meeting of the A.A. Executive Committee, held on the 10th inst., reports and recommendations from the Committee of Public Safety were considered, and it was unanimously decided to call for the resignation of certain members of the Association.

The committee had the pleasure of welcoming the 8,000th member of the association in the person of Count Stenbock Fermor, Captain of the Chevalier Guards of H.I.M. the Czar of Russia. Prominent among other new members elected at the November meeting were the following:—The Marquis of Anglesey, the Marquis de San Guillano, the Marquis de la Granja, the Earl of Sefton, the Earl of Eglinton and Winton, the Marchioness of Exeter, Anna Countess de Hamel de Manin, Lady Wemyss, Lord Leonfield, Lord Hotham, Lady Clifford, Lady Day, Lady Mary Turner, Sir Nathaniel Dunlop, Bart., Sir Wm. F. Hartley, Sir Daniel Cooper, Sir Thomas V. S. Gooch, Lady Battersea, and Sir Wilfrid Peek, Bart.

SOCIETY OF MOTOR TRADERS.

ON Tuesday the dinner of the agents' section of the Society of Motor Manufacturers and Traders, Ltd., was held at the Restaurant Frascati, London, with Mr. W. M. Letts in the chair.

In proposing the toast of "The Motor Trade," Mr. S.F. Edge gave some interesting figures with regard to the present position of the industry. In referring to the business in cars from abroad he went on to say that the industry was employing about 180,000 workpeople in this country. These with their dependants represented a population of 420,000 people interested in the future of the automobile. The output of the British motor trade he calculated was about £8,000,000 sterling, a figure that probably would not be exceeded, for the decrease in the price of cars would tend to keep it at this figure. Touching on the road question, he pointed out that many of the great highways were not at present suitable for motoring. Motorists did not wish so much to travel at a high rate of speed as to be able to maintain regular running without the constant starting and stopping that is necessary under the present conditions. Signs and warning posts associated with the high roads and cross roads should be located at the bye-turnings for the information of motorists about to turn on to the main arteries of traffic. Mr. Charles Jarrott responded to the toast. That of "The Agents' Section" was proposed by Mr. E. Manville, who referred to the mutual dependence of agents and manufacturers on each other. Response was made by Messrs. A. R. Atkey and J. S. Stafford.

BROOKLANDS.

THOUGH the full programme for next year's racing at Brooklands has not yet been settled, it has been decided to repeat the three popular two-day meetings on the Easter, Whitsun and August Bank Holidays and the Saturdays which precede them.

BRADFORD AUTOMOBILE CLUB.

THE Bradford Automobile Club held a successful smoking concert at the Great Northern Victoria Hotel last week. Owing to the unavoidable absence of the president, Mr. Tom Mitchell, the chair was filled by Mr. Kent, who was supported by Mr. Hepper, President of the Yorkshire Automobile Club.

SOCIETY OF MECHANIC AUTOMOBILE DRIVERS.

THE Society of Mechanic Automobile Drivers of the United Kingdom, of which Sir Robert Gunter, Bart., is president, is an organisation for the mutual benefit of drivers, and has 500 members. The idea is not to deal with questions of wages and the like, but to find employment for men of efficiency and character, and also to assist them in other ways. Mr. G. T. Clarke, Rawling's Garage, Halkin Street, Belgrave Square, London, S.W., is the secretary, and will be pleased to forward information to those who communicate with him.

BRITISH MOTOR-BOAT.

DURING the last six months there has been a large increase in the number of candidates for membership of the British Motor-Boat Club. Those who intend putting up for membership now will have the advantage of the rule which gives membership from December to April 31st for one half of the ordinary subscription.

SPEAKING at the annual dinner of the Cambridgeshire Motor-Cycle Club, Mr. A. H. Moreing asked for a spirit of comradeship among motorists in order to combat prevalent prejudices.

MR. C. R. ENGELBACK has been lecturing on "Motor Cars" before the Elswick Foremen and Draftsmen's Association.

THE Motor House, 314, 316, 366, 368, Euston Road, N.W., send a special bargain list of motor-cars, which will be of material assistance to prospective motorists.

MOTORIST v. ROAD CONTRACTOR.

SHERIFF SUBSTITUTE BLAIR, of Dumbartonshire, has delivered an interesting judgment in an action for damages at the instance of Mr. W. Chrystal, of Auchindennan, a member of the S.A.C., against the contractors for the Dumbartonshire Tramways, for damage done to his motor-car by a tramway overhead wire pole, which the contractors negligently allowed to lie on the roadway in a dangerous position.

The Sheriff found that the pole, which was of iron and about 30 ft. long, and which weighed about 800 lb., had been left lying on the roadside, but projecting some little distance into the roadway at the thin end, probably from one to three feet, and that Mr. Chrystal's car, in negotiating a corner to clear a red danger lamp marking trench operations on the road, ran into the pole, burst two tyres, and did £7 worth of damage besides. On account of the failure to take proper precautions for the safety of the public and their consequent fault and negligence, the Sheriff decreed against the contractors for £39 3s. 5d., being the repairs costing £7 0s. 9d. and two new tyres, £32 2s. 5d.

With regard to the item of £55 which was included in the claim in respect of loss of use of the car during the time it was under repair, the Sheriff disallowed the same, but stated that, if Mr. Chrystal had hired another car rather than submit to the inconvenience of being without one, there is no doubt that the £55 must have been added to the amount decreed for, and that consequently the defenders had to congratulate themselves that Mr. Chrystal had not done so.

ROAD REPORTS.

MOTOR UNION SIGNS.—Danger signs issued by the Motor Union are in course of erection at Penzance, Blackheath, Birdlip Hill (Glos.), Richmond Park (Robin Hood Gate), Harrietsham, on the Maidstone-Folkestone road, and at Pounce Hill, to the east of Saffron Walden. In four of these cases the signs are being issued at the instance of the local authority. Ipswich Council has asked for signs for two schools, and has intimated that unless drivers moderate their speed a drastic speed limit will be applied for. Thirty signs were sent out by the M.U. during October, bringing the total to 70 in towns and villages, 280 near schools, and 120 near concealed turnings.

CHESHIRE.—The Highways Committee of the Cheshire County Council recently recommended the Council that the surveyor should inspect the Goyt Valley Road at Macclesfield, with a view to the application for an Order prohibiting motor traffic thereon. An amendment including several other roads in the application was supported by Mr. F. Barlow as the user of a car. It was, however, lost.

HEREFORDSHIRE.—It is said that the cost of the maintenance of the main roads in Herefordshire has increased from £16,000 to £27,000 in recent years, and the County Chamber of Agriculture has just passed a resolution calling for the licence fees of motorists being increased, the revenue being devoted to the repair of the roads.

COMPANY NEWS.

URBAN TAXICABS, LTD., has been registered with a capital of £200 in 1s. shares.

THE eleventh annual general meeting of the shareholders of Rossleigh, Ltd., will be held at Edinburgh on Tuesday next, when the directors will report the profits available for division, including the balance carried forward from last year, amount to £7,276. It is recommended to pay a dividend of 6 per cent. on the preference shares and 10 per cent. per annum on the ordinary shares and to carry forward £4,817.

THE secretary of the F.I.A.T. Motor Cab Company, Ltd., has issued a circular letter, in which it is stated that the company has seventy-seven complete cabs plying for hire, and a further ten to fifteen are being placed on the streets weekly. The average daily takings are in excess of the estimate foreshadowed in the prospectus. Apart from these cabs there are a further forty in the garage of the Thames Bank Wharf Motor Works, Ltd., and for the detention of these the company are claiming damages in a forthcoming arbitration. Negotiations have been concluded for the tenancy of garage premises adjoining King's Cross (G.N.R.) Station. The annual meeting is due to be held before the end of the year, and the directors see no reason why those interested in the company should have any apprehension as to its future prosperity.

MESSRS. DAVID BRIDGE AND CO., engineers, Castleton, Manchester, have secured an order for a complete installation of their well-known Heywood and Bridge's patent friction clutches, together with the whole of the millwrights' work for driving electric generators, compressors, &c., the power being over 3,000 h.p.

THE Sunday of the Olympia Show week is invariably a quiet one for provincial agents, and for several years past Mr. T. C. Pullinger, of Humber, Ltd., has organised a trip for those Humber agents forced to spend the week end in London. On Sunday last a number of Humber cars left Holborn Viaduct, E.C., at 9 a.m., with a large party of agents, and a delightful run was made to Brighton, lunch being partaken of at the Royal York Hotel. The journey throughout was most enjoyable, and formed a pleasant break in the round of show business.

CASES AGAINST MOTORISTS.

DISMISSALS.

At the Guildford Petty Sessions, Lieut. Rose was summoned on Saturday for exceeding the legal speed limit on the Portsmouth road on October 18th. Superintendent Jennings estimated the speed at thirty-five miles per hour. The defendant, in his evidence, said that he, with two ladies, went out to see what English traps were like. Other witnesses were called to disprove the police evidence and the case was dismissed.

At the Reigate Court on the same day Mr. E. M. Welton was similarly summoned for exceeding the speed limit at Merstham. The defendant said that he had made a wager that he would drive from London to Brighton in a certain time without at any part of the journey exceeding the speed limit. The gentleman with whom defendant made the bet said that he kept close observation upon the speedometer the whole journey and they never exceeded twenty miles an hour; whereupon the case was dismissed by the magistrates.

A QUARTETTE OF SUMMONSES.

Richard Bird, of Ley Street, Ilford, appeared at Highgate to answer four summonses for (1), driving an unregistered motor-car, (2) driving the car without having a licence, (3), driving without having a front light, and (4) for driving without having a light at the rear of the car to render the identification plate easily distinguishable after dusk. F. W. Jenkins, of the Maddox Street Motor Company, Ltd., W., had to answer two summonses for employing a person without a licence to drive a motor-car, and with aiding and abetting Bird to drive

Mr. Barker appeared for the Commissioner of Police, and ascribed the lateness of the summons to the great difficulty in tracing the defendant. The affair happened in the early morning, defendant's car, which was on the wrong side of the road, running into a one-horse van. Mr. Shipley would not give his name and address. The car was registered in the name of a Mr. Carne, of Wales, who sold it over a year ago. In fining defendant, the chairman said £20 was for reckless driving, other fines and costs brought the total to the amount already stated. The Bench also suspended defendant's licence for six months.

BATCHES.

Several cases against motorists have been heard at Lewes, Haywards Heath, Kingston (12), and Reigate (4), Brentford, Carlisle, Paisley (14), Dumfries (3), Weymouth.

Motorists have lately been summoned to the courts at Grantham, Brentford (3), Richmond (a fine of £20 and costs in one case), Cambridge (4), Woking (£15 fine in one case), Horsham (3), Croydon and Epsom (8), Chertsey (7), Kingston (16), Grantham (3), Petworth (4 cases, occupying nine hours).

RECKLESS DRIVING.

At Epsom, on Tuesday, Ian Hayward, of St. James's Place, London, S.W., was fined £10 and costs for recklessly driving a motor-car.

PUBLIC SERVICES.

THE colour of the Fiat cabs plying for hire in London has been changed to dark blue for business and practical reasons. It was found by experience that yellow was too delicate in use, and that it was very apt to become stained by the mud in wet weather.



The Lorraine-Dietrich Four-Ton Petrol Wagon which took part in the recent Trials in Austria.

This vehicle has lately been making a tour of eastern Europe, demonstrations having been given in Bulgaria, Roumania, Turkey and Greece.

(Allgemeine Automobil Zeitung.)

an unregistered car. P.C. Barton, 357Y, said that he stopped Bird at 9.15 p.m. in the Broadway, Crouch-end, for not having a lighted lamp in front of the motor-car. Witness then noticed that the rear lamp was not alight. Bird, when asked for his licence, produced one which had run out three days before. Inspector Thomas said he afterwards ascertained that the car had not been registered by the defendants, with whom it had been left for sale. On the night in question the car was out for a trial run. Mr. Jenkins was fined 10s. on each of the two summonses against him; and Bird, whose previous licence was clean, was fined 20s. and costs on each of the four summonses against him.

EXCEEDING THE LIMIT.

At Kingston, recently, Miss Dorothy Levitt was summoned for exceeding the limit at Esher on October 25th. It was stated by the police that the defendant was travelling at a speed equal to twenty-eight miles an hour, and that when stopped she denied the speed. Defendant conducted her own case, and subjected the police witnesses to a searching cross-examination. The chairman, in imposing a fine of £10 and costs, said there were five convictions against her. If she appeared before the Bench again, and was convicted, her licence would be suspended.

SUSPENSION OF LICENCE.

Fines and costs amounting to £35 14s. 4d. in all were imposed by the Croydon County magistrates, on Saturday, upon Percy Snipley, of Caenley Hall, Lincoln, who was summoned for driving a motor-car recklessly at Wallington on August 15th, for failing to give his name and address when requested, and for driving an unregistered motor-car.

THE Hull Hackney Carriage Committee has agreed to allow three motor-cabs to stand outside the railway station at Hull.

"POLICE CONTROLS."

AT Merstham the police trap has been in frequent operation of late. THE "control" in the Shooter's Hill Road, London, S.E., is in almost daily observation by the local police.

POLICE traps have been established on the Glasgow and Busby road, Paisley; the Dumbarton road at Yoker; Newlands; and the Paisley to Birth road at Howwood.

ON Saturday last the Daimler Company's stand at Olympia was a scene of great animation, and a record was established in that we are informed no less than fifteen of the new models were sold in the same number of minutes.

THERE is an excellent opportunity just now for an automobile racing enthusiast to achieve greatness. A purchaser on the Vauxhall Company's Olympia stand last Saturday, after complimenting Mr. Kidner on his Gaillon success, asked him if the company were running anything in the French Grand Prix of next year. He was told they were not, but they were so impressed with the capability for improvement of last year's British performances that they were ready to build a Grand Prix team of three Vauxhalls for anybody who would enter them and have them driven—confident, moreover of turning out a team that should stay the course.

FORTHCOMING EVENTS.

NOVEMBER.

20th-28th.—Stanley Show at the Royal Agricultural Hall, London, N.
 25th (W.).—Annual Dinner of the Founder Members of the Royal A.C.
 26th (Th.).—400-mile International Grand Prize Race of the Automobile Club of America.
 28th (Sat.).—Opening of the Paris Motor Car Exhibition.

DECEMBER.

2nd (W.).—Lecture by Mr. E. Stuart Bruce, M.A., before the Society of Arts, on "Mechanical Flight."
 3rd (Th.).—R.A.C. Lecture by Mr. H. M. Wyatt on Magnetos.
 13th (Sun.).—Closing day of the Paris Salon.
 23rd (W.).—Speed and reliability trials at Nagpur, Central Provinces.

JANUARY, 1909.

14th (Th.) (provisional).—Annual Dinner of clubs associated with the R.A.C.
 22nd-30th.—Scottish Motor Exhibition at the Waverley Market, Edinburgh.
 26th.—Scottish Motor Trade Association Dinner at Edinburgh.

FEBRUARY.

War Office Fourteen-days' Trial for Light Tractors.

LIGHTING-UP TIMES—LONDON.

| | | | | | | |
|----------------|-----|-----------|-----|-----------|-----|-----------|
| Nov. 21st—4.59 | ... | 23rd—4.57 | ... | 25th—4.54 | ... | 27th—4.52 |
| " 22nd—4.58 | ... | 24th—4.56 | ... | 26th—4.53 | ... | 28th—4.51 |

To find the approximate lighting-up time in November for Birmingham 5 minutes should be added to the above times, 5 for Manchester, and 8 for Glasgow.

WANTED—A CHAUFFEUR.

"Wanted—a chauffeur, both sober and neat,
 And able to clean and repair,
 And when he's not driving, to wait on the door,
 And manage the pony with care.

He must sleep in the stable, and take his meals out,
 The chickens and pigs he must feed,
 And keep all the lawn and grass borders mowed,
 And the garden he also must weed.

He must work every Sunday, and clean all the boots,
 He must milk and attend to the cow,
 And put up the clotheslines, and beat out the rugs,
 And to polish the windows know how.

For duties like these the munificent sum
 Of ten dollars a week he will get"—

The woman or man who inserted this ad.
 Is in want of a chauffeur as yet.

—New York Sun.

MESSRS. J. KEELE, LTD., have received one of the first 8-h.p. two-cylinder two-seated Renault which has arrived in this country, and as they have not room for this on their stand at the Olympia Show, they have it on exhibition in the showrooms at 72, New Bond Street, London, W.

As evidence of the wearing quality of modern British-built motor-cars we have just been informed of an instance of a vehicle made by Humber, Ltd. One of their agents—Mr. Webb, of Monmouth—has offered for inspection at the Olympia Show the mechanism of a 20-h.p. Humber, of which he received delivery about three years ago. The car had been used extensively for hiring purposes ever since, and has been driven no less than 91,400 miles, yet, notwithstanding this enormous distance and the rough usage the machine has had, the engine gears, back axle, &c., show no appreciable sign of wear.

AMONG the various forms of wheel control, the horizontally-operated level is deservedly very popular with a large number of motorists, and those who have grown used to this system often find some difficulty in accustoming themselves to other methods. Recognising this, and in order to enable the well-known Bowden car controls to be available for drivers who prefer the horizontal movement to any other, the E. M. Bowden's Patents Syndicate, Ltd., have introduced a couple of new controls, which, though practically the same, have this difference, that one is designed to be fitted to cars with hollow steering pillars, while the other is specially adapted for solid pillars.

REFERRING to the reference in our issue of the 24th ult. to the 550 miles run of one of the new 33-h.p. Daimler cars, we are asked to state that the test therein referred to was not an official trial conducted under the observation of the Royal Automobile Club, and that in running it the Daimler Company acted in contravention of the Club's competition rules, for which they have expressed regret, and tendered an apology to the R.A.C.

BUSINESS NEWS.

EARLY in the spring of 1909 Mr. F. W. Lanchester will give three lectures before the Society of Arts on "Aerial Flight."

MESSRS. A. W. GAMAGE, LTD., have been honoured with the Royal Warrant of Appointment to His Majesty the King of Spain.

THE Thornton Engineering Company, Ltd., Belle Vue, Bradford, Yorks., have been appointed district agents for the Sheffield-Simplex cars.

MR. L. SAVORY informs us that he has sold the business of the Westminster Motor-Car Garage, of 17½, Kensington Place, off Page Street, Westminster, and that it will be carried on on the same general lines as heretofore.

THE Aster Engineering Co., Ltd., of Wembley, have taken over the business of the Autoloc Syndicate, Ltd.

MR. W. P. WARREN SMITH, who has for some years been connected with the Argyll Company, has now joined Messrs. C. E. Whittaker, Ltd., to push the new Imperia car.

THOSE of our readers who have not yet had any opportunity of seeing the new gear and differential lubricant "Vasoleum" subjected to a practical test, and who may be desirous of doing so, are invited to send to the manufacturers, the County Chemical Company, Ltd., Birmingham, the name and address of their local motor dealer, when a practical demonstration will be arranged at no expense whatever to the customer.

As compared with the 23,717 motor-cars registered in London, 16,214 are officially reported as having been registered in Germany.

THE necessity of always seeing that the change-speed gear is in the neutral position before starting up the engine was exemplified at Nottingham last week, when, while the chauffeur was turning the starting handle of the car belonging to Mr. Trivett, the vehicle suddenly dashed off, and, after narrowly missing several persons, came to rest in the middle of the shop of an antique dealer.

A SOMEWHAT remarkable item of news has reached us from New York, that the greatly-increased use of motor-cars by American motorists touring abroad has made it necessary to alter the arrangements of the steamers of at least one of the great trans-Atlantic lines. When Americans first began bringing their cars to Europe for touring purposes, they were content to land at Southampton, Cherbourg or Bremen. Now, however, many prefer to land in Italy and then tour northward, embarking for the homeward voyage from one of the northern ports. The distance between decks of the Mediterranean steamers was not sufficient to comfortably accommodate the crates used for some of the covered cars, and now on all steamers of the line in question the distance between decks has been increased nine inches.

TO CORRESPONDENTS.

All communications intended for insertion in this Journal or relating to Editorial matters should be addressed to THE EDITORIAL DEPARTMENT, MOTOR-CAR JOURNAL, 27-33, Charing Cross Road, London, W.C., and must be written on one side of the paper only. Letters must in all cases be accompanied by the name and address of the writer, as no notice will be taken of anonymous communications.

To insure insertion communications and contributions must be in the Editor's hands by Tuesday forenoon of the week in which the same are intended to appear. Disappointment may be caused by non-compliance with this rule, and to avoid this earlier receipt, if possible, is necessary.

Photographers, both professional and amateur, are invited to send photographs of current events or of motoring scenes and incidents. The fee, if any, required for reproduction should be stated in each case, otherwise no liability will be accepted.

The Editors cannot undertake to return MSS. or drawings, although every effort will be made to do so in the case of rejected communications. Where such are regarded as of value, correspondents are requested to retain copies.

The Editors do not hold themselves responsible for the opinions expressed by their correspondents, or for statements and facts which do not appear in the editorial columns.

The Editors and Publishers beg also to state that they will accept no responsibility for unsolicited contributions, even if used, unless payment for same is directly specified in forwarding, and the terms arranged before publication.

THE Motor-Car Journal.

VOL. X.]

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TO THE FRIENDS WHO MISSED US.

Our thanks are due to the writers of the many hundreds of letters who have written expressing regret at our absence from the recent Exhibition at Olympia. We are sorry; it was not our fault.

COMMENTS.

The M.P.'s Petition. It is reported that more than a hundred M.P.'s have petitioned the President of the Local Government Board to give heed to the pleas of smaller bodies with regard to the limitation of the speed of cars, and hasten the many inquiries which have been applied for, and which, according to the narrow views of prejudiced persons, have been unduly delayed. More than that, these suggestive Parliamentarians are persuaded that the revision of the existing law cannot be long put off and that its early alteration is most desirable. The overloaded cargo of the Parliamentary vessel is perhaps the best guarantee that can be offered to prove the impossibility of adding the motor problem to the perplexities of M.P.'s for some months to come.

Obstructing Motorists.

MOTORISTS who take action against those persons who seem to delight in obstructing the passage of other people along the highway are generally to be commended. In this category we would place Mr. W. Firth, who has just taken action against a carter who would not give way to his car in the High Road, Brentford. Although the defendant was only ordered to pay the costs, the chairman of the Bench warned carters to remember that they have no right to bait other vehicles. He hoped, too, that the County Council would make a bye-law as to vehicles keeping on the near side of the road.

The Battle of the Seals.

RIVALRY in trade has had many phases, and the issue of coupons by soapmakers, which, garnered at certain seasons of the year, entitled the collectors to presents, is now being emulated, in slightly different form, by some of the sellers of motor spirit. During the Show one firm offered 5s. for every 100 seals that were obtained by users of its petrol; within a few hours, on the other side of the gallery, another bait was being thrown out, viz., of 5s. 6d. for 100 seals—and now we have a letter from a third concern deploring the inducements held out by the other two. The matter has become a subject of correspondence in the daily Press; and we do not incline to the view that this form of rivalry will be appreciated by either the private owners of motor-cars or by the firms engaged in the trade. The collection of pictures from cigarette packets for the beautification, or otherwise, of a young lady's album has been worry enough without the chauffeur getting wasteful in using the petrol so that he may have a whole pocketful of seals representing a monetary value. Both the competitors who indulged in this little joke at the Show have

so well established their reputation without giving prizes that we would hope they will shortly withdraw their offer and go on their way to increasing prosperity without such extraneous aids to the purchase of spirit. No one would complain of a reduction in the price; it is the idea of their giving "something for nothing" that seems to be urged with dubious wisdom.

An Offer that should be withdrawn.

So much for the matter as it concerned the Show. The suggestion that the notion is to be a permanent one should be earnestly considered by all who have the welfare of the industry at heart. Its development would certainly be inimical to the best interests of all parties concerned in the future of automobilism. Everyone can easily see a dozen ways in which chauffeurs would be tempted to extravagance. Makers of cars are endeavouring to secure the economical running of engines, and, in some cases, have given awards to drivers who have assisted the motor trade by running carefully and getting all they can from the resources at their command. To give the drivers a monetary interest in increasing the consumption of petrol is therefore running in direct opposition to the whole trend of things during the last few years. Therefore the innovation, which we are afraid was lightly introduced, and even less thoughtfully imitated, is one to be deplored. We would even go further and condemn it as tapping at the development of the industry at a time when it needs all the assistance it can obtain from records of economical running and moderation in upkeep, both of which desiderata are threatened by offers that will lead to more waste than their authors have imagined.

Strange Bedfellows.

"MISERY," Shakespeare says, "makes us acquainted with strange bedfellows," but nothing more remarkable can be imagined than the Olympian chamber towards which heavy vehicles will drag their ponderous weight along, while aeroplanes heavier than the air, but lighter than the others, will float above the elephantine masses of machinery. Verily it is a strange juxtaposition. True, the heavy vehicles did not attract to Olympia this year; the marine section, which brought a few, "has had its day and ceased to be," but the idea of bringing "fliers" to coquette with steam tractors and heavy vehicles to rub exteriors with aeroplanes is, as my Lord Tomnoddy would say, "quite a new thing." Dr. Johnson would have marvelled at such a terrestrial display of the potentialities of airships combined with the utilitarian purposes of the ponderous heavy vehicle that draws great loads for commercial advantage. Why not seek to give local colour to the show by the introduction of diaphanous clouds through which the aeroplanes could be viewed while standing on the footboard of a tractor?

Cribb'd, cabin'd and confined.

AWAY in the gallery at the motor show at Olympia last week were many useful novelties and recently-introduced accessories for the service of motorists which, unfortunately, were doubtless unobserved by some otherwise prospective buyers. Several of the displays were crowded into small spaces that were really inadequate for the effective display of the variety

of goods shown. The result was that half a dozen people easily made a crowd around a stand, and when this also occurred at one immediately opposite, the progress of passing observers was obstructed, or those intending to examine the points of any particular exhibits were hustled and jostled in a way that did not tend towards a business mood. Exhibitors have some claim to consideration in the matter, and there will have to be limits to the minimum space allowed to exhibitors. Business is often lost owing to the circumstances we have mentioned, and the only way that those who show at these displays can secure the full result of their enterprise is that they shall be allotted ample space in which to dispose their goods to the best commercial advantage, and not be "cribb'd, cabin'd and confined."

Provincial Meets.

WITH reference to the provincial meets of the motoring organisations which have their headquarters in London, Mr. Rees Jeffreys struck a right note at the last meeting of the M.U. committee when he said that the time had come for the introduction of new features in these events. So far there has undoubtedly been a sameness—and we might add, a tameness—about the provincial visits of both the R.A.C. and the M.U. Apparently the feeling of most of the members of the committee was in favour of a three days' meeting instead of three one-day meetings. This would be a reversion to those early tours and



Moreton Old Hall. (See page 841).

meets of the A.C.G.B.I. which did so much for the social side of motoring in the days when it had few friends. With regard to the programme for 1909 it is proposed to hold a joint gathering of the M.U. with the Welsh A.C., and Mr. A. E. Newton has been asked to draw up a suggested tour in connection with this meet, for the entertainment of which the local club is prepared to spend £150. No more varied centre for a motor meet could be found than South Wales and the Wye Valley, and it should be easy to provide a programme of enjoyment and novelty in that district.

The R.A.C. and the Clubs.

THE meeting of the Derby and District A.C. to be held on Tuesday next will be anxiously regarded by those who are following the course of events in what might be called the political side of automobilism. Efforts to weld the various organisations into one homogeneous society have not met with success, and the pacific endeavours of some northern clubs have not brought peace. By requiring its affiliated bodies to restrict their official connection only to themselves the R.A.C. has entered upon a campaign which those who now assist two or more associations regard as of a bellicose character. The attitude of the Derby Club is therefore more than usually interesting. Should the policy recommended by the committee of this virile club be endorsed by the members and followed elsewhere to any extent it will cause some fluttering in

the Piccadilly dovescotes. Of course the R.A.C. will await developments in other directions; but there is much to be said on behalf of those who would allow the local clubs perfect liberty of action with regard to the associations they propose to support. After all, they pay the fees, and if they wish to give threefold help who should say them nay? The R.A.C. organises trials, the M.U. gives legal assistance, the A.A. secures the comparative safety of the roads from overweening police attention. If a club that is concerned with the R.A.C. also wishes to promote either of the two other good works, we do not see why its enterprise should be restricted. At the conference of provincial clubs held at Birmingham it was decided to ask the R.A.C. to reconsider its position on the question—a decision endorsed at a meeting at which the following clubs were represented:—Harrogate and District A.C. (one delegate), Sheffield and District A.C. (three), Derby and District A.C. (three), Midland A.C. (three), Leicestershire A.C. (three), Shropshire A.C. (one), Liverpool A.C. (two), Manchester M.C. (one).

The Motor Union.

THE principal feature at the annual dinner of the Motor Union last week, the proceedings at which are referred to elsewhere in the present issue, was the spirited speech of Mr. Joynson-Hicks, M.P., the chairman of the Union, in which he pointed out that the coming year would be a critical one for motorists owing to the growing hostility they had to face. Nowhere was that hostility more apparent than in the place where it ought least to be—the House of Commons. The future was, however, with the motor-car, and the time had now come when, in his opinion, they could demand as a right the improvement of the roads and the recognition of motorists as occupying a really living place in the body politic. They had been on the defensive long enough; they must carry the war into the enemy's camp and demand as a right the same justice and fairness as was accorded to the other users of the road.

The Motor Mail Van.

IN a few days the last of the horse-drawn mail coaches which travel nightly from London to Guildford will be superseded by a motor-van. And thus the service of the horse for carrying mails through the night will be relegated into historical annals. The way in which the Post Office has tackled the question of the conveyance of the mails has been really commendable. Of course, the motor vehicle will not carry parcels and letters long distances from one end of the country to the other, but within a radius of fifty or sixty miles, or even rather more, will have opportunity of proving its utility. Every provincial town in the future will have its motor mail van to distribute its bags of mails in the villages, and in the organisation of an even quicker service than now prevails the automobile will have a place.

A REMINDER of the passing of 1908 comes with the receipt of a set of date-indicating pads and book diaries for 1909 from Messrs. Hudson and Kearns, Hatfield Street Works, Stamford Street, London, S.E. These are issued in various sizes, all presenting distinguishing features of value for the office desk. The blotting paper employed is of good quality and readily absorbent, and to the left of the pad, in all patterns, is a calendar with postal information, &c., as well as a diary interleaved with blotting paper and an alphabetical index for memorandum, &c. Many of our readers will find the pad known as 8A a useful blotting addition to the desk equipment. This has, in addition to the blotting pad and the daily remembrancer with its weekly tear-off, ample space on the right-hand side for notes, &c., as well as the features already indicated. Even more complete is the bankers' edition, this being a pad of 2 ft. 3 in. in width, and providing within easy reach many things that are necessary for the desk and which cannot be lost or mislaid where such an excellent pad is adopted.

ABOUT NORTHERN STAFFORDSHIRE.

THE Staffordshire district may not seem an inviting locality for the holiday-maker, who has associated the district only with the Potteries, but those who are familiar with the county, particularly the northern section, know full well the delightful roads and beautiful scenery there to be enjoyed.

A reminder of many interesting tours in the locality comes in a new Guide to Picturesque Staffordshire, which has been issued by the North Staffordshire Railway Company, of which Mr. Tonman Mosley is the chairman. Mr. Mosley is an active motorist, and, in fact, was one of the first of the J.P.'s of Buckinghamshire to recognise the value of the motor-car as a social as well as a commercial force. The motorist who intends to tour the district served by the railway system will include Congleton, Biddulph, Alsager, Mow Cop, and Moreton in his itinerary. The Cheshire town of Congleton possesses special interest in the magpie houses that still remain, and although the demand for "improvement" has robbed the place of many of its antiquarian delights, the Lion and Swan Hotel and Ye Olde Black Boy inn preserve their ancient appearance for the delight of the visitor. Several good runs may be taken from Congleton, the ascent to Cloud End, 1,000 feet above the sea level, giving a panoramic view of the surrounding country, including Mow Cop in the prospect.

An artificial ruin on the top of the hill of Mow Cop is a landmark for the surrounding country; and from the summit of the hill a magnificent view is to be obtained of the Cheshire Plain, a well-wooded district interspersed with fields and hedge rows. Alderley Edge, Beeston Castle, Market Drayton, and, with a clear atmosphere, the Welsh Hills, the Wrekin, and Delamere Forest are distinctly visible.

But perhaps the greatest treasure of the district is Moreton Old Hall, a view of which is on page 840. This is an example of



The Archway, Hawkestone Park.

Elizabethan architecture and presents a most picturesque appearance. The moat is rectangular, measuring about 90 yards by 80 yards, and is crossed on the south side by the stone bridge shown in our illustration, the arms of the Moreton family being carved in the centre. The courtyard is unique in this country, and the building is a perfect specimen of the half-timbered house of the sixteenth century. Two magnificent bay windows with

exquisitely leaded glass are immediately opposite the entrance, the black timber in contrast to the white plaster being very effective. The following words may be seen round the upper tiers of the two great bays:—

God x is x al x in x al x things x this x window
x Where x made x by x William x Moreton x in x
the x year x of x oure x Lorde x MDLIX.

On a panel against the ground floor window is the maker's record as follows:—

Rycharde x Dale x Carpeder x made x
thies x by x the x grac x of x God.



"Green Man and Black's Head," Ashbourne.

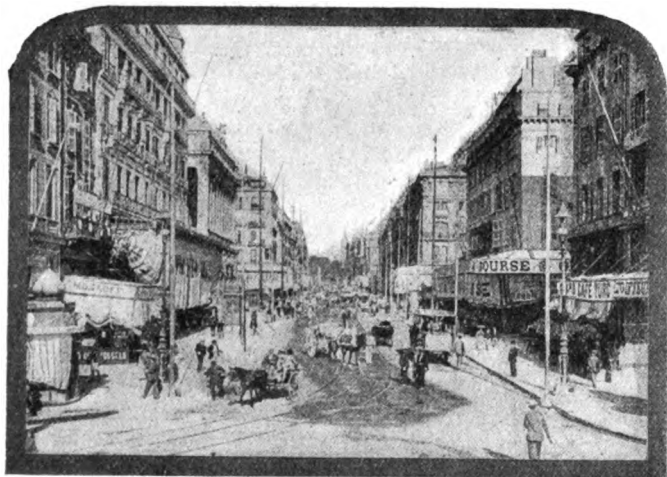
The long gallery, which measures 70 ft. by 12 ft., is reached by a spiral staircase, and many old relics can be seen in the kitchen, while literary interest is given in the fact that Moreton Old Hall was the "Manor House" of Miss Amelia Edwardes' novel "Lord Brackenbury."

The second route for those wishing to explore the district thoroughly will include Sandon, Weston, Great Haywood, Chartley and Ingestre, a tract of country in which are many great houses, of which Trentham Hall, the splendid residence of the Duke of Sutherland, has first place. Hawkstone Park, about nine miles from Market Drayton and three from Hodnet, has also many interesting memories and natural beauties. Among the latter is the remarkable archway cut through the solid rock. This is reached through the Park after descending the Mound opposite the ruins of Red Castle. Following the descent there is a short distance to be traversed along a cart-road, and, passing under the archway, a winding footpath leads up to the Grotto Hill. Here is a cave supported by pillars hewn out of the rock. It contains a large number of shells and fossils inlaid in the roof and sides. Market Drayton was an old Roman station and has had a place in history ever since Doomsday. The half-timbered houses still standing in its streets give it an interest that is not often found in such busy centres as in this historical locality.

Ingestre Park, the name of which recalls a prominent motorist of the present day, connects Weston and Hixon, a village on the main road from Uttoxeter to Lichfield, where recently great celebrations have been made in connection with the unveiling of the monument to the biographer of Dr. Johnson. Pursuing the journey to Tutbury Castle, the Manifold Valley should on no account be missed. The Manifold Valley is in such close proximity to that of the Dove that there are necessarily many points of resemblance between them. The former is the more impressive on account of the number of high hills on either side, in some cases the eminences rising upwards of 1,000 ft. in height. Beeston Tor, Grindon and Wetton are other places of interest, and then the motorist would do well to make his way to Hartington, Beresford, Dale, Dove Dale, and Ilam, which although not in Staffordshire, are sufficiently near to warrant a day's diversion from the path. They claim association with the North Staffordshire Railway, to whose courtesy we are indebted for the accompanying illustration of the old sign at Ashbourne and the other pictures of interest.

Gossip from Paris.

THE movement in favour of making the Paris Salon a biennial event does not meet with the success some of the leading automobile manufacturers expected. The truth is that the eve of the opening of the great annual show is scarcely the right moment to speak of its suppression. Moreover the question is whether it can be suppressed effectually one year out of two. To do so would require the unanimity of the 650 or 700 exhibitors, or something approaching it, and that unanimity does not seem to exist. An influential gentleman said to me the other day that if by chance the Automobile Club decided not to hold a Salon next year he would at once organise an automobile exhibition for 1909. In the case of the Grand Palais being refused for the show, there were, he pointed out, a dozen other places in Paris at which it could be held. And he added, "Mark my word, it would be a huge success." There is a good deal of truth in this. Those who are satisfied with the position they have attained, and can scarcely hope to improve it by whatever they may exhibit, are, after all, the very small minority, and they have failed to persuade the rising manufacturers or those they call rather contemptuously "the small fry," that it is no use trying to compete with them. No, "the small fry" want an annual show, and will participate in one even if the Automobile Club refuses to organise it. Nothing is eternal, but it does not



Touring in France.—La Canebière, Marseilles.

appear as if the moment had come to transform the annual automobile Salon.

Is the game worth the candle? is the question some of the most renowned French automobile manufacturers have been studying several months in connection with the Grand Prix Race. The Anjou circuit has been chosen for the great international race not because it is the most suitable and convenient but because the local committee was able to furnish the proof that unanimity prevailed in its favour in the district, that the roads would be repaired, and especially that there was a substantial subvention of £4,000. For the Automobile Club the pecuniary risk is therefore not very great, but for the automobile manufacturers participating in it the competition must be very costly. It has been said that in all probability their number will nevertheless be so great that it will be necessary either to have recourse to the unpopular system of an elimination race or to reduce the number of the racing cars each firm may enter for the competition from three to two. Even reduced to two racing cars the cost for the maker is not materially lessened, and several of the leading firms whose position on the market is well established are seriously thinking of suppressing an item of expenditure for which they get no return. For instance, the board of directors of the Panhard Company believe the sale of their cars would not be adversely affected by abstention from the race; Renault Freres are of the same opinion, and I am informed that Dietrich and

Mercedes do not consider the game is worth the candle. Of course, a board of directors can always modify its decision, but at the present moment there is very little probability of a Panhard or a Renault car being seen in the Grand Prix of 1909. And if neither of those firms participate in the great international competition their example may be contagious.

THE decision of the French Automobile Club to occupy itself with aviation and steerable balloons is not distasteful to the majority of the aviators, who complained that their interests had been somewhat neglected. Then the Aero Club and the National Aviation League did not work harmoniously together. The regulations for the very numerous prizes already in the hands of the League were not drawn up by the Club, which I am informed demanded that half the funds belonging to the National Aviation League should be handed over to it. I cannot affirm that this assertion is absolutely correct. However, the report that such was the case made a bad impression. But "All's well that ends well," and every one for the moment pretends to be satisfied with the nomination of the commission composed of members of the Automobile Club, the National Aviation League and the Aero Club. What the commission is to do no one knows exactly. It is supposed to be the pledge for the harmonious working of the three institutions. The National Aviation League contents itself at least for the time being with the collection of the funds. There nevertheless remain two associations each of which aspires to the honour of establishing the rules and regulations of the competitions and races and of presiding over them. It appears that the National League will give its financial support to the Automobile Club, which has appointed a special Aviation Committee and contends that it alone has the right to occupy itself with the heavier-than-air means of locomotion, because it is the new-born child of automobilism—that is to say, of the petrol motor. The Aero Club was founded ten years ago to encourage ballooning, with which the Automobile Club has nothing to do. Consequently the Automobile Club claims to be the rightful paramount authority on all that concerns steerable balloons and aeroplanes of all sorts, because the petrol engine is used to propel them. But it recognises the spherical balloons floating at the will of the wind constitute the exclusive province of the Aero Club. To be thus thrust into the background is very distasteful to the Aero Club, which points out with perfect truth that it is at present the only authority on ballooning and aviation recognised by the International Aeronautic Federation. It is, however, not difficult to foresee that the weakest will ultimately go to the wall.

MARNEY.

MR. JAMES SETON-ANDERSON, whose garage is at 57A, Shepherd's Bush Green, W., is the first to put Spyker taxi-cabs on the London streets. The vehicles are fitted with 10-15 h.p. four-cylinder engines and are luxuriously equipped.

WE learn that Messrs. Boon and Porter, Ltd., of Castelnau, S.W., have recently supplied no less than twenty-three motor-vans of the Renault and Lacre type to Messrs. J. Lyons and Co., Ltd., the well-known caterers. Messrs. Boon and Porter have during the past season made a special feature of the Renault cars, and the sales have been so satisfactory that they are now arranging for a large number of these vehicles for 1909, and already have the new 8-h.p. two-seated model in stock.

A NEW series of motor-car regulations have recently been adopted in Buenos Ayres, they having been rendered necessary by the increasing number of automobiles in the city. Experienced drivers are given a fairly free hand as to speed, but must satisfy the authorities that they are competent by passing a suitable examination. They are also required to carry a duplicate pass book, containing their licence, and blank pages, on which any accident or carelessness is to be recorded by the police. Persons under eighteen years of age are only permitted to run cars up to 12-h.p., and this only after passing a satisfactory examination. As to the cars themselves, they must be provided with non-slipping tyres and efficient brakes.

MY FRIEND GILFILLIAN AND HIS 6½-H.P.

By "Rus."

(Concluded from page 814.)

I usually spend my holidays with Gilfillian, and this year we had chosen St. Andrews, and he had suggested as an additional attraction to golf that he would take the car and that we should travel over in it.

However, after the last exploit I went home and dreamed a dream about our journey to St. Andrews on that car. We were *en route* through Edinburgh down its steepest street, suitably named Pitt Street, but, unlike the other pit, it has a bottom. Gilfillian mistook something else for the brakes and down we went that long thoroughfare at sixty miles an hour, over a low wall at the said bottom into a stream beyond, and were fished out and gathered up and taken to hospital; but, nightmarelike, continued the journey nevertheless to the Granton Ferry, where we went down the slip to get on the steamer. Gilfillian saying that he always did it on his own power, would not let the pier-men interfere. The tide was low, and when he got her on the stones covered with slimy seaweed she skidded past the gangway and into the sea at the bottom of the slip. Again we were rescued, and taken this time home, where I presently awoke.

"Gilfillian," said I next day, "about that holiday. I suppose the car won't be repaired in time?"

"Oh! won't it," said he, "I'll see to that."

"Gilfillian," I replied, "I feel I am trespassing on your generosity. I have no motor and so cannot return the compliment."

"My dear sir, you rate me very low. You are my friend, and therefore I am glad to give you any little pleasure I can. A return does not enter into my mind."

"Of course," said I, "it will be great pleasure to have the motor with us. By the way, do you know an awfully good way to get to Granton—avoiding the steep gradients of Edinburgh—is to skirt the town on the west side and get along to Granton on the Queensferry Road."

"Yes, I know that way—a sort of 'lubber's hole' as they say in the Navy, but why not take the direct road? The brakes are good enough, aren't they?"

The brakes were no doubt good enough, I thought, but what about the brakesman—the breaker he might suitably be called.

"Gilfillian," said I, "I am afraid I can't get away for that trip at the time, but you go, and if—when—you arrive you will let me know, I'll try and get off, and come by train." I hope I substituted the "when" for the half murmured "if" without him noticing. I would feel just wretched if I thought I had hurt his feelings; besides, there's a new doctor started just a few doors away.

"Not at all," said he; "I wouldn't enjoy that lovely drive through Edinburgh and Fife a bit without you. I can wait a day or two, my time is my own."

There seemed no way out of it now. It wanted ten days yet till we were appointed to go.

But every night till then I found myself bound, Mazeppa-like, to that blessed car in wild career down Pitt Street, Gilfillian laughing the wild laugh of a maniac—every night we charged that low wall at the bottom, crashed over it and came suddenly to rest in the bed of the Water of Leith, then to hospital and at the same time on the road again, and sliding and skidding down that slippery, squeezy, slimy slip, and into the deep and turgid waters of Granton Harbour—awakening in the morning racked and wearied, as one who has come out of a delirium.

Mazeppa had had at least a flirtation with the wife of his tormentor, but what had I done to Gilfillian? How can you persuade a man, without offence, that what he wishes you to do is not the good turn he thinks it is?

I consulted another friend, an expert in such matters.

"Do you believe in dreams?" I said.

"Sometimes," he replied, "but nightmares twice repeated are always true."

"Always?" I tremulously queried.

"Always," he responded with oracular and fatalistic solemnity.

Well, the fateful morning had come at last; Gilfillian was to call for me at 8.30. My luggage was ready, but, with all my preparations, how unprepared I was. What I really needed was a priest to give me absolution.

How fast the minutes went during breakfast. A swollen thorax refused to allow me to swallow anything, not even tea.

It was half-past eight—there it rang. The door-bell went at the same time. Was it the hangman and his procession to lead me to the scaffold or Gilfillian to take me for—a holiday? For the only time in my life I took a drink of brandy in the morning, and a good big one, too, my paralytic hands filled out.

The door opened—not Gilfillian but my servant appeared and handed me a telegram:—

"Sorry motor ran over a bridge last night, twenty miles from home; repair impossible. Meet me Waverley Station 9.30, and go by train. Gilfillian."

Flinging both hands towards Heaven I shouted, "Saved! Saved! Saved!!!"

The astonished servant bolted from the room, knocking over my best breakfast service in his blind rush; but what matter a trifle like that to me at such a moment as this?

We went to St. Andrews, and of Gilfillian as a golfer there is much to say; but that is another story.

LIEUT.-COL. HOLFORD, Equerry to H.M. the King, has placed an order for a 28-35-h.p. Fiat motor-car with limousine body.



"Motor ran over a bridge."

CONTINENTAL NOTES.

The Paris Salon.

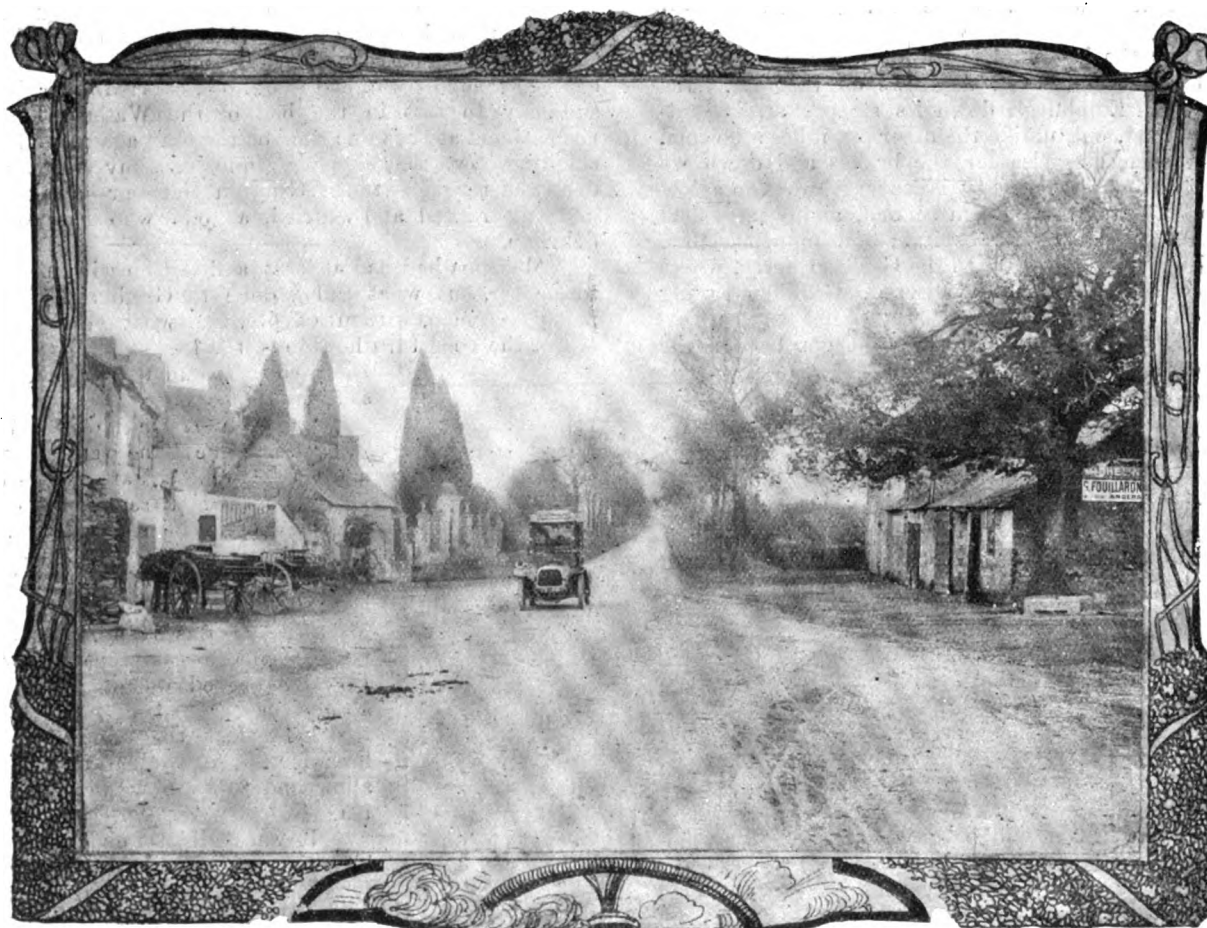
The annual Paris Salon will be opened in the Grand Palais on the Champs Elysees to-day (Saturday) by M. Fallieres, the President of the French Republic. The 1908 show is being run on quite new lines; hitherto the pleasure cars (1) and the industrial vehicles, motor-boats, machines, tools, &c. (2) have been shown concurrently, the first section in the Grand Palais and the second group in annexes. This arrangement not having given general satisfaction, two separate exhibitions are this year being held in the same building; the one which opens on the 28th inst., and which will run to December 13th, being confined to pleasure cars and cycles, while that for heavy vehicles, motor-boats, &c., will run from December 24th to the 30th. Although many of the new models of the leading French builders have already seen the light at Olympia, the Salon is expected to

Belgian Motor-car Imports and Exports.

Returns just issued show that the value of the foreign motor-cars and parts imported into Belgium during the ten months ending with October last amounted to only £122,156, as compared with £142,764 in the corresponding period of last year. On the other hand, there has been an increase in the exports of Belgian motor-cars and parts—from £368,856 in the first ten months of 1907 to £396,584 in the similar period of the current year.

Aeronautical News.

The French Chamber has adopted a supplementary credit of £4,000 for the encouragement of aviation, and a motion in favour of conferring the Legion of Honour on French and foreign aeronauts who carry out their experiments in France.—The Wright aeroplane was taken up and piloted without Mr. Wilbur Wright for the first time on Tuesday last week. The aeroplanist was



A View on the Anjou Circuit, on which the A.C.F. Grand Prix Race is to be held next year.

be fertile in novelties and interesting features, a description of which will be given in the next issue of the *M.C.J.*

The A.C.F. Grand Prix Race.

A good many French and foreign racing car drivers have already gone to the Anjou circuit to examine and to "try it." There is certainly no reason why they should not examine it as minutely as they like, but the local authorities do not seem disposed to let them "try it," at least in towns and villages. Foreseeing the inevitable excess of speed which will, in spite of all rules and regulations, be indulged in, the mayors of the communes through which the circuit runs have agreed not only to issue decrees prohibiting, for all sorts of vehicles, a speed of more than 11½ miles an hour, but also to take the necessary measures to secure the punishment of all who may violate the regulation. English drivers, when they come over to visit the circuit, should remember this, especially as great tolerance will be exercised on the roads not bordered with houses or cottages.

Count de Lambert, who successfully made two flights of fifteen minutes each.—Mr. H. Farman has transformed his aeroplane into a tri-plane, and a few days ago made two flights of between three and four miles each, flying at a height of between 50 ft. and 60 ft.—On Friday last week Colonel Lowther, the British Military Attaché, accompanied M. Clement for a trip in the dirigible balloon, Clement-Bayard, over Paris.—M. R. Esnault-Pelterie's aeroplane, piloted by M. Chateau, made a successful flight of 316 metres on Saturday last.

Miscellaneous Items.

So far ten entries have been received for the competition of tyre-inflating devices which is to be held by the French Automobile Club on the 7th and 8th prox.—A company has been formed in Amsterdam to introduce a service of motor taxicabs in that city.—A motor volunteer corps is being formed in Roumania.—Negotiations are again in hand for the construction of a large motor racing track in the neighbourhood of Spa, Belgium.

THREE years ago there was not a single motor-car in Uruguay, but according to a recent return there are now 138 in use.

THE City Diary for 1909 is issued by Messrs. W. H. and L. Collingridge. This is now in its 46th year of publication and is a capital work of reference as to the affairs of the City of London as well as a useful diary for the office.

FROM the Daimler Motor Company comes a copy of the first number of the Daimler Bulletin, which contains a reprint of Mr. Knight's paper on the new Daimler engine, an article on Ireland from the motorist's point of view, and many other items of interest.

THE St. Catherine Press, Ltd., send a series of little guides to various places of interest, including Tain, Cullen, and Kirkcudbright, in the north of Britain, and Devonport, in the south. These are well printed and illustrated, and copies can be obtained free on application to the Town Clerks of the respective towns.

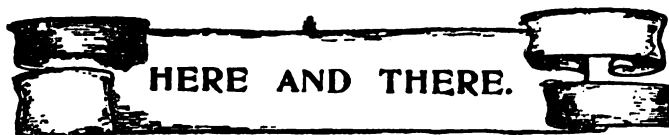
NOTICING that there exists a demand for a good light, cheap car, and as the lowest power in which Germains are made is the 14-22-h.p. model, Capt. Theo Masui has taken up the sole representation for the United Kingdom for the Gregoire light cars, which will in the future be known as the "Gregoire-Gordon."

THE next conference of representatives of National Automobile Clubs will be held on Monday next at the French Automobile Club. We understand that the R.A.C. will again put forward its proposition for the establishment of a definite system, whereby records made under certain approved conditions will be accepted by all the federated clubs as world's records.

THE Coachmakers and Coach-Harness Makers' Company of London are offering a number of prizes for competition among British subjects engaged in the coach and coach-harness making trades and members of technical classes in connection therewith. The competitions include designs for a limousine motor-car body and a four-seated open motor-car body, and essays on decoration for modern carriages.

THE members of the staff and agents of the Star Engineering Company who were in attendance at the company's stand at Olympia were entertained on the evening of Friday last to supper at the invitation of Mr. E. Lisle, sen., the managing director. The party met at Frascati's after the close of the show. Mr. E. Lisle, sen., was in the chair, and amongst those present were Messrs. J. Goodman, J. Lisle, F. Goodwin, H. Goodwin (London) R. Lisle, H. Herbert, and W. Collins (Leicester). A most pleasant time was spent and the occasion served to cement more firmly than ever the pleasant relations existing between the firm, its staff and agents.

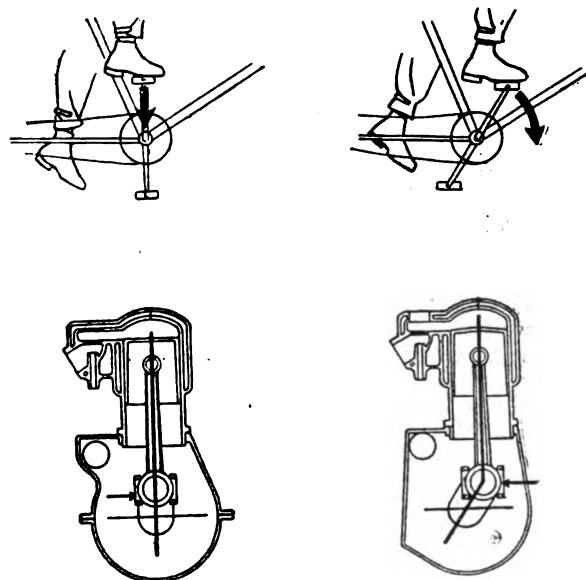
AMONG the many useful publications issued by Messrs. Hans Renold, Ltd., Progress Works, Manchester, that entitled "Renold Driving Chains and Their Uses," a copy of which has just reached us, will take a prominent place. The book, which extends to about 120 pages, is not a mere catalogue—indeed, prices and sizes have been left out—but is intended to serve an educational purpose by giving illustrations and particulars of some of the many uses chains are now being put to in all branches of engineering. The work is divided into three parts, the first dealing with the principle of chain gearing, the three types of chains mostly used, the types of sprockets used, and the tools for making them; the second illustrates the chains in use in the Renold chain factory; while the third shows various applications of chain driving, including the driving of textile calenders, engine governors, pumps, saw benches, radial drilling, or for printing machinery, &c. Established in 1879 in a small room, the Renold chain business has progressed to such an extent that it now comprises two large works with over seven acres of floor space, and gives employment to about 700 persons. Last year the company turned out chains to transmit over 30,000-h.p. for general engineering purposes, in addition to over 50,000-h.p. for driving bicycles and motor vehicles.



It is announced that the Russian-Baltic Wagon Works of St. Petersburg are taking up the construction of motor-cars.

THIS week the motor-car is much *en evidence* at Chichester, the Prince and Princess of Wales being on a visit to Mr. and Mrs. Willie James at West Dean Park. Many of the guests invited to meet their Royal Highnesses arrived in their automobiles.

IN the course of our report of the Olympia Show our readers will have noticed several references to engines in which the crankshafts are *desaxé*, or, in other words, set slightly forward of the centre of the cylinders. The object of this arrangement has already been explained in these columns, but, as we are able this week to reproduce an illustration which has lately been issued by Messrs. Thos. B. Jeffery and Co., the makers of the American-built Rambler cars, and which very clearly shows the advantage that is gained, the following further reference to the matter will not be without interest. The firm in question have taken for purposes of comparison an ordinary bicycle and a petrol engine. As the diagram shows, the best position for the pedals to receive the first downward stroke of the rider's foot is just slightly forward of the centre of the



crank shaft of the bicycle, as shown on the right. If he mounted when the pedal was immediately over the centre of the bottom bracket spindle, as seen on the left, his weight would fall directly on the bearings and the first downward stroke would be retarded, and, therefore, weak. Now imagine the man's leg as the piston of the engine, the pedal of the bicycle as the crank pin and the bottom bracket spindle as the crank shaft of the motor. In the ordinary engine the crank pin and piston (the pedal and the man's leg) are directly over the dead centre, and until the crank passes the turning point all effort is wasted. Thus, when the explosion occurs, the greatest force falls upon the bearings. In the case of a *desaxé* crank shaft, at the instant the explosion occurs the crank pin has moved past the dead centre, the crank shaft being in a position to receive the full pressure and turn without friction. Consequently there is no side thrust of the piston on the cylinder walls, with a consequent saving of wear on the latter.

ON Tuesday a good send-off was given to Messrs. Gamage's Christmas bazaar—one of the sights of London so far as the juveniles are concerned—when the head of the firm invited his friends of the Press to an inauguration luncheon. Motoring in miniature is likely to be attractive in Toyland this season, while the serious side of the subject so far as the adults are concerned will be fully maintained in the comprehensive stocks of accessories both in Holborn and Cheapside.

THE OLYMPIA SHOW.



(Continued from page 833.)

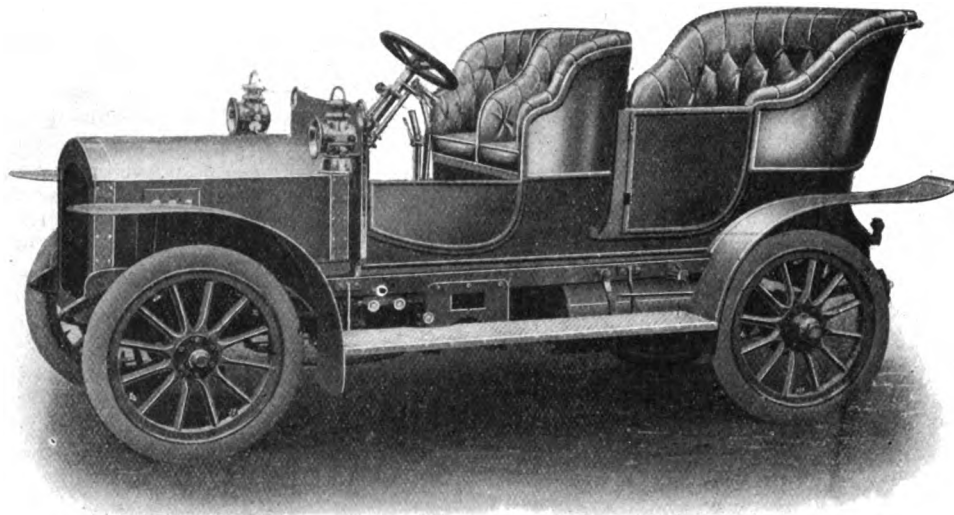


Fig. 68.—The Turner-Miesse 10-h.p. Four-Seated Steam Car. (See page 773 issue November 7th).

THE TENDENCY OF DESIGN—A PLEA FOR GREATER SIMPLICITY.

IN our last issue we gave a brief summary of the tendencies of design in motor-cars as exemplified by the vehicles on view at the annual Show at Olympia, which was brought to a close on Saturday last. In concluding our review of the Exhibition we cannot help giving expression to a feeling that, generally speaking, there is still room for considerable simplification

the production of cars which, while giving satisfactory results on the road, shall have a minimum number of parts and consequently be less costly to produce than is now the case. Pressure on our space at the present time prevents our going so fully into the matter as we would like, but reference may be briefly made to a few points to which we consider the attention of those responsible for the design of automobiles might usefully be directed.

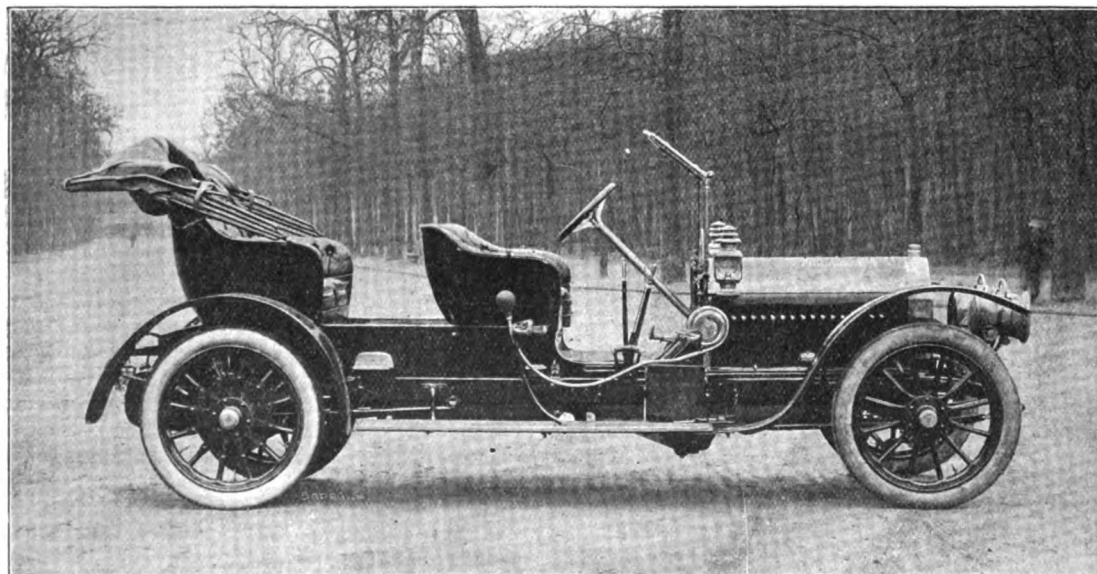


Fig. 69.—The Piccard-Pictet 28-50-h.p. Four-Cylinder Car. (See page 850.)

in motor vehicles. While at the present time there are a few machines on the market which set a laudable example in the direction we have in mind, a careful inspection of many of the chassis exhibited last week almost leads one to imagine that designers have given more attention to the provision of work for the machine and fitting shops than to

In the first place, we may allude to the water circulating system of petrol engines. Seeing that even motors of high power racing cars can be kept sufficiently cool on the thermo-syphon system, why do the majority of firms still continue to employ water circulating pumps and their necessary complications? We have heard it argued that there is nothing to be saved by dis-

carding the pump—that the extra capacity of the radiator required with a natural system of water circulation equals in cost that of the pump, and that the power required to drive the latter is a negligible quantity. Even granting both points, we still maintain that there is a distinct gain in simplicity, which should be the object aimed at.

Turning from the engine to the means adopted to transmit the power of the same to the rear road wheels, we are not surprised to find that the erstwhile much-maligned leather-faced cone clutch is again beginning to be more widely used. Disc clutches, while they may possess certain good qualities not possessed by the older type, have only followed the natural order of things in having these advantages accompanied by certain drawbacks, and certainly, from the point of view of fewness of parts, they compare badly with the relatively simple leather cone. And then as to the change-speed gear? Time was when we were led to expect that the modern wonderfully "flexible" engines—that is, motors capable of "pulling" between a very wide range of rotative speeds—would render gear-boxes practically unnecessary; that, owing to it being possible to "crawl" on the top speed, the only thing that was necessary was a reverse motion and perhaps a low speed for starting purposes on exceptionally steep hills. But what do we find to-day—that instead of the number of speeds in the gear-box being reduced, six-cylinder cars—the cars which are claimed to be possessed of flexibility in the highest degree—are practically all being provided with four speeds, the maximum so far adopted. We do not, of course, forget that the builders of one six-cylinder vehicle have in their new touring model made a start towards the desired simplification, but that there are further developments to come in this direction no doubt can be entertained.

Although great credit is due to engineers for the ingenuity they have displayed in overcoming the many problems connected with the production of motor vehicles, we are inclined to think that the ingenuity has hitherto been associated more with complexity than with simplicity, and that, although our views may not meet with universal approval, the time has come when a distinct change in methods in the draughting department of our automobile factories is not only desirable but in the best interest of the industry.

C. J. W.

The Remo Cars.

For the 1909 season the REX MANUFACTURING COMPANY, LTD., are turning out two sizes of the Remo cars—16-h.p. and 20-h.p.—the bore and stroke being respectively 86 mm. by 110 mm., and 90 mm. by

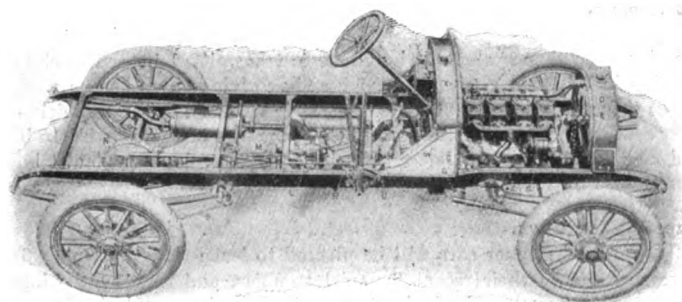


Fig. 70.—Chassis of Remo 20-h.p. Car.

- | | | |
|----------------------|-------------------------------------|--------------------------|
| A.—Cylinders. | H ¹ .—Brake pedal. | O.—Sleeve for back axle. |
| B.—Crank case. | H ² .—Accelerator pedal. | R.—Brake lever. |
| C.—Magneto. | J.—Gear-box. | U.—Change-speed lever. |
| D.—Radiator. | K.—Foot brake. | W.—Dash bracket. |
| E.—Fan. | L.—Universal joint. | X.—Petrol tank. |
| F.—Clutch. | M.—Cardan shaft. | Y.—Oil tank. |
| G.—Steering bracket. | N.—Back axle gear-box. | Z.—Carburettor. |
| H.—Clutch pedal. | | |

110 mm. Except for certain detail improvements, notably as regards the lubrication, the vehicles remain practically the same as last year. The engines comprise four separate cylinders, with the valves arranged on opposite sides. The water circulating pump and high tension magneto are gear driven off the half-time gear, through shafts provided with universal joints. To render the engine as quiet as possible, the valve tappets are kept continuously in contact with the valve stems

by means of a spring; to the same end, the tappets are provided with hard fibre tops. The carburettor is of the T. and M. triple-jet automatic type, provision being made for the engine to draw in, when the throttle is closed, a supply of pure air, so enabling it to act as a brake, and also to be kept as cool as possible. The transmission is through a leather-faced cone clutch and three-speed gear-box, giving a direct drive on the top to the rear live axle. The latter is of a special strong construction, $\frac{3}{4}$ in. ball bearings being fitted to the main bevel wheel and differential gear. Space prevents reference to other details of the cars. It may, however, be mentioned that they are throughout on modern lines, ren-

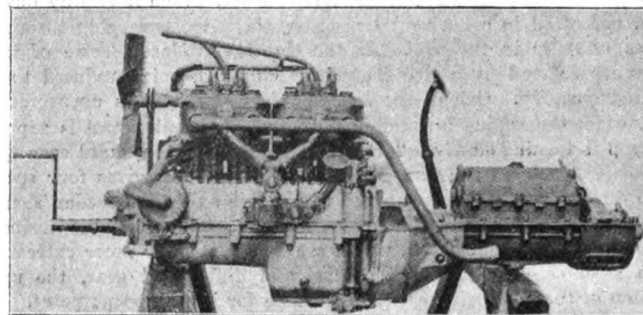


Fig. 71.—View of Engine and Gear-Box of Adler 12-h.p. Car.

dering the Remo vehicles well worthy of the attention of those looking for a reliable machine at a reasonable price. One of the standard side-entrance double phaetons on view was fitted with a new Cape-cart hood and wind screen, recently brought out by the Rex Company. A feature of the hood is that it is extended further over the front seats than usual. It also has side wings, so that the rear part of a four-seated body can be quite enclosed, there being a celluloid window in that part of the side screen which comes over the door. Similarly, the side screen extends towards the front of the extension over the driver and protects him from side draughts. The other feature is the tilting glass wind screen, which can be set at any angle, and affords considerable protection against wet in combination with the extended Cape hood. When the hood is folded back, it takes up no more space than the ordinary Cape-cart hood.

The Adler Cars.

The novelty of the exhibit of Messrs. MORGAN AND CO., LTD., London, was the new Adler 12-h.p. four-cylinder car. The engine, which has a bore of 75 mm. by 88 mm. stroke, is, as shown by Fig. 71, bolted up to the gear-box in such a way that they form a single unit. Two systems of ignition are fitted, while the lubrication is maintained by a pump driven off the rear end of the cam shaft. The transmission is through a metal-to-metal cone clutch and a three-speed gear-box, giving a direct drive to the live-axle on the top speed. The change-speed lever is of special construction, enabling the speeds to be changed without touching an intermediate gear. For the first speed and reverse motion a handle on the top of the lever has first to be turned, while for the second and top speeds the lever is simply moved forward and backward in the usual way. A noteworthy feature of the new vehicle is the accessibility of all its parts, they being so arranged that they can be readily and rapidly taken to pieces and reassembled. The car is made in two lengths of wheel base, the longer one being intended to receive a four-seated body, while the short chassis is designed to furnish a speedy two-seated touring car. In addition to the above, a 7-h.p. (R.A.C. rating) chassis, with two-cylinder vertical engine, bore 75 mm., stroke 100 mm., with magneto ignition, is also being made; like the 12-h.p., this car can also be fitted with either a two or four-seated body. Examples of the Adler 20-h.p. and 40-h.p. cars were also on view, all being equipped with Morgan bodies, of which a limousine was a notable example.

The Benz Cars.

Examples of the Benz cars were shown by BENZ MOTORS, in the 28-h.p. and 40-h.p. sizes, the former being exhibited with a double landaulet body. These have each four-cylinder engines, the cylinders being cast in pairs. Power in the 40-h.p. chassis is transmitted through a leather cone clutch to the gear-box, having four speeds and reverse, working with a "gate." The 28-h.p. vehicle is fitted with a live axle.

C

The Hotchkiss Cars.

A brief reference has already been made to the Hotchkiss cars exhibited by the British agents, the LONDON AND PARISIAN MOTOR COMPANY, LTD. We are now able to give an illustration (Fig. 72) of the chassis of the 20-30-h.p., which forms a new model for the 1909 season. The engine comprises four cylinders, 110 mm. bore by 130 mm. stroke, cast in pairs, with the valves all operated off a single cam shaft. Plain bearings are fitted to the crank shaft, in place of the ball-bearings formerly employed. The ignition is by high-tension magneto of the Eisemann type, while the lubrication is maintained by a mechanical lubricator on the dashboard driven by an eccentric off the cam shaft. The carburettor is of a special design; the jet, which is readily detachable, is located in a horizontal position, the petrol emerging through a series of holes in the side. As the throttle is closed, some of these holes are covered by a sleeve and the supply of spirit reduced to the desired quantity. One of the holes is, however, always uncovered, so that when the engine is running light just sufficient petrol is supplied to keep it turning slowly. The clutch is of the leather-faced cone type, and entirely closed in; the gate-controlled gear-box gives four speeds, with direct drive on the top speed to the live axle; the cardan shaft is provided with universal joints at each end. The rear axle casing is formed of two tubular arms, which are bolted at their inner extremities to a steel case containing the bevel and differential gear, the upper portion of the case being easily detachable for inspection purposes. The rear axle is a very well designed piece of work; all the parts run on

system. The power is transmitted through a leather-faced cone clutch, three-speed gear-box, to a live axle. A feature of the brake system is that the usual order is reversed, the pedal actuating the brakes on the hubs of the rear road wheels, and the hand lever that located at the rear of the gear-box. A similar car, but with a single-cylinder engine, is also being manufactured by the Delage Company.

The Gaggenau Cars.

The GAGGENAU MOTOR VEHICLES COMPANY exhibited an example of their 18-22-h.p. four-cylinder chassis, in which there are many points of interest. The four cylinders (85 mm. bore by 115 mm. stroke) are all in one casting, and the crankshaft is *desaxé*. The magneto and pump, both of which are easily detachable, are driven off a cross shaft at the front part of the engine. The clutch is of the multiple disc type. The gear-box is gate controlled, and the joints of the cardan shaft are provided with metal covers. The Gaggenau 28-32-h.p. engine is an interesting production. All the valves are located in the cylinder heads, being operated by an overhead camshaft.

The Martini Cars.

Much interest was shown in the chassis of the new 12-h.p. Martini two-seated car displayed by Messrs. HILLS-MARTINI AND Co. The vehicle is fitted with an engine having the four cylinders, 63 mm. bore by 90 mm. stroke, all cast *en bloc*; the valves, which are located in the cylinder heads, are operated by an overhead cam shaft. The lubrication is maintained by a gear-driven pump, while the water circulation is on

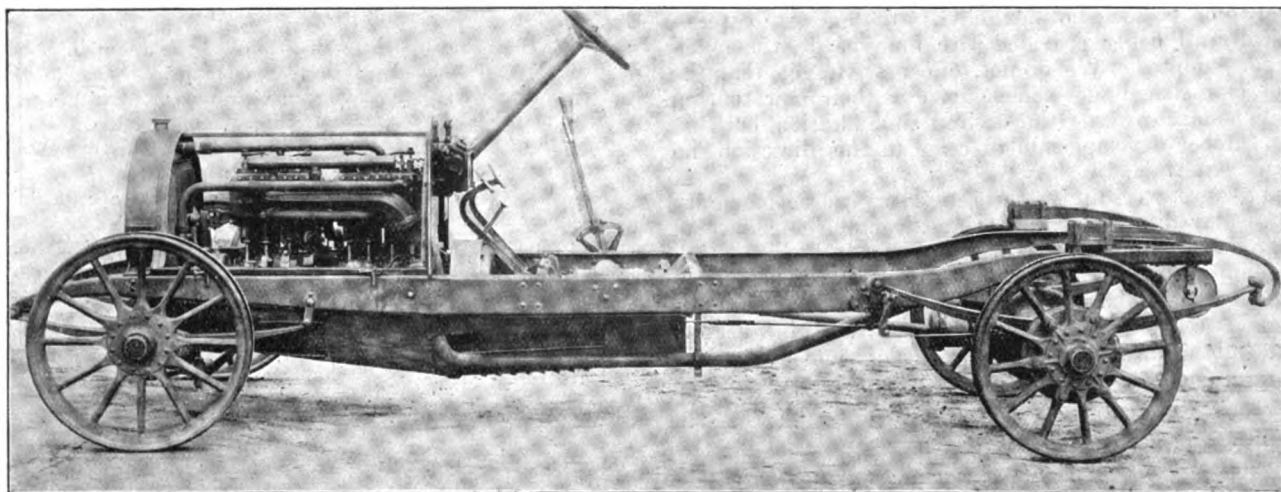


Fig. 72.—Chassis of new Hotchkiss 20-30-h.p. Car. The engine, which comprises four cylinders cast in pairs, 110 mm. bore by 130 mm. stroke, develops about 40-h.p.

ball-bearings, large ball thrusts being also provided to take up the end thrust on the bevel pinions and crown wheel.

The Delahaye Cars.

Three models—12-16-h.p., 18-24-h.p., and 25-35-h.p.—were staged by Messrs. DELAHAYE AND Co. Principal interest centred in the 12-16-h.p. vehicle, the four-cylinder engine of which is of an exceedingly "clean" design. The cylinders, together with the exhaust and admission piping—or rather, passages—are cast in one piece. The change-speed gear control is also on somewhat novel lines, the sector being a combination of a straight through quadrant and "gate," the various speeds being obtained by two sets of sliding pinions.

The Delage Cars.

The LONDON AND PARISIAN MOTOR COMPANY, LTD., who have taken up the British agency for the Delage light cars, had one of these interesting little vehicles on view. The vehicles are of French construction, and have recently come into great prominence by reason of their success in various speed contests, notably by winning the Grand Prix des Voiturettes in July last. The car is a replica in miniature of a high-powered vehicle. The engine, which is rated at 10-h.p., comprises four cylinders, all in one casting, and with the valves all operated off a single camshaft. Inlet and exhaust passages are cast as part of the cylinder water-jacket, thus doing away with a considerable amount of piping and joints. The ignition is by a Simms-Bosch high-tension magneto, and the water circulation on the thermo-syphon

the thermo-syphon system. The power is transmitted by a disc clutch, running in oil, to a gate-controlled gear-box giving three speeds with a direct drive on the top, and so arranged that when the through drive is in operation the layshaft remains idle. Examples of the Martini 16-h.p. and 20-h.p. vehicles—the latter being fitted with a single landaulet body—were also on view.

The Spyker Cars.

Owners of Spyker cars will be pleased to learn that the Dutch firm have surmounted their recent financial troubles, and that by the introduction of a new board of directors and of fresh capital the business has now been placed on a sound financial basis. Temporary premises have been established at 64, Wellington Road, N.W., with Mr. F. F. Wellington as representative. The Spyker display in the Annexe comprised a 30-40-h.p. touring car, a 10-15-h.p. runabout, and a 10-15-h.p. landaulet. The latter is especially designed for town use, and is similar to the cabs the company are now introducing on the London streets. The motor comprises four cylinders (80 mm. bore by 90 mm. stroke) in one casting. In order that overheating troubles shall be obviated, a very large honeycomb radiator is employed. The ignition is by high-tension magneto, and, as the point of firing is fixed, only one lever is provided on the steering wheel. The lubrication of the motor is so arranged that it is impossible for over-lubrication to take place, the emission of obnoxious smoke being consequently prevented. The "gate"-controlled change-speed gear gives three speeds forward and a reverse; the final transmission is by a cardan shaft and bevel gear to a live axle.

The Austrian Daimler Car.

A newcomer to the English market is the AUSTRIAN DAIMLER MOTOR COMPANY, LTD., who displayed on the stand of the Electric Vehicle Company a 20-30-h.p. chassis, in which a number of interesting features are incorporated. The engine comprises four cylinders, cast in pairs. The ignition is by low-tension magneto in connection with the Bosch "candles," or magnetic plugs. The transmission is through a four-speed gear-box, cardan shaft, and bevel gear, to a live axle. The propeller shaft is enclosed in a casing which acts as a torque rod. The forward end of the shaft is supported in a Y-shaped member anchored to the frame. Four brakes are available, the usual pair working on drums attached to the back wheel hubs being supplemented by two separately actuated foot brakes at the rear of the gear-box.

The Mass Cars.

The MASS CAR DEPOT, of 71, Ladbroke Road, Notting Hill, W., displayed examples of four of the sizes of the latest Mass cars; these include 15-h.p., 20-h.p., 24-30-h.p., and 30-40-h.p., all fitted with four-cylinder engines. The 20-h.p. is a new model, the engine comprising four separate cylinders, 4 5/16 in. bore by 5 in. stroke. The ignition is by high-tension magneto, while the lubrication is maintained by a plunger pump, which draws the oil from a pump in the base chamber to a small reservoir on the dashboard, whence it is conveyed to the main bearings and through the hollow crank shaft to the big ends of

bore by 100 mm. stroke) are cast *en bloc*, with the valves all on one side. The crank shaft, as in the larger type, is slightly out of line with the centre of the cylinders, but in this case long plain bearings are employed. Of the Imperia cars it may be briefly said that the makers' object has been not so much to turn out vehicles containing wide divergencies from standard lines, but rather machines in which special attention has been paid to the selection of the material of the various components, and which from the point of view of reliability and low cost of upkeep should give the highest satisfaction.

The Cadillac Cars.

The ANGLO-AMERICAN MOTOR CAR COMPANY, LTD., staged several of the well-known Cadillac 10-h.p. single-cylinder cars, including a two-seated runabout, fitted with hood, suitable for doctors' use, and a four-seated touring car. The principal novelty was, however, the new 26-30-h.p. vehicle, fitted with a four-cylinder vertical engine, 4 in. bore by 4 in. stroke. The crank shaft is slightly *desaxé*; that is, out of line with the centre of the cylinders. Two systems of ignition are fitted; both foot and hand control of the throttle are provided; the clutch pedal being also connected up with both the throttle and the ignition, so that as the clutch is released the speed of the engine is cut down and the ignition retarded simultaneously. The change-speed gear is of the sliding pinion type, giving four forward speeds, a notable feature being an arrangement whereby the clutch cannot

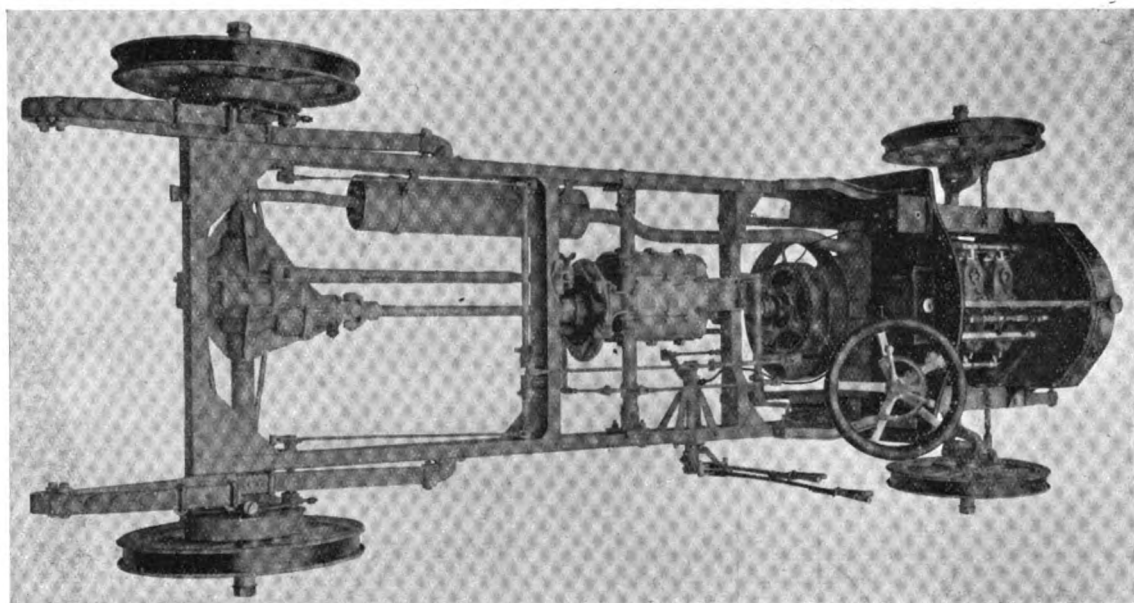


Fig. 73.—Plan of Chassis of Mass 15-h.p. Car.

the connecting rods. The transmission is through a gate-controlled gear-box giving three speeds, and cardan shaft and bevel gear to a rear live axle. The universal joints are of a special type, the pins being provided with renewable screwed-in bushes. Of the complete cars on view, an exceedingly interesting one was a 20-h.p. two-seated car designed for touring purposes; this is provided with a hood, a large luggage platform at the rear, a petrol tank of extra capacity, and a cradle for carrying a couple of spare tyres.

The Imperia Cars.

The Belgian-built Imperia cars, for which Messrs. C. E. WHITTAKER, LTD., have recently taken up the British agency, made their first appearance at the Olympia Show. Prominence was given to a chassis of the 16-20-h.p. model. The feature of the four-cylinder engine (90 mm. bore by 120 mm. stroke) is that both the cam shaft and the crank shaft—which is *desaxé*—run on ball bearings. The various details of the motor are on up-to-date lines, and include a pump system of lubrication. The transmission follows the usual lines of live axle cars, the clutch being of the Hele-Shaw type, and the gate-controlled gear-box gives a direct drive on top. For the coming season a new 12-h.p. Imperia car is being introduced. Messrs. Whittaker were, however, not able to exhibit a complete vehicle, but had on view the engine and gear-box, which are built up together in such a way as to form a unit in which all the control gear, including the clutch and brake pedals, are embodied. The four cylinders (75 mm.

be let in until the desired pair of pinions are in full engagement. The final transmission is by cardan-shaft and bevel gear to a live axle. The vehicle on view was fitted with a roomy side-entrance touring body.

The Thornycroft Cars.

The chief novelty at the stand of Messrs. JOHN J. THORNYCROFT AND Co., LTD., was a new 18-h.p. car, a chassis of which was shown. This is fitted with a four-cylinder engine, 95 mm. bore by 114 mm. stroke, having all the valves operated off a single cam shaft. Ignition is by high-tension magneto, and the lubrication is maintained by means of a pump located in the crank chamber. The thermo-syphon system of water circulation has been adopted, a current of air being drawn through the radiator by the fan-shaped arms of the flywheel. The clutch is of the multiple disc type, a noticeable feature being the neat design of the disengaging gear. The gear-box is adapted to give three speeds, with a direct drive on the top to the live axle. The casing surrounding the latter is of special construction, consisting as it does of a single forging. The portion which encloses the differential and bevel gear is closed by means of detachable covers, enabling the internal mechanism to be readily inspected or removed in case of necessity. Other cars on view included a 30-h.p. four-cylinder standard touring car, with Cape cart hood and wind shield, a 30-h.p. three-quarter landaulet, and a 45-h.p. six-cylinder chassis, these models, except for minor details, remaining unchanged from the 1908 types.

The Argyll Cars.

Many visitors to the show regretted the absence of ARGYLL MOTORS, LTD., of Alexandria, N.B. The company had fully intended to exhibit their latest models, but were unable to do so owing to a dispute with the S.M.M.T. with regard to the space. Special attention is just now being paid to a 12-14-h.p. vehicle, designed to meet the demand for a small, light, speedy, and good hill-climbing machine. The feature of the vehicle is that the engine and gear-box are built up in the form of a single unit. In fact, it will be seen from Fig. 75 that the steering gear, pedals, and the foot-brake are also part of the *bloc*. The

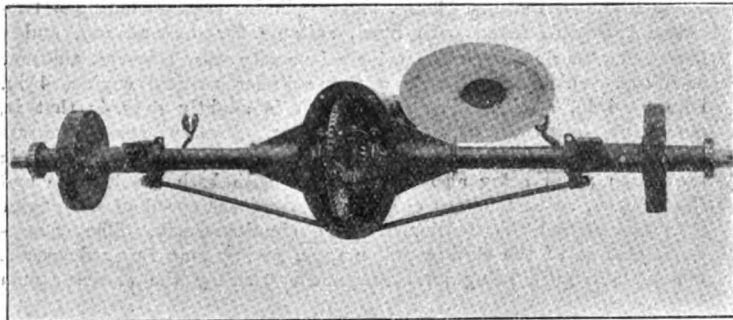


Fig. 74.—The Back Axle of the Argyll 12-14-h.p. Car.

engine comprises four cylinders, 80 mm. bore by 100 mm. stroke, cast in one piece, with the valves all operated off a single cam shaft. The carburettor is placed on the opposite side, the mixture being led to the valve pockets through passages cast between the cylinders. The ignition is by high tension magneto. The crank-shaft is mounted on ball bearings, while those of the big ends of the connecting rods are lined with white metal. The water circulation is on the thermo-syphon system, while a gear-driven pump maintains the lubrication. The transmission is through a clutch of the flat plate type, gate-controlled three-speed gear-box, giving a direct drive to the live axle. The latter (Fig. 74) is modelled on the lines of that fitted on the 40-h.p. Argyll. The special feature is the centre casting, which is made without any vertical or horizontal joint, thus ensuring great strength. The casing at the rear allows the crown wheel and differential to be taken out without disturbing the back axle. The driving bevel spindle runs on ball bearings, and is enclosed in a separate casing at the front end, and is also readily accessible. No brazing or flanges are employed, the tubes being shrunk and pinned into the casing direct. The road wheels run on ball bearings carried on the sleeve, leaving the rotating shafts of the live axle to only transmit the drive. A substantial torque rod is fitted to relieve the springs and axle of unnecessary strains. There are a number of interesting features in the car, which has a wheelbase of 8 ft. 3 in., and which, it may be added, is similar to that which secured a gold medal in its class in the 1908 Scottish Reliability Trial. The company are continuing the manufacture of the 40-h.p. and 14-16-h.p. Argyll cars, the only modification in them being the adoption on the last-mentioned of a back axle on similar lines to that illustrated in Fig. 74.

The Piccard-Pictet and Rochet-Schneider Cars.

Messrs. DONNE AND WILLANS, LTD., showed two sizes of the Swiss-built Piccard-Pictet cars, for which they are the British agents. The vehicles on view comprised chassis of the 28-40-h.p. six-cylinder, and 18-24-h.p. four-cylinder types, as also an 18-24-h.p. touring car, with detachable wire wheels. The feature of the design is that the engine, clutch and gear-box are built up so as to form a single unit, which is supported directly on the side members of the pressed steel frame. The engine has the cylinders cast in pairs, with the valves arranged on opposite sides. A special design of automatic carburettor controlled both by hand and foot levers furnishes the mixture, while a new feature is the provision of a small pump for effecting the lubrication of the engine. The clutch is of the metal-disc type, and the "gate"-controlled change-speed gear gives four speeds with direct drive on top, through the cardan shaft and bevel gear to the live axle. The latter is of an excellent design, and is provided with pressed steel torque bar, extending from the differential case to a cross member in line with the forward universal joint; it is hinged to provide for lateral as well as vertical motion. Of the well-known Rochet-Schneider cars, a 16-20-h.p. live-axle chassis, in which the design is, generally speaking, unchanged from

last year, was displayed. The four-cylinder engine, 100 mm. bore by 120 mm. stroke, is provided with high-tension magneto ignition, and a new carburettor known as the Zenith, which is of novel design. The petrol supply is pressure fed, while the gear-box is arranged to give four speeds forward in place of the three previously fitted.

The Riley Cars.

Three different models—9-h.p., 10-h.p., and 12-18-h.p.—were exhibited by the RILEY CYCLE COMPANY, LTD., Coventry, all being fitted with V-type two-cylinder engines. The 9-h.p. two-seater, with single chain drive, remains unchanged in its general design. The 12-18-h.p. car, which can be fitted with either a closed or open side-entrance body, also shows but little change from last year. The ignition is by coil and accumulators with a high-tension distributor, provision being also made for readily installing a magneto. A new model was seen in the 10-h.p. two-seater car, the general arrangement of which is similar to the 12-18-h.p.; the engine, 96 mm. bore by 96 mm. stroke, is fitted with a pump system of lubrication, the water circulation being, however, by thermo-syphon. The power is transmitted through a leather-faced cone clutch to the Riley patent three-speed gear-box, in which the gear-wheels are always in mesh, the various pairs of pinions being brought into action by dog clutches. The final drive is through a cardan shaft (with enclosed joints) and bevel gear to a live axle. A feature of the Riley cars lies in the road wheels, which are so arranged as to be readily detachable, the system being applied to both wire and artillery pattern wheels.

The Zedel Cars.

Since the BRITISH AUTOMOBILE COMMERCIAL SYNDICATE, LTD., took up the agency for the Zedel cars the vehicles have met with a well-deserved popularity. Two models are being made, 10-12-h.p., and a

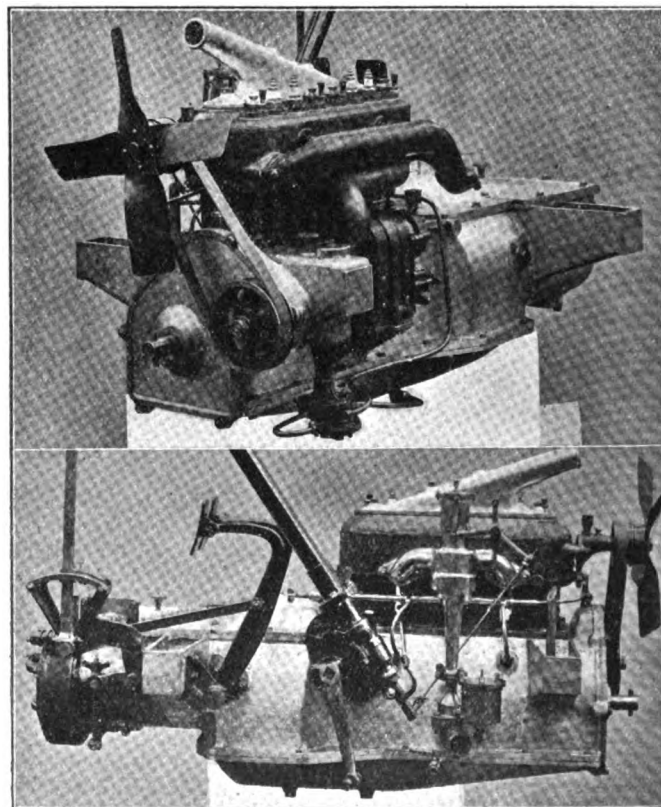


Fig. 75.—Two Views of Argyll Combined Engine and Gear-Box.

15-h.p. Except for minor details, no changes have been made from the 1908 cars, which have given general satisfaction. The 10-12-h.p. engine has the four cylinders all in one casting, with the valves arranged on opposite sides. The ignition is by high-tension magneto, and pump lubrication is adopted. The clutch is of the multiple-disc type, and the drive is through a "gate"-controlled three-speed gear-box and cardan shaft to a live axle. A feature of the engine of the 15-h.p. car is the carburettor, the automatic air valve of which is controlled by a balance wheel, dispensing entirely with springs. Among the complete cars on view was a 10-12-h.p. two-seater victoria and a 15-h.p. coupé-limousine.

The Brasier and Unic Cars.

Considerable interest was shown in the first of the new Brasier 10-12-h.p. cars with landaulet body exhibited by Messrs. MANN AND OVERTONS, LTD. The two-cylinder engine has a bore of 90 mm. by 120 mm. stroke. The valves are operated off a single cam shaft, and the water circulation is on the thermo-syphon system, rendering the use of a pump unnecessary. The ignition is by Simms-Bosch high-tension magneto, while the mixture is furnished by an automatic carburettor, a feature of which is that the pipe along which the hot air is drawn does not terminate round the exhaust pipe as usual, but round the forward end of the silencer. The transmission is through a leather-faced cone clutch, a three-speed gear-box, and cardan shaft to a live axle. The differential case on the rear axle is provided with an arrangement by means of which it is possible to adjust the mesh of the bevel gear without dismantling any of the parts. Among the Unic cars exhibited was a chassis of the 16-20-h.p. type, which has many points of interest. The four cylinders of the motor are cast in pairs, with the valves on opposite sides; the bore is 87 mm. and the stroke 110 mm. The carburettor is of a simple automatic type, which has proved very economical as regards fuel consumption. The throttle, which is of the sliding piston type, is controlled by both hand and foot levers, the latter being also connected up with the ignition, so that as the throttle is closed the high-tension magneto is retarded. The clutch is of the leather-faced-cone type, and a joint is introduced in the shaft connecting it with the gear-box. The gear is arranged to give three or four speeds as desired, and the control is by a "gate" lever. The transmission is by a cardan shaft to the back axle, which is of solid construction, and fitted with ball-bearings. The exhibit also comprised a 10-12-h.p. two-cylinder landaulet, the chassis being of the same type

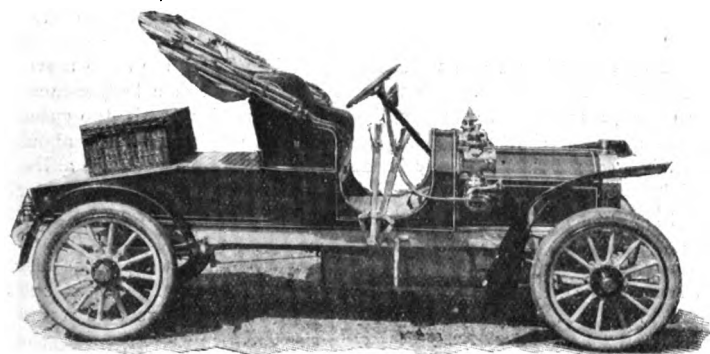


Fig. 76.—A Unic 12-14-h.p. Car with Two-Seated Body.

as that employed in the large number of Unic cabs now running in London; and a 12-14-h.p. car, the chassis of which can be provided with any type of body, Fig. 76 illustrating it as a two-seater. The feature of this vehicle is that the engine (75 mm. bore by 110 mm. stroke) has all the four cylinders in one casting, the eight valves being all on one side. In other respects the chassis follows the usual practice in Unic vehicles. Messrs. Mann and Overtons have for some time past been devoting special attention to the demand for landaulets for town and station use at a moderate price, and in the Brasier and Unic vehicles they have a selection which should meet all requirements.

The Metallurgique Cars.

For the coming season four sizes of the Metallurgique cars are being put on the market by Messrs. WARWICK WRIGHT, LTD. They are of respectively 12-14-h.p., 18-h.p., 26-h.p., and 40-h.p. Principal interest centres in the "four-inch" model (26-h.p.), in which a number of important changes have been introduced. While the old type, with cylinders 102 mm. by 120 mm., is being continued, the experience in the Tourist Trophy Race has led to the introduction of a new model in which the piston stroke is 150 mm. Although rated at 26-h.p., this motor is guaranteed to develop 55-h.p. at 1,500 revolutions per minute. The inlet valves, instead of being of the overhead type, are now arranged side by side with the exhaust valves, large water spaces being provided round the valve pockets. The crank shaft is *desaxé*—that is, slightly out of line with the centre of the cylinders. The company were exhibiting a model to demonstrate the advantage this gives in the way of a direct thrust on the explosion stroke. Another new departure is that the pump has been discarded, the water circulation being now on the thermo-syphon system.

The Gregoire Cars.

Among the popular-priced cars of French manufacture, the Gregoire vehicles take a prominent place. The British concession for these vehicles has now been secured by Capt. THEO MASUI, under whose aegis they will doubtless become as popular as the Germain vehicles. Two models are being made for the 1909 season—one fitted with a 9-h.p. two-cylinder, and the other with a 14-16-h.p. four-cylinder engine. As the general design of both cars is identical, the following particulars may be taken as applying to the two models. The engine has the cylinders (80 mm. bore by 110 mm. stroke) cast in pairs, with the valves operated

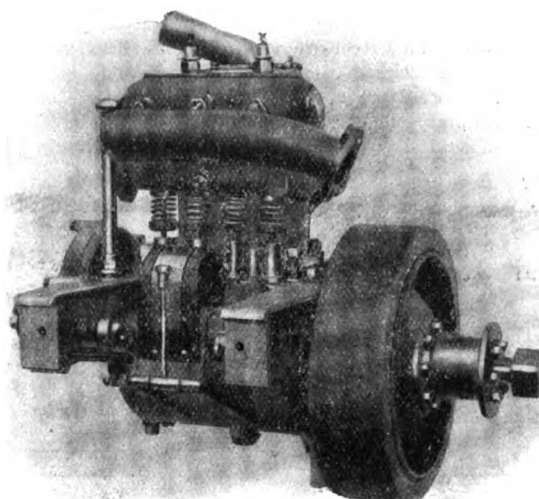


Fig. 77.—Valve Side of Gregoire 9-h.p. Two-Cylinder Engine.

off a single cam shaft. An illustration of the 9-h.p. motor is given in Fig. 77. Ignition is by Bosch high-tension magneto, while the mixture is furnished by an automatic carburettor, a feature of which is the provision of two jets. As will be seen from Fig. 78, which gives a view of the 14-16-h.p. engine, the carburettor is located on the right of the cylinders, the admission pipe being bolted to one corner of each pair of cylinders, in the walls of which ports or passages are formed leading to the inlet valves on the opposite side. The water circulation is on the thermo-syphon system, no pump being employed. The transmission is through a leather-faced cone clutch and three-speed gear-box, giving a direct drive on the top speed to the rear live axle. It will be seen from Fig. 79 that the cardan shaft is entirely enclosed in a casing, which acts as a torque rod; the forward end of the shaft is supported in a forked arm pivoted to the frame, so that provision for movement in all directions

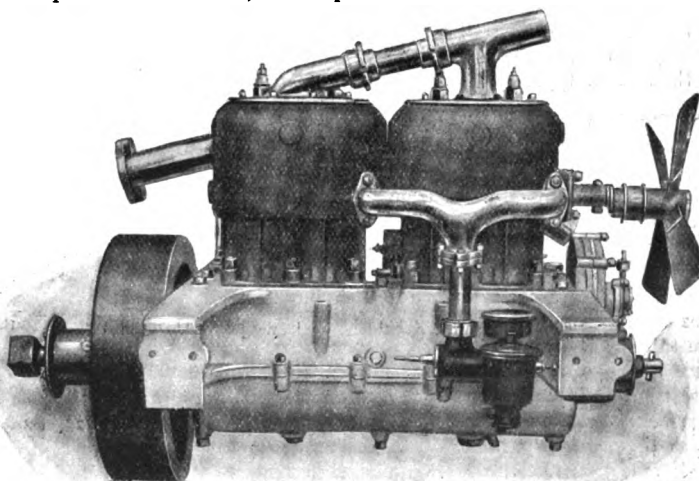


Fig. 78.—The Gregoire 14-16-h.p. Four-Cylinder Engine, showing method of connecting up the gas admission pipe to the cylinders.

is provided. Other points worthy of attention are the pump lubrication of the engine, a stop in connection with the clutch to facilitate changing gear, and ball-bearings to all parts except the engine. Both vehicles are made in two lengths of chassis, intended respectively to receive two or four seated bodies. The Gregoire cars throughout bear evidence of careful design and construction, and being both speedy and economical, are well worthy the attention of motorists.

The Clyde Cars.

Examples of two, three and four cylinder cars were shown on the stand occupied by Messrs. G. H. WAIT AND CO., of London Road, Leicester, these being of 8-10-h.p. two-seater, 12-14-h.p. four-seater, and 16-20-h.p. five-seater, respectively. These are all fitted with White and Poppe engines and Longuemare carburettors. The motor is mounted transversely on the tubular frame, and power is transmitted by a Renold silent chain drive. The clutch and change-speed gear are close to the back axle and the gears are always in mesh. There is a gate change of T shape with a neutral position in the centre. Two internal expanding side brakes are fitted on the rear wheels, and there is also a pedal brake acting on a steel drum to the countershaft, the latter being geared direct to the back axle. The Clyde cars have done extremely well in competitions since 1903, and with their direct drive on each gear, economical running, and high-class carriage work, they possess points that should secure them the consideration of prospective motorists.

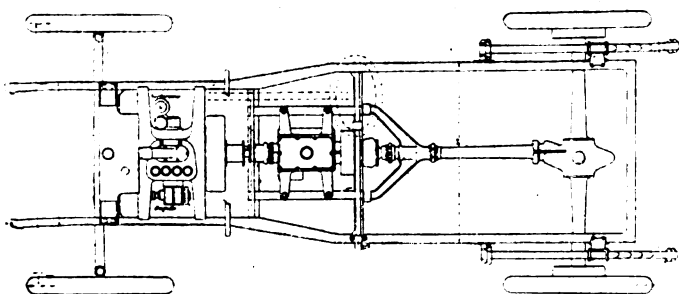


Fig. 79.—Plan of Chassis of Gregoire 9-h.p. Two-Cylinder Car.

The Niclausse Cars.

Messrs. J. AND W. NICLAUSSE, of Paris, who are well known in France as builders of boilers for the Navy, were present with two examples of their petrol cars, which are excellent examples of modern automobile construction. A polished chassis of the 35-h.p. type was shown; the engine comprises four separate cylinders, with the valves arranged on opposite sides. The automatic carburettor is provided with an automatic extra air valve, in conjunction with which is fitted a dashpot arrangement which prevents any sudden movement of the valve. Another point worthy of notice is in connection with the starting handle, which is connected with the exhaust valve cam shaft in such a way that on turning the handle the compression is automatically and partially released. The transmission is through a four-speed gate-controlled gear-box to a live axle of the arched type, universal joints being introduced on the rotating shafts between the differential gear and the rear road wheel hubs. A 20-h.p. limousine-landaulet was also displayed, this, so far as regards the chassis arrangement, being similar to the 35-h.p. type.

The Rapid Cars.

These well-known Italian-built vehicles are now being handled in this country by the RAPID CAR CONCESSIONS, LTD., of Westgate Street, Gloucester. The 14-h.p. car which was on view is provided with a four-cylinder engine, 80 mm. bore by 105 mm. stroke. The inlet valves are located in the cylinder heads and are operated by overhead tappets from the same cam-shaft that actuates the exhaust valves. A special form of adjustment is provided in connection with the tappets. The carburettor is of the automatic type, and is so arranged that when the throttle is entirely closed a port is opened, by means of which only pure air is drawn into the cylinders. The clutch is of the multiple disc type, the discs being flat and alternately of bronze and steel. The gear-box, which is located close to the clutch, is gate-controlled, and gives three speeds with a direct drive on the top to a well-designed back axle; parallel suspension of the latter is obtained by the employment of a torque and two radius rods all working on the same centre as the forward universal joint of the cardan shaft. The 20-h.p. car is, generally speaking, on similar lines; in this case, however, the engine has the valves arranged on opposite sides.

The White Steam Cars.

A fortnight ago we described the new features introduced into the White Steam car, chief of which was the adoption of the Joy valve gear, which gives great opportunity for the simplification of the engine. The latter, which we had seen at the WHITE COMPANY'S DEPÔT, at Carlow Street, Camden Town, London, N.W., was on the stand, and naturally was a centre of attraction. Having already fully illustrated and

referred to the details of the new 15-h.p. and 40-h.p. standard models, it remains but to be said that show exhibits comprised, in addition to the 15-h.p. chassis, a model of that size with a side entrance open touring body, coloured a rich claret, and having a deep back, giving an appearance of luxurious comfort. The 40-h.p. laundaulet shown was also a capital specimen of the coachmaker's art. It will accommodate five passengers inside and two on the front, giving everyone ample room. Painted sage green, with black mouldings and fine yellow lines, it had a distinctive style which should carry it far into Society during the season.

The N.E.C. Cars.

THE NEW ENGINE (MOTOR) COMPANY, LTD., of Acton Hill, W., had a display of their N.E.C. cars, which for originality of design were amongst the most interesting in the Show. Although at first the fact that the mechanism is entirely hidden from view may lead some to think that it is difficult of access, this is far from being the case, the arrangement being, in fact, such that all the different parts of the engine and gear can be got at with a minimum of trouble and without having to get under the car. Two sizes were shown, 30-h.p. and 40-h.p., both being fitted with engines comprising four horizontal opposed cylinders. The motor is located below the front seat floor board; the cylinders are arranged in pairs on the opposite side of the base chamber, the valves being all operated off a single cam shaft. The lubrication is maintained by a pump, while the water circulation is on the thermo-syphon system, the fan being incorporated with the flywheel. A change has been made in the methods of controlling the speed of the engine; this is now effected by a lever projecting beneath the steering wheel at right angles to the steering column, and about which it is free to turn completely round. When right back the throttle is closed, when right forward it is fully open, so that moving the lever forward on either side of the column opens the throttle. The advantage is that the lever can be worked by either hand, and whichever hand is using it the same movement has the same effect. The transmission is through a leather-faced cone clutch, a four-speed gear-box giving a direct drive on the top speed through a cardan shaft and worm gear to a live axle. A point about the N.E.C. cars is that the body is entirely supported between the axles. Special attention has been devoted to the suspension, a new type of spring having been adopted. Fig. 80 gives a view of the front spring; the rear ones differ therefrom only in that the spring box is attached to the frame in a different manner. It will be seen that the inner end of the spring is held in a box bolted on to the frame. The outer end is free to slide in a bracket fixed to the top and able to revolve round the axle. The two bottom leaves of the spring are carried through the bracket. The axle is rigidly attached to the frame by the radius rod, which is immediately beneath the spring and pivoted at its inner end. The advantages of this design are that no end strain can be thrown on the spring; that the radius rod, which is easily removed and straightened, will give sideways under a too severe end strain before the frame can be damaged; that with the radius rod lying immediately

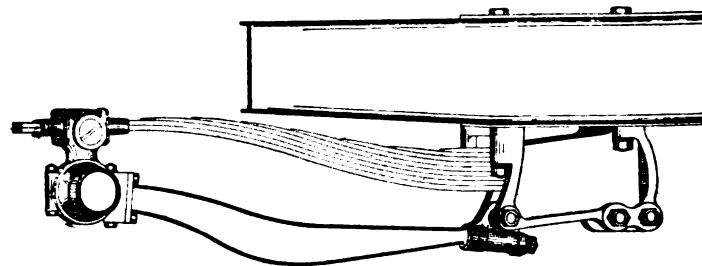


Fig. 80.—The New Type Spring on the N.E.C. Car.

beneath the spring, should one or more of the leaves be broken, the spring can only sag on to the radius rod and the car could be driven in this condition; that the outer end of the spring can be put at the correct height in relation to the centre of gravity of the chassis, and thus obviate the tendency to roll sideways, which is otherwise unavoidable with flexible springs. The complete cars on view included a 30-h.p. "D"-fronted laundaulet, painted green with black mouldings. A special point of this car is that the door is in the centre of the back portion of the body. A 40-h.p. limousine was also displayed, arranged to give complete comfort for five passengers inside, and to carry eight when used for night work, such as theatres, dinners, &c. Finally, mention may be made of a 40-h.p. touring car with a 11 ft. 6 in. wheelbase, and notable for the roomy proportions of the body.

The Swift Cars.

As already mentioned, the Swift Motor Co., Ltd., Coventry, are turning out three different models for the 1909 season, 10-12-h.p. two-cylinder, 15-18-h.p., and 18-24-h.p. four-cylinder. A feature of all these vehicles is the new type of gate-controlled change-speed gear, the lever of which has now a rocking instead of a sliding motion. As will be seen from Fig. 81, the lever swivels on a bearing at the bottom, and is quite separate from the actual sliding rod. The latter is made solid,

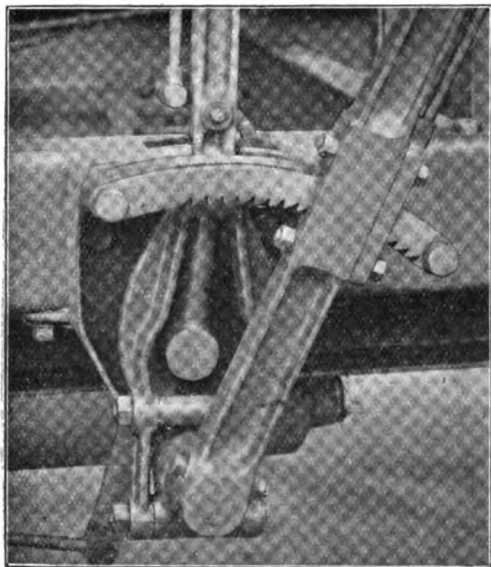


Fig. 81.—View of Improved Gate Change on Swift Cars.

with a short ball-ended lever, which is socketed to the hand lever near the lower end, and is thus slid backwards and forwards as the hand lever is rocked freely on its swivel, so that it is impossible for the lever to bind or stick when effecting a change of gear. A safety catch is fitted to prevent an involuntary change from first speed into reverse.

The Opel Cars.

In addition to an Opperman electric landaulet, the BRITISH ELECTROMOBILE COMPANY, LTD., had on view a range of the Opel petrol cars, prominent among which was a 45-60-h.p. chassis; the engine comprises four cylinders cast in pairs, 140 bore by 140 stroke; two systems of ignition are provided, low-tension magneto and high-tension accumulator. The clutch is of the metal-to-metal cone type. The four-speed gear-box gives a direct drive on top to the live axle, the latter being of a strong design, with gate change. A 25-40-h.p. car with Rothschild landaulet body was also shown, this being on similar lines to the 45-60-h.p. Other vehicles to be seen included a 10-18-h.p. touring car with four-cylinder engine, high-tension magneto ignition, and leather-faced cone clutch, and a 10-12-h.p. light model with side entrance body. The engine in this case has the four cylinders, 64 mm. bore by 120 mm. stroke, all in one casting. The Opel cars, which are built at Russelsheim, near Frankfort-on-Main, have been very successful in several important hill-climbing competitions during the past season, notably the Semmering event organised by the Austrian Automobile Club.

The Austin Cars.

The novelty at the stand of the AUSTIN MOTOR COMPANY, LTD., was a new 15-h.p. car, the engine of which has the four cylinders in one casting. Another new feature is seen in the clutch, which is of the leather-faced cone type; instead of the leather being continuous, as usual, it is attached in six segments, each being riveted to a spring steel plate connected with the cone. By means of the new arrangement any of the sections can be taken out, cleaned, dressed, or changed for a new set without dismantling a single nut. The spring sections are also given additional camber, so that the engagement of the clutch is progressive, enabling the engine to take up the load without shock.

The Lanchester Cars.

The principal departure in connection with the cars of the LANCHESTER MOTOR COMPANY, LTD., is the production of a 28-h.p. six-cylinder vehicle with wheel steering. Hitherto these vehicles have been provided with side lever or tiller steering only, but in future clients will be able to make their own selection. As regards the other portion of the chassis, all the well-known Lanchester features, such as the special location of the engine, the epicyclic change-speed gear, and

the worm drive, are being retained. The changes of speed are now effected by a lever working in a "gate." The complete cars on view included a six-seated limousine, a three-quarter landaulet seating six persons, a double phaeton, and a single landaulet. Needless to say, the body work is of the highest class, while the special suspension adopted on the Lanchester cars causes them to be second to none as regards easy riding qualities.

The Iris Cars.

For the 1909 season the Iris cars of Messrs. LEGROS AND KNOWLES, LTD., are being made in two sizes—25-h.p. and 35-h.p. An inspection of the chassis showed quite a number of improvements in these high-grade vehicles. The 25-h.p. engine comprises four cylinders, $4\frac{1}{2}$ in. bore by $5\frac{1}{2}$ in. stroke, the dimensions of the 35-h.p. being 5 in. by $5\frac{1}{2}$ in. So far as the design is concerned, this is identical in both vehicles, so that the following particulars may be taken as applying to each:—The cylinders are cast in pairs, with the valves all set on the same side; the timing gear is now completely cased in an oil-retaining case communicating with the crank chamber. The valve tappet guides for each pair of cylinders are mounted on an aluminium plate secured to the base chamber by six studs. When these are removed the cam shaft is immediately accessible for examination. The lubrication is of the forced type, the oil being collected from the bottom of the sloping crank pit and forced by a pump to the main bearings, and through the hollow crank shaft to the big ends, whence a small pipe up the connecting rods leads the oil to the gudgeon pins. The ignition is by a Bosch high-tension magneto, placed upon the central arm, and driven by an extension of the water circulating pump shaft, so that both pump and magneto are driven in series off one gear. The usual fan behind the radiator is dispensed with, its place being taken by the flywheel, which is provided with radial fan-blade arms. A new feature of the Iris engine is the employment of steel pistons—made under a patent of Mr. Legros—which combines the two qualities of lightness and strength. The throttle and ignition are still controlled by one lever on the steering wheel, but a second small lever is now mounted on the large one by which an extra advance or retard may be given to the ignition relatively to its ordinary position. The clutch is of the multiple disc type, running in oil and connected to the gear-box by a universal joint. The gear-box remains unaltered, and gives three speeds forward with direct drive on top. An alteration to the torque tube has made it now possible to withdraw the whole

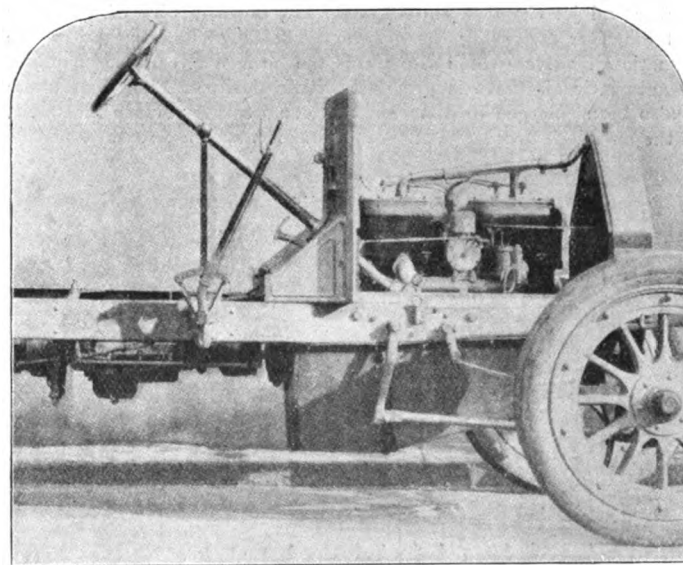


Fig. 82.—View of Forward Portion of Chassis of Iris 35-h.p. Car.

propeller shaft, with the driving bevel pinion mounted on it, through the differential casing on the rear axle. The latter is of an exceedingly accessible design, as the whole of the driving bevels and differential can be dismantled without taking the car off its road wheels. The frame of the chassis has been widened to 33 in., thus enabling a larger and wider body to be fitted. The springs are of the semi-elliptical type in front and three-quarter elliptic at the rear. A front axle of H-section forging is now employed, and the road wheels run on Hoffmann compound ball bearings.

The Siddeley Cars.

Although the WOLSELEY TOOL AND MOTOR CAR COMPANY, LTD., have taken no part in any of this year's speed trials and competitions on the road, the high reputation of the Siddeley cars for reliability has steadily increased. The models for 1909 will, as during the past season, be eight in number. Of these only five were to be seen at Olympia, among which is an entirely new type—a light 20-30-h.p. six-

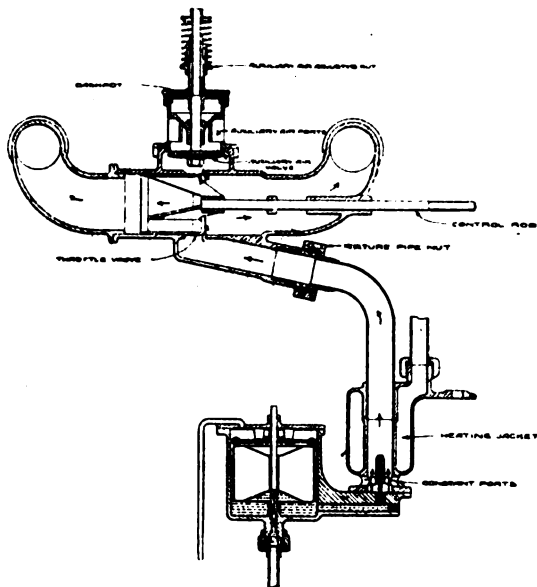


Fig. 83.—Sectional View of Carburettor on Siddeley 14-20-h.p. Car.

cylinder car—which has several improvements suggested by the light of the year's experience. For example, it is fitted with magneto ignition, pump lubrication, and gate-controlled change-speed gear. The 10-h.p. two-cylinder car is being continued, with minor improvements, among which may be mentioned a lengthened wheelbase and mechanical lubrication. The thermo-syphon circulation has been maintained, but the water pipes have been increased in size. On the 14-20-h.p. vehicle a new automatic carburettor has been adopted; a sectional view of this is given in Fig. 83. As will be seen, the float feed chamber and jet chamber are set fairly low down, a pipe of relatively small diameter conveying the gas to the mixing chamber—below the automatic air valve—which also forms the horizontal throttle chamber. The automatic air valve is provided with a dashpot. The foot brake has also been enlarged in diameter, and the wearing surface increased, and the chassis is now supplied with a longer wheelbase so as to permit

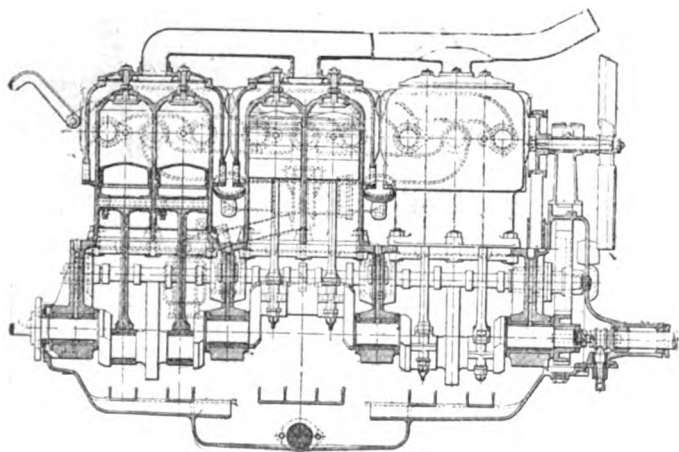


Fig. 84.—Sectional Elevation of Siddeley Six-Cylinder Engine.

the use of a light landaulet body. The 18-25-h.p., which may be regarded as the standard car among the Wolseley Company's productions, is again equipped with three speeds, but has now a selector gate change. A more efficient type of radiator is fitted, and the lubrication has been considerably improved. In the 30-h.p. model mechanical lubrication is now employed, while on the 40-h.p. car a multiple disc clutch is fitted instead of one of the metal cone type. In addition to

this a new form of carburettor, which considerably increases the power output and improves the flexibility, is also being supplied. The 50-60-h.p. six-cylinder model is now being built with either chain drive, effected through Renold silent chains, or with a live axle. Principal interest centred in the new 20-30-h.p. six-cylinder car (Fig. 85) above referred to. A sectional view of the motor, which has all the valves operated off a single cam shaft, is given in Fig. 84. The cylinders, which are 3 9-16 in. bore by 4½ in. stroke, are fitted with steel pistons and connecting rods, so as to enable the motor to run at a high rate of speed in order to increase its flexibility. The carburettor is similar in design to that illustrated in Fig. 83; it has, however, an addition in the shape of a choke cap over the jet, which, working in conjunction with the throttle, governs the amount of air allowed to enter the jet chamber, so giving an extra strong mixture for slow running. For higher speeds the carburettor is balanced by means of the extra air valve, which is controlled by a dashpot. As regards the lubrication of the motor, the oil is pumped into troughs below the connecting rods in excess so as to maintain a constant level under all conditions. Scoops on the lower parts of the connecting rods dip into these troughs, and thus lubricate the parts below the piston by splash. The main bearings are independently fed by the pump. The ignition is by magneto, combined with a semi-independent coil ignition for starting and emergency purposes. Both ignitions use the same set of plugs. The radiator is of the honeycomb pattern, and the circulation is by pump, a draught being induced by a fan driven from the engine, immediately behind the radiator, assisted by a fan flywheel. The clutch is of the multiple disc type. Between it and the gear-box are provided two complete universal joints, so as to avoid any possi-

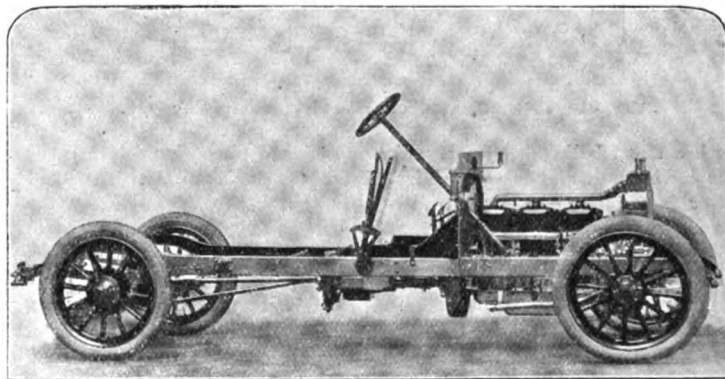


Fig. 85.—Chassis of Siddeley 20-30-h.p. Six-Cylinder Car.

bility of lack of alignment affecting the running of the car. The gear-box provides four speeds, with direct drive on the third. The reverse pinion is stationary on all the forward speeds, and only comes into operation when actually reversing. The "gate" in which the lever works is of a special form. It is very compact, and also so arranged as to prevent any possibility of accidentally engaging the reverse should the press button on the top of the lever be inadvertently depressed. The final drive is by a propeller shaft, fitted with complete universal joints at each end, and bevel gear to the live axle. The hubs run on ball bearings on the axle sleeves, and are driven through a square end from the internal shaft. The complete cars on view included a 14-20-h.p. single landaulet for town use; an 18-h.p. side-entrance double phaeton, with hood and glass screen; a 40-h.p. limousine-landaulet, in yellow, with blue leather; and a 50-h.p. six-cylinder limousine, in royal blue, fitted with canopy and glass screen.

The Albion Cars.

Two models of the latest types of Albion cars were to be seen on the stand of the LACRE MOTOR CAR CO., LTD. These are of respectively 16-h.p. and 24-30-h.p., both being fitted with four-cylinder engines. The main alteration in the 16-h.p. car is the provision of an extra air valve in connection with the carburettor, operated from the dashboard. As regards the 24-30-h.p. model, this is provided with an improved form of carburettor, while the mechanical lubricator has been greatly simplified. The magneto is similar to that fitted on the 16-h.p. engine, except that the magnets are of semi-circular form instead of being straight. In both cars the side driving chains are provided with gear cases, which not only protect the chains from mud and dirt, but act as radius rods.

The Albruna.

Messrs. BROWN BROS., LTD., had on view their familiar cars, which have done good service, notably the 20-22-h.p. Brown that was used by the Royal Commissioners on Congestion in Ireland, a 25-30-h.p., and a 35-40-h.p. four-cylinder vehicle. The new comer on the stand was a two-seated vehicle (Fig. 86), developing 12-h.p., and supplied at a low price. The four cylinders of the engine, 62 mm. bore by 120 mm. stroke, are in one casting. Mechanical valves are fitted. The ignition is of the high-tension Bosch magneto type. Transmission is by a metallic clutch to a three-speed gear with "gate" change. The direct drive is on the third

arranged as to admit the maximum amount when running with the throttle fully open, and in addition there is an air shutter fixed at the opposite end for correcting the mixture in hot and cold weather. An ingenious float agitator, or "tickler," is coupled up by a wire cord to within reach of the driver on the dashboard. The lubrication is effected by means of an oil pump in the crank case which forces the oil through the crank shaft to the bearings, and so up to the gudgeon pins. Instead of filling the oil in the usual side tank, one of the engine arms is provided with a cover into which fresh oil is poured when necessary, this entirely preventing the footboards and steps

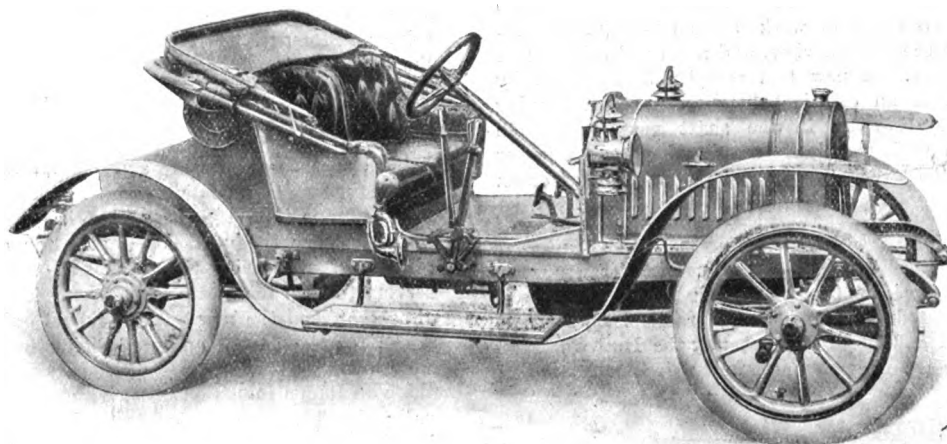


Fig. 86.—The "Albruna" 10-12-h.p. Light Car.

speed. The switch is on the top of the steering wheel and a foot accelerator is provided, with auxiliary hand adjustment on the dashboard. The thermo-syphon system of water circulation has been adopted, dispensing with the pump. There are internal rear brakes as well as an internal expanding foot brake on the countershaft. The frame is of pressed steel tapered and well set up at the rear. With its two bucket seats and petrol tank behind, the Albruna presents a striking appearance that should secure its early popularity on the market.

The Ariel Car.

Reference has already been made to the 20-h.p. cars exhibited by the Ariel Motors, Ltd. The company also had on view examples of their 30-h.p. and 40-h.p. cars, which embody many points of interest.

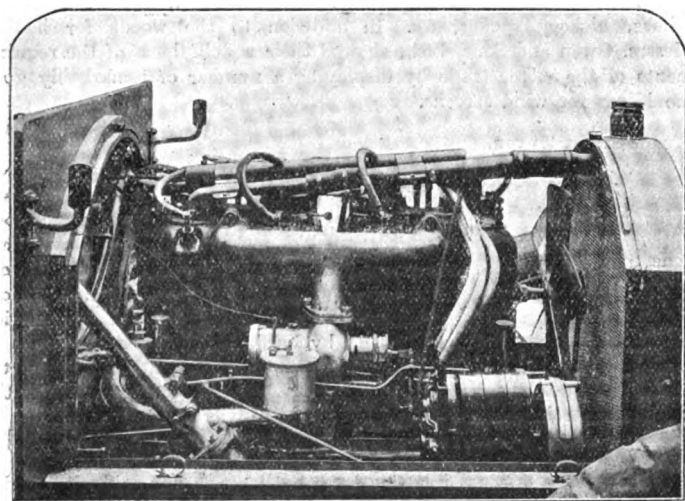


Fig. 87.—The Ariel 40-h.p. Four-Cylinder Engine.

Fig. 87 illustrates the carburettor side of the 40-h.p. engine, which, like the 30-h.p., has the cylinders cast in two pairs, with the inlet valves located in the cylinder heads, and operated by overhead tappets off the single cam shaft. The carburettor is of a simple automatic type; it has a single jet, which is attached to the base casting of the float chamber, and can easily be dismantled without having to remove the whole of the carburettor. The throttle is of the piston type, working in an extended cylinder on the forward end of the vaporising chamber, and can be operated either by hand or foot. The air ports are so

becoming covered with oil. A striking car on the Ariel stand was a 50-h.p. with Pullman body by Rippon Bros., Huddersfield. The vehicle (Fig. 88) has been built to a special design in order that the driver shall be completely enclosed, and in the case of fine weather it is possible also to have the car completely open. Another feature is that the rear portion, which is after the design of a single landaulet, can remain closed whilst the front seats are left open, and the dash-board glass screen can be folded, as is usual with a touring car. The internal fittings are most complete, and include tables, electric lights, speaking tubes and speedometer. There is seating capacity for five people, and the colour scheme is effectively carried out in dark sage green with black moulding and fine red lines. The upholstery is in red leather, and the roof is covered in cloth to match.

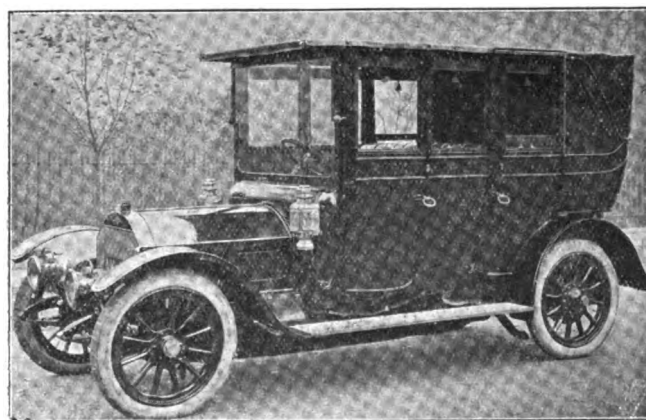


Fig. 88.—The Ariel 50-h.p. Car, with special Pullman Body.

Chenard-Walcker.

Messrs. CHENARD AND WALCKER (England), LTD., had on view their 8-9-h.p. single-cylinder chassis, another, mounted with a two-seated body, chassis of the two-cylinder 10-h.p., and four-cylinder 10-12-h.p., and a 14-16-h.p. four-cylinder landaulet of stylish appearance. Several good points are incorporated in these vehicles. The 8-9-h.p. chassis has a single cylinder with a bore of 100 mm. and a stroke of 120 mm. The ignition is of the high-tension Bosch magneto type. Power is transmitted to the road wheels by the employment of a double axle, in which the weight of the car is borne on a solid fixed axle independent of the driving axle.

SOME ACCESSORY EXHIBITS.

Machine Tools.

Messrs. DRUMMOND BROS., of Ryde's Hill, Guildford, who are well known in the motor industry, their special tools for workshop garages and workshops being in most of the representative establishments in the country, had an utilitarian exhibit of considerable interest. Speaking of the whole range of the firm's productions, they are notable for the sound workmanship that enters into their construction, strength and firmness being indicated in their appearance. A new radial drilling machine, available for foot drive as well as operation by power, was shown, this being one of the first of the kind produced by Messrs. Drummond Bros., at a price which should secure its extensive adoption throughout the country. Its range of work is from 1-16 in. to 1 in. The 3½ in. screw cutting lathe was on view, and a general selection of tools for motor repair shops. A new tool recently brought out by Messrs. Drummond Bros. is an excellent hand-lever bench shaping machine, with the cutting keyway in the shaft passing through the body of the device. This is practically a reduced copy of a power shaping machine worked, however, by a hand lever in place of crank and belt pulleys.

C.A.V. Specialities.

A large display of their well-known electrical specialities was made by Messrs. C. A. VANDERVELL AND Co., of Warple Way, Acton Vale, London, W., who have secured the confidence of practical motorists to a great degree. A special exhibit of interest was the Ruthardt high tension magneto, in which the magnetos are nearly circular instead of

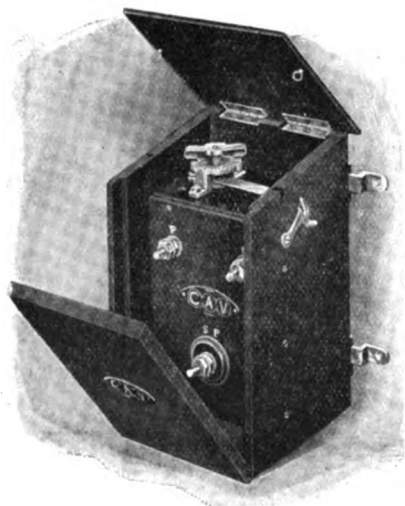


Fig. 89.

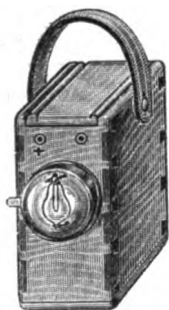


Fig. 90.

the usual horseshoe pattern. The good features of these have already been described. The C.A.V. distributor coil, Model A4, of the dashboard type, is shown in Fig. 89. Among the other exhibits were portable hand lamps (Fig. 90), suitable for garages and similar establishments. These are made with detachable celluloid accumulators, and will be found an improvement on the older types, as the battery can be removed for recharging when necessary.

Continental Tyres.

A new all-rubber non-skid with a three-ribbed tread was the novelty at the stand of the CONTINENTAL TYRE AND RUBBER COMPANY, LTD., while an "extra strong type course" inner tube was being shown for the first time. The latter is of a distinctive green colour, and is specially adapted for use with the tread with three wide circumferential ridges and deep grooves. The tyre has been thoroughly tested, and should become a standard Continental article.

The Doherty Carburettor.

Among the exhibits of the DOHERTY MOTOR COMPONENTS, LTD., was the Tubicomb radiator, illustrated in our issue of the 14th inst. They also showed their new automatic carburettor, and although it has not appeared at an exhibition before it has been thoroughly well tested on the road during the past few months. In this new carburettor the variable jet is of tubular form, carrying a larger plunger, which is raised and lowered as the throttle is opened by means of a small eccentric on the throttle spindle. The supply of petrol increases with the air supply, both being controlled by one lever. The adjustment of the

device to suit any engine is made by releasing a small set screw and moving a graduated collar, the whole operation occupying but a few seconds. Compactness and lightness, as well as efficiency, are characteristic of the Doherty carburettor.

Van Raden's Specialities.

Messrs. VAN RADEN AND Co., LTD., have long been known to motorists in connection with specialities for ignition, and their display served to emphasise the position they have attained in this connection. Their patent spun-glass and woven-glass accumulators are now, owing to the reduction in the cost of the raw materials, lower in price than before, while their "L" type of spun-glass plates continues to supply a large demand where hard wear and tear is required of the motor vehicle. Moreover, the amalgamation of the frame, grid and paste, and the porosity caused by the internal use of spun glass render the plate extremely active and of great capacity. This year a new celluloid battery was shown, in which the cell is unspillable, while there is no interference with the free escape of the generated gases to the open air. In this type the plates are supported at the top and bottom, so that they do not come in contact with the sides or ends of the celluloid boxes. At the same time the electrolyte has free circulation all round the plates. Below the vent hole in the top of the cell is a trough with glass wool, preventing the possibility of the acid being spilt, and also serving to keep the plates in position. The vent plug is dispensed with altogether, and the new pattern should quickly become popular. Hand lamps for the garage and roof lights for the tops of covered bodies were exhibited, and we noticed some improvements have been made in the Van Raden induction coils, without and change in the prices originally charged. The present method of ensuring the insulation of the bobbin and connections should secure the utmost durability. Several patterns of sparking plugs were also on view. Reference to this stand would be incomplete without mention of the Newport dual ignition introduced by the firm. In this high-tension magneto the pole pieces are cast in the armature tunnel, there are unpierced magnets, and the circular condenser is mounted on the armature spindle. It has an external safety gap.

Timber for Bodies.

Messrs. JOSEPH OWEN AND SON, LTD., had a representative collection of timber for motor-car body builders, this being shown in planks and boards as well as in panels. The firm occupy a leading position in the timber trade of Liverpool, and from their yards in the Borough High Street, London, S.E., are supplying many of the leading builders of automobile carriages. Oak, ash, birch, mahogany, and other hard woods were shown, as well as some well-shaped panels in white wood and yellow pine. Bent timber was another section of the exhibit, which also comprised wings, seats, sticks, rails, &c., hickory rims, ash felloes, hickory spokes, &c. In addition to the woods for bodies, Messrs. Owen and Sons, Ltd., showed their watchfulness of the requirements of the motor trade by displaying a number of remarkably good mouldings for wind screens.

Hutchinson Tyres.

ETABLISSEMENT HUTCHINSON, of 13, Maddox Street, Regent Street, London, W., had a good position whereon to show their Hutchinson tyres for voiturettes and larger cars. These are supplied with the wood fibre non-skid, the steel-studded non-skid, and a grooved tread, so that there is a good choice in connection with this tyre, which has certainly done good service. It is claimed in connection with the wood fibre non-skid that the durability is ensured by the particular plan of construction adopted. The steel studs are held by hardened compressed plaques of wood fibre protecting the running surface, and consequently increasing the life of the tyre. The other tyres on the stand were distinguished by the thick tread reinforced by extra layers of canvas at the beads.

The Parsons Non-Skid.

Since their original introduction the Parsons non-skids, for which the PARSONS NON-SKID COMPANY, LTD., of 210, Shaftesbury Avenue, London, W.C., is responsible, have been constantly improved, until they now present one of the most valuable devices of the kind on the market. The Parsons Grippa non-skid is made with an endless chain side hoop, and another which is divided in two places and fastened with couplings. As the non-skids slacken with wear, they can be easily tightened by taking off a link from the outer hoop chain. This can be attached in three minutes, and detached in one-third of the time. At the stand we also saw the Parsons sparklet inflators, which are now made up in small cases that can be easily packed away on the car, such a size having the capacity of pumping ten 870 by 90 tyres. The idea of the Sparklet

inflator has been adopted for use as a fire-extinguisher, the interior of the vessel being filled with water, which, on being discharged, is impregnated with carbonic acid gas. Reference may also be made to a change introduced into the well-known Parsons detachable rim with a view to secure its effective adjustment.

Vasoleum.

At the stand of the NEW MOTOR AND GENERAL RUBBER COMPANY an interesting exhibit was made of Vasoleum. This is being put on the market by the County Chemical Company, Ltd., of Birmingham, who will be pleased to give practical demonstrations of its merits in any locality where agents and motorists are likely to give the preparation effective trial. It is claimed to have "all the lubricating virtues of both oil and grease, with none of their vices." At the Show a demonstration was given showing how Vasoleum passes freely in and around the gears, never escaping or solidifying, and ensuring cool, silent running. Eliminating friction, the preparation should assist the longevity of the gears and add its quota to the easy running of the car. The Warwick motor tyres and the Rub Metal non-skids were also staged on the same stand.

E.I.C. Specialities.

The large selection of their specialities shown by the ELECTRIC IGNITION COMPANY, LTD., of Sparkbrook, Birmingham, comprised something of interest for every visitor. Even those who did not comprehend the significance of the many improvements offered were well able to recognise the sound construction and excellent finish of the articles on the stand. The E.I.C. magneto is characterised by the reduction of the number of parts—a development that has given the makers confidence in guaranteeing their magneto for two years. In connection with this, mention may be made of the dual ignition attachment, which can be easily fitted to any E.I.C. magneto, and gives the advantage of being capable of being used either as an ordinary trembler coil distributor ignition, or as a non-trembler coil distributor ignition by the simple operation of moving a small lever from right to left, or vice versa. The difficulty which is often experienced of starting up with a non-trembler coil ignition in winter time is obviated, for by the movement of the lever the coil can be made to work as a trembler coil. If the engine is turned, if only very slowly, 70 or 80 sparks will jump across each sparking plug point in due course, so that starting up becomes quite easy and the engine will start off the switch, provided, of course, that everything is properly adjusted. Another good feature of the dual attachment of the E.I.C. type is that the main switch-handle is detachable, preventing the starting of the engine by unauthorised persons. In plugs, the company showed their A1 Mica Model. The insulator of this can be taken out of the body of the plug in half a minute, wiped, and replaced without any disturbance of the electrical connections which remain in the cylinder. High-tension distributors, accumulators, &c., completed a very representative exhibit.

Repair Work.

Unique among exhibitors by reason of its being the sole representative of motor repairing work on show, the LAYSTALL MOTOR ENGINEERING WORKS, LTD., 27-29, Laystall Street, Rosebery Avenue, London, E.C., attracted considerable notice. It specialises in such work as the production of special castings for replacements, the repair of cracked or broken cylinders, and similar work, which means economy to the motorist who has had mishaps which would otherwise consign much material to the scrap-heap. The samples of repair work on view included gears, cylinders, &c., specimens of the latter shown including those in which the cylinders had been rebored for the purpose of renewing compression to cylinders which are worn or scored. The company have executed more than 2,000 orders for repair work this year, and their plant and staff have both satisfied their clients. They are able to undertake complete overhauling and repairing, and have done a good deal of work in lengthening chassis and fitting side-entrance bodies.

Dunlop Motor Clothing.

The name of the firm and its acknowledged reputation contributed to the maintenance of a crowded condition for the space in the gallery whereon the DUNLOP RUBBER COMPANY, LTD., of the Manor Mills, Birmingham, had a display the variety of which deserved a better opportunity of exhibition. Several excellent styles of motor coats for ladies and gentlemen were on view, the specialities—all rubber-proofed—being the "Crossover," the "Militaire" and the "Renault." The detachable leather and camel fleece linings which came into vogue a couple of seasons ago continue their popularity, the comfort and adaptability of the patterns being likely to sustain their present favour for a long series of years. These linings are successfully introduced in

English tweeds, Irish friezes, and rainproof materials. A large selection of rubber goods, aprons, car covers, lamp covers, and similar accessories was also included in the exhibit of the Dunlop Rubber Company, Ltd.

The Peter Union Tyre.

In addition to their well-known flat and round treaded tyres, the PETER UNION TYRE COMPANY, of 6, Upper St. Martin's Lane, London, W.C., had on view a ribbed tyre. In this the tread is flat, with three ribs so pronounced that in wet and greasy weather they act as an efficient non-skid. A special point is made of the quality of the tyre. In the tread a tough rubber is employed with the view of securing the retention of the form on the ribs as long as possible. The canvas used, too, is of a selected and carefully-tested quality. Both the bead and the tread are strongly made, and the makers claim that it is impossible for any of these parts to burst or break, while the system of testing adopted with every tyre enables the company to assure buyers of the good wearing quality of the Peter Union tyre.

Benetfink's Accessories.

Since it came into the hands of the present proprietors, the old-established firm of Messrs. BENETFINK AND Co., LTD., of 107 and 108, Cheapside, London, E.C., has completely established itself with motorists in the City of London as an emporium for their requirements. Evidence of the universal character of the stock kept in Cheapside was given at Olympia, where the representation included motor tools, horns, speedometers, electrical accessories, clothing, gloves, goggles, and, in fact, many of the things that the motorist really needs.

The "No Glare" Lamp.

In our last issue a description was given of the "No Glare" lamp,



Fig. 91.

brought out by Messrs. BLERIOT, LTD. In Fig. 91 we give an illustration of the device, which effects the purpose of minimising the glare from the headlights of motor cars without any mechanically-operated screens or shutters. The lamp is of good appearance and is supplied either of all brass or nickel plated. Now that the winter is upon us and lights are required before 5 p.m., the motorist who indulges in evening motoring will be wise in giving heed to the excellent features of the

Bleriot lamps. The headquarters of the agency in London are at 53, 54, Long Acre, W.C.

"Enots" Triple-Action Pump.

Messrs. BENTON AND STONE, of Bracebridge Street, Birmingham, had a valuable collection of accessories and devices calculated to ease the labour of motorists on the road. Motor-tyre pumps, petrol filters, lubricators, &c., made up a display which contained several features to some of which we hope to refer on a later occasion. Among them was the "Enots" compound triple-action pump, which is supplied with a pressure gauge calibrated to 100 lb. per square inch, secured by a swivel nut which prevents it jarring loose. In this all the inflating is done on the downstroke, the upstroke being made use of to compress the air into the smaller barrel from the larger one. The makers emphasize the fact that there are no glands or stuffing brass to wear away or get out of order.

Radiators.

On every occasion that productions of Messrs. ORME, EVANS AND Co., LTD., of Wolverhampton, have been represented at a London show we have been impressed with their style, construction, and finish. They comprise bonnets, tanks, radiators, and similar components, the latter department including those of the gilled tubular variety, and also two specialities, known as the Orme-Whitlock and the Livingston. The latter has few parts, little weight, and great efficiency, while its economy of cost is another of its quartette of merits. It is constructed of bands which are composed of light copper strips joined together, forming a square section tube, which is automatically produced with mathematical accuracy. This radiator

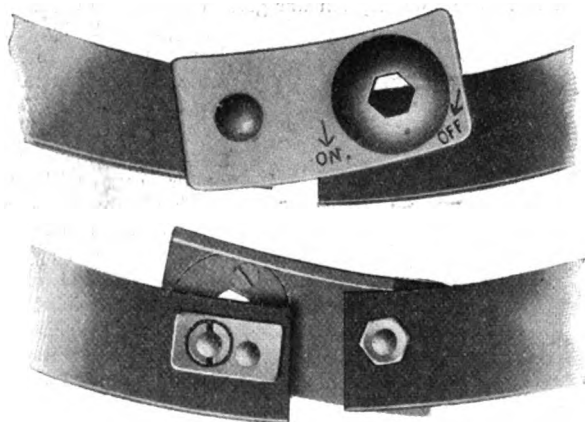
gives 58 square inches of cooling surface to one square inch of radiator front. In the Orme-Whitlock radiator the feature is the series of transversely corrugated tubes which extend between a top and bottom water tank. The corrugations of each tube are reversed with relation to the two tubes adjacent on either side, so that air cells run from the front to the back. Copper is employed in the cellular portion, the tanks and case being made of polished brass, and presenting a wholly creditable appearance. Only one width, 4 in., is made of the Livingston radiator; that of the Orme-Whitlock is made in the following widths: 3 in., $3\frac{1}{2}$ in., 4 in., and 5 in.

Goodrich Tyres.

The special distinguishing feature of the Goodrich non-skid, which was shown by the B. F. GOODRICH COMPANY, of 7, Snow Hill, London, E.C., is the rubber studs, which take the place of the ordinary metal studded tyre in this particular make. Being moulded in the tread, they are not likely to come away, while their non-slipping properties are easily demonstrable. The Goodrich non-skid can be fitted to other makes of tyres than the Goodrich.

The Dunlop Rim.

In addition to the Dunlop tyres, which have already been referred to, the DUNLOP TYRE COMPANY had on view a new detachable rim, which was shown for the first time. In the device the expanding flange ring is the essential feature. This is attached to the outer side of the wooden wheel by bolts, which are secured by nuts on the inner side of the wheel. There are eight of these bolts inserted at equal distances in the wheel. As will be seen from Figs. 92 and 93, an expanding and



Figs. 92 and 93.

contracting device is provided, so that the bolts and nuts do not require to be disturbed. The illustrations show the front and back views of the flange ring half contracted. The expansion and contraction is effected by an eccentric movement of the joint, actuated by a lever attached to the hole in the locking plate, on a system somewhat similar to that employed in the original type of Dunlop detachable rim. The new rim is certainly a great advance in such devices.

Motor Supply Company.

The MOTOR SUPPLY COMPANY, of 110-111, Piccadilly, London, had a comprehensive display of specialities for which they are agents. The Torkington tyre, a solid rubber tyre possessing many good qualities, which were fully explained in our columns recently, was on the stand, as well as many minor accessories equally necessary for the steady running of the car. Among these was the well-known Eyquem sparking plug, several good patterns of lamps and fittings for the same, horns, including those of the boa constrictor type, tool kits, goggles, &c., the latter being fitted with lenses to suit various sights.

Windham Interchangeable Bodies.

On a 20-h.p. four-cylinder Beeston-Humber, the WINDHAM SLIDING DETACHABLE MOTOR BODY COMPANY, of 22A, St. John's Hill, Clapham Junction, London, S.W., demonstrated the undoubted advantages of the system of patent detachable and interchangeable motor bodies with which their name is associated. The plan has had considerable endorsement from those who have adopted it since the publication of the description which appeared in our columns. The Earl of Norbury declares the method of attachment, though simple in the extreme, to be perfectly secure, without rattle or clatter. It

is, he adds, only a matter of seconds to take off the body, and it is a great advantage to have legs on which to stand it or wheel it about. Mr. Frank Warrack, of Carnwath, N.B., has adopted it on a Berliet chassis, which he is able to use three days a week as a shooting brake, and on the alternate days as a side-entrance car of the ordinary type. With only a little practice, the rear portion of the box can be taken off and another portion placed in position, joining up in a style that avoids notice and secures safety in less time than detachable rims can be dealt with.

Miscellaneous.

The SAMSON LEATHER TREAD AND TYRE COMPANY, LTD., 1, New Burlington Street, Regent Street, W., were represented by the "Royal" Samson de Luxe tyre, which is claimed to secure efficiency with regard to non-skidding properties without adding to the weight. Grooves are made across the tyre running parallel to each other at an angle of about 45 degrees to the direction of running. In each of these is set four metal studs, the tops of which are flush with the cover of the tyre. The tyres are supplied in pairs (right and left), so that when they are running on the road there is a greater tendency to grip the road and reduce the likelihood of skidding to a minimum. Inner tubes, plain covers, steel studded covers, and grooved covers made up an interesting exhibit.

The "Marston-Megenet" honeycomb radiators were the feature of the display of Messrs. JOHN MARSTON, LTD., of Wolverhampton, whose bonnets, wings, panels, &c., were also to be seen on many leading cars in the show. A pressure feed petrol tank was also included in the exhibit.

Several useful tools were on the stand of Messrs. F. M. RUSSELL AND CO., LTD., of Willesden, N.W., these including the "Newleva" and "Gryp" patent spanners and pipe wrenches, as well as the "Calori-Bloc" warmers, the latter being serviceable in such cold weather as now seems to be coming upon us.

The "Ubas" steel, with which Messrs. W. T. FLATHER, LTD., of Sheffield, are associated, was shown in the Gallery. This is now coming well into service for gears, shafts, bearings, and the like. Test pieces of nickel steel and a good display of metals for the automobile industry made up an interesting exhibit.

THE CAR AND GENERAL INSURANCE CORPORATION, LTD., 1, Queen Victoria Street, London, E.C., took advantage of the occasion to make the advantages they offer better known. They undertake the insurance of mechanical breakdowns, accidental damage, third-party claims, &c.

At the stand of Messrs. MÖBIUS AND SON, of 1, Howard Road, Stoke Newington, were to be found the well-known "Challenge" motor oils, and the grease with the same distinctive name. Oils for every description of motor work were included in the display.

Several good types of accessories and competent parts were to be seen on the stand of Messrs. B. M. and W. D. FAIR AND CO., their specialities including the "Percival" self-locking control levers, the Noakes' lubricator, the A.P.S. shock absorber, the "Gibaud" radiator, and also those of the "Grenier and Mercier" type.

The exhibits of Messrs. DOVER, LTD., of most interest to motorists were the different types of the "Dover" motor steering wheels. These are made with brass, gunmetal, and aluminium centres, and are fitted with rolled steel rim and polished Exonite covering with the well-known ribbed grip. The company also showed a steering wheel which is entirely covered with polished Exonite, and they had a small selection of their patent sleeve nuts for security bolts and valves for the quick detachment of tyres.

An all-rubber non-skid tyre was shown on the stand of the COLLIER TYRE COMPANY, LTD. The tread is moulded so as to secure a surface in which a number of diamond-shaped intersections appear. This "Medallion" beaded edge tyre presents a roughened tread to the ground, which should prove little liable to side slip.

"D.W.F." patent standard ball-bearings were exhibited by Messrs. LUDW. LOEWE AND CO., LTD., who are the sole agents. The journal bearing shown on the stand was unique in the fact that it has unbroken races, while the balls themselves are contained in a one-piece metal cage. Messrs. Ludw. Loewe and Co. were also showing a number of steel plates in which the "D.W.F." steel balls have been impressed by blows from a steam hammer. The result was a capital demonstration of the remarkable hardness and tenacity of these specialities.

A useful display was that of Messrs. W. H. WILLCOX AND CO., LTD., of Southwark Street, London, S.E., which included oils, greases, &c., for cylinders, gears, bearings, &c. Lubricators of various types were shown, as well as a selection of tools and accessories for garage proprietors.

(To be concluded.)

THE STANLEY SHOW.

THE thirty-second annual Stanley Cycle Show, which opened at the Agricultural Hall, Islington, on the 20th inst., and which closes to-day (Saturday), has apparently lost none of its interest, the well-known locale being well filled. A feature of the exhibition is the large number of motor-cycles on view, and judging from the interest taken in the machines, the pastime of motor-cycling, far from declining, as has been frequently prognosticated, seems, to use a popular phrase, to be going stronger than ever. One striking evidence of this is seen in the fact that the Humber Company, who a few years ago gave up their motor-cycle department, have again taken up the construction of motor-bicycles. The new Humber machine is fitted with a $3\frac{1}{2}$ -h.p. engine, the crank shaft of which runs on ball-bearings, and among the special features are a new design of frame, the silencer being so arranged that it forms part of the main down tube. It has been made unusually large, having a capacity of ten times that of the combustion chamber, and is made of steel tubing. The transmission is by a V-belt and two-speed gear.

The REX MOTOR MANUFACTURING CO., LTD., are building two sizes of the Rex motor-bicycle— $3\frac{1}{2}$ -h.p. single-cylinder, and 5-h.p. twin-cylinder. Among the features of these machines are a new type of spring fork which is so designed that the front wheel can easily be detached without deranging the fork in any way. The engine is now carried in a new type of steel cradle, with which is incorporated the magneto cradle, the magneto being placed very high from the ground so as to be free from mud splashing. The tank is of an entirely new design and holds $1\frac{1}{2}$ gallons of petrol; a lubricating pump is placed inside the tank. The engine has been altered considerably, the exhaust ports having been arranged to enable a free exit of the burnt gases. The timing gear is now so arranged that one cam working two rocking arms manipulates the valve tappets.

One of the most novel motor-bicycles to be seen is that shown by the JAMES CYCLE CO., LTD., Birmingham. The frame is quite a radical departure from the usual pattern, it being so arranged as to give the rider an extremely low position and enabling either of the wheels to be readily detached. The engine, which is of $3\frac{1}{2}$ -h.p., is fitted with a patent system of concentric valves and magneto ignition.

Other motor-bicycles on view include those of the WEARWELL MOTOR CARRIAGE CO., LTD., Wolverhampton, Messrs. DOUGLAS BROS., Kingswood, Bristol, the Motosacoche of Messrs. DUFAUX AND COMPANY, the LLOYD MOTOR AND ENGINEERING COMPANY, Birmingham, OSBORNE MOTOR MANUFACTURING COMPANY, Lincoln, "E. D. F." MOTORS, Birmingham, Messrs. BRADBURY AND CO., LTD., Oldham, J. PRINGLE, Saltcoats, N.B., Messrs. J. T. BROWN AND SONS, Reading, NORTON MANUFACTURING COMPANY, Birmingham, BAT MOTOR MANUFACTURING COMPANY, Penge, S.E., the OAKLEIGH MOTOR COMPANY, West Dulwich, the MOTOR REVE COMPANY, the QUADRANT MOTOR CO., LTD., Coventry, the PHANOMEN MOTOR COMPANY, MINERVA MOTORS, LTD., the PHELON AND MOORE COMPANY, the SERVICE CO., LTD., the TRIUMPH CYCLE CO., LTD., ZENITH MOTORS, LTD., the VINDEC MOTOR CYCLE CO., LTD., H. COLLIER AND SONS, LTD., Plumstead, the F.N. MOTOR AGENCY, Messrs. BROWN BROS., LTD., Messrs. CHATER-LEA, LTD., the N.S.U. MOTOR CO., LTD., the ARNO MOTOR CO., LTD., and L. W. WALL, LTD., Birmingham.

The Gilbey Hall is, as usual, devoted to motor-car exhibits, and although the number is not very large, the vehicles on view are well worthy of inspection, especially as illustrating recent developments in light cars fitted with air-cooled engines.

The Starling and Little Briton Cars.

The most interesting display of cars is that of the STAR CYCLE CO., LTD., Wolverhampton, who have for some years been devoting special attention to the production of reliable little vehicles to meet the demand of a large and steadily increasing class of motorists. One of the most attractive machines is the Little Briton 10-h.p. machine, built on the lines of a racer, this being achieved by locating the two seats well to the rear and employing a long engine bonnet. The motive power is supplied by a 10-h.p. two-cylinder engine, $3\frac{1}{2}$ in. bore by $4\frac{1}{4}$ in. stroke. The standard ignition is by coil and accumulators, but provision is made for the ready installation of a high tension magneto. The speed of the motor is controlled by varying the lift of the inlet valves. The drive is through a leather-faced cone clutch, three-speed gear-box, mounted on Hoffman ball-bearings, cardan shaft, and bevel gear, to a substantially-designed live axle. So far as the chassis is concerned the Royal Starling cars are on very similar lines to the Little Briton; the bodies—two or four seated—being, however, of the touring vehicle type. Finally, reference may be made to the Imperial

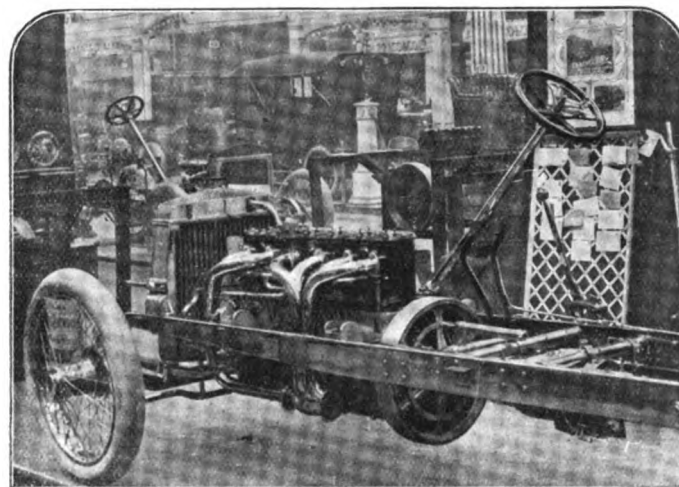
Starling two-seated car. This is fitted with a single-cylinder engine, $4\frac{1}{2}$ in. bore by $4\frac{1}{2}$ in. stroke, rated at 8-h.p. The details throughout are on up-to-date lines, as may be judged from the fact that the gear-box is not only mounted on ball-bearings, but is provided with a lever working in a "gate."

The O.T.A.V. Voiturettes.

Several examples of the interesting little O.T.A.V. voiturettes are to be seen at the stand of the JUNIOR AND O.T.A.V. CARS CO., LTD. These have already been illustrated and described in the *M.C.J.*, but it may be mentioned that they are fitted with a $5\frac{1}{2}$ -h.p. single-cylinder air-cooled engine, 100 mm. bore by 110 mm. stroke, located in the fore part of the frame. A chain connects the engine with the countershaft, on which is mounted an epicyclic two-speed gear; the final drive is by V-belts from the ends of the countershaft to pulleys on the rear road wheels. The O.T.A.V. voiturettes have been submitted to exhaustive trials, through which they have passed successfully. Fitted with a hood they form a handy little runabout machine.

The Piccolo Cars.

Two very interesting types of cars, fitted with air-cooled engines, are shown by the VICTORIA TRADING COMPANY, of 47, Lamb's Conduit Street, London, W.C. The vehicles, which are of German construction, and known as the Piccolo, follow in general design the usual lines of cardan shaft driven machines. Dealing first with the two-seated vehicle, this is fitted with a 6-8-h.p. V type twin-cylinder engine, the



View of Front Portion of Daimler 57-h.p. Six-Cylinder Car.
(See page 819 last issue.)

cooling of which is effected by radiating fins in conjunction with a couple of fans driven by a belt off the crank shaft. The cylinders themselves are made from a special quality of steel, which is claimed to be non-heat retaining. The three-speed gear-box, which is controlled by a lever under the steering wheel, is built up so as to form a unit with the motor. The final drive is by a cardan shaft with joints at each end, and bevel gear to a live axle. The 12-16-h.p. car, which is fitted with a standard side-entrance double phaeton body, is on similar lines to the 6-8-h.p.; the engine, however, comprises four cylinders, 72 mm. bore by 95 mm. stroke, three fans being provided to assist in the cooling of the cylinders.

The Chater-Lea Carrette.

A somewhat novel design of two-seated car is exhibited by CHATER LEA, LTD.; it is known as the Chater-Lea Carrette, the novelty lying in the fact that the engine—a 6-h.p. V-type two cylinder—is mounted on the outside of the frame at the right of the driver. The transmission is through a leather-faced cone clutch to a compact three-speed gear; the driving shaft is arranged as a continuation of the engine shaft, and is carried across the machine; it terminates in a sprocket from whence the drive is by Renold chain to the left rear road wheel. The vehicle is claimed to be able to maintain an average speed on fair roads of 20 miles per hour.

The Vindec Voiturette.

The VINDEC MOTOR CYCLE COMPANY, 13-15, Wilson Street, Finsbury, introduce a new two-seated voiturette fitted with a 7-9-h.p. V-type two-cylinder air-cooled engine. The transmission is by a chain to a countershaft, on which a clutch and two-speed gear is mounted, the

final drive being by a single V-belt to a pulley bolted to the near side rear road wheel. The fitting of a differential gear is obviated by mounting the off-side wheel so that it runs loosely on the continuous axle.

The Arno Car.

A new-comer in the motor-car world is the ARNO MOTOR CO., LTD., Coventry, who are showing a 35-h.p. car fitted with a White and Poppe four-cylinder engine, automatic carburettor and two systems of ignition. The transmission is through a leather-faced cone clutch, three-speed gear-box, cardan shaft and bevel gear to a live axle. Among the special features in the Arno car is the method of attaching the springs to the frame, and the provision of a large detachable cover to the differential case, by means of which the large bevel and differential gear can not only be readily inspected, but, if necessary, removed with but little difficulty.

The Phenomen Car.

A novel three-wheel two-seated car is shown by PHANOMEN MOTORS, of 49, King Square, Goswell Road, E.C.; the novelty lies in mounting the engine—a 6-8-h.p. V-type two-cylinder—and the whole of the driving gear on the single front wheel.

Some Accessories.

The CITY IGNITION COMPANY, of 14, Spencer Street, Goswell Road, London, E.C., are in the Arcade with their "Voltoo" coils, sparking plugs, and similar specialities. The Voltoo 2-volt coils are claimed to have a minimum of current consumption, and require but slight adjustment, renewal of platinum points, &c., thereby entitling them to be regarded as an economical type.

Messrs. W. AND R. JACOBS, of 39c, King William Street, London, E.C., have a large selection of electrical accessories for motor-cycles, their standard goods including a full range of accumulators from 2 to 8 volts, sparking plugs, voltmeters, &c. The "Electary" electric side lamps for tricar and cars are a large feature of the display, the details of which are of good construction, as well as of sound principles and design. The new Aimia plug, in which the electrode is one solid piece of pure nickel steel, practically insensible to expansion, is shown by the ABOLO COMPANY, 133, Regent Street, W.

At the stand of the INDIA RUBBER AND GUTTA PERCHA CO., LTD., is the sectional type for motor-buses, invented by Mr. A. T. Collier and placed upon the market by the Reilloc Tyre Co., Ltd., of 83, Victoria Street, Westminster, S.W. This was fitted to the Renard trains running at the Franco-British Exhibition. It consists of a series of sectional blocks of rubber, any of which can be replaced when worn, and offers a useful innovation to those concerned with heavy traffic.

Messrs. STEINER AND COMPANY, now located at 58, Great Eastern Street, London, E.C., have a good range of their lamps and horns for motorists. Of the latter the firm have a full range of 15 patterns and 120 sizes, including some excellent types, to which we hope to refer on a later occasion. The "Hella" lamp, with its automatic generator, is notable in the lamp section, where is also included the Phare Ellipso searchlight, with mirror lens, reflector and sectional front glasses.

Messrs. PRICE'S PATENT CANDLE CO., LTD., have a large display of their specialities, which include Rangraphine for motor chains, Belmoline solidified oil, and other productions that have stood the test of time with motorists.

The COUNTY CHEMICAL CO., LTD., are taking advantage of the occasion to make their "Vasoleum" for gear and differential lubricant better known, and their range of Chemico specialities and vulcanising equipments is also on view. At another stand the UNION RUBBER AND CHEMICAL CO., LTD., is drawing attention to an electric vulcaniser and the Turco detachable lining, which is intended to give a new foundation for a tyre, and, in cases of emergency, can be fitted to the cover in a few seconds. Elsewhere in the Gallery will be found the exhibit of the ELEPHANT CHEMICAL COMPANY, which includes "Calcoid" for motor lamps, and the well-known Elephant motor greases.

Messrs. MOEBIUS AND SON have a large display of oils, special attention being drawn to their "Challenge" motor oils and greases.

Messrs. HARVEY, FROST AND CO., LTD., are showing their "Popular" type of vulcaniser, and generally proving the capacity of their appliances to execute excellent repairs to punctured tyres.

In a prominent position in the Arcade Messrs. W. SEARLE AND COMPANY have on view their well-known speedometers, and also the A.V. sparking plugs and Fulmen accumulators, for which they are agents in this country.

Other well-known exhibitors include Messrs. NICKELLS AND CO., of Blackheath, who show their patent terminals with auxiliary connections; and among other prominent exhibitors are the ARA MATERIAL PATENTS MANUFACTURING CORPORATION, with their familiar means of

vulcanising tyres. With this system surface cuts on covers can be repaired without deflating the tyre; Messrs. E. H. HILL, LTD., of Sheffield, whose motor tyre pumps and tool kits deserve mention; Messrs. J. B. BROOKS, LTD., who show a complete motor-cycle touring equipment; the PETER UNION TYRE COMPANY, with puncture-proof bands; the BIFURCATED AND TUBULAR RIVET CO., LTD., with the speciality indicated in the title of the firm; ETABLISSEMENTS HUTCHINSON, whose motor-cycle tyres are on view; the PRESTED MINERS' GAS INDICATING ELECTRIC LAMP COMPANY, with batteries, coils, charging boards, &c.; and Mr. H. J. HARDING, whose "Pushon" pump connection enables an airtight joint to be made on the valve of a tyre instantaneously. Mr. Harding also has an accumulator with detachable plates which can be replaced when run down. LYXAVON, which is well known to motorists as an effective liquid soap, possessing really wonderful activity as a cleanser, is brought to the front again by the company of that name.

Mr. R. W. COAN has his familiar place at the entrance to the Arcade, where he demonstrates his capacity to repair broken crank cases and undertake all classes of aluminium work at his establishment, 219, Goswell Road, Clerkenwell Road, London, E.C. A new exhibit is an aluminium mould for making rubber matting.

The Palmer, Calmon, Le Persan, Continental, and other well-known tyres are on view, and the CONTINENTAL MOTOR COMPANY show the "Rom" non-skid, in which a toughened compressed rubber tread is provided with short rubber bars in place of studs. These are so disposed as to provide a preventive of side slip.

An improved motor-car wheel, known as the "Victor," with a detachable flange to facilitate the changing of covers or inner tubes, is exhibited for the first time by SHEPPARD'S PATENT MOTOR WHEEL COMPANY, of Bridgend, Glam. The removable flange is of brass, and two small handles or bolts are provided, which, when screwed into the flange, automatically unlock it from the wheel. A turn of about two inches permits the flange to come off and the cover to be removed. The reversion of the process enables the device to be securely locked when the tyre has been replaced. It is claimed that the device is absolutely watertight, while it is impossible to rust.

The PREMIER ACCUMULATOR CO., LTD., of Northampton, exhibit their magnetos and sparking plugs. In the former some interesting improvements have been introduced with a view to the simplicity as well as the reliability of the device. The make and break arrangement is now operated by a steel ball working in an oil bath on a steel cam, and can be easily detached in one piece for examination when necessary. The armature is wholly enclosed, and the case enclosing it is entirely in one piece.

Messrs. DRUMMOND BROS., LTD., have a new radial drilling machine for motor garage and repair work, as well as other machine tools; and the E. M. BOWDEN'S PATENTS SYNDICATE, LTD., demonstrate their system of transmitting power through a flexible medium.

AUTOMOBILE ACCIDENTS.

THE inquest relative to the death of Mrs. Le Neve Foster, of Wilmslow, who was killed by a train overturning her motor-car at a level crossing, has been concluded at Northwich. The chauffeur admitted that he saw the flagman waving the red flag, but he mistook the significance of his action. He had no knowledge that there was a level crossing at the spot; he thought the man was guiding him past a part of the road which was being repaired. The jury returned a verdict of "Accidental death," and in a rider expressed the view that the railway company should erect a signal-box and place swing gates across the highway at the point where the accident occurred.

ON Saturday the Southwark coroner held an enquiry into the death of a man who had been knocked down by a skidding motor-bus while working in the Walworth Road. Evidence showed that the vehicle was going at a steady pace and the driver was prompt in pulling up. The jury returned a verdict of "Accidental death through the skidding of a motor-omnibus," adding a rider that there was not sufficient evidence to show whether a defect in the road between the tramlines was the cause of the skidding.

ON Tuesday an inquest was held at Seabrooke (Kent), on the body of Mrs. Heridge, who was knocked down by a motor-car and killed instantaneously. The jury returned a verdict of "Accidental death," exonerating the driver of the vehicle from all blame.

WHILE a motor-car was being driven along the highway near Coventry, on Tuesday afternoon, it swerved, ran up a bank and overturned. Mr. T. H. Abbott, of Newport, Isle of Wight, was killed, and a Coventry man named Peggy was badly injured.

Correspondence.

[Letters to the Editor should be addressed to the offices, 27-33, Charing Cross Road, London, W.C.]

"JUSTICE" FOR MOTORISTS.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—The following particulars might be of interest to the readers of your valued journal as illustrating the sort of "justice" meted out to motorists by the Seabrook (Kent) Bench of magistrates.

Motoring on the main road between Canterbury and Folkestone, I was timed to have covered a measured distance of three furlongs at the alleged rate of twenty-six miles per hour. I was not, however, summoned for exceeding the limit, but for driving at a dangerous speed, although there was nothing on the road at the time except a motor in front, which was timed with mine, and there are no houses at all on this part of the road, which for certainly three-quarters of the distance is quite straight. As a result I was fined and my licence was asked for for endorsement, but it was not produced owing to my not having it with me at the time. Having regard to the circumstances and certain proved inaccuracies in the evidence, I was strongly advised to appeal against the decision and notice of appeal was accordingly given. Naturally thinking that the endorsement of my licence would depend upon the decision of the appeal, and receiving no further communication in respect of it, imagine my surprise on receiving a summons two days before the appeal was to be heard, to appear at Seabrook, two days after the appeal, for failing to produce my licence for endorsement. Upon hearing the appeal at Canterbury Sessions it was dismissed, several of the Seabrook magistrates being on the Bench during the sitting. In attending the summons for non-production of licence my solicitor explained why the licence had not been sent and asked that under the circumstances the case should be dismissed on my paying the costs. The magistrates, however, imposed a fine of £10 and suspended my licence for three months.

For a technical offence of the sort, due entirely to a misapprehension, this appears to be a most arbitrary and harsh sentence. It seems particularly vindictive inasmuch as an appeal against it could only be made to the Quarter Sessions, which will not be held until January next, by which time the period of suspension will have almost expired. Perhaps I ought to be thankful that there was not power to the Bench to order my incarceration, or possibly I should have had this experience included in my apportionment of "justices' justice."—Yours truly,

THE VICTIM.

THE KNIGHT ENGINE.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—I have read with much interest all the literature I have been able to obtain with reference to the Knight engine, and most of the letters in connection with the same, and arising from this I should like to make the following remarks:—The only real advantage with this engine seems to be the absence of noise from its valve gear, for the other points claimed, viz., flexibility, quick acceleration, slowing down and picking up rapidly on a hill, amount to nothing, as these are only a matter of a good carburettor, a well-designed combustion chamber and gearing. Is the very slight noise made by mushroom valves worse than the hissing of the air when entering the carburettor, on many of the best makes, or anything like as bad as a pair of noisy chains? Therefore, is it not taking a big risk in substituting this new valve gear for an old, well-tried, and completely satisfactory method, for the sake of such a small decrease in the general noise? If this engine is all Mr. Knight claims it to be, why was it not entered in the 2,000-miles trial this year, as it is acknowledged that these cars were tested before that date? A good performance in that event would have effectively silenced some of the critics.

With regard to Mr. Knight's wholesale condemnation of the mushroom valve and the extravagant language with which he does it, one would think they really were bad. But, considering they have been used with the very greatest success ever since the petrol motor was invented, it is self-evident there cannot be much the matter with them. I quite admit that there are bad mushroom valves, but this is only because they are badly made or else of the wrong material. I have been to the trouble of asking 350 owners of Vauxhall cars if they have ever experienced any trouble with their valves. The following are the questions asked:—

Have you ever experienced any broken valves on your car?

If so, how many? After what length of time and what number of miles running approximately?

And can you assign any cause for the breakage or breakages?

Also number of miles car has run up to the present, approximately?

To these questions I have received 157 replies to date, giving a total mileage of over 1,265,700. And of these 157 owners only two have experienced a broken valve, both of which cases occurred after running about 3,000 miles on 5-h.p. cars, the earliest type of car built by my company, and the design of which valves was admittedly wrong. I am quite sure that other manufacturers could give equally good figures.—Yours truly,

VAUXHALL MOTORS, LTD.

L. Walton, Managing Director.

BALANCING A MOTOR.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—I should like your advice as to the best method of balancing engine of my car. It is a two-cylinder Buchet of 10-12-h.p., 4 in. by 4½ in. stroke, which was purchased new to replace a 6-h.p. single-cylinder motor. The crank-shaft is made up of two heavy discs, with crank pin, which both pistons work on. The complaint is excessive vibration when running. I have tried, I think, all methods of balancing the flywheel by lightening and loading rim, but fail to get it anything like steady, compared with other cars. The flywheel is 12 in. diameter and about 56 lbs. weight. Would a larger diameter flywheel, say 16 in. and about same weight, be any better?—Yours truly,

BALANCING.

[We doubt if "Balancing" will obtain any better result by increasing the diameter of the flywheel. The only method is to add a counter-weight thereto at a point opposite the crank pin. The engine should run steadily if balanced properly.]

THREE-CYLINDER ENGINES.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—It would be interesting to know the reason why the three-cylinder engine, which a few years ago bid fair to become popular, has now practically disappeared from the motor world. While three vertical cylinders are the smallest number which give a perfect rotating balance, one drawback of the combination is the presence of an unbalanced couple in the fore and aft vertical plane. With the light pistons which are now made it is possible that the vibration to which



A Clement-Talbot Car "bogged" in New Zealand.

The illustration is reproduced from a post-card sent by a motorist in Christchurch. It gives a vivid impression of the difficult ground to be negotiated in the Antipodes.

this gave rise would not now be so serious. Another feature of this type of engine which very probably worked against its popularity is that of ignition. When one cylinder of a three-cylinder engine "misses" the effect is very disagreeable, but the great improvements that have been made in ignition devices during the last few years have rendered this objection much less serious than it formerly was.—Yours truly,

ENGINEER.

HILLS AND THEIR GRADIENTS.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—I read with much interest your most valuable paper; I also see that "A Constant Reader" would like to know the gradient of Wiveliscombe Hill. The gradient is 1 in 16. This is not the worst hill in the district; there is a much steeper one between Dulverton and Extown, going towards Lynmouth over Exmoor. I am a native of Barnstaple, and know all the hills "Constant Reader" speaks of. I think he will agree with me that Bridge Street, Bideford, is much worse than Wiveliscombe.—Yours truly,

R. L. H.

MR. J. T. PRESTON, Witheycombe, Earlsdon, Coventry, the chairman of the Coventry Commercial Travellers' Association, asks for votes for the Commercial Travellers' School at Pinner for the daughter of the late Mr. F. W. Edmonds, of Coventry, who was for long known in the Midland motor and allied trades.

IN motoring from Strood to Lewes, on Saturday afternoon, via Tonbridge, Tunbridge Wells, Crowborough, and Wakefield, Mr. Albert Batchelor, The Limes, Frindsbury, Rochester, lost his 880 by 120 Stepney wheel fitted with square tread tyre. In the event of it having been discovered he would like to hear from the finder.

CLUBS AND ASSOCIATIONS.

ROYAL.

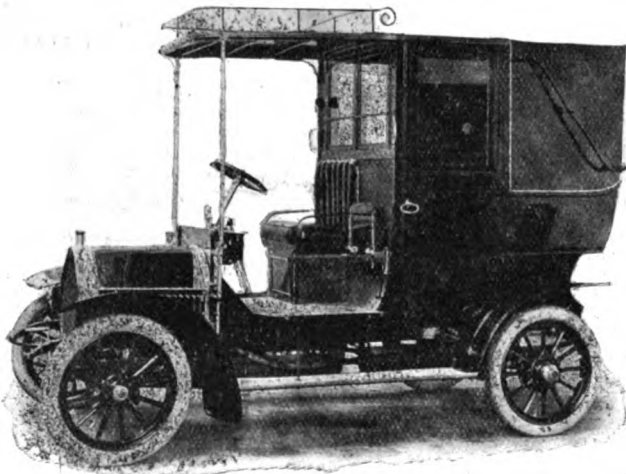
LORD ANNALY and Commander W. M. Ellerton, R.N., have been elected to membership of the R.A.C., as has also Count d'Oliveira et de la Penha Longa, of the Portuguese A.C.

The South Wales and Monmouthshire A.C. have decided to become associated with the R.A.C.

THE MOTOR UNION.

THE fourth annual dinner of the Motor Union was held in the Wharncliffe Rooms of the Hotel Great Central, Marylebone, N.W., on Wednesday last week. Mr. W. Joynson-Hicks, M.P., the chairman, presided over a representative gathering, which included Sir Martin Conway, Earl Russell, Sir Clifton Robinson, Mr. T. McKinnon Wood, M.P., Mr. W. R. Adkins, M.P., Mr. J. S. Ainsworth, M.P., Mr. R. A. Robinson (chairman of the London County Council), Hon. G. S. Montagu, Rear-Admiral H. M. T. Tudor, Mr. Ballin-Hinde, Mr. C. Cordingley, Mr. and Mrs. T. W. Staples Firth, and Mr. G. L. Gomme (clerk of the London County Council).

After the usual loyal toasts Mr. T. McKinnon Wood, the Under-Secretary of State for Foreign Affairs, proposed "The Motor Union of Great Britain and Ireland," and in the course of a somewhat humorous speech remarked that during the autumn holidays, when the daily papers were not too well supplied with news, they were chiefly occupied with the class to which those present belonged. The general idea seemed to be that motorists were a sort of bloodthirsty Bashi-Bazouks, and he almost thought that one's duty compelled him to sell his motor-car and travel in a four-wheeled cab. But he had not yet reached the heroic resolution of



The Humber Motor-Cab.

The above illustration depicts the Humber cab, which, since its introduction, has quickly become popular, especially among those who desire to make long runs from London. The reason for this lies in the fact that the vehicle, being fitted with a 12-h.p. four-cylinder engine, is not only very smooth running, but, being a good hill-climber, is able to maintain a good average speed. The chassis, which is provided with an exceedingly comfortable body, is well adapted for town work by both private and professional owners.

disposing of his motor-car. The motto of the Motor Union was considerate driving, and therefore he thought that he might appear there and wish them good luck. He personally had never been convicted, like some of his friends, or fined like others; but he had been run into, and that by a covered cart. He thought the motto "considerate driving" would be useful to other people besides motorists. As regarded the dust nuisance, motorists would probably prove to be blessings in disguise; they would lead to improved roadmaking in this country.

Mr. Joynson-Hicks, in replying, said that, although during the past year they had severed their connection with the R.A.C., they wished that club every success. They also wished success to all country clubs which thought it best to throw in their lot with the R.A.C. rather than with the Union, and they did not intend to take any steps to make any club join the Union. As regarded motorists and the public, he thought the former were in for a considerable amount of trouble during the next year or two. He objected in the strongest manner to all motorists being tarred with the blackest of brushes because there were a few inconsiderate drivers. He also objected to the idea that motorists generally were to be held responsible for the improvement of the manners of the inconsiderate drivers. It might just as well be said that the riders and drivers of other vehicles ought to be held responsible for the black sheep in covered vans. There was a law for inconsiderate drivers, and the Motor Union was desirous that the law should be obeyed. He thought the police would be better employed in seeing that the law was observed than in setting traps for motorists on Salisbury Plain or other places where a little speed was not dangerous. Motoring had lived through

the period of ridicule, and was now in the period of hostility, which was nowhere more apparent than in the House of Commons. It had recently been decided by the motoring associations that there should be no more road-racing in this country, and he was exceedingly glad of it. The roads were not established for that purpose, and no motorist had any right to indulge in racing on any part of the King's highway. The future was with the motor, and the time had arrived when they might demand the same justice as was accorded to the driver of the covered an.

"The Motor Movement" was proposed by Sir Martin Conway and replied to by Mr. R. A. Robinson, the chairman of the London County Council, who said that the congestion of London traffic was rapidly increasing, and the problem before those who were responsible for public affairs was a great one. The appointment of a strong advisory committee to deal with traffic matters had been recommended. The London County Council, however, did not want any one forcing it to make roads or spend money unless it considered such action was necessary. Other people thought that the Council itself ought to be the managing body, but that he feared could not be so. The Prime Minister had consented to receive a small deputation on the subject of the traffic problem in a few days' time, and they were going to ask what, in the opinion of the Government, was the best remedy. The matter must not be left to drift, as the condition of the streets was becoming dangerous. Mr. W. R. Adkins, M.P., and Mr. E. Manville, president of the Society of Motor Manufacturers and Traders, also responded to the toast.

MR. W. JOYNSON-HICKS, M.P., presided at the monthly meeting of the Motor Union, held at the Hotel Great Central on the 18th inst. The receipts from January 1st to October 31st were reported as £12,197, as against £9,878 for the same period of last year. It was agreed to support two appeals in police and county court cases, and grants were made in three cases under the car and cycle badge rules. Additional members of committees were elected as follows:—Highways Protection Committee, Messrs. D. J. Barry and G. H. Bowden (Reigate); Signs and Notices, Mr. H. G. M. Conybeare, J.P. (Ingatstone); Engineering and Technical, Messrs. J. W. Coade (Brixton) and K. M. Munro (Kingston-on-Thames).

The Welsh A.C. submitted a three days' programme of entertainment for members of the Union attending the provincial meeting in South Wales next year. A discussion took place on the best way of dealing with the small minority of motorists who drive recklessly. A letter to the Home Secretary was considered, amended, and ordered to be sent.

BROOKLANDS.

AT Brooklands, F. Newton has attained a speed of 119.34 miles per hour, travelling over the flying half-mile in 15.083 sec. He was driving the 90-h.p. Napier Samson, and thus beat the 90-h.p. short distance record obtained on the 30th ult., when he covered the distance at the rate of 114.98 miles per hour.

DERBY.

AT their meeting on Tuesday the 1st prox. the members of the Derby and District Automobile Club will be asked to consider a resolution which has been arrived at unanimously by the committee.

This is to the following effect:—"That the Derby and District Automobile Club become associated with the Royal Automobile Club, provided that that body consents to withdraw the word "only" in Clause 18 of their scheme for association, thus allowing freedom of action to provincial clubs; but that, in the event of their refusal to adopt this suggestion, the Derby and District Automobile Club remain affiliated with the Motor Union."

Following the meeting a dinner will be held and a large attendance is expected.

ESSEX.

THE Essex County A.C. is supplying at cost price special warning triangles to owners of property having carriage drives abutting upon the main roads.

SHEFFIELD.

MR. E. F. COUPE will preside at the third annual dinner of the Sheffield and District A.C., to be held at the King's Head Hotel, Sheffield, on the 16th prox.

The club has recently opposed the application of the borough of Glossop for a ten mile speed limit, and is continuing its work of fixing caution boards at various cross roads in the area of its influence.

SCOTTISH.

THE Road Surveyors' Association of Scotland have accepted an invitation from the club to a conference between the club and the association, at which reports by the representatives of both bodies on the recent International Road Congress in Paris will be made, and will form a basis of discussion. The meeting is to be held in the Central Station Hotel, Glasgow, on the evening of Friday, the 11th prox., at 7.30 p.m.

TRANSVAAL.

OFFICIAL news is now to hand with regard to the events during the past year held by the Transvaal Automobile Club.

For the annual hill-climbing competition twenty-seven cars were entered and the special prize for the best all-round performance was won by Mr. D. H. Baker on his 12-14-h.p. Star car. Mr. Baker was also credited with the best performance in the "Reyersbach" Trophy Reliability Trial over a course of 194 miles.

The "Park" Trophy Reliability Trial was won by Mr. H. Gill on his 25-30-h.p. Austin car, and Mr. H. Hellman on his 40-h.p. Napier took the special cup for the fastest time, travelling the 166 miles of the route at the rate of 31.38 miles per hour—a record for the Transvaal A.C.

THE Society of Road Traction Engineers will meet next Monday to debate a motion by Mr. Kerr Thomas: "That the tubular system of radiator is the only satisfactory one for use upon commercial vehicles." Mr. Leo Harris will oppose.

THE committee of the Sussex Motor Yacht Club have secured as headquarters the premises formerly occupied by the Brighton County Club. The building, which was specially erected for a club, is conveniently situate in the centre of the town, within a few doors of the sea front, and affords excellent accommodation, including a large lofty hall on the ground floor, about 80 ft. by 30 ft., which will be very useful on the occasions of dinners, concerts and other social gatherings.

COMPANY NEWS.

In the case of New Companies the file number is given at the end of the particulars.

THE Vindec Motor Cycle Company, Ltd., has been registered with a capital of £20,000 and offices at 13-15, Wilson Street, Finsbury, E.C.

WITH a capital of £1,500 in £1 shares the firm of Pemsel and Wilson, Ltd., has been registered as a public liability company. The offices are in the London Road, Apsley End, Hemel Hempstead.

WITH a capital of £70,000 British Lyxhayr has been registered to acquire the British rights in an innovation for the treatment of a fibre which has been shown at some of the motor exhibitions in the past. (100,234).

A. DARRACQ AND CO. (1905).—The third annual ordinary general meeting of A. Darracq and Co. (1905) was held under the chairmanship of Mr. J. S. Smith-Winby, who moved the adoption of the report and accounts to September 30th last. For the sixth successive year he was able to make a satisfactory statement with regard to net profits. It was true they had not attained the very high level of the two previous years; but a net profit of £165,000, in a concern of such dimensions, was a very handsome amount. The turnover was largely increased by orders for motor-cabs for London, Paris, New York, and other places, and the sales of touring cars were good. There was, however, a falling-off in business during the last six months of the year. The company had been handicapped by the great reductions in prices constantly being made by manufacturers who found it necessary to realise on stock regardless as to whether they sold below cost price, as many of them must have been doing for some time past. The resources of the company were in a more liquid state than at this time last year, and they might claim their financial position was correspondingly strong. He moved the declaration of a dividend of 2s. per share on the ordinary shares, making a total of 20 per cent. for the year (the same rate as last year), and that the balance of £35,437 be carried forward. This was £8,000 more than the amount brought in. Mr. E. F. Kelly seconded, and the resolution was adopted.

DAIMLER MOTOR.—The directors report that the trading for 1908 has been of an unsatisfactory nature. This loss has been partially incurred by a decreased turnover, owing to the indifferent state of the market, and to the change (due to the adoption of the new engine, now well known to the public) which the board have been effecting for some considerable time past. The amount brought forward from last year was £49,395, from which directors' additional remuneration absorbed £3,105 and interim dividend paid on preference shares £2,089, leaving £44,200. Final dividend on preference shares then absorbed £3,174, leaving £42,026. From the net loss for the year, viz., £49,286, is to be deducted the above amount of £42,026, leaving a deficit of £7,260. Deducting this from the general reserve account of £180,000 will leave that account at £172,739.

AERONAUTICS.

MR. F. H. BUTLER informs us that the International Aeronautical Federation comprises the following clubs:—Aero Club of the United Kingdom, Aero Club of America, Wiener Aero Club, Aero Club de Belgique, Aero Club de France, Berliner Verein Fur Luftschiffahrt, Societa Aeronautica Italiana, Real Aero Club de Espana, Svenska Aeronautiska Sallskapet, Aero Club Suisse.

THE Aeroplane Club, of which Captain W. Windham is the hon. secretary, has issued a list of prizes which await successful aviators. In addition to about £37,000 offered for prizes for success in navigating the air, the Government of France will include a sum of £4,000 in its next Budget for the encouragement of aerial flight.

ROAD REPORTS.

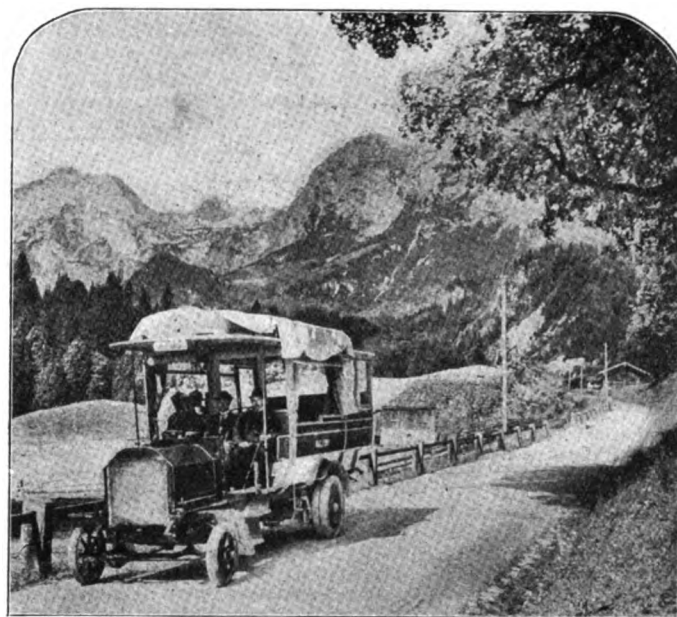
LONDON.—It never seems to occur to the various engineers and surveyors of London, writes the driver of a horse-drawn vehicle, that an occasional layer of new ballast rolled well into the surface of the wood pavement would not only prevent vehicles from side slips, but would also add to the durability of the road surface.

HAYWARDS HEATH.—The Haywards Heath Council are apparently converted to the principle of tarred roads. It has been decided to tar the roads of the town next spring, and the Council are about to purchase their own tar-spreading machine.

BERKHAMSTED.—The Berkhamsted authorities, who had intended to apply to the County Council for an enquiry into a proposed speed limit for motor-cars, have now decided to postpone the matter until the spring of next year, and in the meantime confer with the County Council upon the subject.

CHESHIRE.—Mr. Burns has made the following reply to a question by Captain Faber as to the dust nuisance created by motor-cars. "It is the practice of the L.G.B. to sanction loans for laying down roads with tar macadam, and to allow a period of five years for the repayment of the loan. Assuming, therefore, that the view attributed to the Cheshire authorities is correct, it would seem that the local authorities could recoup themselves the additional initial expense within the period of the loan." The declaration of the Cheshire authorities referred to in the question was that tar macadam when once laid down on roads was one-fourth less costly than ordinary macadam to renovate.

LINCOLNSHIRE.—At Saxilby, near Lincoln, the only way for vehicular traffic to cross the river has hitherto been to ford it. As the river is rather wide and deep after rains it was had enough for horses, but often



A Bavarian Government Public Motor-Car Service.—A Snapshot between Berchtesgaden and Hintersee.

dangerous for automobiles. The width of the water was forty feet, and motorists who were aware of the conditions avoided this road as far as possible. A bridge has at length been built. This was completed this week and the road is now passable to motor-cars.

KENT.—Mr. Thomas Kettle, the Borough Surveyor of Lydd, reports that the main road from New Romney to Lydd is undergoing repairs, and for a few days cars should proceed from New Romney via Old Romney. The repairs to Castle Hill road, Dover, are nearing completion. Caution should be exercised when driving on this road, which is dangerous owing to its steep gradients and curves.

SPEED LIMIT APPLICATIONS.—Several roads are scheduled in applications for ten-mile limits made by the Middlesex and Hertford County Councils and West Ham Council. In the former case the roads are High Street and Kew Bridge Road in the Brentford Urban District, and the Uxbridge road within Southall-Norwood Urban District. In Hertfordshire the application relates to the St. Albans, Hatfield, and Barnet roads, besides several in Elstree. West Ham Council seeks a similar restriction for a number of roads.

"POLICE CONTROLS."

THE police have been timing motorists on the familiar traps around Cambridge; and also near Grantham, on the Great North Road.

THE police trap in Clifton Drive, Lytham, has lately been in daily operation.

IN the parish of Long Bennington, near Grantham, motorists are being timed over a measured distance every week end.

FORTHCOMING EVENTS.

NOVEMBER.

28th (Sat.).—Opening of the Paris Motor Car Exhibition.
30th (M.).—Speed limit inquiry at High Wycombe.

DECEMBER.

2nd (W.).—Lecture by Mr. E. Stuart Bruce, M.A., before the Society of Arts, on "Mechanical Flight."
10th (Th.).—Annual Dinner of the Aero Club of the United Kingdom at the Hotel Ritz, London.
10th.—Ladies' A.C. lecture by Mr. C. Y. Knight on "The Valveless Engine."
11th.—Scottish A.C. Conference with Road Surveyors' Association of Scotland.
13th (Sun.).—Closing day of the Paris Salon.
23rd (W.).—Speed and reliability trials at Nagpur, Central Provinces.

JANUARY, 1909.

14th (Th.).—Annual Dinner of clubs associated with the R.A.C. at the Hotel Cecil, London.
22nd-30th.—Scottish Motor Exhibition at the Waverley Market, Edinburgh.
26th.—Scottish Motor Trade Association Dinner at Edinburgh.

FEBRUARY.

War Office Fourteen-days' Trial for Light Tractors.

LIGHTING-UP TIMES—LONDON.

Nov. 28th—4.51 ... 30th—4.49 ... Dec. 2nd—4.47 ... 4th—4.45
" 29th—4.50 ... Dec. 1st—4.48 ... 3rd—4.46 ... 5th—4.44

To find the approximate lighting-up time for Birmingham 4 minutes should be added to the above times, and 1 for Manchester. For Glasgow 3 minutes should be subtracted, and a deduction of 6 minutes from the above times should be made for York.

CASES AGAINST MOTORISTS.

COMMITTAL.

Mr. J. H. Pearson has been committed by the Bow Street (London) magistrate to the Central Criminal Court for trial on a charge of manslaughter; the circumstances of the case have been already reported in our columns.

WARRANT ISSUED.

A warrant has been issued by the Bakewell Bench for the apprehension of a motorist who failed to answer summonses for driving a tri-car with no light attached and for failing to produce his licence.

BATCHES.

Several cases against drivers of motor-cars have lately been heard at the courts at Newbury (4), Grantham (several drivers fined sums ranging from £2 to £5), Cambridge (3), Lytham (2), Guildford (9), Ramsgate (6).

MOTOR-BUSES AND LAMP-POSTS.

IN the Divisional Court of the High Court the decision of the Wandsworth County Court judge in the case of "The Barnes Urban District Council v. the London General Omnibus Company" was reversed, and the company is thus rendered liable for knocking down several lamp-posts in the streets. It was shown that the motor-buses had been driven within four inches of the kerb, although their bodies projected considerably beyond their wheels. The onus, according to the court, lay with the company to show that the drivers used reasonable care.

PUBLIC SERVICE.

THE motor-buses between Stranraer and Drummore, which were put in service about a year ago by the railway company, are about to be withdrawn, the enterprise having been a somewhat serious loss.

OWING to the increase in their business the Crypto Electrical Company have installed a second telephone, the number of which is 12831 Central, at their premises at 155 and 157, Bermondsey Street, London, S.E.

THE difficulty of cleaning the painted work of motor-cars can be materially lessened by the use of "Lickoleum," a new liquid soap for the introduction of which to motorists Messrs. R. D. Stewart, 61, Mansell Street, Aldgate, London, E. (who are also associated with Handoline), are responsible.

THE Palmer Tyre Company, 119, Shaftesbury Avenue, London, W.C., have issued a new circular in advocacy of the use of tyres of a large diameter.

BUSINESS NEWS.

IN the reliability trials of industrial motor vehicles, lately held by the Austrian Motor Club, the Coventry 10-12-h.p. Humber van was awarded a diploma for reliability, while in the brake trial the vehicle showed the best result.

WE understand that Mr. L. B. Rawlence and Messrs. W. Watson and Company, of Liverpool, have purchased the goodwill of J. E. Hutton, Ltd., and have acquired the sale concession for Berliet cars for the United Kingdom. The firm, which will be known as Berliet Motors, will have its headquarters from the 1st prox. at Piccadilly House, Sackville Street, London, W.

IN connection with the Paris Salon, which is being held from the 28th inst. to December 13th, and from December 24th to 30th, the London, Brighton, and South Coast Railway are issuing special 14-day excursion tickets from London to Paris, via Newhaven and Dieppe, on Fridays, November 27th and December 4th, 11th, 18th, and 25th, and Saturdays, November 28th and December 5th, 12th, 19th, and 26th. Special "Sunday in Paris" tickets will also be issued on Saturdays, November 28th, and December 5th, 12th, and 26th.

WITH their usual enterprise, Messrs. Easton and Melville, Ltd., of Illo lubricant fame, chartered a steam motor-bus which ran daily, during Show week, between their place of business in Shaftesbury Avenue, W.C., and Olympia. The vehicle was placed at the disposal of their customers and created quite a furore as it proceeded through the West End, a leather-lunged bugler assisting to draw attention to the notices regarding Illo which were plentifully sprinkled about the bus.

PUBLIC service examinations are to be instituted by the M.U. and Captain L. A. Kingston and Mr. R. W. A. Brewer are drafting a specimen set of questions for use in connection therewith.

AN excellent type of electric vulcanizer has been brought out by Messrs. Richard Gornall and Sons, of Pilling, Garstang, Lancashire, who will be able to satisfy inquiries as to its economical consumption of current.

THE entrance fee for examinations for the R.A.C. driving certificate has been reduced from 10s. to 5s., and the *viva voce* questions on mechanism are to be discontinued, so far as the driving certificate, as distinguished from the certificate for mechanical proficiency, is concerned.

AT the dinner of Messrs. A. Darracq and Co. (1905), Ltd., last week at the Trocadero Restaurant, London, many of the leading agents attended. Mr. Alfred Rawlinson presided, and spoke of the value of racing in the perfection of motor design. He referred to the successful handling of the Darracq car in the Scottish Trial by Mr. H. Kennedy, and presented that gentleman with a souvenir of the event.

ACCORDING to a recent return there were 3,267 motor-cars and 4,002 motor-cycles in use in Belgium at the commencement of 1907, the cars showing an increase of 311, and motor-cycles a decrease of 293 on the year.

TO CORRESPONDENTS.

All communications intended for insertion in this Journal or relating to Editorial matters should be addressed to THE EDITORIAL DEPARTMENT, MOTOR-CAR JOURNAL, 27-33, Charing Cross Road, London, W.C., and must be written on one side of the paper only. Letters must in all cases be accompanied by the name and address of the writer, as no notice will be taken of anonymous communications.

To insure insertion communications and contributions must be in the Editor's hands by Tuesday forenoon of the week in which the same are intended to appear. Disappointment may be caused by non-compliance with this rule, and to avoid this earlier receipt, if possible, is necessary.

Photographers, both professional and amateur, are invited to send photographs of current events or of motoring scenes and incidents. The fee, if any, required for reproduction should be stated in each case, otherwise no liability will be accepted.

The Editors cannot undertake to return MSS. or drawings, although every effort will be made to do so in the case of rejected communications. Where such are regarded as of value, correspondents are requested to retain copies.

The Editors do not hold themselves responsible for the opinions expressed by their correspondents, or for statements and facts which do not appear in the editorial columns.

The Editors and Publishers beg also to state that they will accept no responsibility for unsolicited contributions, even if used, unless payment for same is directly specified in forwarding, and the terms arranged before publication.

THE Motor-Car Journal.

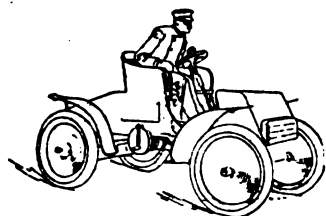
VOL. X.]

LONDON, SATURDAY, DECEMBER 5, 1908.

[No. 509.

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COMMENTS.



ON several recent occasions we have referred to the efforts being made to instruct soldiers and naval men in various occupations and handicrafts. This work is being satisfactorily developed, and apparently the occupation of the chauffeur is finding considerable acceptance among those who have served their country on land or sea. Special training has been given at military and naval centres, and although it is not yet possible to estimate how far the motor instruction has led to permanent employment, the first impression is that many men have obtained good positions and are doing satisfactorily. During the past year 271 men have been trained as motor-car drivers in the Army Schools, and the Committee of the War Office which has supervised the training appears to be well satisfied with the result of this interesting effort to equip men for civilian employment when they leave the service.

The International Automobile Conference.

THE most momentous decision of the congress of delegates of national automobile clubs, held in Paris on Monday, was that which allows the use in the A.C.F. Grand Prix and other international races during 1909 of detachable wheels as well as removable rims. There has during the past year or so been a good deal of discussion on the point, the A.C.F. in particular having been adverse to allowing detachable wheels. The matter was brought forward on Monday by the R.A.C. delegates, with the result already mentioned. Another matter dealt with at the meeting was the proposal of the Royal Automobile Club of Portugal to form a committee to consider means to bring about a uniform code of motoring regulations in the various countries of the world, this being agreed to. The Congress also considered a long-standing difficulty in connection with the recognition by one country of another country's "records," and the delegate of each of the national clubs represented undertook to make a trial of Col. Holden's electrical timing apparatus. The proposal that "records," when made, shall be automatically and electrically timed, and shall then be deemed "world's records," to be recognised by all the clubs comprised in the Association, was deferred to a subsequent meeting.

A Bad Impression Removed.

SEVERAL times have police witnesses suggested that motorists were in the habit of using unauthorised number plates on their cars. The statements have generally been untrue, and the discovery of a few isolated cases in which a wrongful use has been made of such identification marks has not warranted the wholesale condemnation of motorists which has sometimes been indulged in. We are glad, therefore, that the Motor Union recently caused inquiries to be addressed to the Chief Commissioner of Police for the Metropolis, and also the Chief Constables of Kent, Surrey and Sussex, asking to what extent they had found unauthorised number plates in use on motor-cars, and offering any assistance in the power of the motoring organisation to stop such an offence. The replies received

show that there is no reason to believe that the use of false number plates is at all common—an official assurance that should satisfy critics that motorists are no worse than other people.

Pathways for Pedestrians.

A PROMINENT public man in Sussex has been suggesting that the money extracted by magistrates from motorists might with advantage be allocated for the purpose of making footpaths by the side of the main roads. He suggested that the danger of being run down was now somewhat pronounced, and the provision of footways would not only give employment during the coming winter to those in need of it, but would also prove of public benefit to the community at large. The making up of footpaths on the highways is undoubtedly a matter of public convenience, if not of public safety, and proposals of a really practical character in such a connection should receive the careful consideration of the local authorities concerned.

A Motor Service in place of Railway.

At the beginning of last month the North British Railway Company curtailed the service in the Border towns by withdrawing the Sunday trains between Galashiels and Peebles, and the Sunday morning trains between Galashiels and Selkirk. As a result considerable inconvenience has been experienced, especially by week-end travellers, who had to be home to start work on Monday mornings. The Peebles Motor Company has now come to the rescue, and they are starting a Sunday service of motor-cars between Peebles and Selkirk, carrying passengers also between Innerleithen, Walkerburn, Clovenfords, and Galashiels. Cars will be run in the morning and evening, and the public will greatly appreciate the enterprise of the motor concern.

The Battle of the Seals.

THE practice which was introduced into the motor trade at the Olympia Show with reference to the collection of seals has received consideration from the Society of Motor Manufacturers and Traders, with the result that the following resolution on the subject has been adopted:—"That this meeting is of opinion that the system is calculated to produce most harmful results, and, in the best interests both of the trade and of users, it calls upon the suppliers of petrol to forthwith abandon the practice." This is undoubtedly the general view of all interested in the welfare of the industry.

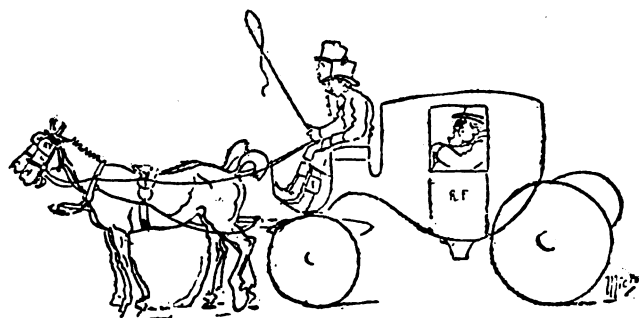
Long Police Traps.

THOSE who thought that the East Sussex police had abandoned their ideas of timing motorists, because they had relinquished the short distance trap, have certainly imagined a vain thing, for the authorities in that district have developed the system of long distance "controls" for seven or ten miles stretches which are practically impossible to circumvent, whether on the road or in the court. It is a general rule to stop large cars and ask for the licences of the drivers, while the police have lately shown quite an enthusiastic interest in the position of the identification numbers, &c., as well as minor matters that

constitute omissions merely of a very minor character. The timing details are worked out at headquarters at Lewes, and it is invariably the case that when the motorist is found to have exceeded a speed of twenty-five miles an hour prosecution follows. According to the "Times," the Haywards Heath Bench have established a scale of fines from which there is little hope of escape. For a speed of 25½ miles per hour the fines are £3 and costs extra; then a sovereign a mile is added up to 30 miles per hour, when the fine becomes £10, and proportionally higher as the speed increases. We believe the scale given in the "Times" is rather below the actual state of things, but in any case even at that modest rate the convictions of motorists will secure a goodly revenue for the county exchequer.

Petrol Dangers.

THE Home Secretary has had under his consideration the frequency of accidents arising from the ignition or explosion of petrol and other vapours. At length he has come to the decision that the matter is serious enough to warrant the appointment of a Departmental Committee not only to consider the mishaps, but also to examine the various mechanical devices introduced to diminish the dangers attendant on the storage as well as the use of petrol spirit. The names of the committee will shortly be issued to the public, and doubtless those of our readers who have given technical attention to the matter will take an early opportunity of bringing the results of their thought and study before the notice of the Home Secretary.



The President arriving at the Salon in a two horse-power carriage.
From a Caricature Sketch [in "L'Auto."]

The War Office Trials.

WITH reference to the announcement made in our columns in June last that the Army Council had decided to offer money prizes for the light tractor that would most nearly fulfil military requirements in a trial test, the Secretary of the War Office announces that the amount of the prizes will be £500 from War Office funds and £250 from the funds of the India Office. The number of entries which have been received is eleven, and includes tractors fitted with internal combustion engines and with steam engines, the latter including loco. type flash boilers, water tube boilers, and flash generators. The road trials will commence on Monday, March 1st, 1909. The competing vehicles will assemble by 9 a.m. on Friday the 26th February in the competition enclosure (the situation of which will be announced later). This will be open to competitors from 9 a.m. on Thursday, February 25th, 1909.

Unlighted Vehicles.

THE presence of winter—the coming week will contain the shortest days in the year, judging by our Lighting-up Table—has brought with it the usual complaints as to unlighted vehicles on the roads. It has been generally assumed that the initiative in prosecuting offenders who thus endanger the lives of others upon the highways has been confined to the police; but the chauffeur of Mr. Wegulin, of Kingston, has demonstrated that this is not so; and that a private individual may take action against erring carters and drivers who neglect to consider the

safety of others. He ran into a van which had no light and damage resulted to both vehicles. Upon reporting the matter to the police they declined to prosecute. The chauffeur thereupon decided to take action independently and has obtained a summons from Mr. Cockburn, the presiding magistrate at the Kingston Court. Whatever the result of this case, the fact should encourage motorists in a campaign against those whose thoughtlessness has often led to accidents in the past.

Helping Public Opinion.

NOT often are public meetings called in the Metropolitan area to consider motor traffic, but that which has just been held at Hatcham seems to have attracted a large attendance and given voice to much local feeling. The chairman was the Rev. G. A. Sowler, who moved a resolution urging the L.G.B. to deal with motor traffic in the New Cross district. Apparently few of the speakers—and there were eight or nine—were aware that the initial steps rest with the London County Council. That body, despite the many promptings it has had, has hitherto declined to suggest a motor-car speed limit, and has taken a rational view of its duties, not attempting to harass motorists in the early days of their industry. We understand that a series of similar meetings are being organised in South London, and it is to be hoped that the Southern Motor Club will arrange to have the views of motorists heard at such gatherings.

The Outcry against Motorists.

THE demand for less high-powered cars than was experienced a few months ago seems to suggest to a correspondent that the new accessions to the ranks of motorists have recognised the ill-feeling that exists in some quarters against the very high-powered vehicles that have been in service. At Bristol the outcry does not seem to have influenced the demand, one of our correspondents suggesting that it has been fanned chiefly by people who not only do not own cars, but are not likely to possess automobiles. From Cheltenham we are glad to learn that there has been very little countenance given to the agitation, and that the police authorities in that district, and indeed in the whole of Gloucestershire, are very fair and reasonable in their treatment of and attitude towards motorists. The west of England has been fortunate in the way in which the authorities have regarded the automobile, only a few isolated cases of unreason having been reported.

The Car as a Time-economiser.

THE saving of time that is obtained in many country districts by commercial travellers and others who use the motor vehicle in preference to the ordinary railway has been illustrated by a trip which the guardians of one of the extra-metropolitan parishes have recently been taking in Suffolk and some districts of Essex. It had been reported that many of the workhouses in these country districts were comparatively empty. The Board of Guardians of West Ham therefore decided on a tour of investigation with a view of arranging to send some of the inmates of their overcrowded establishment to those in the country. Many of the houses were found several miles from railway stations, and the motor-car again proved its value in saving time and expense.

Worse than Haywards Heath.

MOTORISTS who complain of the severity of fines for excessive speed in this country may be interested to hear of the measures taken in the premier native State of India to punish infringements of motor regulations recently promulgated there. His Highness the Nizam had a narrow escape from a collision with a car belonging to a Haiderabad notable which overtook and passed at full speed within about two inches of the Nizam's car. His Highness is stated to have inflicted a fine of Rs. 1,000 (£66), and to have ordered the confiscation of all the motor-cars belonging to the offender.

THE PARIS SALON.

[BY OUR SPECIAL REPRESENTATIVE.]

THE eleventh Paris Show presents the French maker in a new light. First, as the determined business man, pushing his wares with an energy unknown at former shows, which were admittedly far too great an attraction for the idle and curious and too little of an inducement to the buyer, and, secondly, as fighting his foreign rivals for lost ground in the trading and racing field. On the foreign stands are to be seen the winning cars of the leading events of the year, and on the eve of the opening of the show the result of the American Grand Prize cast a further gloom on the prospects. It is being preached that the need of the day for the French motor industry is the desire and the will to conquer, and, as some well-known sports-

tension ignition has been abandoned by the large firms, who have up to now been its firm adherents. Nor has this change been made to allow dual ignition to be provided with ease, since dual ignition is rather the exception. Makers incline to the opinion that in the hands of expert drivers, and in racing or demonstration, the low tension system has an advantage, but it is perceived that for the ordinary everyday user of motor-cars, whose numbers are ever on the increase, the help of an expert in tuning up the car is not always at hand, and that the high tension system is undoubtedly the best in these conditions. A proof of this may be seen in the fact that such makers as Brasier, Berliet, Mercedes, and Lorraine-Dietrich have adopted high tension for small cars,



General View of the Salon.

men add, the faith to win the races. Faith in the mechanical features as well as the human side in the race, it is stated, have a deal to do with former French victories.

The Salon presents a high standard of excellence and an advance over previous shows which has not been seen for some years. Great efforts have been made by everyone towards the goal they have in view, whilst the artistic features have been relegated to a less prominent position than in the last two exhibitions, although everyone admits that the decoration of the Grand Palais is quite sufficient for the needs of the show. There is now no great divergence of opinion among the leading makers in respect to the adoption of cone or disc clutches, shaft and chain drive, thermo-syphon and pump water circulation, high and low tension ignition, selective and progressive gear change, pressed steel and armoured wood frames, &c. French constructors, and in fact European builders in general, are pretty well of one opinion on these details, and whilst few makers make remarkable changes in their design all have sought to simplify them to the greatest extent; in fact, simplification is perhaps the keynote of the show. With this end in view low

and fit low tension to the higher powered cars, which will generally be driven by a skilled mechanic.

In further attempt at simplification we see a bare dashboard; the old practice of locating lubricator, pumps, coil, oil, gas, and water gauges, &c., in full view of the driver having been superseded. In the case of Panhard, for instance, who formerly displayed a coil, lubricator, and other accessories on the dashboard, the single-sight feed and a switch is all that is to be seen on this year's models. The bonnet now hides the coil, and the lubricator is on the front side of the dash. Berliet again in his new models has suppressed the sight feed, the dash being cut away to allow the insertion of an oil level. The two sight feeds for the rear axle and gear-box are located beneath the bonnet. Pressure feed being abandoned by this firm, the accessories thereto, the indicators and pump necessary for the gas tank, oil tank, and water circulation, have disappeared. Another interesting example of this tendency is seen in the Renault cars. Here have been no changes in the method of lubrication, ignition, or position of the petrol tank, but the lubricating tank in front of the driver has been replaced

by a sight feed let in flush with the dashboard and covered by a glass plate, which is one of the neatest arrangements to be seen in the show. The filler for the oil tank is behind the radiator filler, the lubricator being lodged in front of the dash. On this stand, it may be mentioned, is to be seen the only survivor of the self-starters which were exhibited at so many stands last year.

The carburettor and admission piping has been the object of attention of many makers. Charron shows one of the best examples of this in the two and four cylinder chassis. The float chamber of the ordinary type has a simple flanged cover held by a flat spring attached to a vertical spindle. Lifting the blade of the spring brings away the top of the box; a tube projects from the float chamber, and from the end of this is placed a vertical nozzle over which is posed a bell mouth ending in a tube leading to the mixing chamber attached to the inlet manifold. The inlet pipe is thus resolved into a six-inch length of copper tube held by a single screw. The exhaust manifold is cast with the cylinders, and the inlet and outlets for the circulating water are each cast in one piece connected to the top and bottom of the dashboard radiator by a short piece of hose, thus practically eliminating piping on the car whether for gas inlet or exhaust. Simplification is again obtained in this model by placing the magneto in front of the engine and locating the cables in a metal tube, giving a motor of great accessibility. The Delaunay-Belleville new model six-cylinder chassis

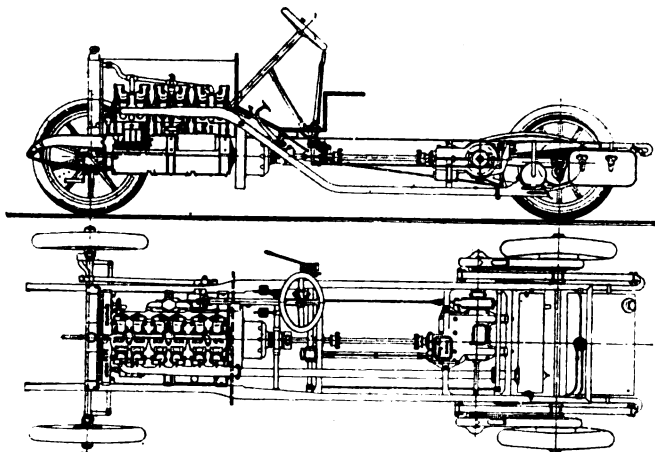


Fig. 1.—Elevation and Plan of Pipe 40-h.p. Six-Cylinder Chassis.

is also arranged in a similar manner in respect to the water piping, the one-piece outlet being screwed in the head of the cylinder, with a single connection to the top of the radiator.

The placing of the radiator on the dash is meeting with increased favour since makers find that better accessibility is thereby obtained. The new Berliet models present this feature, a tube radiator with a top and bottom tank being connected up in front of the dash. Some smaller firms have closely copied the same idea. On the new Charron cars the dashboard radiator, of the gilled tube variety, with top and bottom tank, is not carried right across the car, but a belt-driven fan connected to the main shaft is placed inside the radiator, which is increased to the full width of the chassis. Leon Bollée and Delahaye show examples of encased valves, a sheet metal plate being used and secured by a single clip. Delahaye further adds to the appearance of the engine by having a single casing to cover the gas intake, exhaust and water inlet.

The London police regulations have had some influence with the French makers desirous of retaining a hold on the English market. The Darracq make has been altered in the sense that the magneto is no longer on the same side as the carburettor, but is placed on a special bracket cast on the crank case. Other firms seeking to produce a suitable taxicab for London have adopted a similar arrangement.

The cardan shaft system of transmission is more common than ever, as is to be expected for the small cars which are the

vogue this year. The chain drive for the larger powered cars stills holds favour, however, and the method is likely to die hard, judging from present indications. There may be a tendency to abolish the torque rod, properly speaking, or to have its functions done by another organ, and this is noticeable even in cars of comparatively large power. The 20-30-h.p. Renault, for instance, is an example of this. On other models of the same make tubular torque stays are fitted in place of the pressed steel

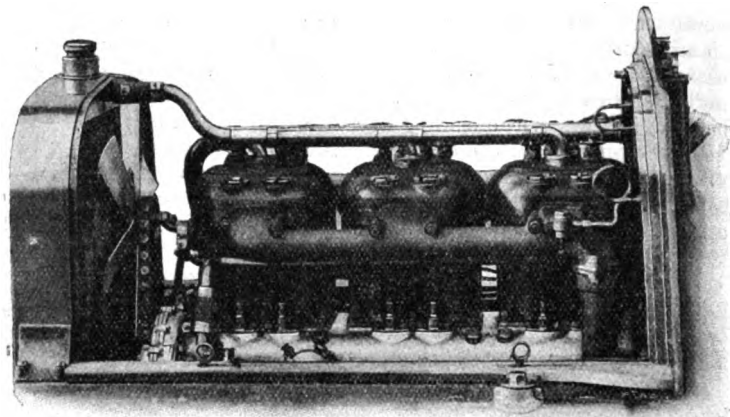


Fig. 2.—The Piccard-Pictet 28-40-h.p. Six-Cylinder Engine.

formerly used. The exception is a small town chassis which has no torque rods at all. The strengthening of the propeller casing is done by some firms to the same end. Delahaye shows a chassis on which the distance rods are attached to the same hanger as the forward end of the rear springs.

As was foreseen, the most interesting part of the show is the small car and voiturette classes, and the usual difficulty of clearly distinguishing between where one class ends and the other begins is enhanced this year. The new two and four-cylinder models of the larger firms, the smallest productions of

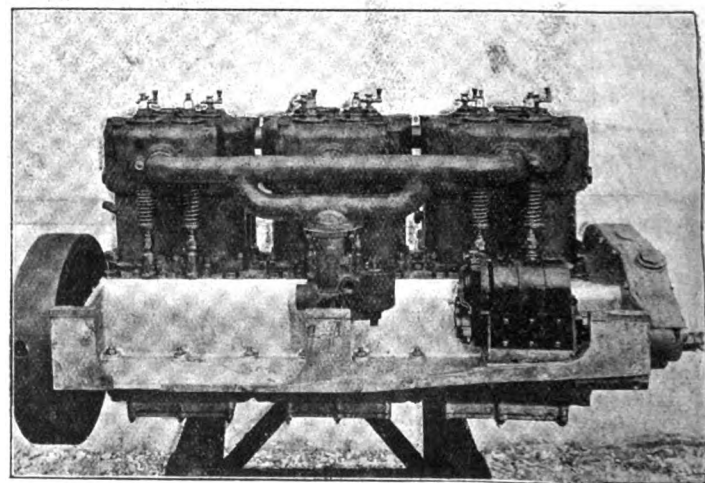


Fig. 3.—The Cottin-Desgouttes Six-Cylinder Engine.

Renault, Brasier, Mercedes, Berliet, Lorraine-Dietrich, Charron, Delahaye, &c., could never be termed voiturettes, however, which are generally included in the turnout of Aries, Werner, Delage, Sizaire-Naudin, &c. And yet all the larger firms have produced a small two-cylinder car of about 10-h.p., suitable for light taxicab or city work in general. Even Panhard brings out a two-cylinder model of this type, with the cylinders in one casting, the forward end of the engine being bolted direct to the side frame. Valves are all on one side, the oil tank between the pair of arms on the right of the engine and the carburettor between a corresponding pair of arms on the opposite side of the cylinders, the

high tension magneto being located in front. Thermo-siphon water circulation and an oil pump driven from the end of the cam shaft complete a very neat arrangement under the hood. Engine control is by pedal, no levers being placed on the steering wheel.

One noteworthy feature is the great increase in the number of six-cylinder cars on view, there being no less than ninety-six, as against fifty-seven a year ago, and only twenty-three at the 1906 Salon. Prominent among the new models is the 30-h.p. Panhard. The cylinders are separately cast, but are placed close to each other to reduce the overall length as much as possible. The vehicle, which is chain driven, is fitted with a two-seated body, and with its greatly inclined steering column has a very speedy appearance. The Pipe Company are also exhibiting a fine sample of their 40-h.p. six-cylinder car, Fig. 1, and state their firm adherence to this type of vehicle. The engine, the cylinders (105 mm. bore by 125 mm. stroke) of which are cast in pairs, has a ball-bearing crank shaft and steel pistons. The valves are located in the sides of the cylinder heads in the usual Pipe fashion. Another good example of six-cylinder car is that shown by the Piccard-Pictet firm of Geneva. A very high efficiency is claimed for this car. Facility in dismantling the engine parts is obtained by means of the plate uniting the engine with the side frames, this being cast with the motor itself. Double ignition by means of high tension magneto and accumulators is retained. A clutch of the multiple disc type is employed. A detail of the car is that none of the mechanism is visible from the outside of the chassis, everything being concealed. The bore and stroke of the engine, which is rated at 28-40-h.p. (Fig. 2), are 105 mm. by 125 mm.

A car which is not as yet known in England, but which is rapidly forging to the front in France, is the Cottin-Desgouttes, made at Lyons by the firm of that name. The 1909 models include 12-h.p., 18-h.p., 30-h.p. and 50-h.p.

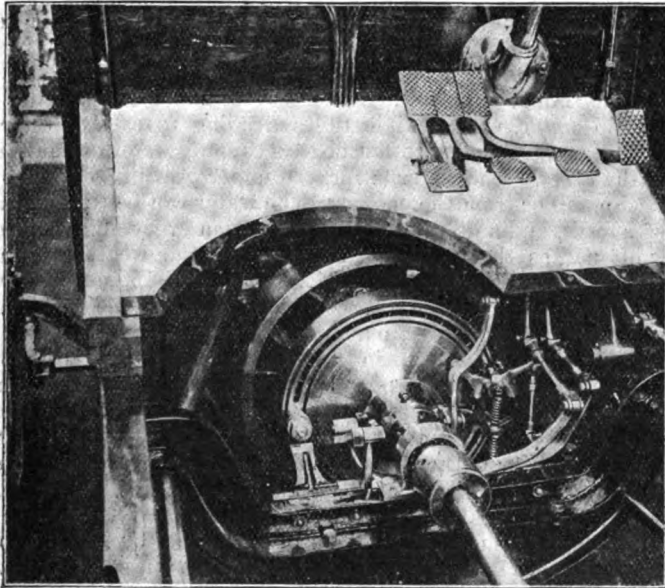


Fig. 4.—The Henriot Chassis with Combined Clutch and Change-Speed Gear.

four-cylinder, and 16-h.p. and 45-h.p. six-cylinder. Fig. 3 gives a view of the engine of the last-mentioned car, from which it will be seen that it is entirely self-contained, the water circulating pump and magneto being mounted on small platforms built as extensions of the crank chamber. A carburettor of the Zenith automatic type is employed with an addition to allow pure air to be drawn into the cylinder when the throttle is entirely closed. A special feature of the car is the clutch, of which a description was given in the *M.C.J.* of June 20th last. Briefly put, the improvement consists in building the female portion of the clutch not as an integral part of the flywheel, but in such a way that

while it is bound to rotate therewith it has a certain amount of room in which it can adjust itself for any temporary lack of alignment. The final transmission is by side chains, which are enclosed in readily detachable gear cases.

Other six-cylinder cars on view include the Brasier, La Buire, Leon Bollée, Renault, Mors, a 25-h.p. Unic with the cylinders cast in sets of three, a 25-h.p. Clement-Bayard, a 24-h.p. Lorraine-Dietrich, a 60-h.p. Itala, a 20-h.p. and 60-h.p. Peugeot, a 30-h.p. Rochet-Schneider, and a 20-30-h.p. Siddeley. The Wolseley; Tool and Motor-Car Company, Ltd., are the only

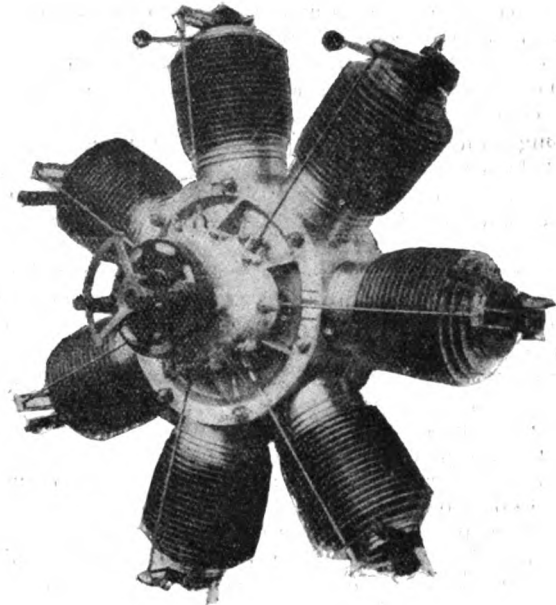


Fig. 5.—The Gnome Seven-Cylinder Aeronautical Engine. The motor, which is of the rotating type, develops 50-h.p. and weighs only 165 lbs.

British car firm exhibiting, and in addition to the 20-30-h.p. show a 40-h.p. four-cylinder chassis. Full particulars of both of these were given in the *M.C.J.* last week.

Distinct departures from the common trend of design are rare. The Henriot engine shows a novelty in the two chassis fitted with four-cylinder motors, air-cooled by a couple of fans on the valve side of the engine driven by bevel gear and spindle from the cam shaft in one case, and belt driven from a pulley on the same shaft in the other case. A planetary transmission contained within the flywheel is seen on the same car (Fig. 4). The three forward speeds are controlled by separate pedals; the second-speed pedal also puts the reverse in action in conjunction with a hand side lever. A four-cylinder water-cooled engine without radiator is on view on the same stand. The water is contained in a tank on the front of the dashboard and thermo-siphon circulation is adopted, with the addition of an air pump driven from the rear end of the crank shaft and connected to the point where cool water enters the cylinders; by discharging its jet of cold air the water is cooled and driven into the jackets at the same time.

The Knight sliding-valve engine does not attract the amount of attention that was expected. The Panhard people, who own the French manufacturing licence, are not showing a chassis fitted with it, but it is shown on one of the Belgian Minerva chassis. The first application of the Knight engine in France has been made to the G.E.M. petrol-electric chassis, made by the Société Française des Automobiles Electro-Mécaniques. The engine is that made at the Daimler Coventry works, and it is stated that the 38-h.p. motor will be adapted to all the G.E.M. chassis used for heavier work. It is shown fitted to an omnibus chassis destined for the Paris Omnibus Company. The engine has been adopted on the electrically-driven chassis without alteration; the ignition is by Simms Bosch high-tension magneto, although the special application of the motor in conjunction with

the electric drive would render this unnecessary. The carburettor is special, being magnetically throttled when the storage battery is being charged, since this is done when the car is running down hill and the motor acts as a generator, the petrol engine being then, of course, unnecessary. The carburettor is automatically opened whenever the battery commences to discharge into the dynamo. The battery of twenty-four elements is capable of giving an output for forty-five minutes of twenty-five amperes at fifty volts and is useful in case of quick starting or on steep grades. In service the accumulators are practically kept constantly charged.

A magnetic clutch is used, and magnetic brakes are fitted in addition to the usual pedal-operated brakes on drums on the rear wheels. All the electrical connections are enclosed within a double dashboard. The car is reversed by means of a sliding gear mounted on the end of the propeller shaft, and contained in a casing alongside the differential. The usual features of the petrol-electric drive are of course evident, and the G.E.M. arrangement, admittedly a good one of its class, has undergone very few changes since it was first presented to the public at the 1907 Show.

The only other petrol-electric vehicle in the exhibition is the Vate. This is a 10-h.p. chassis, in which a combination of dynamo and motor is built up as the flywheel of the engine; a small battery of accumulators is also carried, this being kept fully charged by the dynamo; on ordinary roads the engine drives the rear axle direct. When a hill is encountered the dynamo acts as a motor, taking current from the battery and adding its power to that of the petrol engine.

Petrol-electrical vehicles are not only few in number, but there are only one or two electromobiles to be seen, while as for steam it has not a single representative in the Show.

An eight-cylinder V-shaped motor is employed on the chassis of the E.N.V. Motor Syndicate. The cylinders, which are cast in pairs, are provided with copper water jackets. The change-speed gear is also interesting. The first speed forward and the reverse are in a gear-box by the engine, but two other forward speeds are obtained direct by separate pairs of bevel wheels in the differential casing.

Although it is the expressed intention of the promoters of the Salon to provide a show for aeronautical motors in the second

to and the pump is driven off the crankshaft. Each of the magnetos supplies current to four cylinders, so that in case of accident to one set the motor would still operate. The Gnome people also show a light-weight engine in which steel is largely used and a hollow crankshaft allows carburation through its centre. The engine (Fig. 4) comprises seven air-cooled cylinders, which revolve round the crank-shaft, there being no fly-wheel. The motor, which is stated to develop 50-h.p., weighs only 165 lbs. The same firm is also building a 100-h.p. engine on similar lines, this having no fewer than fourteen cylinders and weighing only 220 lbs. The Pipe Company, of Brussels, in addition to their cars, have on view an aeronautical engine comprising eight cylinders arranged in the form of a V. The motor, which is stated to

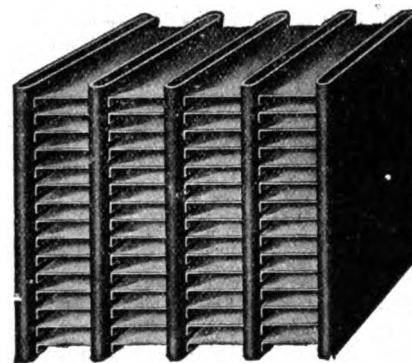


Fig. 7.—The G.A. Arecal Radiator.

The illustration shows the method adopted in building up the elements of the new radiator.

have developed 78-h.p. during a two hours' test, weighs only 290 lbs. The cylinders are 3.9 in. bore and stroke, and the same valve performs the function of inlet and exhaust by means of a sliding sleeve.

Among the novel accessories on view one of the most interesting and which is attracting considerable attention is that shown fitted to a car on the Rapid stand. It is known as the Douche Pneu (Fig. 6); it consists of a small cylinder to contain water, with flexible tubes heading to each of the road wheels, terminating with flat nozzles to spray water on the treads of the tyres. The water is sprayed under pressure, either by a hand-pump or from the exhaust. The water can be turned on or off at will, and a douche to the tyres given every eighteen miles or oftener, as the conditions of the road and weather require. The cylinder has a water capacity for about 150 miles. It is claimed that the douche adds considerably to the life of the tyres and lessen the chances of punctures.

A prominent stand in the accessory section is that of Messrs. Grouville and Arquembourg, Paris, who are well known as manufacturers of radiators and carburettors. Fig. 7 shows the method of construction adopted in the firm's latest radiator, which is known as the Arecal, and which is being used by several of the leading French motor-car builders. As will be seen, it consists of a series of thin flat copper tubes, between which the thin radiating surfaces are fixed by a patented process. It is claimed for the new radiator that it combines an equal efficiency of the best honeycomb type with the solidity of the strongest-gilled-tube pattern. In the case of natural thermo-syphon circulation the water tubes are arranged vertically, as illustrated; where a pump is employed they are placed horizontally. A new departure in connection with the well-known G.A. carburettor is a special fitting arranged to be clipped round the exhaust pipe to provide the necessary heat to enable benzol to be used as fuel in place of petrol. The G.A. Gypta is another interesting addition to petrol motors, enabling as it does part of the exhaust gases to be compressed into a reservoir ready to be used for the inflation of tyres, for the operation of self-starters, motor horns, &c., by the simple opening of a cock.

In the side galleries there are many interesting novelties to be seen, extended reference to which will be made later.

(To be continued.)

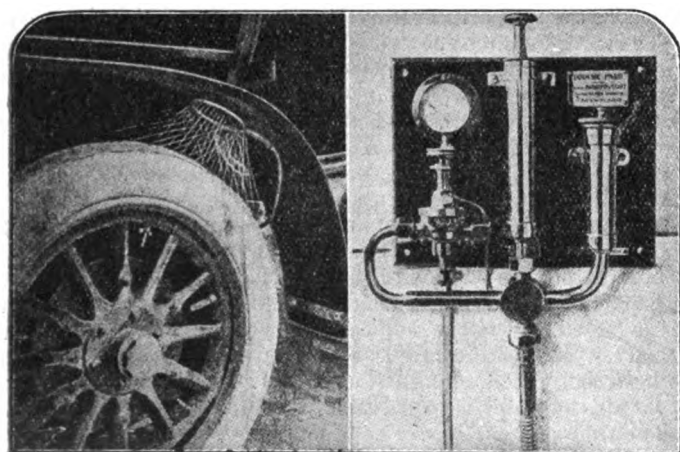


Fig. 6.—The Douche Pneu, a device for cooling off the tyres when the car is running.

The illustration on the left shows the Douche in operation, while that on the right depicts the hand pump, gauge and filling tube mounted on the dashboard.

exhibition to be opened on the 24th inst., yet several firms have produced their novelties in this line. Gobron displays one of the most interesting motors in this class, the eight cylinders developing 80-h.p. at 1,500 r.p.m., and weighing, complete with two magnetos, 460 lbs. The cylinders, of the usual Gobron construction, form pairs, and each pair is arranged at 90 degrees from its neighbour, the group being thus in the shape of an X. A two-throw crankshaft is employed. Water cooling is resorted

EMERGENCY MOTOR REPAIRS AT HOME AND ON THE ROAD.

By E. T. HUMPHRIES.

EMERGENCY repairs to motor-cars need not necessarily be associated with the road; many owners live in isolated spots far removed from the hub of any industrial centre where skilled labour can be obtained. A slight defect when one has to go on a sudden or urgent journey may cause much inconvenience, resulting also in loss of time and money. Doubtless with motoring as well as most other things a little knowledge is dangerous, but at the same time "Faint heart never won fair lady."

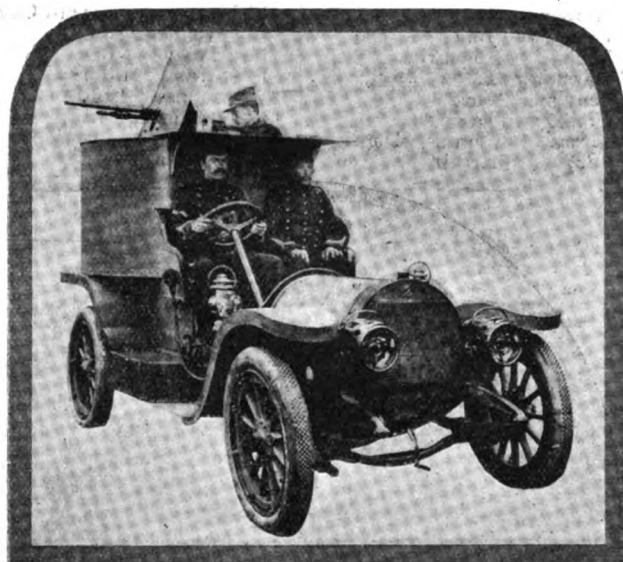
A famous writer said, "The most just man could never defend the innocent or detect the guilty unless he knew how to be just." The same with a man and his car: unless he knows how to make wrong right he is not able to get the best out of his machine. If only a small thing goes amiss, a self-performed repair not only saves a bill, but enables the running costs to be kept down to a lower level than would otherwise be the case. For this reason comparisons of the expenditure under the heading of upkeep must greatly vary according to individual conditions.

How often one hears the owner of a car say "It is not pulling well to-day; I believe the compression is weak." On investigation this proves to be the case, and a closer research discloses the fact that the piston rings fit somewhat slack, which accounts for the trouble. The result of such a conclusion is generally a visit to the local repairers, who will in odd cases suggest expanding the rings, but more often their replacement by a new set. Now the question of the moment is, could not this simple operation be done in the owner's garage by himself or his chauffeur, if either have only a rudimentary knowledge of the use of a hammer? There is an operation known in the engineering world as "penning"—that is, flattening the inside periphery of a ring; all that is necessary is a smooth plate and a hammer and a series of gentle, but firm, blows or taps, which will elongate the ring. The effect of the hammering can be regulated to a fraction and tested by inserting the rings in position from time to time as each is so treated. The writer has done this more than once, and made previously loose-fitting rings hold a good compression.

It is well to point out that some rings are cut eccentrically, i.e., thicker in one part than another, the greatest thickness being usually exactly opposite to the slot, thus giving increased outward spring to the ring. When treating rings of this pattern the best results are obtained, and in less time, by striking the thickest part one-third less blows than those on either side. Suppose the ring to be the face of a clock with the slots at the top representing 12 o'clock. Those parts representing 3 and 9 o'clock should be hammered most, and the part at the base, viz., 6 o'clock, the least.

A matter which, although very simple, one often sees mentioned in the correspondence columns of motoring and engineering papers as causing trouble to amateurs is the removal of studs, fly wheels, or gears from their shafts. In view of the fact that the weights of motors, and particularly motor-cycles, have been reduced in many parts to the lowest possible limit of safety, it is almost needless to say that to try to unduly force a nut, or put excessive stress on a stud, will generally result in breakage. Nearly everybody knows that most metals expand under the effect of heat. This is also seen with other substances; take such a simple thing as the sticking of a glass stopper in a bottle. Nothing is easier to remove; place round the neck of the bottle a warm wet rag, and if the stopper is still refractory dip the top of the same into cold water. The effect is that the stopper contracts and the bottle expands, and the desired result is attained. Now the same thing takes place, only in the reverse order of things, with a refractory nut. Get a piece of iron (if a small nut a piece of hoop iron will do); make it hot and bend it round the nut, holding it in place until the nut is quite warm. The heated piece should, however, be removed before the

stud has become too hot. Apply a spanner at once and the nut will come off quite easily. A wet rag placed below the nut and round the stud is an assistance if the position is such that it can be used. A rather interesting and most useful repair was fixed up on the road to Moscow. It is always admitted that if anything goes wrong with the steering gear of a car one is absolutely helpless, the man at the wheel having a feeling akin to that of a horse driver when a horse bolts or a rein breaks. When on a journey some one hundred miles short of Moscow the ball end of a steering arm broke. There we were, many versts of unbroken steppe between us and our destination, and not even a police trap to appeal to. What was to be done? On looking through the spare parts and the contents of the tool box an idea struck the writer which, to quote Captain Cuttle, it may be well for the reader "to make a note of." A fair-sized nut was found, and after some filing was forced into the end of the broken arm until sufficient protruded through to "nobble," or, in other words, hammer over the nut face, so that it could not come off. The file was then applied to the outside faces of the new ball end until the sharp edges had been removed, and, though at times the steering was somewhat stiff, we proceeded for over 100 miles without any trouble. The whole operation was done inside 50 min.



One of the six Hotchkiss 30-40-h.p. Cars equipped with quick-firing gun recently supplied to an European Government.

A differential gear having been removed by the usual hammering and drifting process, resulted in a broken wheel boss. When replacing it the crack opened, leaving the wheel loose on the shaft. Having got the reader so far, it will not be out of place to state the easy repair effected to overcome the difficulty; at the same time, if the hot and cold process previously described had been resorted to in the first instance, no fracture would have occurred. An ordinary piece of mild steel (iron would have done), slightly narrower than the wheel boss, having been obtained, it was forged into a ring and hammered smooth inside, its size when cold being slightly smaller in diameter than the boss; the ring was then reheated and forced as a tight fit over the wheel centre. Contraction in cooling followed, and it was then practically one solid mass. The foregoing may appear a little difficult, but such is not the case; any country smith would make the ring; a hammer and a little common sense does the rest.

THE proceedings of the Rugby Engineering Society for the session 1907-8 have just been published and testify to the value of the Association, both from the technical and the social point of view. Among the papers included in the volume is one by Mr. B. Hopps on the London motor-omnibus problem; with special reference to the petrol-electric system.

B

THE A.C.A. GRAND PRIZE RACE.

CONSIDERABLE interest was evinced in the first race organised by the Automobile Club of America for its Grand Prize. The event, which was conducted under the same rules as the 1908 A.C.F. Grand Prix contest, the cylinder dimensions being restricted to a bore of 155 mm. in the case of four-cylinder engines, was held on the public roads of Chatham County, Georgia, adjacent to the city of Savannah. The course, which varied in width from thirty to sixty feet, measured 25.13 miles, and had to be covered sixteen times, giving a total distance of about 402 miles; it had been thoroughly prepared and oiled, and was patrolled by a large force of State troops under military orders from the Governor of the State. The surface on the whole was flat, but there were numerous sharp turns, and though some of them had been altered and banked there were points of the course which were still considered dangerous. The start took place at 9.45 a.m., when the following twenty competitors, six Italian, six American, five French and three German, were sent off at minute intervals.

| No. | Driver. | Car. | No. | Driver. | Car. |
|-----|---------|-------------------|-----|----------|----------------|
| 1 | Rigal | Bayard-Clement | 11 | Harding | National |
| 2 | Mulford | Lozier | 12 | Cagno | Itala |
| 3 | Seymour | Simplex | 13 | Hautvast | Bayard-Clement |
| 4 | Burman | Buick | 14 | Wagner | Fiat |
| 5 | Haupt | Chadwick | 15 | Hanriot | Benz |
| 6 | Nazzaro | Fiat | 16 | Strang | Renault |
| 7 | Zengle | Acme | 17 | Fournier | Itala |
| 8 | Hemery | Benz | 18 | De Palma | Fiat |
| 9 | Daray | Lorraine-Dietrich | 19 | Erle | Benz |
| 10 | Szisz | Renault | 20 | Piacenza | Itala |



View on the Course on which the A.C.A. Grand Prize Race was run.

The Fiat cars quickly took the lead and held it until the third round, when Hanriot (Benz) ran into first place. This he held until the end of the seventh circuit, at which time Hemery (Benz) was second and Nazzaro (Fiat) third. Eight of the competitors had, up to this point, fallen out of the race, these including all the American cars and Szisz (Renault) and Piacenza (Itala). In the eighth lap Hanriot fell back to the fifth place, Wagner (Fiat) taking up the lead, hotly pursued by Hemery (Benz), who indeed passed him in the ninth circuit. At the end of eleven laps Wagner, however, again came to the front, while twelve circuits saw Nazzaro first, Wagner being second, and Hemery only a few seconds behind. The struggle between these three was unusually keen. Nazzaro lost a few minutes in the penultimate round, owing to tyre troubles, but Wagner kept just in front of Hemery and won by the narrow margin of sixteen seconds.

Out of the twenty cars which started only the following ten finished the race :—

| No. | Driver. | Car. | Time. |
|-----|----------|-------------------|----------|
| | | | H. M. S. |
| 1 | Wagner | Fiat | 6 10 31 |
| 2 | Hemery | Benz | 6 10 47 |
| 3 | Nazzaro | Fiat | 6 18 47 |
| 4 | Hanriot | Benz | 6 28 16 |
| 5 | Hautvast | Clement-Bayard | 6 34 5 |
| 6 | Strang | Renault | 6 43 37 |
| 7 | Rigal | Clement-Bayard | 6 45 47 |
| 8 | Fournier | Itala | 6 46 32 |
| 9 | De Palma | Fiat | 6 51 31 |
| 10 | Daray | Lorraine-Dietrich | 7 19 40 |

Wagner's average speed works out at about 65½ miles per hour. The fastest lap of the day (21 min. 36 sec.), was made by the Fiat driven by De Palma in the second circuit. A somewhat serious accident occurred in the tenth lap. Erle (Benz), was travelling at a high rate of speed when the tread came off one of his tyres and struck him in the face. He lost control of the car, and ran into a tree. The machine was overturned, but both driver and mechanic escaped, in a miraculous manner, without serious injury.

In addition to the Gold Cup which forms the Grand Prize and is a perpetual trophy to be competed for annually, money prizes to the extent of £1,600 were awarded, the winner taking £800, the second £400, the third £200, the fourth £150, and the fifth £50.

On the previous day a contest for light cars was held over part of the same circuit, the vehicles in this case being limited to a bore for four-cylinder engines of 3½ in. and to a minimum weight of 950 lbs. The circuit measured nearly 10 miles, this being covered twenty times, giving a total distance approximately of 196 miles. Out of the seventeen entries fifteen—twelve American, two Italian and one French—duly started, of which, however, only six completed the whole distance. The event proved a victory for the Lancia car, driven by Hilliard, who covered the distance in 3 h. 43 min., equal to an average speed of about 53 miles per hour. Burman on a Buick was second in 3 h. 49 min. and Lorimer on a Chalmers third in 3 h. 53 min.

SEVERAL cases of sheep being run down by motorists having occurred in and about Worcester of late the Bench of the Cathedral City have expressed a determination to stop such offences by the infliction of heavy fines on those who are proved to have been the cause of such mishaps.

THE Albion 16-h.p. car, reference to which was made in our last issue, is provided with a two-cylinder engine, the bore and stroke being respectively 4½ in. by 5 in. The latest improvements and additions to this type comprise chiefly an extra air attachment and chain cases. Until quite recently the vehicle was entirely governed by a single lever on the steering column, but experience has proved that more or less air is occasionally required, according to outside atmospheric temperatures. An extra air valve has consequently been fitted, the same being controlled from the dashboard.

WITH all their Diaries, Tablet Calendars and Engagement Blocks the firm of Thomas De La Rue and Co., Ltd., are issuing Insurance Coupons, which should do much to add to the popularity of the dainty and serviceable publications issued from 110, Bunhill Row, London, E.C. Among the specialities in the diaries for 1909 are the Onoto Diary—a thin and flexible volume with a pencil in the back loop and ample space for daily notes; Index Diaries in which reference can be made to any month instantaneously; the Handy series of diaries of diminutive size, in which the printing is so ingeniously arranged that there is writing space for every day; Diary Engagement Blocks opening both from the top and from the side, and Tablet Calendars. The originality of design and splendid printing in all these works make them among the most favoured Diaries for general service.

GOSSIP FROM PARIS.

Rumoured Withdrawals from the Grand Prix Race.

Immediately after the inauguration of the Salon de l'Automobile by the President last Saturday great sensation was created by the handing about of a list of seven French, two German and two Italian automobile manufacturers who it was affirmed had agreed not to participate in the Grand Prix of 1909. The names inscribed were Panhard, Renault, Peugeot, Lorraine-Dietrich, Bayard-Clement, Brasier and Darracq, (French); Mercedes and Benz (German); Itala and Fiat (Italian). This list goes beyond the announcement I was able to make in the *M.C.J.* last week, and I think it should be taken with a grain of salt. At the beginning of the present year it was affirmed the big automobile firms would abstain from exhibiting at the Salon and now we see them all there. It may be the same with the Grand Prix. The decisions of a private firm or of a board of directors of a company can always be modified or even reversed. However, I am assured on good authority that five of the leading automobile makers have signed an agreement not to compete in next year's Great International Competition. It is not difficult to guess which those five firms

aviation, and a few days ago an almost equally large number of senators followed their example, placing M. de Freycenet at their head as honorary president, and M. d'Estournelles de Constant as acting president. The Government has consented to inscribe £4,000 in the budget to be offered in prizes to the aviators, who had already more than £50,000 to compete for. The Aero Club instituted a prize of £4,000, and at once the Automobile Club decided to occupy itself with aerial locomotion, and created a prize of £8,000. The National Aviation League had in the meantime received rich donations amounting to very many other thousand pounds to further the interests of the new scientific industry. That is all very well, but the aviators themselves are somewhat alarmed at the great expectations raised by their exploits. They have given man wings, but the feathers are still weak and must be allowed time to grow and get strong. The aviators have advanced with giant strides during the last twelve months and the French seem to imagine they will always continue to do so. But Rome was not built in a day, and though the time is fast approaching when perhaps a journey from Paris to London on an aeroplane will not be a very uncommon occurrence, it must not be expected that the feat will be accomplished to-morrow.



A Group of Military Chauffeurs at the Royal Ordnance College, Woolwich. The men have been trained by Sergeant Chaplin, and out of 31 candidates 29 have successfully passed the R.A.C. examination. In the group Sergeant Chaplin is seen seated in the front row at the left of Captain H. Noble (in the centre), while at the two extremes are Messrs. H. D. Smith and L. A. Fox, of the R.A.C.

are, since they are all represented on the A.C.F. Sporting Committee. It is rather anomalous to see men who choose the ground and draw up the regulations for a race compete in it, but it is still stranger to see them suddenly decide to hold aloof from the event after they have made all the preparations for it and invited all the world to meet them on the Anjou circuit. I fear their decision is not due to any qualms of conscience concerning the rather false position they have occupied for so many years. No, it appears, as I said last week, they think the game is not worth the candle. But is that all? Are they not afraid, especially with the reduction of the cylinder bore to 130 mm., that they would, if they entered the lists, be beaten, not only by foreign cars, but perhaps figure on the final result list after some of the French "small fry"? I should not like to pronounce, but it must be admitted their abstention, if persisted in, will render such a supposition permissible.

Prizes for Aviators.

The French are allowing themselves to be carried away by their enthusiasm for the conquest of the air. Some seventy-five deputies recently formed themselves into a group to encourage

Pails to London by Airship.

M. Clement, the well-known automobile manufacturer, and M. Henry Kapferer, an equally well-known aeronaut, intend to commence the invasion of England by the air. In their steerable balloon the Bayard-Clement they will cross the Channel high above and out of the reach of the Dreadnoughts! One fine morning, perhaps before the new year, the airship will start out from its shed at Sartrouville, steer straight to Boulogne, and then, boldly flying across the Silver Streak, make straight for London. That is what has been decided! The distance as the crow flies is about 250 miles. The enterprising invaders make light of all the difficulties, and seem to despise even the idea of breaking the aerial voyage by a stop at Boulogne, which they think will be unnecessary. There will be at least seven persons in the car, and it is hoped that Commandant Renard, who is only waiting for the establishment of a means of aerial communication to visit the dominions of his Majesty King Edward, will be among them. It is perhaps probable the blustery winter weather will prevent the voyage being taken quite as soon as M. Clement hopes, but it may be relied on the airship will, ere long, be seen circling above St. Paul's Cathedral.

MARNEY.

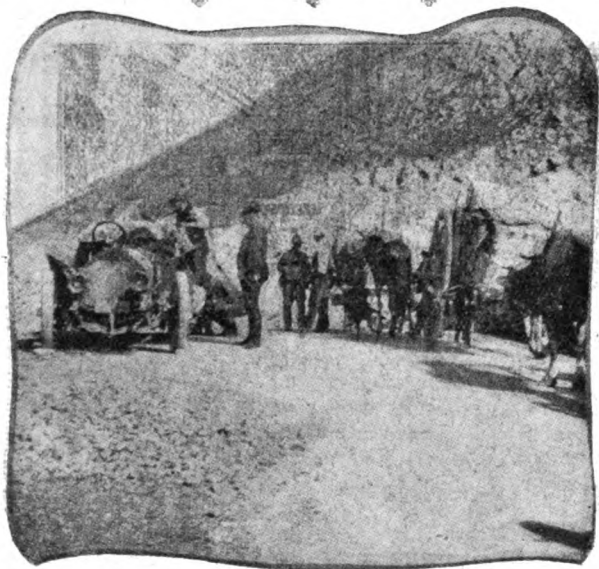
CONTINENTAL NOTES.

Touring in France.

Motorists who contemplate a continental tour will appreciate a concession just made by the French Government as the outcome of representations resulting from the proceedings of the Ligue Internationale des Touristes. Motorists in possession of triptyques will be permitted to make their first entry or last exit on Sundays and fête days, the regulations hitherto having permitted the Customs Houses to be open only on ordinary weekdays. The new arrangement will apply only on roads over which the greatest amount of motor traffic passes, but, notwithstanding that restriction, it should prove a great convenience.

The 1909 Prince Henry of Prussia Touring Competition.

The Imperial Motor Club and the Association of German Automobile Manufacturers have decided to lower the minimum volume limit for cars eligible for the 1909 Prince Henry of Prussia Touring Competition, making it 1.6 litres in place of 2 litres, as originally intended. The minimum weight has been fixed at 750 kilos, of which at least 15 per cent. must fall to the bodywork. For cars with engines of greater volume the



Touring in Italy.—An Incident on the Summit of the Calabria Pass.

weight allowed increases 1 kilo per 0.01 litre. There will be no hill-climbing competition, but instead of this a couple of speed trials on the level will be held. A somewhat novel system of handicapping is also to be introduced. Those drivers who, since January 1, 1905, have not won any money or honour prizes for themselves or the owners of the cars either at home or abroad in an officially-recognised race will receive three good marks; these will not, however, annul bad marks except those given for change of and repairs to tyres.

To Prevent Mud Splashing by Motor-Buses.

The Compagnie Générale des Omnibus, of Paris, has made many attempts to overcome the nuisance caused by the splashing of mud on pedestrians by their motor-buses. Apparently none of them have proved effective, for they have organised a competition of devices intended to prevent mud splashing. Entries will be received at the offices of the company, 34, Rue Championnet, Paris, until the 15th inst., and competitors are to state the price at which they supply their arrangements, and also mention the royalty demanded in case the company decide to manufacture the devices themselves.

Industrial Motor Vehicle Trials in Sweden.

The regulations in connection with the reliability trials of industrial vehicles which the Swedish Imperial Automobile Club will hold in May next year have now been issued. Classes will be

provided for (1) delivery vans up to 12 cwt. capacity; (2) motor-lorries to carry from 14 to 24 cwt.; (3) motor-lorries to carry from 3 to 5 tons; (4) motor-lorries to carry from 6 to 8 tons; (5) motor-lorries to carry over 8 tons; (6a) motor-buses with seating accommodation for twelve persons; (6b) motor-buses with seating accommodation for more than twelve passengers. The trial will consist of at least six daily runs, the distance ranging from thirty-seven and a-half to ninety-four miles, in accordance with the class. Entries will be received up to March 1st next, and full particulars can be obtained from the club, whose address is Hotel Continental, Stockholm.

The Motor Movement in Portugal.

According to a recent return, there are at present only 838 motor-cars in Portugal, of which 501 are in Lisbon and 148 in Oporto. With the view of giving a further impetus to the movement the Royal Portuguese Automobile Club is endeavouring to secure a reduction in the import duties of petrol, tyres and other accessories; and a simplification in the Customs formalities, the latter in order to induce touring motorists to visit Portugal more frequently and in greater numbers than is now the case.

Motor-cars in the Spanish Army.

The Spanish military authorities have recently organized automobile drivers' schools in connection with several regiments, with the object of training a staff of skilled drivers. The schools are said to be well equipped in the way of machine tools for making all kinds of repairs, and are conducted under the supervision of engineers of the Central Electrical School. A corps of motor volunteers has also recently been organized under the auspices of the Spanish Royal Automobile Club.

Aeronautical News.

On Saturday last the German military airship Parseval fulfilled the last outstanding condition for its purchase by the authorities by making a flight to determine the actual speed it is capable of developing.—A Ligue Aérienne Nationale Suisse has just been formed in Geneva.—It is reported that the Russian Government has ordered six aeroplanes from Mr. Wilbur Wright.—Considerable interest is being shown in the Concours des Aeroplanes, which is to commence at Monaco on January 24th and continue for two months. It has been decided that the aeroplanes shall be placed on the quay of Monaco Harbour, from which they will have to start on their course to Cap Martin and back, a distance of about six miles.

Miscellaneous Items.

The Automobile Club de Picardie of Amiens proposes to hold an exhibition of agricultural motors during the course of the coming year.—The French Post and Telegraph authorities are about to invite tenders for the transport of the mails between Riom and St. Pardoux by motor vehicles.—An automobile exhibition is to be held in Turin, from January 30th to February 14th next.—A speed limit of 12 kilometres per hour having been imposed by the municipal authorities of Beauvais (Oise) France, all motorists entering the town are being pulled up at the octroi gate and handed a notification of the regulations in three languages—French, German and English.

Les Vieilles Autos.

A quoi servent les vieilles automobiles, les antiqués châssis démodés, les valeureux moteurs qui menèrent le bon combat aux premiers âges de l'automobilisme? Les uns se rouillent sans doute au fond des remises, dans un coin perdu des garages, mais il en est d'autres qui continuent leur vie de bons et braves moteurs, à peine un peu asthmatiques, et encore. Ainsi, il y a quelques jours nous avons remarqué à Paris, dans le quartier de l'Etoile, un châssis Panhard et Levassor, 8-h.p., modèle Paris-Amsterdam, qui actionnait, au moyen d'un embrayage spécial, un appareil de nettoyage des appartements par le vide. Voilà une application ingénieuse des vieux châssis. La voiture et son attirail se rendent devant la maison à nettoyer. Là il suffit de désembrayer la commande des roues, pour embrayer sur l'appareil quelconque de "suction," et le tour est joué. C'est simple et pratique!

THE SOCIAL WHIRL.

KING EDWARD and the Royal family were busy motoring on the occasion of the birthday of Queen Maud of Norway, on the 26th ult. Her Majesty celebrated the occasion at Appleton House, Sandringham. The King, who was on a visit to Lord and Lady Farquhar at Castle Rising, motored in the morning to Appleton House to wish Queen Maud "many happy returns," and to meet his son-in-law, King Haakon. Queen Alexandra, the Princess Royal (Duchess of Fife), and Princess Victoria motored from Sandringham House to offer their congratulations, and there were many motoring parties in the afternoon.

It has now been definitely decided that the proposed county testimonial to the Marquis of Hartford shall take the form of a motor-car, and, although the proposal has not yet appeared in print, it is probable that many of his London friends will similarly recognise the work done by the Bishop of Stepney. He will want an automobile to cover the whole of his northern diocese.

THOSE who were in the centre of automobilism in the early days may remember that soon after the R.A.C. removed from its cosy quarters in Whitehall Court to the present location in Piccadilly, a discussion took place with regard to the Motor Volunteers. A whole evening was devoted to the subject. Pitiful tales were told of loyal owners of motor-cars waiting foodless outside comfortable houses while the officers they had driven were dining within. Various indignities were undoubtedly imposed upon the pioneers of the movement—more from want of thought and lack of knowledge on the part of the authorities than from *malice prepense*. With the proper organisation into the Army Motor Reserve, it was to be expected that such stories would pass into legendary lore and not be repeated. Such, however, is reported not to have come to pass, and at recent manoeuvres some strange happenings have occurred. They have at length reached the ear of Mr. Haldane, and it is currently whispered in the Service clubs that the War Office has now undertaken to define anew the duties of this valuable branch of our military reserve.

MEN who hold themselves and their cars in readiness for national emergencies are certainly deserving of consideration, and all will hope that those who are attached to the Motor Reserve will have proof that their services are not only appreciated on paper but are rightly employed when engaged in operation—whether in these "piping times of peace" or in times of sterner conflict.

MR. F. S. CODY, the War Office aeronautical expert, is a keen motorist, and was one of a number of military men who travelled from Aldershot one day in March last to inspect the exhibits at the Agricultural Hall Motor Show. The last time I saw him was at Olympia, where he was closely studying the carriage work in the Annexe. All motorists will regret to learn he has just had a nasty accident. On Saturday evening he was driving a car near Aldershot, when, in turning a corner, he met a cart which is said to have been approaching on the wrong side. Mr. Cody endeavoured to avoid a collision by passing on the other side, but was unable to prevent an impact, the shafts of the cart crashing into the side of the car. Mrs. Cody, who was seated behind her husband, was seriously injured.

In the tyre section of the Show much interest was taken in the K.T. variety illustrated in a recent *M.C.J.* These are being favourably regarded in connection with pleasure cars. Sir Nevill Gunter, Bart., one of the vice-presidents of the Society of Motor Mechanic Drivers, has adopted them, as have also H.S.H. Prince Louis of Battenburg, Sir Oswald Mosley, Bart., Sir Vincent Caillard, and Major Frazer-Tytler, of Aldourie Castle, Inverness.

LOLLIUS.

HERE AND THERE.

THE Bishop of Bath and Wells has just become the owner of a Singer car.

THE Ceylon Budget estimates for 1909 include provision of £4,252 for motor-cars for Government service.

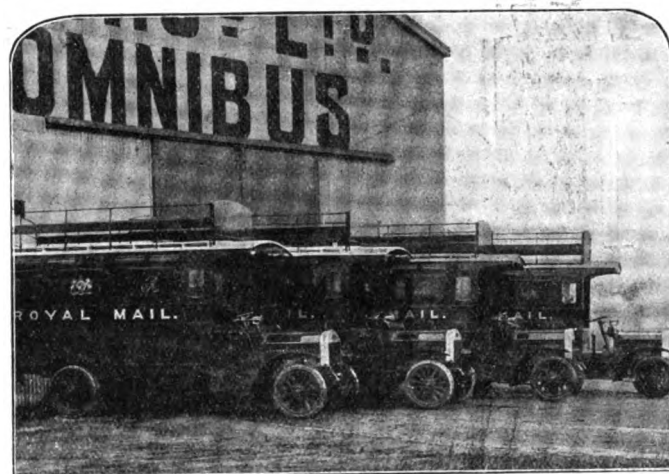
WE regret to learn of the death of Mr. E. A. Stretton, the managing director of Strettons, Ltd., motor engineers, Cheltenham.

A PUBLIC meeting is announced to be held in the Athenæum, Manchester, on the 11th inst., to form a branch of the Highways Protection League.

AT Newport-on-Tay (Fifeshire), Mr. J. T. Young has a large garage and repair works, the latter being well manned by competent mechanics and equipped with the latest types of machinery.

A NEW arrangement for starting the engines of petrol cars from the driver's seat has been devised by Mr. Mallins, the traffic manager of the Liverpool Tramways. We hope to give some details of the new device in a later issue.

WE illustrate herewith four of the Dennis 3-ton mail vans recently completed for Messrs. McNamara, the Royal Mail contractors, for the new motor mail service between London and Southampton and between London and Portsmouth, which commenced in the 1st inst. The vehicles, which are fitted with Dennis 35-55-h.p. engines, have been tested with full loads,



have completed the journeys in much less time than is required by the Post Office authorities, and have negotiated the steepest hills on the journey with the greatest ease. Leyland Motors, Ltd., have also built a number of 3-ton vans for the new service. In this case the motive power is supplied by a 35-40-h.p. engine, the transmission being on the Leyland Company's standard lines. A feature of the bodywork of the vehicles is that provision is made for the sorting of letters *en route*, in addition to the conveyance of parcels, the latter being carried on the roof.

ON Saturday pedestrians in the Strand and other London thoroughfares saw the new covered-top electrobus which the London Electrobus Co. hopes to make a permanent feature of traffic in the Metropolis. The accumulators, which weigh about 30 cwt., are placed below the level of the axles, and the seats on the upper deck are arranged transversely with gangways on either side instead of along the centre. There are now an average of seventeen electrobuses running daily in London.

A LATE addition to the motor-car exhibits at the Stanley Show last week was the Colibri 8-h.p. two-seated car made by the Norddeutsche Automobilwerke of Hameln, Germany. The car comprises a number of interesting points, not the least of which is its extremely moderate price. The engine is of the two-cylinder type, with magneto ignition and thermo-siphon water circulation. The drive is transmitted through a three-speed gear-box giving a direct drive on top to the live axle. Full particulars of the car can be obtained from Mr. A. Powell, of the Earl's Court Motor Garage Company, Ltd., Earl's Court, S.W.

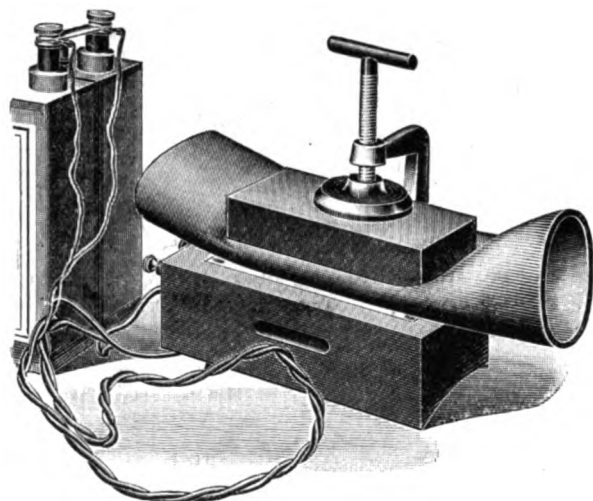
THE Merchant Venturers' Technical College of Bristol is about to engage a professor of motor-car engineering.

A GERMAN motor-car manufacturer has just introduced a new vehicle fitted with a four-cylinder engine of 4-8-h.p. The dimensions of the cylinders are not stated.

THE motor yacht "Mercedes," built to the order of M. E. Jellinck Mercedes by Messrs. Simpson, Strickland and Co., has left Dartmouth for Nice. The vessel has a length of 136 ft. and beam of 15 ft., while the contract speed is $21\frac{1}{2}$ knots.

FROM the National Motor Academy and Exchange, Ltd., of Boundary Road, Notting Hill, London, W., comes a copy of some motor questions they are using at their school. These test questions suggest the thoroughly practical nature of the instruction that is being given at the Academy.

Now that vulcanizing has become the accepted method of dealing with punctures and cuts in tyres, motorists will follow with interest the introduction of any new appliances calculated to secure results in which economy and efficiency are combined. Lately Messrs. Richard Gornall and Sons, of Pilling, Garston, Lancashire, have brought out an Electric Vulcaniser, the form of which will be seen on reference to the accompanying illustration, in which the vulcanizer is being employed to repair an air tube. This particular type is made to work with an ordinary 4-volt accumulator, and the current required is under $\frac{1}{2}$ ampere-hour, at four volts for each square inch of repair. The apparatus is extremely simple, no thermometer or other recording instrument



being required. To work the appliance the Vulcanizer is connected by means of the flexible wire cord, shown in the illustration, to the accumulator, and in about three minutes the necessary heat, 270 deg. Fahr., is obtained. It remains uniformly at this temperature during the operation. In executing repairs the device will be found quite cool when handled, as all the heat is confined to the vulcanizing plate only, so that dissipation of the heat generated is reduced to a minimum, while economy in the current consumed is effected. The makers are sending out their useful appliance complete with the necessary vulcanizing materials, clamp, scissors, rasp, and all accessories; and the instructions are so easily followed that the ease and simplicity of operation may be regarded as further points in favour of Messrs. Gornall's Electric Vulcanizer.

THE Accident Insurance coupon which has been identified with the diaries and pocket-books of Messrs. Charles Letts and Co., 3, Royal Exchange, London, E.C., since 1895, has proved a most popular feature, no less than 200,000 insurance registrations in connection with this firm's annual publications having been effected. The various diaries for 1909 indicate that the publishers are determined to keep well to the fore in this connection, their self-opening pocket diaries, leather cases, &c., being of excellent quality and well designed with a view to facilitating reference to the memoranda made. Several varieties of these pocket publications are before the public, and the varied selection gives opportunity for everyone to find something suited to his particular needs.

THERE will be no motor exhibition in Ireland during 1909, the Irish A.C. having abandoned the idea of holding the same.

A MOTOR-CAR driver has been charged at Epsom for permitting another person to ride on the driving box. Pleading ignorance of the law, his case was dismissed on the payment of costs.

THE "Douche Pneu," described and illustrated in our report of the Paris Salon, is, we learn, being introduced into this country by Messrs. Woollett, Airey and Co., Ltd., 28-30, Lime Street, London, E.C.

THE Canterbury Farmers' Club has passed a resolution asking the Motor Union, and also the Central Chamber of Agriculture, to call attention to the way in which some motorists drive along the centre of the roadway until quite close to an approaching vehicle.

THE commodious establishment for automobiles which Mr. P. M. Carmichael is erecting in King Street, Brighton, should prove of great convenience to motorists visiting London-by-the-Sea. It will be known as the Prudential Garage, and will shortly be made the occasion of a public opening.

FROM Ariel Motors comes a copy of the 1909 catalogue of Ariel cars; this is a very handsome production and contains full descriptions, together with many illustrations of the various types of Ariel cars that are being turned out for the 1909 season, and some particulars of which have been given in our report of the recent Exhibition at Olympia.

A NEW booklet, "All About Speedometers," has just been published for Messrs. W. Searle and Co., of 33, Glasshouse Street, W. It, of course, deals particularly with the design and operation of the "O.S." first-prize speedometer, but will be none the less interesting on that account, and the general matter included should prove instructive to all present or potential users of speed and mileage recording instruments.

WE learn from the Société des Pétroles de Groeniy (Russie) of 107, Leadenhall Street, E.C., that the P.G.R. motor spirit is now being supplied in three grades, viz., light with a specific gravity of .700 to .710; ordinary, .720 to .725; and heavy, .750 to .760. Arrangements have also been completed whereby the spirit can be obtained from all the principal garages and ironmongery establishments throughout the country.

THE Electrical and Motor Company, of Banbury, have opened a depot, for the convenience of tourists, opposite Banbury Cross, where they will keep a stock of petrol, oils, grease, tyres and accessories. They have no garage accommodation there, but a vulcaniser has been fitted up and the place is in touch with the company's main depot, where they have accommodation for fifty cars, and an up-to-date plant with competent mechanics.

REPLYING to the deputation from the L.C.C. which waited upon him to advocate the setting up of a traffic authority for London, the Premier promised careful attention to the point raised. The Government now had the advantage at the Board of Trade of having the skilled advice of the new Traffic Department. The Home Office was also interested, as was the Local Government Board and the Board of Trade, and no conclusion could be come to without a consultation between those Departments.

THE Anglo-American Oil Company, Ltd., 22, Billiter Street, London, E.C., are adopting new brand names for their spirit. Pratt's spirit will be known as Pratt's Perfection Spirit, and their 760 spirit will in future be called Anglo's Taxibus Spirit. The company have arranged to have these brands sealed with a new "silver" seal, and an item of interest to readers is the fact that they are now giving 5s. for every 100 of these seals returned.

WE learn from the Continental traffic manager of the London, Brighton, and South Coast Railway, that a crane capable of lifting five tons has now been installed on the quay at Dieppe, opposite the berths of the Newhaven-Dieppe steamers, thus enabling motor-cars to be shipped and unshipped at Dieppe as well as at Newhaven, irrespective of the state of the tide. This has added greatly to the convenience of the route, the more so as cars not exceeding 30 cwt. are conveyed by any of the passenger boats, while those exceeding that weight can be carried on the majority of the steamers.

The Olympia Show.



(Concluded from page 858.)

IN concluding our report of the recent show at Olympia it may be mentioned that instead of endeavouring to compress it into a single issue by giving brief and necessarily incomplete notices of the exhibits, we have preferred, for the sake of many of our readers who were not able to visit the exhibition, to deal at greater length with the vehicles on view that comprised points of interest.

The Lorraine-Dietrich Voiturette.

An interesting addition was made during show week to the stand of the LORRAINE-DIETRICH COMPANY, in the shape of a little car, illustrated in Fig. 94. The vehicle, which has been introduced to meet the demand for a speedy two-seated machine, is fitted with an engine, the

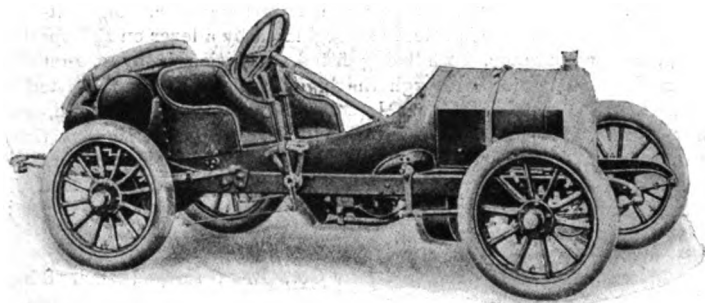


Fig. 94.—The Lorraine-Dietrich 10-h.p. Two-Seated Car.

four cylinders (65 mm. bore by 110 mm. stroke) of which, together with the admission and exhaust piping, are cast in one piece. As will be seen from Fig. 95, the valves are operated by an enclosed overhead cam shaft driven through a vertical spindle and gearing at the front end of the motor. The latter, which is rated at 10-h.p., normally runs at 1,500 revolutions, but is capable of running much faster, and consequently developing greater power. The transmission is through a disc clutch, four-speed gear-box, to a live axle. The cardan shaft is supported by ball bearings in a steel tube, which acts as a torque rod. An improved type of universal joint, which is completely enclosed and self-lubricating, is fitted at the front end of the shaft. The live axle is enclosed in a sleeve constructed of two pressed steel pieces bolted vertically together at the top and bottom, a system which combines relative lightness with extreme rigidity.

The Pilain Cars.

Three examples of Pilain vehicles were shown by Mr. E. D. HEINEMANN—viz., 18-h.p., 24-h.p., and 35-h.p., all provided with motors having four cylinders. The 24-h.p. was fitted with a very handsome limousine body, a notable feature of which is that all the accessories, including the lamps, are locked in position, so that there is little likelihood of any of them being stolen, the owner of the car retaining one key for the lot. The 35-h.p. touring car is also an attractive vehicle; it is built somewhat lower than usual, giving it a very comfortable and speedy appearance. On both the foregoing vehicles the transmission from the clutch to the gear-box is by means of a cardan shaft. Four speeds are provided, both the third and fourth being direct drives. This is obtained by dog clutches engaging with the respective bevel pinions. The third-speed bevel-pinion shaft is, in fact, a sleeve fitting loosely on the main shaft carrying the fourth-speed bevel, and of course engages with its particular crown wheel carried on the differential shaft. The latter is provided with universal joints at each end, through which power is conveyed to short cardan shafts on each side, which in turn convey power to the rear road wheels through the intermediary of a spur wheel engaging with an internally-toothed ring rigidly fixed to the wheels. The 18-h.p. car, which is an entirely new model, is provided with a somewhat novel form of transmission. The rear road wheels are supported on a fixed axle, which curves towards the rear. The gear-box is located much nearer the end of the frame than usual, and is built up in one with the differential case, from the side of which extend short cardan shafts, passing through the hollowed ends of the

fixed axle into the hubs of the rear road wheels, which they drive through the medium of special joints. There are many other points of interest in the Pilain cars, the designer of which has apparently endeavoured to get away from the conventional lines of transmission by means which appear to be giving excellent results in practice.

The Belsize Cars.

Among the cars that have steadily gained in popularity during the past few years are those of BELSIZE MOTORS, LTD., Manchester. The vehicle which is attracting considerable attention at the present time is the 14-16-h.p. four-cylinder, which is noticeable for its extremely moderate price. A few slight changes have been introduced in the chassis for the 1909 season. The four cylinders (90 mm. bore by 101 mm. stroke) have the valves all operated off a single cam shaft. The water circulation is by thermo-syphon, while the mixture is furnished by a White and Poppe automatic carburettor. Special attention has been devoted to the question of engine lubrication, which is now maintained by a gear-driven pump. The transmission is through a metal-to-metal cone clutch and three-speed gear-box, giving a direct drive on top to the live axle. The brakes are arranged reversely to the usual method, the pedal actuating those on the hubs of the rear road wheels, and the hand lever a wide brake at the back of the gear-box. A new model is the 28-h.p., which follows the usual Belsize lines; in this case, however, the valves are arranged on opposite sides. Two systems of ignition are fitted, while a clutch of the Hele-Shaw disc type transmits the power to the gear-box. Other Belsize cars include a 20-h.p. four-cylinder and a 40-h.p. six-cylinder.

The Roydale Cars.

The ROYDALE ENGINEERING COMPANY, Huddersfield, were present with two polished chassis of the Roydale vehicles of respectively 18-22-h.p. and 25-30-h.p., both having engines the four cylinders of which are cast in one piece. There are many points of interest in these vehicles, among them being an automatic carburettor with variable choke tube, which is very simple in its action, while allowing the mixture to automatically adjust itself according to the speed of the motor. Ignition is by Simms-Bosch gear-driven high-tension magneto, accumulators and

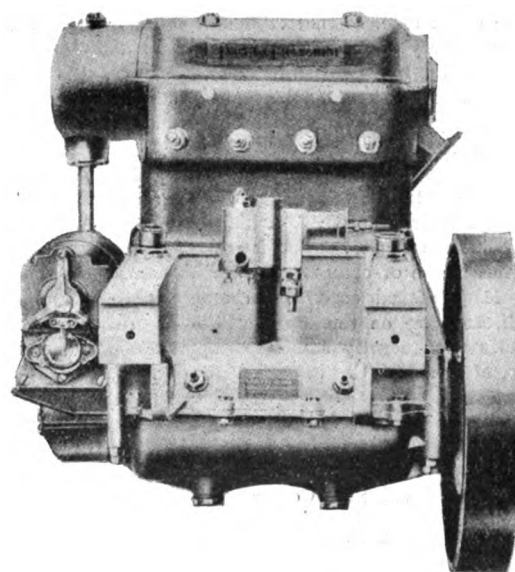


Fig. 95.—View of Engine of Lorraine-Dietrich 10-h.p. Light Car.

coil being provided as a reserve ignition system. The throttle is arranged to be operated in three ways—by a hand lever on the steering wheel, by an accelerator pedal, and automatically when the clutch is withdrawn. The gear-box furnishes three forward speeds, with a direct drive on the top, through a double-jointed propeller shaft to a live axle. The shafts of the gear-box run on roller bearings, while the universal joints are entirely enclosed and run in oil.

The Valveless Car.

Since we described the Valveless car, in our issue of November 30th, 1907, the makers, VALVELESS, LTD., while retaining their special type of two-cycle engine, have entirely redesigned the vehicle, which now in general appearance closely follows the lines of a standard live-axle machine, the motor being located under a bonnet in the front portion of the frame. The exhibit comprised a 25-h.p. chassis, and a vehicle of similar power fitted with a handsome limousine body. As regards the motor, it may briefly be mentioned that it has neither valves,

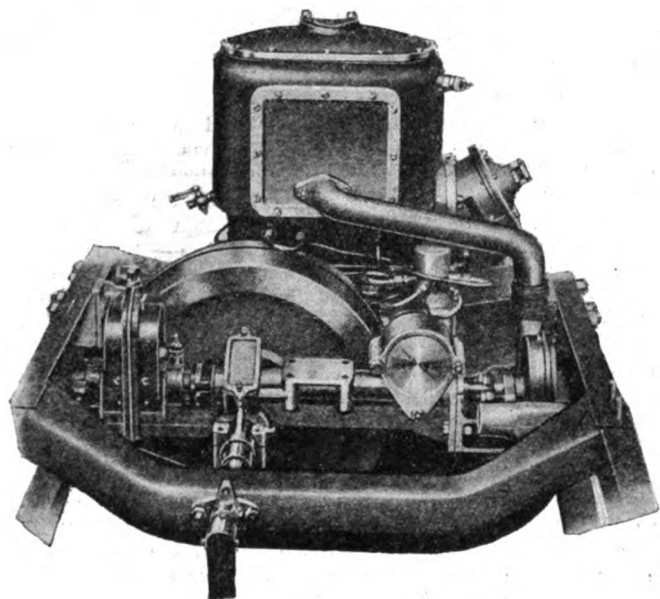


Fig. 96.—Front View of Chassis of "Valveless" Car, showing the two-cycle engine and the cross-shaft actuating the magneto, the oil pump and the water-circulating pump.

valve tappets, nor cam shafts. Two vertical cylinders ($5\frac{1}{2}$ in. by $5\frac{1}{2}$ in. stroke), placed side by side, share in common a single combustion chamber, carburettor, air-tight crank case, inlet port, exhaust port, and ignition. Each cylinder has a piston, each operating its own crank shaft; the latter revolve in opposite directions, and are geared together by teeth cut on the disc webs. The action of the engine is such that while one charge is being used in the cylinders another is being prepared in the crank case, so that explosion takes place at every revolution, as against every other revolution in the ordinary four-cycle engine. The ignition is by high-tension magneto, and, as the two cylinders have a common combustion chamber, only one sparking plug and one wire are necessary. The lubrication is effected by a special valveless pump, driven, like the magneto and water-circulating pump, by a cross shaft in front of the engine, actuated by skew gear off one of the crankshafts, the latter being slightly *desaxé*, and also mounted on ball bearings. The normal speed, at which 25-h.p. is developed, is 1,000 revolutions, but the engine, which is stated to comprise only six working parts, is capable of considerable acceleration. The transmission is through a leather-faced cone clutch and a gate-controlled gear-box, giving a direct drive on the top speed to the rear live axle. One of these vehicles was recently submitted to a 1,000-mile trial under the observation of the R.A.C., in which the involuntary stoppages only amounted to one minute. The petrol consumption worked out at 19.1 miles per gallon, and that of lubricating oil .7 pint per 100 miles. We understand that arrangements have been concluded whereby Messrs. David Brown and Sons, Huddersfield, are taking up the construction of the cars for the Valveless Company.

The Straker-Squire Car.

For the 1909 season Messrs. STRAKER AND SQUIRE, LTD., are confining their attention to a single type of chassis—a 14-16-h.p., which, introduced about a year ago as the "Shamrock," is now known as the "Straker-Squire." The motor comprises four cylinders cast in pairs, 87 mm. bore by 85 mm. stroke, the valves being arranged on one side. The ignition is by high-tension magneto, provision being made for installing coil and accumulators as a reserve. The water circulation is on the thermo-siphon system, no pump being employed. The clutch is of the leather-faced cone type. The gear-box is adapted to give three forward speeds in addition to the reverse, the transmission being by

cardan shaft and bevel gear to a live axle. The latter is specially designed to give ample strength together with immediate accessibility. The differential case consists of a solid steel casting with a large door in front. In order to take out the differential, it is only necessary to remove the hub caps, withdraw the driving shafts, take off the large plate at the back of the case, when the bevel and differential gear can be withdrawn. The complete cars on view included a two-seater, a four-seater with Roi des Belges side-entrance body, a single landaulet, and a light runabout having two comfortable bucket seats, tool-box, luggage rail and wind shield.

The Stella Car.

Coach work of a notable degree of finish and incorporating some interesting points was shown by Messrs. E. and H. HORA, LTD., of Peckham Road, London, S.E. On a four-cylinder 16-h.p. Stella car was a good type of landaulet, with extension canopy. A Stella low phaeton was shown, to which the firm's "Perfect" hood was fitted, and the exhibits also included a good type of body for the use of doctors and a Roi de Belges phaeton on a Darracq chassis. Messrs. E. and H. Hora, Ltd., are making excellent bodies for the Stella car. In this the 16-h.p. engine has four cylinders, cast in pairs. The mechanical valves are interchangeable. A float-feed multiple-jet carburettor is fitted, and regulated by a lever on the steering wheel and accelerator, both being fitted. Ignition is by low-tension Simms-Bosch magneto, although the high-tension type can be fitted if desired. The clutch is of the leather-faced external cone type, and transmission is by cardan shaft from the gear-box, which has three speeds and a reverse, worked by a lever in a "gate." The chassis is fitted with three brakes and with coach work by Messrs. E. and H. Hora should prove popular.

Jackson Cars.

Messrs. REYNOLD JACKSON AND CO., LTD., showed their 8-h.p. single cylinder Jackson's doctor's car, a chassis of the same vehicle, a dog-cart, and their No. 8 Jackson car. The latter has recently been illustrated in our columns, and has a racing look that is attractive. All the principal working parts are located under the bonnet, thus rendering the car very accessible. Speaking of the range of single-cylinder vehicles shown, they were fitted with De Dion engines. Transmission is by cardan shaft, and the direct drive on the top speed is attained by a device which throws all the other speed gears out of mesh when this is in use. An efficient and automatic system of lubrica-

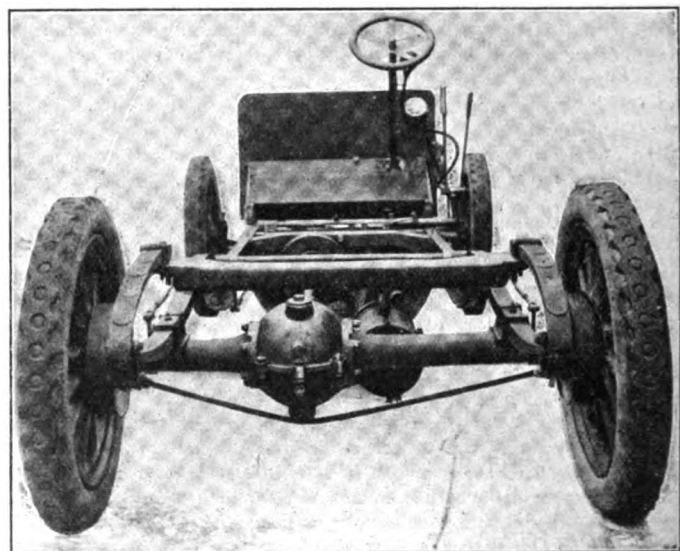


Fig. 97.—Rear View of Chassis of "Valveless" 25-h.p. Live Axle Car.

tion has been adopted in connection with the bearings of the two shafts in the gear-boxes. This is secured by the provision of oil boxes, which are filled with oil; against these metal rings are carried, which, revolving with the shafts, convey oil to the bearings—a plan carried out on all the bearings on the car. The foot and hand brakes are double acting. The dogcarts are easily convertible into two-seated vehicles, and the doctor's cart shown was an equally useful vehicle. Those who are prospective owners of a small car will not fail to investigate the merits of the Jackson vehicles.

The Weigel Cars.

Interest was general in the exhibit of Messrs. WEIGEL MOTORS (1907), Ltd., which included four-cylinder chassis of 25-h.p. (110 mm. bore by 120 mm. stroke), 40-h.p. (130 mm. bore by 140 mm. stroke), and a six-cylinder 60-h.p., with 130 mm. bore and 140 mm. stroke. During the season special attention will be devoted to the 40-h.p. car. The cylinders of this are cast in pairs, with the carburettor fitted between the two. The valves are on both sides, and are interchangeable. The magneto is of the low-tension type, and driven off the timing gear on one side of the engine, the water-circulating pump being similarly driven on the other. Transmission is through a multiple disc clutch, the gear-box having four speeds on a gate change. The drive passes through a propeller shaft, universally jointed at each end, to the back axle, which is provided with a torque rod. In the 25-h.p. model high-tension magneto is adopted, and the 60-h.p. is identical with the 40-h.p. model, with, of course, the difference in the number of cylinders.

The Vinot Cars.

Interest at the stand of Messrs. T. J. HARMAN AND CO. was centred on the chassis of the Vinot 16-h.p. car, some few particulars of which have already been given. The new vehicle is fitted with a four-cylinder engine, 80 mm. bore by 110 mm. stroke. The valves are all operated off a single cam shaft, and in order to render them more accessible, the carburettor is located on the opposite side, and the admission pipe brought over the top of the cylinders. The ignition is by Bosch high-tension magneto, and the mixture furnished by a carburettor of the Claudel automatic type. The control of the motor is by a single lever acting on the throttle, the ignition being fixed. The water circulating pump and high-tension magneto, which are driven off one shaft, are so arranged that either can be readily detached without disturbing the other. The Vinot patent clutch and gear-box are fitted, the latter giving three speeds. The final transmission is by a propeller shaft and bevel gear to a live axle of exceptionally strong design, it being similar to that employed on the firm's "four-inch" car. The motor is claimed to not only be economical—the petrol consumption being 30 miles to the gallon—but extremely flexible, it being able to drive the car on top gear at any speed from five to 45 miles per hour. Other cars on view included a 16-h.p. landaulet suitable for doctors and town use, a 16-h.p. side-entrance car, and a 24-h.p. fitted with a special "all-weather" body by Salmon and Sons. When the body is closed, the whole of the occupants of this vehicle, including the driver, are sheltered from wind and weather, while a window that extends across the whole width of the carriage enables the back portion to be closed while the front is open, or vice versa, the driver and his companion on the box-seat can be enclosed while the back is entirely open.

Messrs. Cole's Coach Work.

Some idea of the skill and art which has been introduced into motor-body building was shown by Messrs. W. COLE AND SONS, LTD., 92, High Street, Kensington, London, W., whose display was a most artistic one. The central feature was the landaulet-limousine on a 14-20-h.p. Renault chassis—a most effective body, that stood out well in its rich blue colouring, with rails of a somewhat lighter hue, and picked out in black and white fine lines. Apart from the colouring, the sweep of the lines and the graceful outline of the body was notable even in a section where the whole range of coach work was really noteworthy. It was fitted with a wind screen, secured with a half turn of a thumb screw. The other exhibit was a limousine of equally good and bold design on a 30-40-h.p. four-cylinder Ariel. A fitment in connection with this merits mention, viz., a carrier for spare tyres, which is bolted to the footboard. It is detached or attached by unhooking a chain, which allows the hinged side to fall away.

Coachwork from Reading.

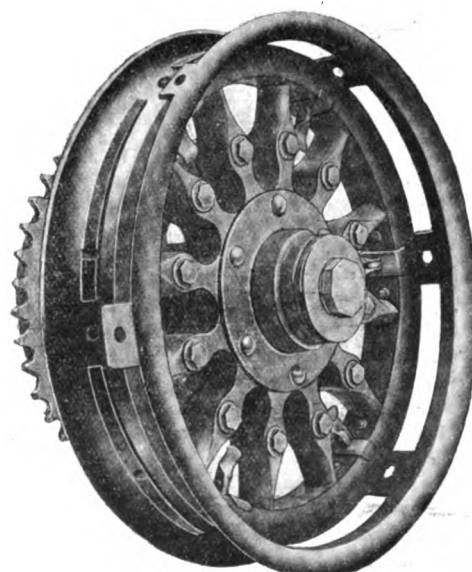
Among the excellent displays of carriage work which were shown in the Annexe, the exhibit of Mr. W. VINCENT, of Reading, was conspicuously noteworthy. This gentleman has specialised for some years on high-class motor bodies, which deserve to be designated as carriages, and evidence of his taste and skill in that direction was forthcoming in the luxurious limousine body fitted to an 18-h.p. Panhard 1909 type. Arranged to carry five persons comfortably inside, it proved commodious as well as attractive in appearance. The inside was full of refinements, such as flower-holders, plate-glass windows, an artistically moulded ceiling coloured to match the dove-grey upholstery—altogether a rich example of coachwork. The 18-20-h.p. Unic, with cabriolet body, on the same stand, was easily convertible to either an open or closed carriage, and was shown fitted with a "Reading" collapsible wind screen.

SOME ACCESSORY EXHIBITS.**The Shaw-Kirsop Detachable Rim.**

One of the most simple of the detachable rims shown in the Gallery was that which drew special notice to the stand of the HUTCHINSON TYRE COMPANY. This is known as the Shaw-Kirsop detachable rim, by the adoption of which the detachment of the tyre, the insertion of a new tube, and the replacement of the device is accomplished within a minimum of time, two minutes being allowed the operators on the stand. This is done by the use of the expanding

**Fig. 98.—The Shaw-Kirsop Band.**

and contracting band shown in Fig. 98. This is an auxiliary device, and is, as will be seen from the illustration, provided with a number of incurved hooks or lips, which engage with the thickened edges of the tyre. In Fig. 99 we show the wheel, to which one part of the rim itself is permanently shrunk on. The second portion is detachable. Operation is simple; the tyre attached to the band is pushed on to the permanent part of the rim, and when it is placed in position the detachable part of the rim is inserted, and locked automatically with the spring-controlled bolts shown on the wheel. The security

**Fig. 99.—The Shaw-Kirsop Detachable Rim.**

bolts are fixed to the bands, and the whole device attains a degree of security that is highly satisfactory. It will be noted that no tools are required, the means of fastening all being provided on the wheel itself, while the absence of loose parts is much to be commended. Further, an auxiliary band can be carried with a spare tyre without any difficulty; the band weighing, with the four security bolts, only 2 lb. When it is fixed the rim is practically watertight, this preventing all risk of damage to the tyre beading by wet. We understand

that before being brought forward into public view the Shaw-Kirsop rim has undergone a series of tests on a 40-h.p. car, with results that have justified its confident introduction by the Hutchinson Tyre Company.

Bowden Specialities.

Motorists always show keen interest in the display staged by the E. M. BOWDEN'S PATENT SYNDICATE, of Gray's Inn Road, London, E.C., who generally take advantage of the show to introduce useful novelties to the public. Many of the exhibits were familiar, particularly Miraculum, which is known in connection with punctured tyres; the Bowden automatic air inlet, which has proved its economy so far as the consumption of fuel is concerned in many public competitions; the well-known petrol strainer of the firm; and the Bowden wire mechanism in its various forms. The exhibit included several adaptations of the mechanism for the service of motorists, among them being wheel controls, carburettor agitators, and the like. A new steering wheel control lever working in ratchet segments was shown.

Lowe, Bevan's Wind Screens.

One of the most comprehensive collections of body builders' ironmongery and fittings for motor-cars was that made by Messrs. LOWE, BEVAN AND Co., of the Clarence Works, Birmingham. Several new designs of folding wind screens were staged, the special novelty being "The Royal" patent wind screen, which is suitable for landaulet or limousine bodies. This is illustrated in Fig. 100, and, as will be apparent, is so made that the front folding glass can be set forward at any angle. This is done in a very simple way with a single move-

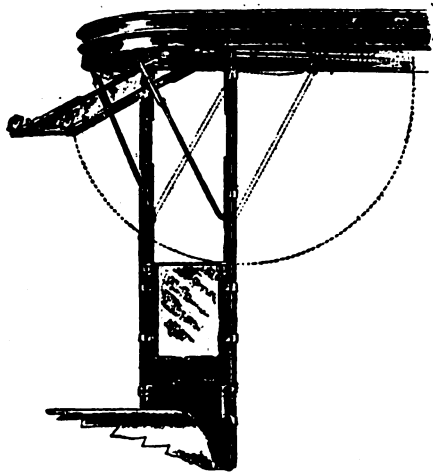


Fig. 100.—"The Royal" Wind Shield.

ment, there being no screws to release or tighten up. It is simply pressed forward to the desired position, and there, as will be seen, it will remain. It works equally well in the opposite direction, when the swinging glass can be stored away in the roof of the canopy. As a simple and useful wind screen "The Royal" is one of the best things of the kind that was in the Show. Another excellent type was the "Kenilworth" folding wind screen, the fittings of which are so arranged that the bottom half of the screen can be regulated at any required angle, or the bottom half can be placed in an upright position and the top portion half-angled towards the steering wheel. It can be used as a straight screen or half folded down to form a half screen. All these combinations are easily manipulated, and the "Kenilworth" will doubtless be seen on many cars during the coming season. Several other types of screens were shown, as well as various patent fittings. We noticed in connection with the latter that the firm are making a point of producing these in oxydised metal as well as in brass, these being to meet the demand for a quieter appearance which is apparently coming along.

The Aster Engines.

On the stand of the ASTER ENGINEERING COMPANY, LTD., of Wembley, Middlesex, was seen a complete range of the Aster engines, a new type of carburettor, and various components of the high grade character associated with the Aster name. The engines ranged from those of 9-h.p. single-cylinder to 35-h.p. four-cylinder. Chief interest centred in a new 14-h.p. four-cylinder engine. The cylinders are all one casting, their dimensions being 75 mm. bore by 100 mm. stroke. Mechanically

operated valves are fitted, the operation being by a cam shaft on the near side; the inlet and exhaust pipes are cast with the cylinder, without interference with the water jacket space. There is a removable driving flange at the rear end of the crank shaft, enabling it to pass through the rear main bearing. The connecting rods are fixed to the bearings by means of studs and nuts. An oil gear pump at the rear end of the crank chamber oil sump is provided for lubrication. The Eisemann high-tension magneto is carried on a bracket on the near side of the crank chamber. On this stand, too, was the "Aster" carburettor, made under Hamilton's patent. In this the throttle valve is incorporated in the device forming part of the carburettor, and thus making it thoroughly self-contained. This throttle valve consists of a barrel with suitable ports cut in it. This slides horizontally inside the body of the carburettor, regulating simultaneously the quantity of mixture passing to the engine and the quantity of air admitted to the vapourising chamber. The air valve is readily adjustable to any changed condition in the weather, and an automatic air valve is also fitted to compensate for any sudden change of depression due to rapid acceleration, thus preventing any tendency to choking, and securing smoothness in running.

United Motor Industries.

Already we have illustrated one of the specialities shown by the UNITED MOTOR INDUSTRIES, LTD., 46, Poland Street, London, W., viz., the Simplex speedometer, which, with its clockface on the same dial as that travelled by the speed indicating pointer, presented an interesting novelty. We would now conclude our review by mention of the "County" wind screen, the "L.M. de Luxe" porcelain plugs, the "Wagner" electric horn, the "Bousfield" silencers, the "Castle" accumulators, the "Castle" condenser induction coils, and other excellent and standard accessories of which the "Eisemann" self-contained magneto is not the least interesting. This new type of magneto, which the United Motor Industries, Ltd., represent in this country, is distinguished by the strength of the spark, the compact form, and the high-class finish. A system of dual ignition has also been introduced, the contact-breaker for the magneto current being also used for the battery circuit. The induction coil for the latter is mounted in a case also containing the switch. The handle of the latter is in the form of a push-button, which thus enables the device to be a self-starter. Mr. G. H. Smith also showed us the "Castle" accumulators, which are now being fitted with a new plate fastening. All the plates are separated at the top and bottom by lugs which project from the plates into round holes in the perforated celluloid which is placed at each end, upper and lower, of the plate. Thus held, the usual separators become unnecessary, and the arrangement secures greater efficiency being obtained from the plates. The "Castle" accumulators are provided with a new terminal that is absolutely non-corrodible and—a new feature—bear a label with the actual capacity rate as decided upon by the S.M.M.T. The wind shield has a simple and excellent arrangement for the prevention of rattling sometimes associated with devices of the kind. In the channel of the wooden frame in which the glass is fixed is placed a cloth bed, upon which the glass rests, with a lining of soft phosphor bronze to even more effectually prevent the effects of the vibration to which a wind shield is normally exposed.

Prested Electrical Specialities.

To motorists the PRESTED MINERS' LAMP COMPANY, LTD., of Elthorne Road, Holloway, London, N., are well known owing to the first-class reputation they have enjoyed in the motor world since they began to cater for its requirements. Their display included electric lamps, charging boards, switches, high and low tension cable, &c., as well as the Prested battery, coil, plug, and commutator, and a new combination set for standard or supplementary ignition. Mention may be made of the four-cylinder synchronised coil, which secures a fierce spark with a low consumption of current. Type A was the model on view, and is a good pattern of coil. In this type each unit is self-contained, fitted with its own trembler and condenser, and is interchangeable. For light cars the Prested Company have brought out a type B, in which the spark is equally as fierce as in the one just referred to, and the consumption is economical, but the units are not interchangeable. This pattern is only 4½ in. from the back to the front—a point worthy of consideration in cases where the distance from the dashboard to the driver's seat is not great. In the Prested batteries for the new season an improved plate of great capacity is fitted. They are also fitted with a patent lead, making the corrosion of the terminal from creeping of the acid impossible. Every plate is laterally supported, so that the battery can withstand any vibration to which it may be subjected. We would add a word about the Prested

spark plug, which has been before the public many years, winning continuous confidence from motorists of a practical bent, one of whom has ridden 25,000 miles, always using the same plug, one of this make.

Garage's Mecca.

Naturally motorists expected to find a full selection of accessories of every description at the stand of Messrs. A. W. GAMAGE, LTD., of Holborn. It was not inappropriately termed the Motorists' Mecca, the exhibits comprising clothing for drivers of all degrees, trunks and other touring conveniences, speed indicators—of which the firm have a full selection—tyres and non-skids, lamps, horns, wind screens, and, in fact, everything, from jacks for hoisting the car to spare tyre cases for attaching to the top. Nothing seems too small for this firm to handle, and any ingenious idea for the convenience of motorists seems to be within their ken. Thus they showed a simple umbrella clip, which is screwed on to the interior of a car, in order to save the paint work from being scratched. In rear lamps, too, were several good ideas, including that known as the Colmore. This is constructed so that in the event of the door being thrown open by vibration or any other cause the burner is not likely to be lost, as it is secured by a screw. Not, perhaps, a great point, but one of those little fitments that mean much to the motorist. Most of the standard accessories which have become known both to private owners and garage proprietors were on this representative stand.

The Rotax Specialities.

Preliminary announcements prepared the public for the novelties at the stand of the ROTAX MOTOR AND CYCLE COMPANY, of Great Eastern Street, E.C. They proved a really interesting collection, notable among them being the vulcaniser, the lamp bracket, foot warmer, and the collapsible steps already described and illustrated in our columns. With regard to the latter, the further illustration in Fig. 101 will be of interest, this showing the device when collapsed and out of the way.

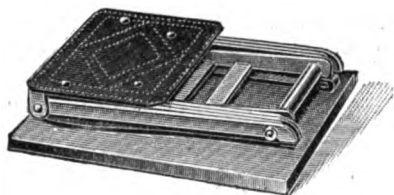


Fig. 101.

The Rotax synchronised coils were also on the stand, and attention may be directed to the accumulators of the firm, in which celluloid separators are adopted, to obviate the possibility of short-circuiting. For this department the company issue a special list, entitled Rotax Ignition, which, with its wiring diagrams, as well as illustrations of other standard devices, will be of great service to motorists generally. Several new designs in lamps were on view, as well as an assortment of motor body and coach builders' fittings.

The Barker Tyre.

The Barker tyre is distinguished by its strength and also its durable qualities. The feature in construction is not only that the canvas embodied has four times the tensile strength of the fabric usually employed, but the grooves which occur laterally across the tyre are supplemented by others placed longitudinally in pairs between these. This excellent device was shown on the stand of Messrs. MACINTOSH AND SON, but is being marketed by Messrs. JOHN BARKER AND CO., LTD., of Kensington, W.

The Ajax Non-Skid Tyre.

At the stand of the MIDLAND RUBBER COMPANY, LTD., of Birmingham, who introduced the Ajax detachable rim, was the Ajax non-skid—a very sensibly-arranged combination of rubber and metal. On the outer edges of the tread are continuous rubber ribs all around the tyre; on the inside of these are rows of rubber studs, while the central space is occupied with a row of special triplicate metal studs. In addition the company showed examples of their armoured tyres, fitted with hardened steel studs of the ordinary type.

Challiner's Rim.

From Kay Street, Ardwick Green, Manchester, came the SHREWSBURY AND CHALLINER TYRE COMPANY, LTD., with a selection of their specialities in carriage and wheel work. Several excellent artillery pattern motor wheels were on view as well as an assortment of tyre

accessories, mainly in connection with the firm's own tyres, covers, &c. The Challiner patent detachable rim has become a familiar feature of these shows, and its merits are receiving increasing recognition from motorists. Its essential features are a fixed rim with a detachable side which is fixed by means of eight nuts. These removed, the tyre on the rim can be promptly pulled away. The device is easily attached or detached, while it is equally satisfactory on the ground of security.

The Jenatzy Tyres.

Messrs. H. M. HOBSON, LTD., had an exhibit of the Jenatzy tyres at their stand in the Gallery. The merits claimed for this tyre are resilience, strength and durability—qualities obtained by the use of special rubbers and fabrics in building up the tyre. A speciality on the stand was the Jenatzy-Houben non-skid cover, which is made with a patent tread composed of alternating hardened steel rivets and leather washers—a plan which is claimed to entirely prevent skidding. Several accessories in connection with tyres were also on view, the firm being well able to undertake repairs and replacements from their establishment at 29, Vauxhall Bridge Road, London, S.E.

Miscellaneous.

The Siemens Obach dry cells for use with Siemen's ignition coils were exhibited by Messrs. SIEMENS BROS. AND CO., LTD., whose display also included high and low tension motor-car flexible leads in standard sizes.

An interesting display was made by Messrs. DAVID MOSELEY AND SONS, LTD., of Manchester, who showed their tough grey inner tubes, as well as their "detachable" tyres, both of the plain and studded non-skid variety.

The ACETYLENE ILLUMINATING COMPANY, LTD., drew attention to their dissolved acetylene lighting outfits for service on automobiles, and also showed the "Sioco" tyre inflators and other well-known adjuncts to automobilism.

At the stand of the SELF-SEALING RUBBER COMPANY, of Ryland Street, Birmingham, was a motor tyre with a flat tread, the feature of which consists in the longitudinal groove and also lateral ones, securing the tyre against any propensity to side slip.

A useful display of electrical accessories was made by Messrs. THOMSON-BENNETT, LTD., of Heneage Street, Birmingham, their fittings including the standard wipe type of distributor, the new "Arden" plug, and several other specialities of good design and finish.

A goodly collection of accessories was staged by the MOTOR ACCESSORIES COMPANY, of 55, Great Marlborough Street, these including the "Mac" specialities, among which were whistles, jacks, luggage carriers, generators, horns, &c. The Fanfare headlight was also on their stand.

Pneumatic tyres of the Gaulois make were shown by Messrs. GAULOIS TYRES, LTD., of 60, Great Marlborough Street, London, W., who also exhibited the Gaulois-Ferre non-skid tyres and the Gaulois air tubes. Here, too, was the Doolittle detachable rim, made by the company of that name at Fleet Street, Coventry.

Ball-bearings of the "F. and S." type were the speciality on the stand of the "TORMO" MANUFACTURING COMPANY, of 67 and 68, Bunhill Row, London, E.C., whose exhibits also included balls in copper, phosphor bronze, gun-metal, and brass. The bearings have a cage with helicoidally cut grooves, by means of which the balls are sprung into position.

Much interest was evidenced in the carburettor introduced by Messrs. BROWN AND BARLOW, LTD., of Birmingham, who made a useful display of their specialities. These are adaptable for engines ranging from 3 to 4½ in. in the bore, and from one to six cylinders. The device has four main parts, the float chamber, the base of the spraying chamber, the carburettor chamber proper, and the hot-air inlet—evidence of the simplicity of the device.

Mr. E. J. HARDY, of Bishop Street, Coventry, who is the agent for the Longuemare carburettor, made full use of his stand to make a bold show of the many goods which he handles. These include the Guenet coils, fitted with Carpentier tremblers, the "Godiva" mica-porcelain plugs, "Dependence" lamps, voltmeters, and the fifty and one instruments of similar character now available in connection with motor-cars.

WE understand that not only has the London and Paris Exchange Motor Agency, Ltd., recently received a large number of inquiries concerning the conversion of second-hand cars into light delivery vans, but that they have received numerous orders from medical men who are now adopting motor vehicles for professional purposes.

Correspondence.

[Letters to the Editor should be addressed to the offices, 27-33, Charing Cross Road, London, W.C.]

NEW MOTOR-CAR LICENSING PROVISIONS.

To THE EDITOR OF *The Motor-Car Journal*.

SIR.—I have not as yet seen any reference to the great change made by the Finance Act of this year in respect of certain Inland Revenue licences, and as motor-car owners are much interested I am sending you a resume of the provisions. The amounts received for carriages, motors, dogs, armorial bearings, male servants, gun licences, game, &c., have hitherto been collected mainly by postmasters and sent to the Inland Revenue authorities. On and after January 1st, 1909, all such licences must be taken out at post offices and the amounts paid in to the county council or county borough in which the post office is situate, instead of the Inland Revenue Department, as at present.

The control is transferred from the Treasury to the county and county borough councils, who will take the whole of the proceeds. These councils, therefore, in addition to the fees for driving licences and for registration of motors, will have a direct interest in the other licences, taking the whole of the money. May we hope, when these authorities realise how much motorists pay for licences, that they will cease to agitate for more road upkeep? The exchequer contribution which has hitherto been paid by the Treasury to the local authorities will, of course, cease on December 31st this year. The Act will come into operation on January 1st, 1909. The forms for licences must be requisitioned from the Local Government Board. Envelopes and special printing, &c., will not be supplied by the Local Government Board. Enquiries as to licences, &c., to go to the clerk to the county council or to the town clerk in a county borough. Some system of intercommunication between councils to be established to prevent fraud, &c.



The Village Cage, Lingfield, Surrey.

The Cage was once used as a temporary lock-up for drunk or disorderly persons.

Registers to be kept by the councils.

Records of Inland Revenue officers are to be at the disposal of the councils.

Certain notices are to be posted on church doors.

A return of penalties inflicted and duties repaid to be sent to the Local Government Board annually.

The money is to go to the council in which the post office is situate where the licence has been obtained, without regard to residence.

The council must detect and prosecute offenders and appoint officers for the purpose.

The council is not to be subject to the control of the Treasury.

There are no restrictions as to arrangements to be made by the councils.

Councils may delegate their powers to a committee.

The councils must send out the forms for the licences.

All the powers of the Inland Revenue Commissioners are conferred on the councils except the printing and prescribing the forms, issuing the licences, and the power of distraint and arrest.

The public to be subject to the same obligations and penalties to officers of the Corporation as now to Revenue officers.

A weekly return of licences granted to be sent to the councils by the various postmasters.

The Postmaster-General will remit to the councils from time to time the amounts received for licences.

£40,000 to be distributed among the county and borough councils to cover cost of collection.

Part of the penalties to go to the council and part to the Police Superannuation Fund.

Notices of exemption granted at petty sessions to be sent to the council by the clerk to the justices, and the council thereupon to give a certificate.—Yours truly,

T. SCOTT FOSTER.

Chairman of Finance Committee of the Portsmouth County Borough Council.

CLEANING OUT ENGINES WITH PARAFFIN.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—Reading "Thermo's" enquiries in the *M.C.J.* of the 21st ult., as to cleaning out engine crank chamber, my plan of action may be of assistance. I have a 20-h.p. four-cylinder car; the drain plugs to the crank chamber are awkward to get at, as the tray under the engine extends to behind the universal joint of the cardan shaft, and the ports of the chambers are not large enough to get my hand in to clean out. I use an ordinary garden syringe with jet nozzle which does the job perfectly, viz., I first suck out the dirty oil by placing the syringe through the ports and draw a charge in, then discharge the contents into any old tin, repeating the action so long as any oil can be extracted. I then have about a pint of paraffin and squirt it with the syringe into the chamber, using all force, repeat this, filling the syringe from chamber; when the inside has had a good washing extract the paraffin in the same way as the oil was taken out. To finish the job I take a cloth and rub it round the inside with a stick; this absorbs any paraffin left by the syringe and leaves the crank chamber perfectly clean; it takes a very short time to do and almost without soiling the hands.—Yours truly,

E. HARCMBE.

ELECTRIC LIGHTING FOR MOTOR HOUSES.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—The desirability of electric lighting for motor houses, especially in country parts or out of way districts, even if only on a small scale, must have frequently occurred to those attending to their cars during the winter season; especially where petrol may be stored or danger from fire increased. If it were possible to employ the same for charging accumulators, a two-fold benefit would be derived by those who for various reasons may discard gas engines and dynamos. Will some readers who may have had some experience in this direction kindly reply?—Yours truly,

ALF. DIXON.

THE TENDENCY OF MOTOR-CAR DESIGN.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—I was very pleased to see the outspoken remarks in the last issue of the *M.C.J.* with regard to the general tendency of design in motor-car construction, and the arguments you brought forward in support of the plea that greater attention should now be paid to the production of a vehicle which, while being reliable, should be as simple as possible. I paid several visits to the Olympia Show, and came away with the impression that motor-cars are not yet being built for the general public, but only for those who have a mechanical turn of mind. For my part I fail to grasp the reason why the British automobile designers look so disdainfully on the simple epicyclic or planetary type of change-speed gear, which has for years found many supporters on the other side of the Atlantic. It has been urged that the British motoring public would not use cars fitted with this class of gear, and that it is useless to try and force them to adopt it. With this view I entirely disagree. There are, of course, buyers of cars who are extremely critical as to the details of their construction; there are thousands of prospective owners who care nothing for such matters—all that they desire is a simple car that they can rely on to take them whither they wish and to bring them home again—putting their reliance in the high standing of the firm they purchase the car from that the engineering portion of the car will not only be fully equal to the work required of it, but will be of so simple a design as to require a minimum amount of attention.—Yours truly,

W. J. DEWSBURY.

MESSRS. BELL AND SMART have opened at 48 and 50, Tottenham Street, Tottenham Court Road, W., large and admirably adapted premises for the repair and garage of motor vehicles. Mr. B. Bell, who was engineer to Argylls London, Ltd., and who also had practical experience in the works of Argyll Motors, Ltd., at Glasgow, will take charge of this department.

THE Vacuum Oil Company have issued an interesting souvenir of the International "Four-Inch" race for the Tourist Trophy, with portraits of the various competitors who used the vacuum oil in that event. From the letters which are included in the souvenir this oil evidently gave universal satisfaction. A copy of the brochure will be sent to all applicants to the company's headquarters, Norfolk Street, Strand, W.C.

CLUBS AND ASSOCIATIONS.

ROYAL.

THE annual dinner of the founder members of the Club was held on the 25th ult. under the chairmanship of Mr. Roger Wallace, K.C. Between sixty and seventy founders were present. The toast of "The Founders" was proposed by Mr. J. W. Orde (the only non-founder present at the dinner) and was replied to by Mr. Claude Johnson, Mr. F. R. Simms, Sir Hiram Maxim, the Hon. C. S. Rolls, Mr. S. F. Edge, and Capt. F. E. Dyke Acland. Col. Holden, F.R.S., proposed the chairman's health, and an entertainment followed.

We learn officially that the South Wales and Monmouthshire Automobile Club, the Bristol and Gloucestershire Automobile Club, and the Bradford Automobile Club have decided to associate with the R.A.C. from January 1st next year, at the expiration of their present agreements.

RICHMOND.

THE annual dinner of the Richmond and District Motor Club has been held at the Trocadero Restaurant, London, with the vice-president, Dr. W. M. Paul, in the chair. After dinner the chairman urged the members of the club to consider the other users of the roads. He felt

M.I.Mech.E., who will read an address on "Some Features of the Exhibits of the London and Paris Shows." At 9 o'clock the gathering will resolve itself into a business meeting for the following purposes:— (1) To form a branch of the Graduates' Section in Coventry. (2) To elect a Graduates' Committee. (3) To draw up a provisional programme.

Particulars of the meeting and of the Institution and forms of application for admission may be obtained from the hon. secretary of the Coventry Centre, Mr. W. Morgan, c.o.; the Daimler Motor Car Company, Ltd., Coventry.

The second ordinary general meeting of the session of the London Branch of the Graduates' Section of the Incorporated Institution of Automobile Engineers was held on Tuesday of last week. The chair was taken by Mr. Chas. Wheeler, a member of the Council of the Institution. A paper was read by Mr. D. Kennedy on "Ignition Systems," illustrated by lantern slides and also by models of the various ignition systems. The discussion was opened by Mr. Percy Bishop, and Messrs. J. H. P. Daman, L. H. Baskerville-Cosway, F. Thomas, L. H. Hounsfeld, H. Burchall, C. E. G. House, and the chairman took part in the same.



The Scene Outside the Grand Palais, Paris, on the opening day of the Salon. The Clement-Bayard Airship is seen making a successful flight over the well-known building.

that it was the opinion of the members of the club that strong measures should be taken against any member who disregarded this wish of the club.

The captain, Mr. A. Carpmal, jun., returned thanks, and emphasized the appeal to the members to drive with extra care and consideration for the future. There was no doubt a very strong feeling had arisen amongst some of the public against motors and motoring, and although he felt this had been caused by the reckless and inconsiderate driving of a very small number of drivers, yet, unless something was done very soon to alter this adverse feeling, there was great risk of very repressive measures being passed.

THE INCORPORATED INSTITUTION OF AUTOMOBILE ENGINEERS.

THE Council of the Incorporated Institution of Automobile Engineers has arranged for a general meeting of pupils, apprentices, and junior draughtsmen engaged in the automobile industry, and engineering students (both members and non-members) employed in Coventry, to be held on Tuesday next, at the works of the Daimler Motor Company, Ltd. The chair will be taken at 8 o'clock p.m. by Mr. Alex. Craig,

MECHANICS' CLUBS.

ACCORDING to the "Leeds Mercury," the secretary of the Yorkshire Chauffeurs' Association says that no member has been reported for furious driving or misconduct, and that owing to the support of various gentlemen all members will have their contributions returned during Christmas week, and an addition of 15s. 6d. bonus.

A club for motor-drivers and mechanics in Bromley, Beckenham and Chislehurst is being formed. At a meeting held at the Star and Garter Hotel, Bromley, it was unanimously decided to form such an organisation, to be known as the Bromley and District Motor Drivers' and Mechanics' Club. Mr. Allan was elected president, and Mr. Lawlor was appointed vice-president. Mr. Randell was appointed hon. secretary, and the following were elected a committee, with power to add to their numbers:—Messrs. F. Springett, E. Laws, Steer, Brittan and Kemp.

BEFORE the Basingstoke and District Motor Club, Mr. G. W. Watson read a paper on Saturday last on "The Scientific Adjustment of Carburettors."

THE Irish Club is endeavouring to put down inconsiderate driving in Ireland, and a case recently tried at the Dublin Police Court was

made the subject of prosecution mainly as a result of enquiries previously undertaken by the Irish A.C.

THE Cambridge University Motor Cycle Club have had a petrol consumption trial over a twenty-six mile course, the winners being Mr. B. M. Oliver on his 5½-h.p. Rex, and Mr. N. H. Joy on his 2½-h.p. Minerva, in the twin and single-cylinder classes respectively.

THE next ordinary meeting of the Society of Engineers will be held on Monday, the 7th inst., at the Royal United Service Institution, Whitehall, when a paper will be read on "Mechanical Flight," by Mr. Herbert Chatley, B.Sc. (Engineering) Lond.

COMMERCIAL MOTOR VEHICLES.

MR. SHRAPNELL SMITH read a paper to the members of the Royal A.C. on Thursday of last week on the subject of "Twelve Years' Progress in the Application of Commercial Motors." The paper was illustrated with tables showing a remarkable decrease in "lost mileage" in successive public competitions and the growth of the use of the business motor vehicle amongst brewers, carriers, municipal authorities, &c. Sir David Salomons, Bart., presided.

In the course of his paper Mr. Smith said there were, twelve years ago, no commercial motors in existence for use. The North of England Branch of the Self-Propelled Traffic Association was inaugurated in October, 1896, when Sir David Salomons, Bart., was unable to indicate a single motor vehicle for utility purposes. There had been several efforts to encourage the construction of self-propelled vehicles for industrial purposes, notably the competition announced by the proprietors of the *Engineer*, and a second under the auspices of the Royal Agricultural Society of England. The opportunity for wider employment of commercial motors was increased by reason of the less disadvantageous conditions of the Heavy Motor Car Order of 1904. Before that Order came into force the unladen weight of any motor-car might not legally exceed 2 tons 19 cwt. 27 lbs., whilst any development of public service vehicles was virtually prohibited by their falling within the speed limit category of five miles an hour. The accompanying table shows the improvement which has been testified to in various public trials that have been held, the last being that organised by the R.A.C. in the autumn of last year, which gave a splendid result of only 7.3 per cent. of lost mileage.

Summary of, and lost mileage in, certain public competitions:—

| Year. | Organising body. | Number of machines. | | Motive powers at "Finish." | | Maximum low car-ried, tons. | Maximum reloaded mileage per vehicle. | Per-centage of miles lost. |
|-------|------------------|---------------------|---------------|----------------------------|----------------------|-----------------------------|---------------------------------------|----------------------------|
| | | Started. | In at finish. | Steam pro-pelled. | Internal com-bustion | | | |
| 1897 | A.C.F. ... | 10 | 7 | 5 | 2 | 5.5 | 192 | 22.4 |
| 1898 | L.S.P.T.A. ... | 4 | 4 | 4 | — | 4.7 | 143 | 14.7 |
| 1901 | L.S.P.T.A. ... | 9 | 8 | 6 | 2 | 6.3 | 168 | 12.0 |
| 1905 | A.C.F. ... | 57 | 50 | 2 | 48 | 7.1 | 555 | 9.5 |
| 1907 | R.A.C. ... | 56 | 50 | 11 | 39 | 5.0 | 1,582 | 7.3 |

An analysis of 342 returns from owners of satisfied users of commercial motors was interesting, showing that in fifteen or sixteen leading trades the industrial vehicle is doing good service. Mention was also made of the development of motor-bus and motor-cab traffic in London, and of the fact that there are not less than sixty motor vehicles now under contract for the conveyance of the Post Office mails.

The undeniable progress of the last few years was measured by higher performance in relation to cost. The cost per vehicle-mile was uniformly less in each class for equal loads than it was even a couple of years ago, whilst lost earnings and disturbance of business generally were virtually disappearing factors in the problem. To-day the purchaser could, in many cases, obtain guarantees as to the maintenance, whether of india-rubber tyres or the whole of the mechanical parts; he could obtain written assurances from users who have been employing vehicles of the same make; he could obtain drivers who had had experience on the road—a qualification which is certainly necessary for men who have to go far afield, and more particularly for those who are in charge of steam wagons; he could obtain low and inclusive insurance rates, unless where exceptional risks are involved. Briefly, given ordinary care and supervision, he could take his choice in the following classifications, with the knowledge that his total outgoings per vehicle mile would not exceed the amounts indicated. One-ton van (petrol), 5d.; two-ton vehicle (petrol) 6½d.; three-ton lorry (petrol) 8d.; five-ton tractor (steam), 8½d.; five-ton wagon (steam), 9½d.; five-ton wagon (steam) with trailer, 1s. A discussion followed, in which the chairman, Messrs. H. G. Burford, J. S. Crichtley, G. Pullock and Portheim took part.

FROM the Motor House, 314-316 and 366-368, Euston Road, N.W. comes a special bargain list of cars which they have now on sale. The Motor House has also twenty new chassis of high grade and of 16-20-h.p. and 30-40-h.p., which are now being offered at special prices.

CASES AGAINST MOTORISTS.

"OH!"

Alexander C. Clarke, mining student, was summoned at the East Pen with (Cornwall) Police Court for having no rear light on a motor-car at 2.15 in the morning.

Defendant said the weather was very wet and windy, and he supposed the light was blown out on the way home.

A fine of 15s. and 6s. costs was inflicted.

Defendant: I thought 10s. was the maximum.

A Magistrate: £10.

Defendant: Oh!

POLICE EVIDENCE.

At the Bristol Police Court, Frank Broomfield, a chauffeur, was summoned for driving a taxi-cab at a dangerous rate. P.s. 2A said on Saturday evening, the 7th of last month, he saw the defendant driving a taxi-cab, No. 1340, at a furious rate in Lower Maudlin Street. Witness was subjected to a cross-examination by Mr. Inskip, who defended, and asked him by what he judged the speed of vehicles. "By my own common sense, sir," was the reply. Broomfield, in the witness-box, said he had perfect control of the vehicle, and estimated that he was riding at between twelve and fourteen miles an hour. Mr. Inskip, in addressing the Bench, commented on the conduct of the police-sergeant and an attending inspector. "Asking a man for his name and address is, one thing," said Mr. Inskip, "and going to him on the pretence of getting his name and address and questioning him for material for prosecution is another. I can't understand what authority the police have to question a man in this way. The thing is altogether inconsistent with my ideas of British justice—ideas which were instilled into me half a century back, and which I still hold to," continued Mr. Inskip, who asked the magistrates to give the case the benefit of the general principle, as he did not deem the offence to have been proved. Mr. Inskip also pointed out that the sergeant omitted to give in evidence some of the statements the defendant communicated to him.

The Chairman, in summing up, said they considered fourteen miles an hour was a dangerous rate for a motor-car to be proceeding in that locality, with its many crossings. They should inflict a fine of 20s. and costs. Later, the Chairman said: "We desire to express our concurrence with what Mr. Inskip says, that it is not only the duty, but it ought to be the pleasure, of all constables to give every detail in evidence, more especially any fact or word that may be in favour of a defendant. We hope all constables will bear this in mind."

A MOTORIST DECIDES TO GIVE UP DRIVING.

At Milverton Police Court, Lionel Lakin, of The Cliffe, Warwick, was summoned for driving a motor at a speed dangerous to the public at Radford on the 21st ult. P.s. Butcher said that the car covered a measured quarter of a mile at a speed of over 23½ miles per hour. There were several children playing about the road, which had a dangerous bend in it, and there was other traffic on the road. The horn was sounded. Addressing the Bench, defendant said that he had driven over this stretch of road at least 800 times, and he prided himself on his carefulness. Owing to the attentions of the police he had now given up driving his own car. He was fined £5 and costs.

BRIEF MENTION.

Convictions of motorists have, within the last few days, taken place at the following courts:—Wimbleton (7), Epsom (15), and another 9 cases on Monday, Shoreham (7), Horsham (8), Kingston, (4) Woking, Colchester (5), Stony Stratford (2), Longton (6).

DISMISSAL.

At King's Heath Police Court, Joseph Golder, employed by Mr. C. T. Menke, the German Consul for Birmingham, was summoned for driving a motor-car across the Alcester Road at a speed dangerous to the public on November 8th. P.c. Payne said that defendant crossed from St. Mary's Road, Moseley, towards Salisbury Road on that day at a speed of fifteen miles an hour. The car dashed into a cyclist, knocking him down and smashing the machine. The cyclist, James W. Bache, said that he was passing a funeral procession, and was justified by the rules of the road in taking the centre, where he was knocked down. Mr. Baker for the defence contended that if the cyclist had been on his right side the accident would not have happened. Three passengers on the car spoke to the reasonable pace at which the car was going, and said the cyclist apparently lost his head and wobbled into the car. The Bench came to the conclusion that the driver was not at fault, and dismissed the case.

IMPRISONMENT.

On Monday, Max Dalloz was indicted at the Guildford Assizes for the manslaughter of a man at Perry Hill, Guildford, on September 10th. The circumstances have already been reported. The defendant was chauffeur to Lord Newborough, and after counsel for the prosecution had opened the case was adjourned till Tuesday, when Dalloz was sentenced to twelve months' imprisonment and recommended for deportation at the end of the term.

AN instructive novelty issued by the Daimler Company at Olympia clearly points out and describes by means of diagrams, &c., the different points of interest in the new Daimler engine. It saves much study, and presents the motor in quite a tabloid form. A copy will be sent, post free, to any applicant, either to the various depots of the company, or direct to the works at Coventry.

COMPANY NEWS.

In the case of New Companies the file number is given at the end of the particulars.

THE SOCIÉTÉ DES ANCIENS ÉTABLISSEMENTS CHENARD ET WALCKER (AGENCE D'ANGLETERRE) (LTD.) has been registered with a capital of £2,000, in £1 shares.

AERO-MOTORS (LTD.) have been registered with a capital of £100 in £1 shares.

LANCASHIRE MOTOR AND ENGINEERING COMPANY (LTD.)—Registered with a capital of £1,500 in £1 shares. The registered office is at Victoria Hotel Yard, Fishergate, Preston.

MESSRS. W. L. STEWART AND CO., LTD., has been registered with offices at 166-170, Shaftesbury Avenue, London, with a capital of £10,000.

FLORENTIA MOTORS (London).—Registered with a capital of £20,000 in £1 shares. To acquire and turn to account the rights of W. C. Jones in patent No. 12,460 for improvements relating to vehicle springs. Private company. 31, Piccadilly Mansions, London, W. (100,379.)

MIDLAND COUNTIES MOTOR GARAGE COMPANY.—£24,000 (£1) (14,100 preference). Object indicated in the title. Private company. (100,397.)

ALLDAYS AND ONIONS.—The annual meeting of Alldays and Onions Pneumatic Engineering Company, Ltd., was held at the Works, Small Heath, Birmingham, on the 26th ult. Mr. E. Tailby, who presided, said that although the net profit for the past year (£13,540) was somewhat less than for the preceding twelve months, the directors were satisfied with the result when they remembered the general trade conditions. In the motor trade they had experienced competition, but had come through successfully with an increased turnover, and profits had been kept up. They had added a profitable motor department to the business at considerable cost without having called up any further capital, but the directors thought the time had come when the balance of the ordinary share capital should be issued. This represented 3,670 shares of £5 each, on which they proposed to call up £3 per share, making them equal to the present shares. They recommended the usual 5 per cent. dividend plus a bonus of 5 per cent., the same as last year, and they carried forward £16,107. Mr. W. Allday seconded the adoption of the report, which was carried.

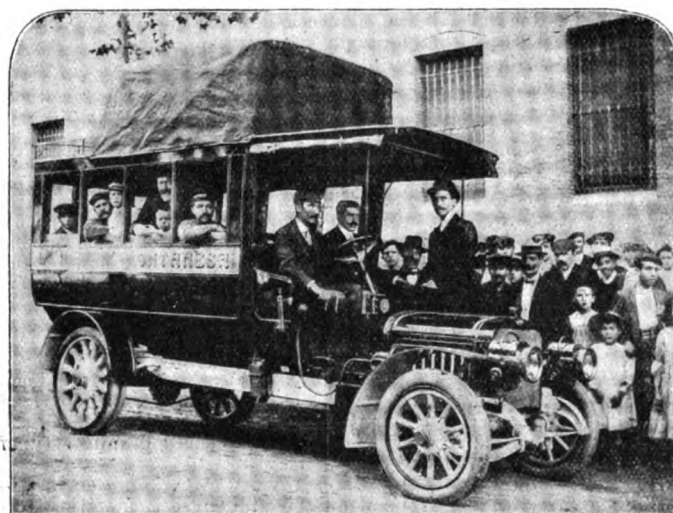
ARGYLL MOTORS, LTD.—A scheme for the reconstruction of this company is contained in a memorandum prepared by Mr. Thomas Jackson, C.A., and Mr. John M. MacLeod, C.A. The assets, including premises, tools, plant, fen duties, &c., have been valued at £322,523, against a book value of £710,545. The total amount due on debentures to date of liquidation is £260,712, and the valuation of the securities belonging to the debenture-holders amounts, on the basis of a going concern, to £232,000, and, on the basis of a forced sale, to £96,230. The valuation of the free assets belonging to the unsecured creditors amounts, on the basis of a going concern, to £90,503, and on the basis of a forced sale to £34,550. The creditors' claims, including £30,380 12s. from Argylls London, Ltd., in liquidation, amount to £360,970 1s. 5d. According to the scheme of reconstruction the debenture holders' claim of £260,712 is to be satisfied by the issue of new debenture stock amounting in all to £144,000. The authorised amount of the new debenture is due to be £200,000; the company is to be at liberty to issue a further amount of £16,000 without additional security, but the balance of £40,000 can only be issued in return for secured assets. Debenture holders are not to have the right to foreclose during the first four years, and the interest is to be non-cumulative for that period. The trade and cash creditors are to be given £75,000 of 5 per cent. income debenture, non-cumulative; creditors under £50 to be paid cash at the rate of 4s. per pound; the share that such creditors would have had in the total amount of income debenture bonds to be distributed to be deducted from the £75,000, leaving the balance *pro rata* among the remaining creditors. New ordinary shares to be created to the extent of 419,595 shares of 10s. each, credited at 6s. 4d. paid with a liability of 3s. 8d. per share, as follows:—30,000 preference shares of £5 each, and 38,264 B preference shares of £1 each, to be replaced by 186,264 shares of 10s. (6s. 4d. paid); 350,000 ordinary shares to be replaced by 233,332 shares of 10s. each (6s. 4d. paid), that is, two shares in respect of every three old shares. The new company, it is declared, would start with assets valued at less than one-half of what they stand at in the books. Including the cash from the proposed new issue and the stock, stores, and cash at present on hand, the company, it is stated, should have at least £100,000 of working capital free of old debts. Mr. Faithfull Begg and Mr. D. Johnstone Smith, trustees for the debenture holders, have issued a circular in which they state that the scheme is one which the debenture holders may fairly approve.

THE DAIMLER COMPANY.—The annual meeting of the Daimler Motor Company (1904) Ltd., was held at the works on Tuesday, with Mr. E. Manville in the chair. He regretted that the directors could not recommend the payment of a dividend on the ordinary shares. The prospects for the new year's trading were excellent and they hoped would prove some consolation. With reference to the stock-in-trade this amounted to £289,657. Since the balance-sheet had been made up, £8,000 worth of cars had been sold at a price above which they were taken into the balance-sheet, so that the stock of finished cars now stood at £29,052. Soon after the beginning of the trading last season it was evident that many high-priced cars were being offered by the trade at prices that made it difficult for the Daimler Company to dispose of their own wares at their proper prices. It was evident to himself and

colleagues that the production would have to be cut down to the lowest limits. Their estimates at the close of the first half-year indicated that up to that date the trading had resulted in some measure of profit, and had they not taken into consideration the needs of the future they might have ended the year with a profit balance by materially reducing the whole organisation of the works. With regard to the future he held out prospects of the rosiest character and went on to deal with the history of the introduction of the new engine, much of which has already appeared in our columns. The prospect of the general acceptance of their new car by the public was, continued the chairman, good, and they regarded the introduction of the engine as having an equally great importance from the point of view of its use for commercial purposes. Experimental work had already resulted in advancement in two directions. Their omnibus had been extensively tried in Paris, and they were in negotiations for their first orders from that centre. During the past year they had constructed a number of Renard trains, and recently the Argentine Government had authorised the expenditure of £30,000 in the purchase of such vehicles. They were working in conjunction with agricultural engineers for the introduction of a type of motor for agricultural purposes. The profits of the hiring department had not been inconsiderable, and if the rate at which they had been receiving orders continued during the season they might look for a prosperous year.

Three or four shareholders in the company having made remarks on the chairman's speech, Mr. Manville replied, and the motion for the adoption of the report and another for the payment of the preference dividend were carried unanimously.

The retiring directors, who were re-nominated, Messrs. Barwick and Martin, were re-elected, and the chairman announced that the Board



One of the Single-Deck Public Service Vehicles lately turned out by the Hispano Suiza Company, of Barcelona.

The vehicle is fitted with a 25-30-h.p. four-cylinder engine and has accommodation for about fourteen passengers.

would consider the question as to whether any change should be made in the place of meeting.

The proceedings then terminated.

"POLICE CONTROLS."

THE police are frequently trapping motorists on the Bury road, Exning, near Newmarket.

THE police are timing motorists almost daily at Southwick, and several drivers recently caught in that trap have appeared at the Shoreham Petty Sessions with the usual result.

THE trap in the Morden road, at Wimbledon, is in almost daily operation and the police are also exceedingly watchful of motorists passing Barnes Common.

THE police "control" at Ewell has been in active operation during the last few days.

THE police have established a motor trap in the village of Trentham, Staffordshire. This is over a distance of 600 yards, extending from Ash Green to the N.S. Hunt stables on the Newcastle road, including a very awkward turn on the Longton road. Twenty-five miles an hour is the speed allowed by the police; those who travel beyond that rate are summoned.

MOTORISTS are now being timed daily over measured furlongs at Hornham and Ifield—in both of which places are ten mile an hour speed limits.

THE London road, Colchester, is being made quite a hotbed of traps by the local police.

THE police have a timed furlong on the Victoria Embankment, London.

FORTHCOMING EVENTS.

DECEMBER.

- 10th (Th.).—Annual Dinner of the Aero Club of the United Kingdom at the Hotel Ritz, London.
 10th.—Ladies' A.C. lecture by Mr. C. Y. Knight on "The Valveless Engine."
 11th.—Scottish A.C. Conference with Road Surveyors' Association of Scotland.
 13th (Sun.).—Closing day of the Paris Salon.
 18th (F.).—Society of Road Traction Engineers' Smoking Concert at the Holborn Restaurant, London. The primary object of the concert is to afford an opportunity for a pleasant reunion of those who took part in the Commercial Vehicle Trials last year.
 23rd (W.).—Speed and reliability trials at Nagpur, Central Provinces.

JANUARY, 1904.

- 1st (F.).—Anniversary of the Motor Car Act, 1903, coming into operation.
 7th (Th.).—Annual Dinner of the Yorkshire A.C. at Leeds.
 8th (F.).—Nottinghamshire A.C.'s Annual Dinner.
 14th (Th.).—Annual Dinner of clubs associated with the R.A.C. at the Hotel Cecil, London.
 14th-25th.—Brussels Motor Show.
 22nd-30th.—Scottish Motor Exhibition at the Waverley Market, Edinburgh.
 26th (T.).—Scottish Motor Trade Association Dinner at Edinburgh.

MARCH.

- 1st (M.).—The Road Trials in connection with the Army Council Competition for light tractors commence.
 Motor-Car Show at Barcelona.

LIGHTING-UP TIMES—LONDON.

During the whole of the week beginning with to-day (Saturday) the lighting up time will be 4.50.

To find the approximate lighting-up time for Birmingham 4 minutes should be added to the above time, and 1 for Manchester. For Glasgow 3 minutes should be subtracted, and a deduction of 6 minutes from the above times should be made for York.

ROAD REPORTS.

LANCASHIRE.—We understand that the Lancashire County Council is about to make trial of a new system of road making on a length of main road between Accrington and Haslingden. This is known as the Dourax system, and the road will be made with small granite setts of 3½ to 3¾ inches laid in intersecting circles.

HORSHAM-WORTHING.—The Sussex County A.C. has been instrumental in securing an improvement on the Findon section of the Horsham-Worthing road. For some distance this section was curtailed on one side by a large ditch, but it has now been piped and filled in by the West Sussex County Surveyor.

COUNTY DUBLIN.—The County Dublin County Council has adopted a motion to the effect that a speed limit of ten miles an hour would not afford the police as much protection as they would obtain under Section 1 of the Motor Car Act, if the provisions of that section were effectively carried out by the police.

PADDINGTON.—Regarding complaints from the Paddington Borough Council and inhabitants as to motor-omnibus traffic in Kilburn Lane—a narrow thoroughfare—the L.C.C. have informed the Borough Council that the Public Control Committee of the former body "are fully considering the whole question of the better regulation of heavy motor-car and locomotive traffic in the streets; that the County Council's powers are very limited; and that fresh legislation will be needed, which, it is hoped, the Government will introduce at the earliest possible date."

LINDFIELD.—The Lindfield Parish Council has adopted the suggestion of its General Purposes Committee to make application for a ten mile speed limit for motor-cars passing through the village.

WEST SUSSEX.—At the meeting of the West Sussex County Council the report of the Finance Committee referred to an expenditure of £2,885 on the work of tar-painting on the county main roads. In the course of the discussion the Rev. E. D. L. Harvey said that in consequence of the long-distance timing on the main Brighton road a great deal more motor traffic was driven on to the road through Horsham and Worthing to Brighton, with the result that the surface was much cut up; and unless it had been treated with tar the Council would have had to face a very serious expenditure on its repair.

HIGH WYCOMBE.—On Monday a L.G.B. enquiry was held into the application of the High Wycombe Corporation that the speed of motor vehicles passing through the borough should be limited to ten miles per hour. Objection was raised to the proposed restriction, and Mr. Rees Jeffreys urged that the road was one of the most important trunk roads in England, not only serving London and Oxford, but being connected with the main road to South Wales. Mr. Willis, the Inspector, will report upon the matter in due course.

THE RULE OF THE ROAD.

A CASE was heard before the Chichester County Magistrates on Saturday which shows how necessary it is to strictly observe the rule of the road. The offender was the driver of a van who, according to the evidence, drove round a corner on his wrong side at a fast pace, and, meeting a lady driving in a cart, collided with her, with the result that the cart was turned over and she was thrown out. The Magistrates took a serious view of the case, and mulcted the offending driver in a fine of forty shillings and costs.

AUTOMOBILE ACCIDENT.

THE driver of a motor-car belonging to Mr. Bainbridge, whilst proceeding along the Northallerton-Boroughbridge road failed in approaching a railway crossing to notice that the gates were shut. The car crashed through the first gate, partially wrecking it, and was brought to a standstill, by the force of the impact, on the metals. Fortunately no train was approaching at the time. The car suffered a little damage.

BUSINESS NEWS.

MESSRS. R. GORNALL AND SONS, of Pilling, near Garstang, Lancashire, have facilities for the charging of accumulators and the repair of motor-cars.

RENOID chains were fitted to over 50 per cent. of the chain-driven cars at the recent Olympia Show.

MR. SPONG, finding his present establishment too small to cope with his increasing business in motor tyres, has taken premises at 193, Shaftesbury Avenue, London, W.C., where he hopes to continue to serve the motor trade as well as private owners.

THE Motor Accessories Company, of 55, Great Marlborough Street, London, W.C., exhibited at Olympia the Muirhead high tension magneto—an ingenious accessory that can be dismantled piece by piece without removing it from the engine.

THE British Chamber of Commerce in Paris is calling the attention of merchants and manufacturers to the changes which have been proposed by the French Parliamentary Customs Commission, and which may, it is thought, shortly be laid before Parliament for approval and application. Among other items it is proposed to increase the duty on motor-car pneumatic tyres from £2 16s. to £3 16s. per 100 kilos.

MESSRS. PERCY LAMBERT AND CO. have long been known in the West End of London in connection with the sale of motor-cars of reliable running; Messrs. T. Worger and Son have been established in the same district since 1842 as coach builders, and, latterly, as motor-body builders. These firms have now amalgamated as Messrs. Lambert and Worger and will continue the joint businesses in splendid premises in Palace Street, Victoria Street, Westminster, S.W. We understand that, in addition to undertaking the sale of motor-cars of all types, they have obtained an agency for the sale of the Austin cars. Motor-body building will also be a prominent feature in the activities of the new combination.

TO CORRESPONDENTS.

All communications intended for insertion in this Journal or relating to Editorial matters should be addressed to THE EDITORIAL DEPARTMENT, MOTOR-CAR JOURNAL, 27-33, Charing Cross Road, London, W.C., and must be written on one side of the paper only. Letters must in all cases be accompanied by the name and address of the writer, as no notice will be taken of anonymous communications.

To insure insertion communications and contributions must be in the Editor's hands by Tuesday forenoon of the week in which the same are intended to appear. Disappointment may be caused by non-compliance with this rule, and to avoid this earlier receipt, if possible, is necessary.

Photographers, both professional and amateur, are invited to send photographs of current events or of motoring scenes and incidents. The fee, if any, required for reproduction should be stated in each case, otherwise no liability will be accepted.

The Editors cannot undertake to return MSS. or drawings, although every effort will be made to do so in the case of rejected communications. Where such are regarded as of value, correspondents are requested to retain copies.

The Editors do not hold themselves responsible for the opinions expressed by their correspondents, or for statements and facts which do not appear in the editorial columns.

THE Motor-Car Journal.

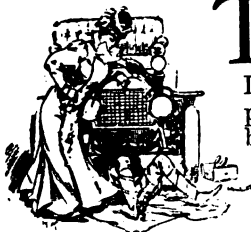
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COMMENTS.



THE Expert and Technical Committee of the R.A.C. is giving serious attention to the regulations for the forthcoming trial of headlights. In this the classification will be based on the candle-power of the naked flame, the categories which have been provisionally accepted being five candle-power and less, over five and under ten, ten and under twenty, twenty and over. If satisfactory arrangements can be made, the Trial will be held at the Crystal Palace, and the Local Government Board

will probably be represented at the tests. Already the latter has been in communication with the Committee on the subject, expressing the view that the glare of high power lights on motor-cars should be abated, and regarding with approval any efforts to encourage attempts to minimise its effect on passing traffic.

The Progress of the Flying Machine.

AVIATORS in France cannot complain of want of encouragement. Scarcely a day passes without the creation of some new prize or the announcement of a generous donation for the encouragement of the aerial science. Great cities and health resorts vie with one another in tempting offers to furnish the necessary ground for experiments, and the undertaking to construct free of all cost the sheds required by the aviators for their machines. Some of them, such as Monaco, Nice, Marseilles, Cannes, &c., have also created handsome prizes to induce the aviators to visit them. They are not like so many poor inventors whose genius has only been recognised long after they took their departure for another world. And the material encouragement is rightly not considered sufficient. At a banquet held in Paris on Saturday last, in honour of the French aviators, M. Barthou, the French Minister of Public Works, announced that at a Cabinet Council the Government had unanimously agreed to confer the cross of the legion of honour on several of the pioneers in the conquest of the air, as well as on many of the delegates who recently attended the International Road Congress. If the aviators merit the coveted reward for their perseverance and courage in opening up the ethereal realm to mankind, the leading members of the Road Congress, though working in what may be described as a less brilliant career, nevertheless deserve the recognition of their services, which will probably be of more immediate benefit to the ordinary mortal who will still for a long time have to crawl along the terrestrial roads than the inventions of the men engaged in creating aerial highways.

M.P.'s Again.

In the House of Commons, on Monday, thirty-five members of Parliament, many of whom are owners of motor-cars, waited upon the President of the Local Government Board with a request that his Department should issue a general notice to the effect that when a local authority made application for the speed limit not exceeding ten miles an hour it should be granted provisionally until good reason was shown to the contrary. Mr. Burns expressed his sympathy with the object in view and promised to look carefully into the Motor Car Act in order to discover what his powers really were. We should have thought that, after the

catechising he has lately undergone at the hands of inquisitive Parliamentarians, the President was sufficiently *au fait* with the Act to have been able to assure his questioners that they were asking him to drive the proverbial carriage and pair through an Act concerned with motor-cars. For although the Section 87 of the Local Government Act, 1888, which relates to local inquiries, applies in this case, the procedure adopted since the Motor Car Act of 1903 came into operation has been to hold the inquiry before the L.G.B. decided. The Local Government Board has acted on the line that such inquiries have been necessary—a course that is clearly right in view of the many applications that have been declined. Moreover, the fact that inquiries were to be held has prevented many frivolous applications being made. The M.P.'s gave no new arguments nor advanced no evidence that the present procedure has operated badly; while substantial proof can be adduced to show that the complaints against motorists are decreasing, despite the greater number of cars on the road. Some proof of this was given at the dinner of the Cheshire Automobile Club, on Saturday, when Col. Hamersley, the Chief Constable of the county, declared that out of 900 cars which he had had timed only twelve were proceeding at a pace which warranted a reprimand. Such facts as those should be considered by the Local Government Board, as well as the suggestions of M.P.'s who are worried by constituents of local political importance.

"Et tu, Brute!"

At the same time we must express surprise that motorists who have practical knowledge of the matters in question should allow themselves to be the spokesmen of petty and prejudiced opinions. As M.P.'s they should educate their constituents, demonstrating, if need be, the safety and the value of the automobile—as the central motoring organisation added to the knowledge of M.P.'s in the early days. Fortunately the President of the L.G.B. is an engineer with a practical mind, and he must realise the importance of fostering rather than killing an industry which is likely to find employment for many people at a time when unemployment is casting a dark shadow over the national prosperity. Have those who formed the deputation fully realised the significance of the step they were taking; for the adoption of their suggestion would tend to set back instead of advance this important branch of the engineering and carriage-building trades? It would appear that the motoring movement is to be injured in the house of friends.

The Importance of the Local Clubs.

THE decision of the Royal Automobile Club to accept affiliation only from those organisations which are exclusively supporting the Piccadilly Institution has given rise to some interesting variations in local views. As announced in our Club News, the Derby Club has decided not to associate on the present exclusive terms, and now a postal vote of members of the Berkshire A.C. has shown that of 100 members who voted sixteen were for association with the R.A.C., three for affiliation with the M.U., and eighty-one for independence. The club will, for the present, therefore not become attached to either organisation, a policy which will doubtless be much discussed by other provincial organisations. Following this decision at a general meeting of the Berkshire Club it was decided to reduce its annual subscription to one guinea, so as to en-

large its circle of influence as widely as possible. Some idea of the importance of these county organisations may be gleaned from the fact that this club alone has in hand funds well in excess of £500. As we went to press we learned that the R.A.C. has considered the resolution adopted at the recent conference in the Midlands and has decided not to depart from its previous decisions on the question of joint affiliation.

Petrol Dangers.

WE have recently referred to the interest which the Home Office has taken in the extinction of petrol fires as well as in the general question of safety to those concerned with the conveyance and storage of the spirit. Private enterprise is also seconding their efforts, and under the auspices of the British Fire Prevention Committee a series of twenty-four tests were undertaken a few days ago at the Regent's Park Testing Station of the committee. Sir Henry Cunyngame, K.C.B., was present for the Home Office, and officials from many of the leading Government Departments were also present to watch the tests held under the direction of Mr. Percy Collins. We understand that an official report of the proceedings will shortly be issued.



Touring in Holland. The General Post Office, Amsterdam.

Police Warning.

THE Head Constable of Liverpool has issued an official notice suggesting that the speed of motor vehicles within the city is increasing to a point which is incompatible with public safety. Up to the present the necessity for prosecution has not arisen very frequently, but, unless increased moderation of speed occurs, he promises to give those who exceed a reasonable rate a salutary warning in the local police court. Several streets and roads are scheduled as thoroughfares where the speed attained is apt to be too great, and attention is called to several busy crossings where dangers exist to pedestrians and others using the highway.

Army Mobilisation.

AN excellent demonstration of the value of the automobile in times of war was given on Sunday in Essex, when a surprise test of the speed at which troops can be mobilised was carried out, the Chelmsford regiment (the 5th Essex Territorials) being selected for the experiment. The immediate object was also to gauge the utility of motor-buses in connection with flying columns. At 9.15 a.m. the alarm was sounded and within fifteen minutes the first movement was made, the whole of the contingent being away by ten o'clock. Two steam motor-buses and a motor-van were supplied by Mr. Thomas Clarkson, whose head

quarters are in the town. The two 'buses each carried forty men and the third vehicle sixteen, while twenty-four cyclists acted as scouts. By nine minutes past eleven o'clock the whole contingent arrived at Latchington, fourteen miles away, in remarkably good time, having regard to the condition of the roads and to the ascending route, which included Danbury. The return was made in about the same time, and the test provided further proof of the value of the motor vehicle in mobilisation work.

Towards Common Sense.

ALTHOUGH one or two fogs do not make a winter, we regard a few cases where motoring has recently been considered in a common-sense way as indicative of a broader spirit which is gradually coming over some of our local authorities, and of a wider outlook now being taken by some magistrates. At the East Grinstead Petty Sessions, the counsel for a motorist, who was not served with a summons until ten days after the occurrence of the alleged offence, expressed the view that the police were really preventing anything like adequate reply being made to the charge. The Bench, however, fined the defendant. They were then good enough to express the opinion that the police, in future cases, should give notice to those who might be regarded as offenders as speedily as possible after the event. This, of course, does not suggest that the police will adopt the hint, but that it should have been made in a southern police court is in itself somewhat significant. In connection with this it is also noticeable that when the recommendation for the General Purposes Committee to apply for an Order limiting the speed of motor-cars in the borough to ten miles an hour was before the Town Council of Boston (Lincolnshire) a few nights ago an amendment rejecting the proposal was adopted by the Council. And now comes the report that the Essex authorities have rejected a proposal to supply the police of the county with stop-watches.

Petrol in Sewers.

AT the request of the L.C.C. we have on several occasions urged those responsible for the management of garages to secure that no petrol is allowed to pass away into the sewers. That the warning is necessary has received new demonstration at Marylebone Borough Council meeting, when Alderman Anglim stated that an employee of that authority had nearly lost his life in one of the sewers. The man, said Mr. Anglim, was at work when a large quantity of petrol, which had been poured down the drain by someone, exploded, with the result that the man's clothing caught alight and he was a mass of flame. With great difficulty he was extricated from the sewer and was now in the hospital terribly burned about the body.

Pressure in Tyres.

MAKERS have been liberal in their advice with regard to the way in which to secure the best from tyres, but private users have been less inclined to rush into print on the subject. Recognising the importance of the subject, Mr. G. Gillmore, the Hon. Treasurer of the Manx A.C., recently sought information thereon from several practical motorists on the island, and has come to a very definite conclusion which will be of service as well as of interest to those on the mainland. He has always held that tyres should not be pumped too hard, particularly in hot weather, the main reason for this being that when a car is going along at a good pace, and one of the wheels suddenly drops into a hollow or runs on to a stone, almost the whole weight of the car is thrown on to that tyre. This must put a very great extra pressure on to the pressure already in the tyre. But if the tyre is not pumped too hard, the shock would, according to Mr. Gillmore's view, not be so great, and far less harmful to the car and engine. Mr. Caparn, however, gives his opinion that back tyres should be pumped up to 80 lbs. and front tyres to 70 lbs., winter and summer. He also advises a separate pressure gauge to be used, as, according to his experience, those usually fitted on pumps are not reliable. The chauffeur to

Mr. Earle Hunt states that he thinks weather has a good deal to do with tyres, and keeps the tyres at 65 lbs. pressure on rear wheels and 55 lbs. front in summer, whilst in winter the rear tyres are 75 lbs. Possibly other readers of the *M.C.J.* have observed the effect of the summer or winter season on tyres.

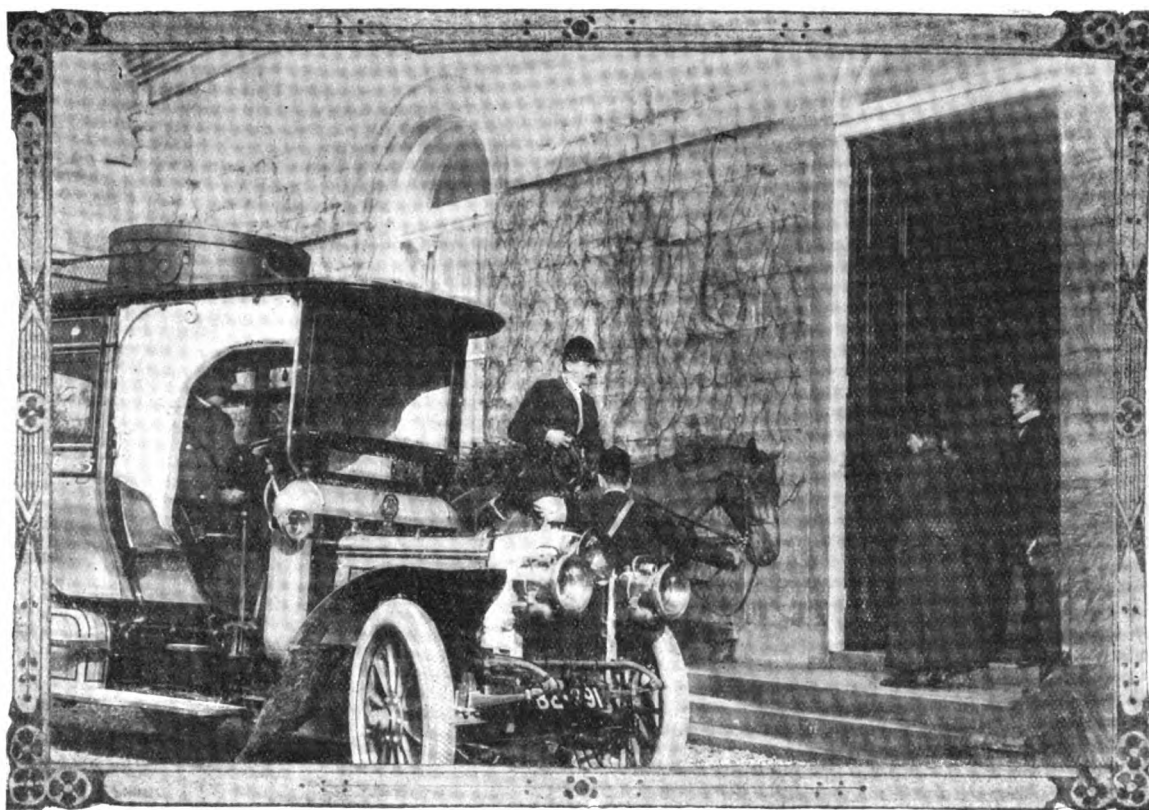
The Swan Song of the Horse.

MR. BASIL TOZER is of opinion that "to-day it seems likely, indeed, almost certain, that the horse's influence upon the world's progress has actually come to an end." Having arrived at such a conclusion he has written an interesting volume of nearly 300 pages entitled "The Horse in History," which has been published by Messrs. Methuen and Co. Before he reaches the note of pessimism to which we have already referred, Mr. Tozer says much as to the part played by the equine from the very earliest times. We are reminded that Professor Owen believed that the Egyptians of the Eighteenth Dynasty

naturally motorial, we have read Mr. Tozer's book with pleasure. His conclusions are true in the main, but we cannot wholly accept his prophecy as to the decadence of the horse within the next thirty years. Of course motoring is making rapid strides—if the term will be allowed by the author—but the Swan Song of the Gee Gee need not yet be written.

The Chauffeur.

A MEMBER of the Oxford and Cambridge Club sends what he regards as the real history of the name of the "chauffeur." Originally, according to his version, the chauffeurs were brigands who, in 1797, infested the department of Eure-et-Loir and inhabited caves and disused quarries around Chartres, sallying forth at night masked, forcing the inmates of surrounding houses and chateaux to hand over their valuables. On their refusal to do so, or divulge where their treasures were hidden, they were dragged to a fierce fire and their feet scorched



The Opening Meet of the Earl Fitzwilliam Hunt at Clumber.—Earl Fitzwilliam, the Master, mounting at Clumber House after arriving by motor-car.

were the first to seriously turn their attention to the employment of horses for useful purposes, but it was not until the Neolithic Age that these animals were domesticated. Proof of this has been found in some remains of horses discovered at Walthamstow, in Essex. Chariots seem to have been the original means of employment, and it was not until 1000 B.C. that anyone, except the Libyans, rode on horseback. In the fourth century the Romans saddled their horses and nearly 200 years later the shoeing business commenced. Many distinguished quadrupeds find mention in Mr. Tozer's book, and credit is given to Sir Robert Carey for riding on horseback between London and Edinburgh in sixty hours, the reason for such celerity being his desire to acquaint James the 1st of the death of Queen Elizabeth. Queen Bess must have been a source of considerable trouble to the people of the localities in which she stayed from time to time, for it is said that when she travelled 2,400 horses had to be provided to drag the carts containing her baggage and paraphernalia. This is all the more credible when we consider the roads. Although our interests are

or roasted till they had satisfied the cupidity of the brigands. Hence "chauffeurs." One hundred and ten were captured and nearly all executed and the quarries walled up. Such a derivation is almost as interesting to the modern motorist as was Darwin's Descent of Man to our grandfathers.

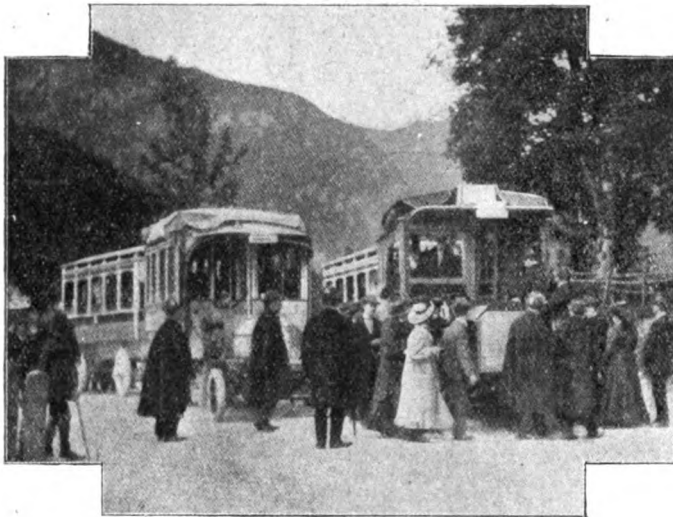
Motor Cases at Horsham.

THE advent of motor-cars has added very considerably to the magisterial duties, and whereas sittings of the Court were formerly fairly brief as a rule, nowadays they are correspondingly extended. Horsham's experience of late has meant a weekly addition of some two hours to the Court sittings. Apparently all southern benches do not view motor offences in the same light. At Horsham the penalties are usually very moderate, and motorists have learned by experience that to contest cases does not pay, for the usual effect of longer hearings is larger penalties.

GOSSIP FROM PARIS.

French Manufacturers and the Grand Prix Race.

Not long ago M. Clemenceau declared in the French Chamber "Nous sommes en plein dans l'incohérence." If that was then true of the Government and its majority, it is equally true at the present moment of the Automobile Club and its sporting and other committees. What could be more incoherent and contradictory than the conduct of the chiefs of the leading automobile firms who are at the head of the A.C.F. In their capacity of delegates of the A.C.F., they met the members of the International Association of Automobile Clubs on November 30th, and, as stated in the *M.C.J.* last week, settled the much-vexed question of the detachable rims and wheels. The following day the same representatives of the leading automobile firms attended the "Congrès du Calendrier" and fixed the dates of the Grand Prix and of the Coupe des Voiturettes for July 1st, 2nd, and 3rd next. Well, after all that, one might imagine there could be no question of not holding the great international competition, but there is! No sooner were the arrangements for holding it complete than the gentlemen who had most actively participated in the preparations announced publicly they would have nothing to do with it, and sent an authorised agent round to all the other important French automobile manu-



A State Public Motor Service in Bavaria.—A Snapshot at Konigssee.

facturers and to the representatives of the foreign makers demanding their adhesion to the agreement, by which they pledged themselves not to participate in any race in France during the coming year. And, discounting their success in suppressing the Grand Prix of 1909 by a general boycott, they intimated privately to the local committee of the Anjou Circuit that it had better suspend its preparations. If this conduct is not incoherent and contradictory I do not know what else to call it. Supposing these manoeuvres are successful and the English, German, Italian, and other foreign makers who were invited so pressingly by the French to participate in the Grand Prix consent to join the French in boycotting the race, it is not clear that they will gain any advantage from it. On the contrary, if they wish to participate in the great automobile competitions organised in their respective countries, they will have to make racing machines and spend almost as much money as if they took part in the Grand Prix. The only saving for them would be the entrance fee and the cost of sending their cars and men to France. That would, of course, be an economy, but they would lose the great advertisement a victory would give them. If a firm makes racing cars, it is because it hopes to get a good advertisement by at least figuring well in the contests. Then, again, by not participating in the Grand Prix the foreign manufacturers would not in any way secure the abstention of the French in their international competitions. Panhard, Renault, Clement-Bayard, &c., would be perfectly free to send racing cars to England,

Germany, Italy, or anywhere else out of France. Moreover, what is to prevent the French firms that may have signed the engagement not to race in France next year from constructing cars for private individuals, who might enter them for all the races they might think fit? This trick has been played before and it might be repeated.

Will there be a Paris Salon in 1909?

Suppressions are evidently the order of the day. The same leading automobile manufacturers who want to cancel the Grand Prix also wish to suppress the Salon of 1909. They say an automobile show once every two years is quite enough for them and should be enough for everybody else. The document presented for signature to all the exhibitors in the present Salon would constitute an engagement not to exhibit in any automobile show in France next year. For the firms which turn out a minimum of 100 cars per annum the penalty for breaking the contract would be £2,000, and for the makers whose annual output is less than 100 cars it would be £1,000. The alleged reasons for the proposed transformation of the annual Salon into a biennial show are the cost of its organisation and of participation in it, and also the impossibility of having well studied and thoroughly perfected novelties to exhibit every twelve months. It is said that of the leading French automobile manufacturers De Dion is the only one who has till now refused to sign the agreement. But, as the engagement is only to become binding if the signatures affixed to it represent a total annual output of 10,000 cars, it is still uncertain whether the promoters of the movement will get their way.

Parisian Taxi-cab Charges.

Since the opening of the Salon I have almost every day heard complaints against the taxi-cab drivers. "What rogues they are!" said an Englishman. And an American replied, "I guess we would not stand that in New York." Each of these gentlemen had three days' running, taking a taxi-cab from his hotel to the Grand Palais, and on each occasion had to pay a different fare. It is possible they may both have been cheated, but it is much more likely they were the victims of the defective tariff system existing in Paris. Till now the municipal authorities have found it impossible to establish a uniform tariff because some of the cabs are of high power, consuming a large quantity of essence, while others, like the new De Dion vehicles, require so little that they can ply at the fare charged by the one-horse cabs. The municipality therefore fixed a maximum tariff and left the owners of the taxi-cabs free to charge what they like so long as they do not exceed that maximum. Consequently it is not astonishing that my English friend should on one occasion, when he hailed a red cab, have paid to go from his hotel to the Salon only 1 fr. 95 c., on another, when he took a green vehicle, 2 fr. 50 c., and on a third day, when the hall porter of his hotel put him into a blue cab, so much as 3 fr. 15 c. It is the little yellow cabs that charge the same fare as the one horse cabs, but at present there are not many on the stands.

MARNEY.

WHILST the Board of Trade Returns show a decrease of £52,912 in the value of the motor-cars exported from this country for the first eleven months of 1908, the imports have declined £654,956. The imports of petrol, however, show an advance of more than 8,000,000 gallons.

AT the Court of Bankruptcy, a day or two ago, a motorist was examined. He told how, since obtaining his majority in 1898, he had run through nearly a quarter of a million of money. Included in his list was an estimate of £58,000 in connection with motor-cars.

AN inquiry with regard to the regulation of motor traffic in co. Kildare during the Punchestown races has been held at Naas by the L.G.B. inspector. No opposition was raised to the proposal that cars proceeding to the races on all narrow roads within two miles of the course should not be allowed to travel more than six miles per hour, that motor-buses be prohibited from plying for hire, and that the military authorities be asked to send their heavy four-wheeled vans to the course at least two hours before the first race.

THE PARIS SALON.

[BY OUR SPECIAL REPRESENTATIVE.]

(Concluded from page 870.)



JUDGING from the attendance during the last week the Paris Salon has lost none of its popularity. Each day the well-known building has been crowded with people, and although at the beginning of the show relatively few English visitors were to be seen, a large number of those interested in the British trade put in an appearance last week-end. Following the usual practice, the organisers of the exhibition have allocated all the central spaces of the Grand Nef to French firms, while the cars of foreign builders are relegated to stands at the sides. The Italian automobile industry, notwithstanding, is very well represented; the exhibitors include Fiat, Itala, Bianchi, S.P.A., Rapid, Isotta-Fraschini, Züst, Lancia, San Giorgio, and a new-comer, Messrs. De Vecchi and Co., of Milan. From Switzerland comes the Piccard-Pietet, the Martini, and Saurer. Belgium

each secures a full blast of air for cooling purposes. The mixture is supplied from a single Zenith carburettor. The engine is stated to develop 24-b.h.p.; its weight is given at 110 lbs. complete, or approximately 4½ lb. per b.h.p. Another interesting engine is that shown by M. J. Ambroise Farcot, Paris. It comprises eight air-cooled cylinders set to form a circle round the crank shaft, each set of four cylinders working on to a separate crank pin. A special feature of the design is seen in the single valve for both inlet and exhaust. The engine is stated to develop 75-h.p. and to weigh complete only 242 lbs. Of the ordinary type of petrol engines for motor-car use, the Aster, Mutel, Ballot, Buchet, Farcot and Sultan may be mentioned.

Although they have not yet so far met with any noteworthy adoption there are still many engine-starting devices to be seen. Messrs. Renault Freres fit one to some of their cars, while M. A. Saurer, of Arbon, Switzerland, still keeps his arrangement well to the front. Another device on somewhat similar lines is the Malivert and Bousquet. The Zed starter of Messrs. Lemale and Co. consists of a spring device mounted on the forward end of

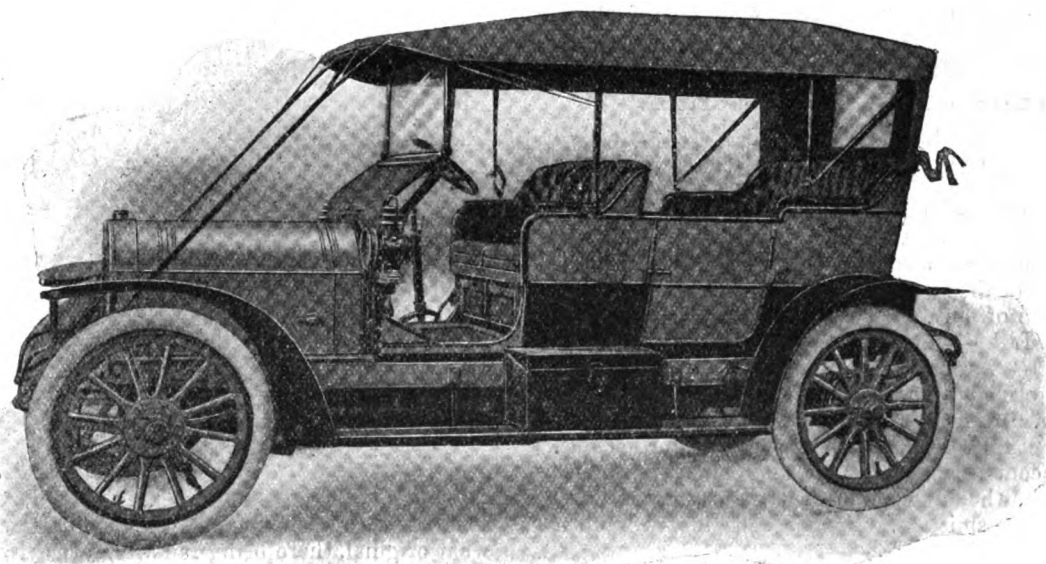


Fig. 8.—The Unic 16-h.p. Double Phaeton.

is represented by Nagant, Germain, F. N., Minerva, and Piedboeuf (Imperia). The German exhibitors include Mercedes, Benz, and the Berliner Motor-Wagen Fabrik. America has only two exhibitors (the Buick and Ford), Austria one (the Reichenberger Automobil Fabrik), while, as mentioned last week, the only British exhibitor of cars is the Wolseley Company. In our last issue we had only space to briefly deal with the general tendencies of motor construction as shown by the exhibits, this week we refer to some of the more interesting vehicles and accessories that are to be seen.

The Peugeot Company are turning out eight models for the 1909 season, ranging from a 9-h.p. single-cylinder vehicle to a 60-h.p. six-cylinder car. A notable feature of the live axle machines is the arrangement of the back axle casing, which is provided with extension piece from each side of the differential cover to the rear end of the cardan shaft sleeve.

In addition to the motors for aeronautical engines mentioned in our last issue, M. Giraud Ainé, the maker of the Buchet engines, shows one built to the designs of M. Korwin. It comprises six air-cooled cylinders arranged in two rows in such a way that

the engine crank shaft in place of the usual starting handle. The spring is wound up by the engine itself and when fully wound is automatically cut out. To start the engine it is only necessary to move a lever on the dashboard, which releases the spring and gives the necessary impetus to the crank shaft to set the engine in operation. A somewhat novel device is seen in the Cablo-Lanceur of M. Henri Toraille; in this a small compressor driven off the engine forces air under pressure into a reservoir connected by a pipe to a special chamber in which is a piston connected to a cable. The latter is wound round a free-wheel pulley mounted on the clutch shaft and held at its other end by a spring. To start the engine it is only necessary to open the distributing cock, when by the action of the piston the clutch shaft is quickly rotated and the engine started.

The Palmer Tyre, Ltd., are well to the fore in the tyre section; their exhibit, owing to the more extensive space available, is much more attractive than at Olympia, the cording machine (shown in operation) drawing crowds of interested spectators. Palmer cord tyres have been well taken up on the Continent, and the company have found it necessary to establish a

larger depot at 152, Avenue Malakoff, Paris. The Société des Pneumatiques Ripert, Paris, show a somewhat novel tyre; the cover is made of rubber and canvas as usual, but the tread consists of a series of strips of leather set on edge and held close together and in place on the tyre by rivets. In addition the Dunlop, Continental, Hutchinson, Michelin, Kempshall and Gaulois tyres are all on view. Considerable interest is being taken

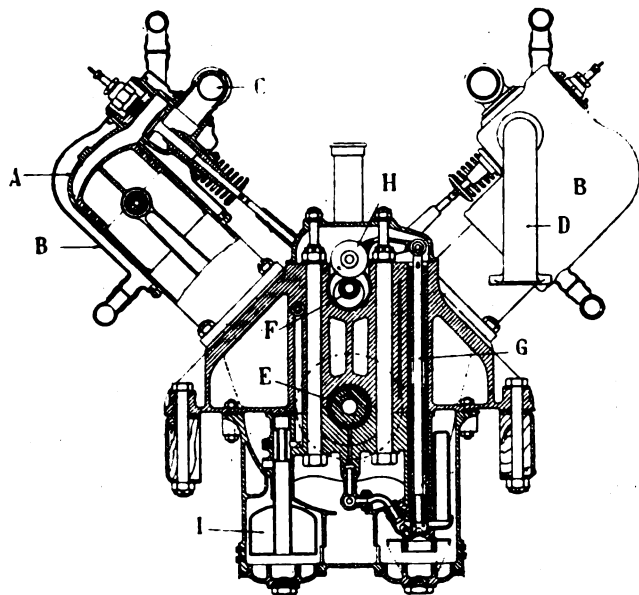


Fig. 9.—Cross Section of E.N.V. Eight-Cylinder Engine.

A.—Cylinder. D.—Exhaust pipe. G.—Oil pump.
B.—Water jacket. E.—Crankshaft. I.—Float chamber for oil supply.
C.—Inlet pipe. F.—Cam shaft.

in the twin pneumatic tyres for heavy touring cars shown by the Michelin and Gaulois Companies.

A brief reference was made to the E.N.V. car in our last issue; this is one of the most interesting vehicles in the show, and is the production of an English company, known as the E.N.V. Motors, Ltd.—in which several well-known English motorists are interested—with works at Courbevoie, near Paris. The motive power is supplied by an eight-cylinder, V-shape engine (Fig. 9) the cylinders of which are cast in pairs and provided with electrically deposited copper water jackets. The clutch is of the contracting band type and closely resembles a brake. Apart from the engine, one of the most noteworthy features lies in the transmission. Four speeds forward and a

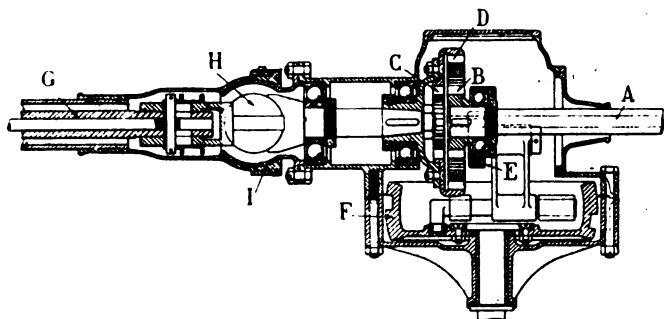


Fig. 10.—Sectional Plan of E.N.V. Gear-Box, giving one forward speed and a reverse motion.

reverse are available; the usual gear-box is replaced by a small carter (Fig. 10) in which the engine can be coupled up direct to the back axle or by means of intermediary pinions the first and reverse speeds obtained; at the end of the cardan shaft are two loosely-mounted bevel pinions each in gear with concentrically arranged bevel crown wheels on the back axle. Thus arranged, while the gear-box only gives two speeds, as this can be transmitted through either of the pairs of bevels, four speeds are altogether available. The E.N.V. Company are also devoting attention to

the construction of light engines for aeronautical purposes, and have on view one comprising eight cylinders (100 mm. bore by 130 mm. stroke) set in the form of a V. It is stated to develop 55-h.p. at 1,000 revolutions per min., and weighs complete 308 lbs.

There are only two friction-driven cars to be seen, the Turicum, which has already been illustrated in the *M.C.J.*, and "S.P.M.A." The latter is a 10–14-h.p. four-cylinder vehicle and is made by the Société Parisienne de Mécanique Appliquée, of Courbevoie. In general arrangement the car follows the usual lines of bevel-gear-driven vehicles; on the back axle, however, are mounted two large discs which are driven by a small friction pulley on the end of the cardan shaft. The pulley is so arranged that its position in relation to the large discs can be varied, and any speed between the minimum and maximum obtained. The friction pulley is controlled by a side lever as usual; when a change of speed is made the pedal has first to be depressed, the effect of this being to slightly move the discs on the back axle away from the driving pulley.

An advance in design is afforded by the 8-h.p. Clement-Bayard. The four cylinders (65 mm. bore by 100 mm. stroke), with engine base, exhaust and intake manifold, are in one casting; the crankshaft is naturally supported on the upper portion, for no lower casting exists, the sheet metal casing forming an oil pan secured along the sides and ends by a steel band drawn tight by a single screw and nut. The valves are on one side and the sparking plugs placed directly over the inlets, the magneto being

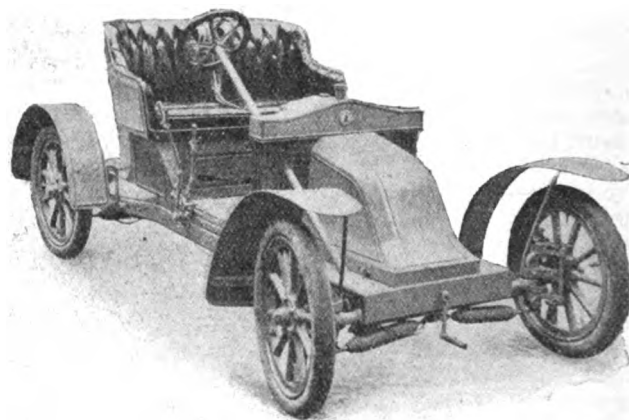


Fig. 11.—The Rip Voiturette.

at the front of the engine. The mounting of the engine is somewhat original, there being radiating arms front and rear; each terminates in an eye-hole, through which passes a steel tube with flattened ends to allow its being bolted to the side members of the frame. Thermo-siphon cooling is used with a special type of radiator formed of flat copper tubes, of which the thin end is presented forward and faced by a metal grating to distribute the air currents. The same firm is showing a single-cylinder car somewhat on the same lines as the above, but without the sheet metal case to the crank chamber. In both cases the change-speed gear is of the sliding type, and the final drive is by cardan shaft.

Among the novel single-cylinder cars on view is the "Rip," (Fig. 11) of the Société des Voitures Automobiles "Rip," of Rivé de Gier. Particular interest centres in the suspension of the frame, no springs in the ordinary sense of the word being employed. The axles are attached to vertical guides connected with the side members of the frame in such a way that they can slide up or down according to the inequalities of road surface or weight. All shock is taken up by transversely and horizontally set coil springs, one to each of the four road wheels. These springs are equipped at their outer ends with chains which slide over a free sprocket, and are connected at their other extremities with the stub axle. Thus any jolt due to the wheels passing over inequalities in the road is communicated by the chain to the coil spring, which opens out under the jerk sufficiently to allow

the axle to slide vertically up the guides. The change-speed gear is located at the rear end of the cardan shaft, it being, however, directly supported on a cross member of the extremely low-set frame. Two models of this interesting vehicle are being made—one fitted with a 5-6-h.p. single-cylinder engine and the other with an 8-10-h.p. four-cylinder motor.

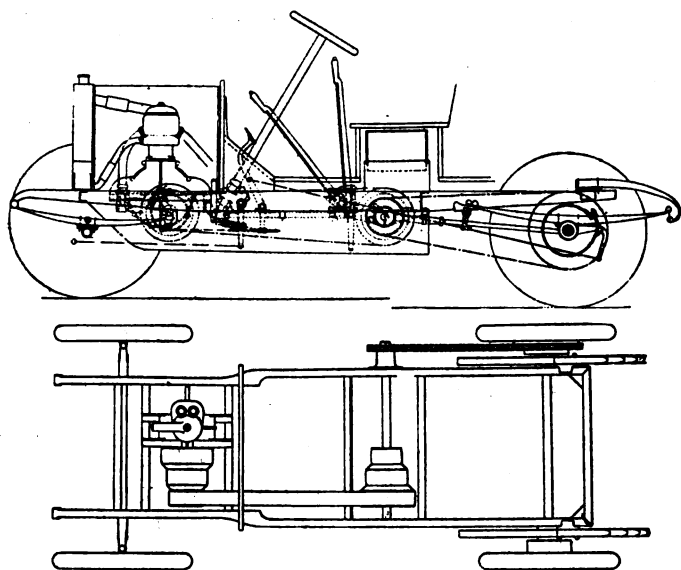


Fig. 12.—Elevation and Plan of Chameroir Belt-driven Car.

The Motobloc Company show the only single-cylinder engine with gear-box and crank case in a single unit. As this has already been illustrated in the *M.C.J.*, it need only be mentioned that the radiator is mounted on hinged bearings with suitable oil caps, this being intended to prevent straining of the tubes owing to any twisting of the frame.

A feature of the show is the reappearance of a number of small belt-driven cars; prominent amongst which is that shown by

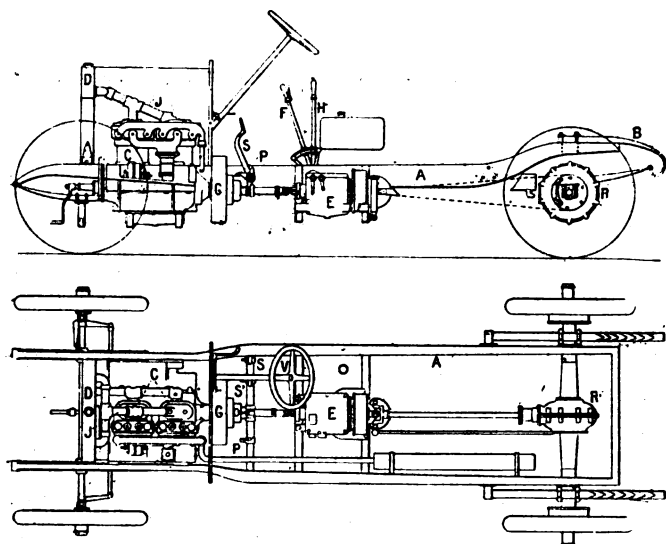


Fig. 13.—Elevation and Plan of Chassis of Berliet 15-h.p. Car.

A.—Frame. D.—Radiator. G.—Flywheel.
B.—Rear ½ elliptic springs. E.—Gear-box. K.—Differential gear.
C.—Engine. F.—Change gear lever. S.—Clutch pedal.

the Brouhot Company, of Vierzon (Cher). We gave an illustrated description of this vehicle in our issue of April 25th last. Since that time, however, several detail changes have been made, the most important of which is the adoption of ordinary semi-elliptic springs at the rear. The Truffault car shown on the stand of M. Bozier is fitted with a single-cylinder engine of 8-h.p. Mounted on an extension of the crank shaft are a couple of small pulleys of different sizes which convey the power to the back axle by V belts; as either of the pulleys can be brought into

action, a direct drive is thus obtained on both of the two speeds available. The suspension of this car is also on exceedingly novel lines.

M. G. Fouillaron, of Levallois Perret, is again present with his novel system of transmission by means of extending and contracting pulleys, the connection between the two being by a special form of steel and leather belt. In order to make room for the two pulleys within the width of a chassis of standard size M. Fouillaron locates his engine at a slight angle to the usual position. The two pulleys are located below the driver's floor board, the driven one being connected with the cardan shaft, which is also at an angle, and transmits the power to the back axle through the usual bevel gear. The various speeds are obtained by reducing the diameter of the driving pulley and increasing that of the driven one, and *vice versa*. We understand that a company has been formed in London to introduce this system into England.

M. Chameroir, of Le Vesinet (Seine-et-Oise), displays a little belt-driven car (Fig. 12) which forms an interesting attempt to produce a vehicle at the popular price of about £100. The engine is a 9-h.p. Aster; on an extension of the crank shaft is loosely mounted a three-step cone pulley, so arranged that while it is gear driven off the engine it has a slight play which enables the tension of the wide driving belt to be maintained or eased when changing speed; a similar three step pulley, combined with one step of which is a reversing gear, is mounted on a cross shaft, at about the centre of the car, from which the power is transmitted by a single chain to one of the rear road wheels. No

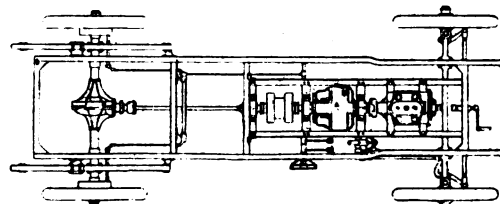


Fig. 14.—Plan of V.A.T.E. Petrol-Electric Car. (See page 870 last issue.)

differential gear is fitted, the opposite road wheel being loosely mounted on the axle.

The two most interesting models on the Berliet stand are a two-cylinder model of 12-h.p. and a four-cylinder car rated at 15-h.p. The smaller of the two has its cylinders in a single casting, high tension magneto ignition, a new type of carburettor directly connected up to the intake manifold, and thermo-siphon water circulation through a plain copper tube radiator carried on the dashboard. A cone clutch is employed and a shaft drive. The four-cylinder model (Fig. 13), which should prove a very popular type of car, has its cylinders, of 80 mm. by 120 mm. bore and stroke, in two castings, with valves all on one side, thermo-siphon water circulation, with radiator in front, and ignition by Bosch high-tension magneto. The clutch is of the multiple disc type; the gear-box, which is mounted on two dropped cross members, is an entirely new pattern, of square shape, with none of the projections and corners which are usually given for the lodging of dust, grease and oil. It contains a double sliding gear providing four forward speeds and reverse, a direct drive being obtained on the top speed through the propeller shaft to the rear live axle. A distinctive feature of the new car is the excellent lubrication system. The base of the crankcase forms an oil tank, from which the oil is forced by means of a gear-driven pump to the crankshaft bearings, and by means of channels in the shaft to the connecting rod bearings. An oil tank is carried on the front of the dashboard, and on the driver's side is a tubular oil level, which indicates the quantity of oil in the engine when the motor is running. A couple of sight feeds with variable flow supply lubrication to the gear-box and the rear axle, the pressure only being maintained when the engine is in operation and the pump is working.

In dealing with the voiturette class one enters the realm of the assembled car, since some of the firms making a specialty of voiturettes lack the resources necessary for producing the entire

vehicle. Many of the firms employ a De Dion or Aster single-cylinder engine, with high tension magneto, thermo-syphon circulation. Sizaire-Naudin, Chenard-Walcker, and a few other firms, however, produce a car entirely of their own make. There seems to be a certain waste in respect to the space on these cars, owing to the disinclination of the makers to reduce the size of the body according to the power of the engine. Advantage is taken of this waste space in some instances to locate other organs of the car beneath the bonnet, the otherwise unoccupied area between the dashboard and the engine being taken up by the petrol, oil, and water tanks, and, in one case, a tool chest.

The Alcyon Company, of Neuilly-sur-Seine, who have given

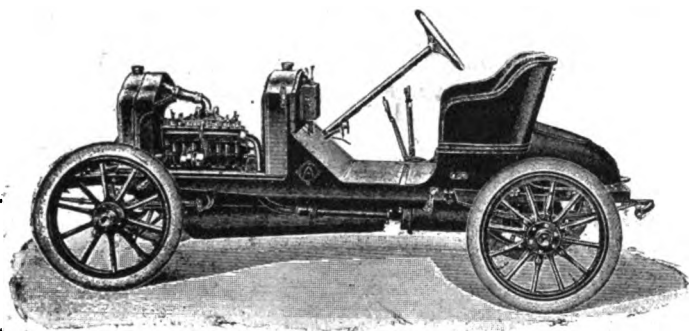


Fig. 15.—The Alcyon 8-10-h.p. Four-Cylinder Car.

up the construction of single and double cylinder cars, are now devoting their attention to the production of light four-cylinder cars of 8-10-h.p. and 12-h.p. The first named (Fig. 15) has the four cylinders (62 mm. bore by 120 mm. stroke) in a single casting. The water circulation is by thermo-syphon, and the ignition is by Bosch high tension magneto, and the details of the transmission, which is to a live axle, comprise a multiple disc clutch and a three-speed gear-box with direct drive on top. The 12-h.p. car has the cylinders (75 mm. bore by 110 mm. stroke) cast in pairs, otherwise it is on similar lines to the 8-10-h.p. Both can be supplied with either two or four-seated bodies. Other light two-seated four-cylinder cars include the 8-10-h.p. De Cleves-Chevalier (Fig. 16), the Delage, the Reyrol, the Werner, the Stimula, and the Corre.

Fig. 17 depicts the somewhat novel car of the Société des Automobiles Stabilia, of Neuilly. As will be seen, the axles are

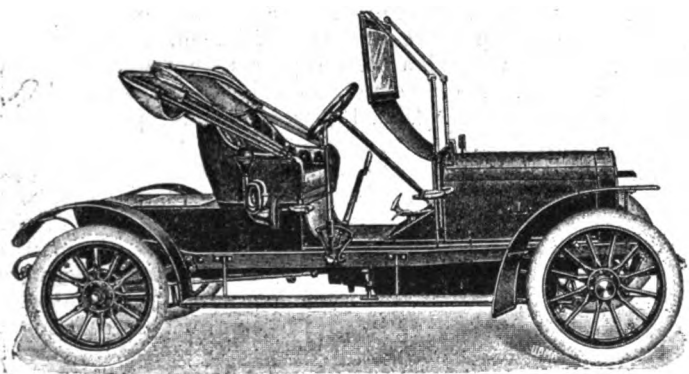


Fig. 16.—The De Cleves-Chevalier 8-10-h.p. Four-Cylinder Car.

located above the frame, which is directly supported from and not on the springs. It is claimed that not only is the stability—hence the name of the car—increased owing to the low centre of gravity, but that the various components are rendered more accessible, and that, owing to the fact that with a corresponding clearance to the ordinary design of car larger wheels may be used, resulting in an increase in the life of the tyres. The Stabilia Company are turning out cars of 8-10-h.p., 12-14-h.p., 14-16-h.p., and 20-h.p., all fitted with four-cylinder engines. Apart from the suspension, the vehicles follow the usual lines of live-axle cars.

A brief mention may be made of the chassis of Messrs. Donnadieu, Saussard and Robert. Both the engine and transmission of this car are on novel lines. The motor, which is air-cooled, has only one overhead valve to each of the four cylinders for inlet and exhaust. The change-speed gear, which is of the epicyclic type, is combined with the differential mechanism on the live axle.

The Westinghouse Electric Company show an ingenious jack for raising the wheels of motor-cars. This is operated by a lever with an up and down motion; the movement is the same both to raise the jack and to lower it, all that is necessary being to push over a small trigger. Another interesting jack is the "Passe Partout" displayed by M. H. Libert, of Charenton-le-Pont (Seine). This is made on the principle of a lazy tongs; by turning the handle the tongs extend; the jack, which is perfectly rigid, when fully extended is 17 in. high, while when folded up it is 2½ in., so that it occupies an extremely small space.

Amongst the non-skid devices on view are the Durandal, the Fournier and the Samson. All the leading makes of detachable rims are to be seen, the most prominent of the new comers being the Alpha, which is made by the Adlerwerke Gesellschaft, of Frankfurt-on-Main. This is on somewhat similar lines to the Dunlop and appears to be a very effective arrangement.

The fact that magneto ignition is now enjoying a big wave of popularity is naturally giving an impetus to the manufacture of magnetos, of which quite a number are on view, amongst them being the Bosch, Eisemann, Gianoli, Nieuport, Nilmelior, the Ruthardt and the Unterberg. As usual a number of spring wheel devices intended to furnish all the advantages of pneumatic

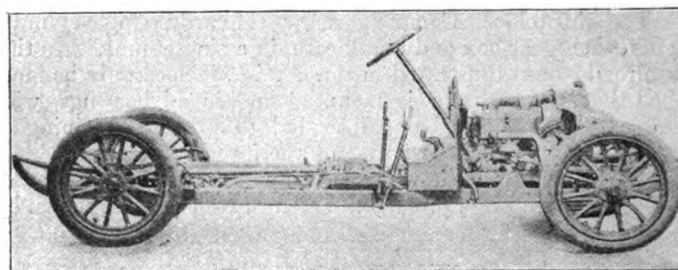


Fig. 17.—Chassis of "Stabilia" Car, in which the frame and the whole of the engine and driving gear are directly supported on the springs.

tyres without any of their drawbacks are to be seen. The one that is attracting considerable attention is that known as the Paulson.

A good deal of attention is still being given to shock absorbers in connection with the springs of motor-cars. One that is just now receiving considerable notice is the Houdaille, in which glycerine is used as the cushioning medium. Automatic tyre inflators form another interesting group of exhibits, among them being the Vadam, the Phono-Pompe, the Rapid of M.P. Pestourie, the Valantin (shown by M. Mazaudier, Paris), and the Ajassan de Grandsagne, which we understand is being introduced into England by Messrs. A. Dunhill, Ltd. Several firms are paying attention to the production of steel pistons, cylinders, &c., among them being the Société Metallurgique de Monthard-Aulnoye, who are represented in England by Messrs. Hamilton, von Glehn and Co., of 40 Trinity Square, E.C.

The British motor chain manufacturers—Messrs. Hans Renold, Ltd., the Coventry Chain Company, and Messrs. Brampton Bros.—each have a representative display of their productions. All the well-known lampmakers are well to the front, among them being the Bleriot, Ducellier, Alpha, Troubetzkoy, Rushmore, and the Autoclipse of Messrs. Brown Bros. Other British firms exhibiting include the United Motor Industries, Messrs. Harvey Frost and Co., with their vulcanisers, Fastnut, Ltd., with their well-known device, Messrs. S. Smith and Sons (speedometers), the Stepney Spare Wheel Co., and Messrs. H. M. Hobson, Ltd. (Hobson-Pognon sparking plugs).

MOTORING THROUGH EUROPE.

ALTHOUGH Mr. Roy Trevor's attractive book, "En Route,"* reached us during the autumn, we delayed its perusal till the period of fog in London and shortened days in the country came upon us. For it is a volume that should be read by the fireside, when the traveller can recall scenes he has known, and find pleasure in learning how other people were impressed. Mr. Trevor has a good capacity for enjoyment and for communicating to others something of his sense of pleasure. His roamings have been in several lands, of varying altitudes and climatic conditions, and with a keen scent for the picturesque in nature he lures us from page to page as smoothly as though we were in the company of Sheila, the beautiful, or Dorothy, the brunette—two very companionable friends who were passengers in his Mercedes over the Alps and through Italy into the Tyrol, with many incidental glimpses along the line of route.

The volume has a somewhat conventional preamble, and the

had been a rabid motor hater. He eagerly questioned me about the car, how it was worked, and listened with interest to my explanation of cylinders, magnetos, gears, and all the hundred and one things that go to make up the intricate workings of an automobile. At last the microbe of automobilism had entered his blood, and I knew that never again would he rave against cars. His next wish would be to handle a living power, and, like the boy in the bath, he would not be happy till he got it."

Hitherto the party had always regarded France as the highway to other lands; now, as they traversed the fine straight highways they came upon old towns with the honoured battlements and noble monuments, and saw, for the first time, the real country, receiving quite a new insight into the delightful land. It was an onward rush from the capital, and then through Troyes to Besancon they were carried on the wheels of the speed god—for no Inspector Marks or Sergeant Waghorn or Surrey J.P. interferes with travel there—to the gate of Switzerland. Passing the officials at the French frontier "a short and easy climb brought us to the summit of the Col de Roches, where the road passes through tunnels bored deep into the rock, and emerges



The Col de Roches—the road passing through tunnels bored into the rock.

usual argumentative disquisition as to whether to motor or not to motor, one of the prospective tourists being somewhat embittered against "condensed horseflesh," as he, with bucolic perception, named the engine beneath the bonnet. At dinner in Paris on the evening before the tour the party raised their glasses to drink success to the adventure. "Let us be merry to-day for tomorrow we start," added this somewhat less-willing-than-the-others sort of person. He was converted from that attitude after passing the Bois de Vincennes and getting on to the Nancy road. The manner of the change is thus told by Mr. Roy Trevor:—

"Now," I said, as we rounded the bend and saw before us a perfect stretch of road, clear of traffic, and losing itself in the distance, "now you shall feel what Mercedes can do." Silently we tore along, and by imperceptible degrees I increased the speed; the delight of motion, the fresh breeze blowing in our faces (for the wind screen was up) combined to make us feel that life was indeed worth living. I instinctively knew that Ken was catching the motor fever; no longer did he sit like a waxen image, his eyes sparkled as he gazed through his goggles, his colour heightened by the quick rush of air, and the whole set of his figure told me that he had forgotten that but a short half-hour ago he

before the doors of the Swiss *douane*." The way was then *via* Neuchatel, Berne, Lucerne, to the great St. Gothard—the pass of which has not long been open to automobiles, the drivers of which have to secure a permit from the official at the station at the foot of the rock.

"There are a few rules you must observe," said he. "Automobiles are forbidden on the pass between the hours of five and eight in the morning and seven and nine in the evening. On meeting any conveyance, you must always take the precipice edge of the road, and must, if required, silence the motor. And lastly, you must accept full responsibility for any damage or accident that may happen in consequence of your automobile's presence upon the road. Here, monsieur, is your pass, and I wish you bon voyage."

The moonbeams were being slowly strangled by the pale light of breaking day, and between the great mountains, rising on either side of the valley, stretched a narrow arc of sky still dotted with innumerable stars, flashing like diamonds upon a velvet cloth. From Goschenen the road winds upwards and enters the Schollenen, a dark sombre defile through which the Reuss tears down its rugged bed, its path strewn with enormous boulders. The perpendicular sides of this fearsome valley rise up sheer from the stream, devoid of all living things save where patches of moss and grass alone seem able to obtain a resting-place. The road passes under an avalanche gallery and winds itself in short zig-zags, ever climbing amidst scattered rocks, till, on rounding a mass of stone, it enters the gorge spanned by "The Devil's Bridge." A

C

* "En Route." A Descriptive Automobile Tour through nine countries and over nineteen great passes of Europe. London: Edward Stanford.

more wild and savage scene it is difficult to imagine. The gorge is narrow; the rocks rise up sheer to a great height—on one side the Reuss leaps over a precipice in one foam-enshrouded mass, falling into an abyss 100 ft. beneath the bridge, which it envelopes with its spray, carried far out from the stream by furious gusts of wind which come howling down the ravine.

"A doleful place: hemmed in with earthen precipices."

The scene is awful enough in broad daylight, but illuminated by the uncertain light of dawn it was weird in the extreme.

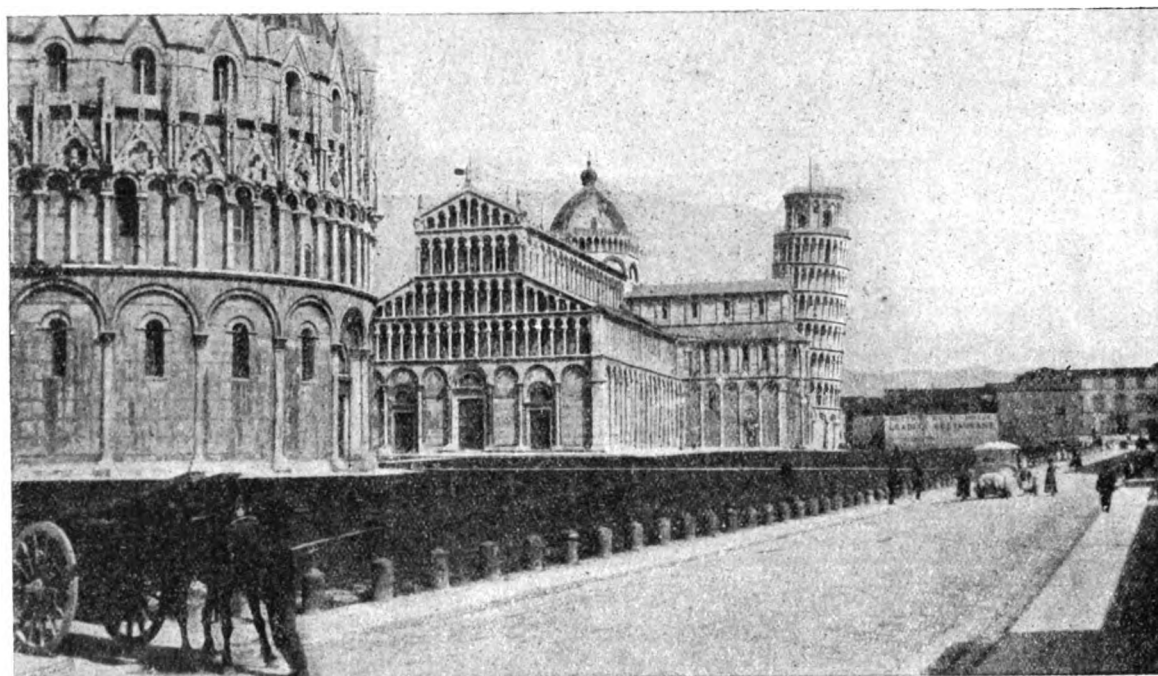
The wind was shrieking down the gorge, carrying spray from the cascade and dashing it against our faces as we crossed the bridge, and continued to rise in windings. A little fort, hardly distinguishable from the black shadows of the rocks, gazes down upon the bridge, and, stopping Mercedes, we descended and walked toward it, hoping to obtain a better view. As we advanced, two dark shadows detached themselves from the blackness, and we found ourselves looking upon the cold steel of two bayonets, whilst a voice bade us return immediately to the road. It was a command to be obeyed, and we at once retraced our steps. Mounting to our seats, we plunged into a tunnel bored through the rock, and emerged, wonder of wonders, in a peaceful green valley enclosed with snow-tipped mountains.

That night they discussed the wonders of the Gothard in the hotel on the shore of Lake Maggiore. In the morning they started over the Simplon road to the Matterhorn, later negotiated the Italian Customs, had a few days by Lake Como, and then

SOME USEFUL NOTES.

THE entire ignition wiring of a car should be carefully examined from time to time for signs of wear in the insulation. At certain places the wires are exposed to continual, if slight, friction, which will ultimately break through the insulation and establish a short circuit. The timely application of a little insulating tape will often save much trouble in this respect.

COMPARATIVELY few owners and drivers of motor-cars seem to realise the necessity of oiling not only the spring shackles but the leaves themselves. The latter should be lubricated, if for no other reason than eliminating the annoying squeak that accompanies a dry spring. The best lubricant for this purpose is a mixture of ordinary oil and graphite or the regular graphite grease that is on the market. To facilitate the injection of the grease between the leaves, the frame of the car should be jacked up until the axle partially hangs by the springs. This will open the leaves, and with the aid of a thin stick the grease can be spread easily. A screwdriver or similar tool can be used with-



The Glories of Pisa.

made way for Austria by the Stelvio Pass. Ultimately, at an altitude of 8,000 ft., they came in view of the lonely Cantoniera Santa Maria, the highest permanently inhabited house in Europe and the seat of the Italian *douane*. At length:—

We bade goodbye to the lonely little house, lost amidst the rocks, and continued the ascent. In a moment all our petty troubles were forgotten in the silent contemplation of the scenes through which we were being swiftly carried. It would be impossible to describe the awful desolation that lay around us, neither pen nor photo could ever reveal a thousandth part of the wildness and magnificence of the scene. Above and beneath us the road writhed like a serpent in agony amidst the rocks; overhead the snow-line into which the mountains rose appeared to be falling. On rounding the last turn we reached a tiny plateau. At the foot, or, as it seemed, upon a gleaming glacier, stood a small white house at whose door the road suddenly disappeared. Around and about rose a towering mass of snowy peaks and streaming glaciers.

This was the summit of the Stelvio, the meeting-place of the three frontiers, 9,200 ft. above the sea, and the highest carriage road in Europe. From the door of the hotel a startling scene is presented on looking down the descent towards Austria. Imagine a world of rock split as though by a gigantic wedge, forming a valley, whose sloping sides rise from a silvery stream into the glaciers. At the further extremity of the road, as far as the eye can reach, is a little pin-point of houses, Franzenshohe, the Austrian *douane*. This is but one-fourth of the whole descent, the road here disappearing into the pines.

(To be concluded.)

out harm to further spread the leaves if necessary. It is best to be liberal in the application of this grease to insure its being squeezed over the whole surface when the frame is let down. The surplus can be wiped off, and with this treatment the leaves will not require attention for another season.

WHEN replacing a broken ball in a ball bearing it is better to renew the whole set, unless the new ball can be carefully gauged to be of the same size as the others. If this is not attended to, the new ball, having to bear more than its share of the weight, quickly succumbs. The greatest care should be taken, of course, to use grease free from grit, and to clean the balls and bearings before they are replaced.

WHEN assembling those parts of a car in which split pins are used, it is quickest to use new pins, and not those which have been removed in taking down the parts. Sometimes, however, the old pins have to be used, and difficulty is experienced in straightening them. A procedure which is generally effective consists in gripping the splayed ends of the pin between a pair of pliers and resting the heads upon some hard surface. A tap on the head of the pin spreads that end and closes up the other, straightening the pin and restoring it to its original shape, so that it may be replaced easily.

THE SOCIAL WHIRL.

THE Right Honourable Sir J. H. A. Macdonald, K.C.B., Lord Justice-Clerk of Scotland, is presiding at the conference between the Road Surveyors' Association of Scotland and the Scottish A.C. which is being held on the evening of the 11th inst. The basis of the discussion will be the reports of Mr. Robert Drummond and Mr. J. R. Nisbet on the recent International Road Congress.

THE Earl of Lonsdale has consented to take the chair at the dinner to Mr. de Rodakowski which will take place in February. It had been intended that this should be held next month, but Lord Lonsdale has no spare evening in January.

ACCORDING to the "Motor Trader," Mr. Oliver Stanton was acting as instructor to King Edward VII. when he was Prince of Wales. While at Cannes with H.R.H. a casual motor-car ride was taken, with the result that not long after the Prince announced his intention of taking to motoring, and instructed Mr. Stanton to buy him the best British car he could get. A visit to Cordingley's Show decided Mr. Stanton to order a 6-h.p. Daimler, then he took it to Ascot, and the rest is history.

MR. RUDYARD KIPLING is a candidate for membership of the Sussex Motor Yacht Club, and it is possible that he will take some active interest in the arrangements for the next "scouting" event organised by the committee. The necessary alterations have been completed to the new club house, the formal opening of which will take place on the 19th inst.

THE first of the bronze medals awarded by the R.A.C. for continuity of service and good conduct was presented to Mr. Frederick Hill, driver to Mr. A. E. Thompson, Westbrook, Sheffield, on Saturday. Mr. Hill has held both the Club's driving and mechanical proficiency certificates for the past three years, and has, during that period, been in the service of Mr. Thompson.

THAT enthusiastic motorists are not insensible to the charms of horsemanship is proved by the fact that a considerable number of members of the Motor Club assemble every morning for their matutinal ride in the Row. A strong Polo Committee is actively at work, and the Motor Club Polo Team may be expected to give a good account of itself next season. The secretary, Mr. Edmondson, was formerly manager of the London Polo Club. As such well-known players as Messrs. Herbert Rich, Humphrey Freville, and H. Antony Browne are on the committee, great things may be reasonably expected.

MR. E. R. PICKMERE, the Town Clerk of Liverpool, reports that up to the end of September there were registered for private use in that commercial city 1,294 motor-cars. One hundred and eighty-five motor vehicles were registered for trade use and seventy-eight for public service, making a total of 1,557 motor vehicles officially recorded in the twelvemonth. Eight hundred and eighty-three motor-cycles were also registered and licences issued to 1,493 motor-car drivers. From Wolverhampton comes the news that during the year ending September 30th forty-six motor-cars and thirty motor-cycles were registered, while licences were issued to 305 drivers.

DURING the past week Capt. Townshend, of Hungerford, and Capt. C. H. Fenwick, of Malmesbury, have decided to obtain Sheffield-Simplex cars, as have also Mr. Walter E. Case, of Frome, and Mr. Allan McOnie, of Buchlyvie.

CAPT. ERNEST G. PRETYMAN, who won the Mid-Essex Division last week, and returned to the House of Commons, is an addition to the ranks of motoring M.P.'s. He joined the R.A.C. shortly after his defeat at the last general election, and his success brings the number of club members in the House from 52 to 53.

MR. C. I. THORNTON, the well-known cricketer, is also an enthusiastic motorist, and is often seen on the southern roads. He intends to winter in India, not returning till the spring.

LOLLIUS.

HERE AND THERE.

THE Churchill Motor and Cycle Company are opening an establishment in Churchill Place, Edinburgh.

A GARAGE solely for commercial cars has been opened in the New City Road, Glasgow, by Mr. Alexander Kennedy.

THE General Committee of the R.A.C. has agreed to accept an application for the affiliation of the Automobile Club of China under the standard "Colonial" agreement.

MESSRS. S. SMITH AND SONS, LTD., 9, Strand, London, W.C., have brought out an excellent cartoon in which their Speed Indicator is shown as being accepted in evidence by a judge of the High Court. to the consternation of the counsel for the police and others engaged on the other side of the case. This, of course, is based upon experience. Among the seasonable novelties which are to be found in the establishments of those who cater for motorists is a perfect model of a motor-car side lamp and head light which has been introduced by Messrs. S. Smith and Sons, of Speed Indicator fame. It contains a sound and reliable watch movement. This is illustrated in the accompanying Fig. 1 so far as the side lamp is concerned. The model headlight is an equally attractive novelty. These are guaranteed timekeepers, are wound and set from the front, and are supplied in beautifully finished brass or copper cases. As presents between one motorist and another they ought to solve the problem of "what to give to our friends at Christmas."

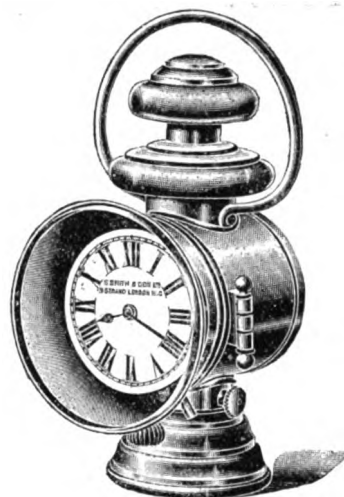


Fig. 1.



Fig. 2.

AWAY in the clerestory of Lincoln Cathedral the corbel on one of the arches ends in a cross-legged, wide-mouthed and prominently-eared little elf who has become known to fame as the Lincoln Imp. A fine brass casting has been made from the original of this curious Imp (Fig. 2), the presence of which was pointed out to motorists attending the meet of the R.A.C. nearly two years ago by Canon Hicks, and this is being suggested by Messrs. A. W. Gamage, Ltd., Holborn, London, E.C., as a Mascot for motorists. Locally the citizens of Lincoln regard the wearing of the Imp on watch-chain or bangle as a charm against danger, and on the car it should exercise similar fascination, although probably in remote districts it might lend semblance to the story of the car's connection with the Evil One. It is made with a plate to screw down on to the top of the radiator or on any other prominent part of the car.

THE Siddeley 20-30-h.p. six cylinder chassis on the Wolseley Company's stand at the Paris Salon bears the legend "sold to Madame Fallieres." The fact that the wife of the French President should have chosen this vehicle is a feather in the cap of British motor-car builders.

MESSRS. J. B. BROOKS AND CO., LTD., of Great Charles Street, Birmingham, have a large selection of seasonable articles, such as Thermos flask cases, weather-proof umbrella cases, as well as novel baskets and wickerwork receptacles for luncheon and tea, in their department devoted to goods for the convenience of motorists when on tour. Trunks and luggage carriers of every kind are supplied by the firm, who will be pleased to send their catalogue to any of our readers thinking of winter travel.

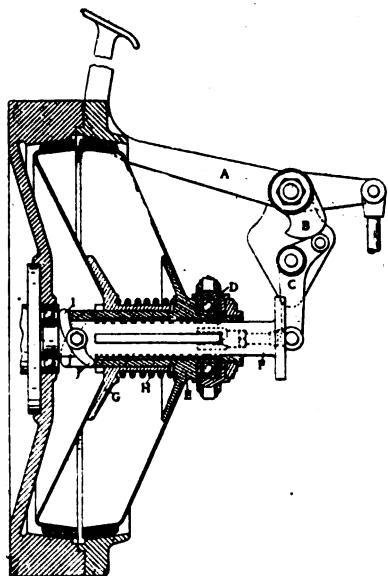
THE Worcestershire Chamber of Agriculture has adopted a resolution in favour of further restrictions being placed on the speed of motor-cars.

WE hear that M. Fabry, of the Itala Automobile Company, is at work on the construction of a new aeroplane, with which he hopes to commence trials early next year.

A LOCAL computation places the fines imposed by the Spittle-gate (Grantham) magistrates on motorists since the Motor Car Act came in force at two thousand pounds.

REPLYING to a proposal that the control of tramways be included in the Town Planning scheme lately before a Committee of the House of Commons, Mr. John Burns remarked that if they included such vehicles, why not motor-omnibuses and motor-bus routes; and if motor-buses, why not aeroplanes? Why not?

THE German Daimler Motor Company have recently patented a double cone clutch, of which a sectional view is shown in the accompanying illustration. The operating pedal A is mounted on the frame of the vehicle and to its shaft is secured a cam piece B, which acts on a bell crank C. The latter connects through a pair of rods with forked ends to the ball-bearing trunnion collar D on the hub E, to which is secured one of the pressed steel cones. The hub E is arranged to slide freely on the shaft F, which is provided with four feather keys. Concentric with the hub E is arranged another hub G, to which is secured a second pressed steel cone. The two hubs are pressed apart by



the coiled spring H, whereby the two cones are forced into engagement with their respective female cones formed in the flywheel. At the forward end of the shaft F are pivoted two short double armed levers I and J. The upper arm of one of these levers and the lower arm of the other bear against projections of the inner hub and the other arms of the two levers bear against projections of the outer hubs. The effect of this arrangement is that when the rearward cone is pushed forward by means of the pedal A, the forward cone is simultaneously drawn backward, thus insuring positive disengagement of both cones.

WE learn that a company, known as the Aeroplane Engine Company, Ltd., has been formed, with headquarters at the Redbridge Motor Works, near Southampton, to manufacture the eight-cylinder engine exhibited by Mr. W. L. Adams at the Cordingley Show in March last. The company have orders in hand for a number of these engines, which are of 100-h.p., including one for Lord Royston, one for Mr. P. Warren, of Brighton, one for a new hydroplane which is being built for the Monaco meeting, and one for a new racing car which will probably be seen on Brooklands track next season.

A CURIOUS feature of the Paris Salon is that most of the novelties are known by names made up of the initial letters of the firms showing the same; for instance, the V.A.T.E. petrol electric car, the D.S.R. car, with change-speed gear on the back axle, the R.I.P. car, the E.N.V. eight-cylinder vehicle, &c.

THE Lewes Literary Society has just attracted attention to itself by deciding that motors are a nuisance, after a debate upon the subject.

SEVERAL agents of the Humber Company have presented a testimonial to Mr. A. S. Butt, who was for many years sales manager in the motor-car department of the Humber Company.

THE Home Secretary has had a report from the City and Metropolitan police that the smoke nuisance that was originally associated with the motor-buses in London has undoubtedly decreased.

ONE feature of the Paris Salon which is this year conspicuous by its absence is the Tombola. In previous years all visitors purchasing a catalogue were given a numbered ticket which entitled them to a chance for one of the many prizes offered to the exhibition authorities by different firms in the trade.

THE Silver Seal scheme introduced in connection with Pratt's Motor Spirit has been the subject of a great deal of misunderstanding, not only on the part of consumers, but dealers as well. The primary object of the scheme was, we are informed by the Anglo-American Oil Company, Ltd., to impress upon the consumer the necessity of assuring himself of the perfect sealing of the can of spirit when delivered to him, which in the opinion of the importers is the only possible guarantee to the consumer of its purity. This object being attained, and the scheme being only operative till the end of February, it will then be withdrawn.

FROM the Société Lorraine-Dietrich, of 5, Regent Street, Waterloo Place, S.W., comes a copy of the new catalogue of the Lorraine-Dietrich cars. This is one of the most handsome productions of the kind that has reached us for a long time; not only are the various types of cars fully illustrated and described, but a number of interesting views of the company's works, as also of its cars, in various parts of the world are included, while interlarded with the pages are a number of plates in colours depicting the various uses to which automobiles are now being put. The company is, we understand, only issuing a relatively small number of these catalogues, so that early application should be made by any of our readers desiring a copy.

MR. GERALD BISS is becoming quite a prolific writer of fiction, and his latest story, "Branded," is as full of excitement as anything he has written. It opens with a gloomy scene at the Old Bailey, and ends with the merry tinkle of wedding bells. Between these two extremes are tragedies, flirtations, social difficulties, unsocial doings, and many of the complexities that darken the modern world. Fortunately for the happiness of all concerned, a motor-car mishap towards the end of the volume gives opportunity for the original wrong to be righted—as far as is then possible—and the story ends in the orthodox fashion, leaving the reader to imagine that "they lived happily ever after." Incident moves rapidly in the pages of "Branded." As a writer of fiction Mr. Biss is going forward, and a little care with regard to such domestic scenes as are pictured in one of the later chapters would hasten his passage to the front. The general domesticity of Ralph seems hardly in accord with some of his language in that part. But that, perhaps, is a detail in a volume that will have many readers. It is published by Messrs. Greening and Co., Ltd.

WE learn that Mr. C. R. Garrard has severed his connection with Messrs. Clement-Talbot, Ltd., and has taken over the position of works manager to the Sheffield-Simplex Motor Works, Ltd. Mr. Garrard's connection with his old firm dates back to a period earlier than the opening of their works at North Kensington, which he schemed out, organised and supervised from a bare piece of ground, being, of course, subsequently responsible for the design and production of the well-known Clement-Talbot cars. Mr. Percy Richardson, the managing director of the Sheffield-Simplex firm, who has up to the present been responsible for the design and production of the Sheffield-Simplex cars, is also well known as one of the earliest pioneers of the trade, and the association of these two gentlemen should form a very strong combination. With the advent of Mr. Garrard it is the intention of the Sheffield-Simplex Motor Works, Ltd., to produce smaller models in addition to their two existing types of 45-h.p. six-cylinder cars. These will embody the same refinement in detail and high class manufacture as the larger models.

CONTINENTAL NOTES.

French Motor-car Imports and Exports.

The French export trade in motor-cars and parts continues in a very depressed condition. The shipments during the ten months ending with October last, according to the returns now available, only amounted to £4,405,920, as compared with £4,824,440 in the corresponding period of 1907, a decline of £418,520. There has also been a shrinkage in the imports of foreign motor-cars and parts into France from £283,440 to £246,240.

Industrial Motor Vehicle Trials in Switzerland.

The Swiss Automobile Club, in conjunction with the Swiss military authorities, are organising a competition of industrial motor vehicles, which is to take place at the end of June next. There will be only one category provided, this being for vehicles having a carrying capacity of 2½ tons. Motors using any form of fuel will be eligible to enter, and in addition to the load the body must have seating accommodation for three persons. To the rear of the chassis a hook must be provided so that a two-ton trailer can be attached. When this is done the load on the

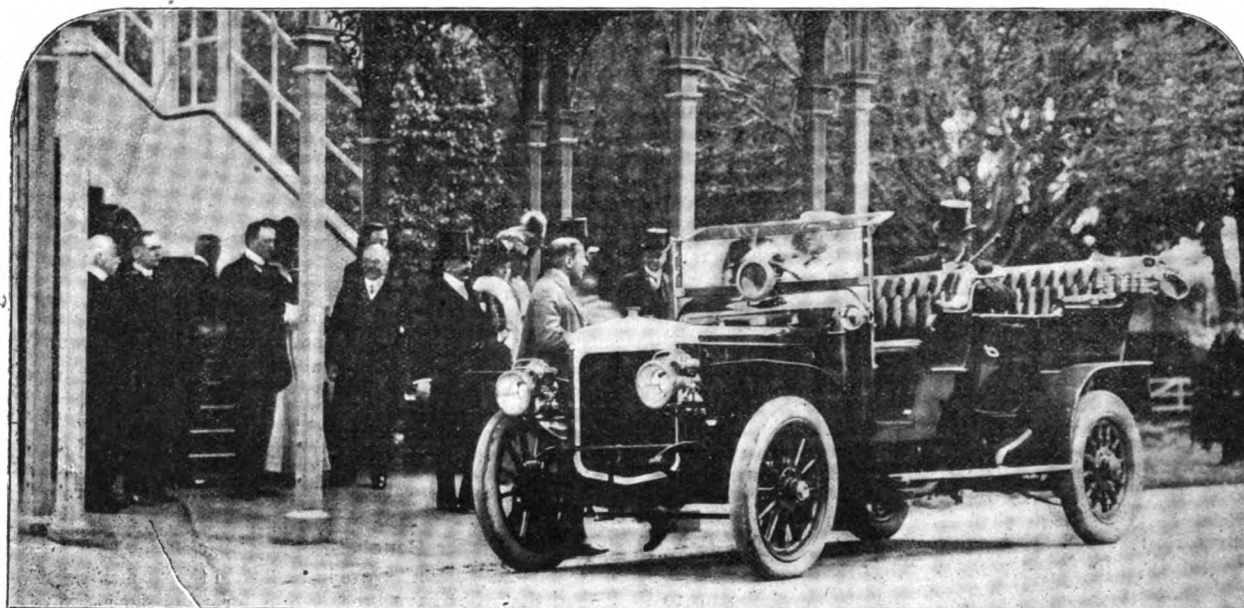
ing up through the centre of the floorboard. The Lorraine-Dietrich Company is also adopting the idea, as in some of its new models the steering and control gear is so arranged that it can readily be adapted to either the left or right side of the front seat.

Motor Events in Italy.

The Italian Automobile Club has provisionally fixed the dates of the leading motoring events to be held in that country next year. The Voiturette Race in Sicily will be held on April 29th, while the Targa Florio has been fixed for May 2nd. The Grande Prix de Bologna and the Coupe Florio races will take place in the first fortnight of September.

Aeronautical News.

The regulations have been issued by the Aero Club de France with regard to the prize of £500 offered by Messrs. Ruinart Père et Fils for the first aviator who succeeds in flying across the English Channel in a machine heavier than the air, and entirely self-propelling. The offer will remain open till January 1st, 1910. Attempts may be made only on Saturdays and Sundays, and the offer is open to all aviators, no matter of what nationality. The flight may be made from either the French or the English coast. Written notice



His Excellency Earl Dudley, Governor-General of Australia, arriving in his Daimler Car at the Caulfield Races, "Guinea Day," Melbourne.

vehicle will be proportionately reduced. The trials will extend to ten days, the daily journeys averaging 100 kilometres; a minimum speed of 10 kilometres per hour will be required. The awards will be based on the regularity of running, hill climbing capabilities, the suspension of the chassis, the behaviour of the tyres, and the running costs per ton-kilometre of useful load. Simultaneously with the trial of military lorries the Swiss Club will hold a competition of all classes of industrial motor vehicles, full particulars of which will be announced at a later date.

The Position of the Steering Wheel.

A discussion is taking place in France as to the position of the driver's seat on motor-cars. Seeing that the rule of the road in that country is the opposite of that which obtains in England, it is urged that the proper position for the steering wheel is on the left, so that the driver, who, when overtaking other vehicles has to keep the same on his right, will have a clearer view ahead than he has at present. One of the strongest advocates of the idea is M. Charron, of the Charron Company, who considers that if the driver's seat on cars for use in France was on the left instead of on the right, the number of motor-car accidents would be reduced fully 50 per cent. It is, therefore, not surprising to find that several of the Charron cars on view at the Salon are arranged in this way, the change-speed and brake levers extend-

must be given sixty days before the attempt is to be made, and this notice must be accompanied by an entrance fee of fifty francs.

—Wilbur Wright made two flights of ten and twenty-five minutes' duration respectively at Le Mans on Friday, last week, having a passenger with him on each occasion.—It is reported that the Marquis De Dion is now having an aeroplane built.—Mr. J. T. Moore-Brabazon succeeded in making several short flights on his aeroplane at Issy les Moulineaux last week-end.—Professor Schuette, of the Dantzig Technical High School, is at work on a new airship. The vessel will be 100 metres long, and be fitted with a 120-h.p. engine.

Miscellaneous.

La Société Co-operative de Taxi-Autos Le Phénix is the name of a company which has just been formed at Levallois-Perret, Paris, to start a service of motor-cabs on a co-operative basis.—The Danish military authorities have just acquired a 24-h.p. Fiat motor-lorry.—Twenty-five entries were received for the competition of tyre inflating devices which was held at the garage of the A.C.F. on the 7th and 8th inst. The result will be announced later.—A proposal is under consideration to establish a State school for the training of chauffeurs in Hamburg.—The municipal authorities of St. Petersburg are about to carry out some trials of motor fire engines.

MOTOR ACCESSORIES.

The Victor Wheel.

In our report of the Stanley Show we referred to the "Victor" motor wheel, an illustration of which, with the flange detached, is given in Fig. 1. This is being introduced by SHEPARD'S PATENT MOTOR WHEEL COMPANY, The Foundry, Bridgend, Glam., and has merits in its simplicity, as well as the evident efficiency of the device. It has been tried for twelve months on a White steam car, and has rendered a good account of itself. As previously mentioned, the detachable flange is the special feature of the wheel, which gives it a decided advantage, and enables the secure and rapid fitting of another cover without the assistance of tools

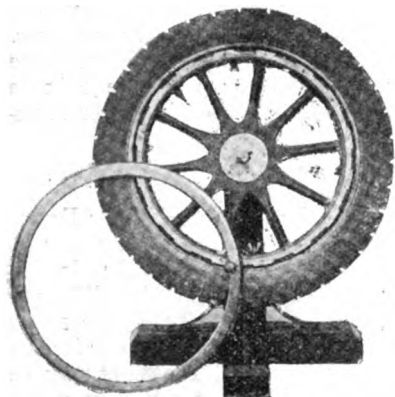


Fig. 1.

other than the screwing handles, which are part of the device.

The "Exide" Accumulator.

The recommendations of the Society of Motor Manufacturers and Traders with regard to the standardisation of accumulators have attracted some attention. They suggest that the capacity be taken at the 20-hour rate of discharge with an interval of rest after ten hours. The Chloride Electrical Storage Co., Ltd., of Clifton Junction, near Manchester, in their new "Exide" accumulator, have taken the ignition capacity as double that at a continuous discharge at the ten-hour rate, thus being better than the S.M.M.T. rating. In this accumulator the plate is of the "cage" type with a grid on each surface, the active material between being continuous. Wood diaphragms are employed to separate the plates. By a special process of treatment the diaphragms are rendered exceedingly porous, while the injurious constituents of the wood are also removed. It is claimed by this process that short circuits between the plates are obviated, that the capacity of the plates is maintained throughout their life, that the loss of charge on open circuit is prevented, and that the internal resistance of the cell is not increased.

The Jones' Speedometer.

We illustrate in Fig. 2 a new model (No. 27) of Jones' Speedometer, which gives a reading up to 50 miles per hour, and also a mileage recorder for the season's running. This is fitted with the Jones' enclosed cumulative mileage recorder, and although supplied at a moderate price, has all the qualities of good workmanship which have given this device such an enviable position on the dashboard of cars. Messrs. MARKET AND Co., 6, City Road, Finsbury Square, London, E.C., are the agents for this speedometer, which, we need scarcely remind our readers, works on the principle of centrifugal force. They recommend that the drive should be taken from the front or steering wheels, but, where desired, can supply the Jones device with direct drive from the cardan shaft. The speedometers are covered by a twelve months' guarantee as well as by one against imperfection in material and workmanship.

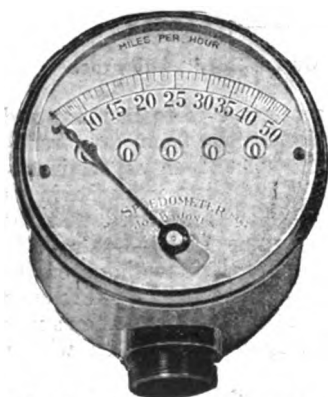


Fig. 2.—The Jones Speedometer.

A Car Locker.

Among the many accessories which are stocked by Messrs. Mestre and Blatge at their London headquarters, 20, Store Street, Tottenham Court Road, W.C., is a locker for use on a car. We recently inspected this excellent device, which should prove of value to agents and repairers, who, in renovating cars for clients, will often find it useful to make an

addition to the fittings, thus giving novelty to their work. This locker is made to fit on the running board of the car. It has a quartette of drawers, which are covered by a couple of doors of the ordinary cupboard type and form a pleasing front to the locker. The whole of the contents can be easily got at and the divisions enable the separate keeping of little articles and accessories which have a tendency to stray under ordinary conditions.

Charging Ignition Accumulators.

We illustrate in Fig. 3 the latest design of the combined alternating-to-continuous current transformer made by the CAYPO ELECTRICAL COMPANY, 155-157, Bermondsey Street, London, S.E. The machine has been designed to enable those situated on alternating current mains to charge ignition accumulators in the most efficient possible way. In the old pattern machine the makers found that it

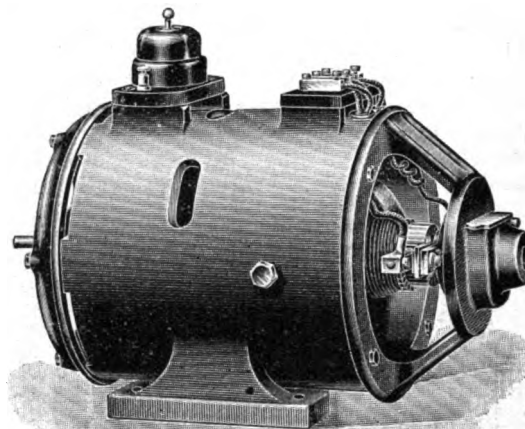


Fig. 3.

was impossible to obtain more than 100 watts on the secondary without the machine overheating, and they have therefore now made both the motor and dynamo considerably larger in order to overcome this objection. The machine is now capable of giving 120 watts output, namely, 15 volts 8 amperes, rating it at 7 amperes output. It is fitted with radial carbon brushes instead of copper gauze, as previously, as by slightly increasing the size of the dynamo it is possible to obtain the same output with carbon brushes as with the copper.

A Hand Lever Bench Shaping Machine.

So many motorists are interested in the mechanical side of the workshop that they have become familiar with the range of machine tools which Messrs. Drummond Bros., Ltd., of Ryde's Hill, Guildford, have brought out for the equipment of automobile and other repairing establishments,

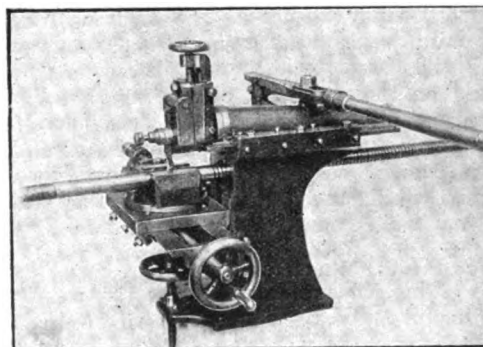


Fig. 4

as well as for engineering works generally. We illustrate in Fig. 4 the firm's hand lever bench shaping machine—an appliance which will save its cost in files in a very short time as well as do work which would be practically impossible to do with the file with accuracy. It is fitted with a machine vice, swivelling to any angle, with hardened tool steel jaws, one of which swivels for taper work. If necessary, the vice can be removed so that the table is clear for work being clamped to it. A self-acting traverse both to right and left is provided for the table. The latter is raised or lowered by a screw operated by a hand wheel, and the whole machine—which is practically a reduced copy of well-designed shaping machines—is actuated by a hand lever. The tool is thoroughly practical and will take a good stiff cut, leaving a highly finished surface.

Correspondence.

[Letters to the Editor should be addressed to the offices, 27-33, Charing Cross Road, London, W.C.]

ELECTRIC LIGHTING FOR MOTOR HOUSES.

TO THE EDITOR OF *The Motor-Car Journal*.

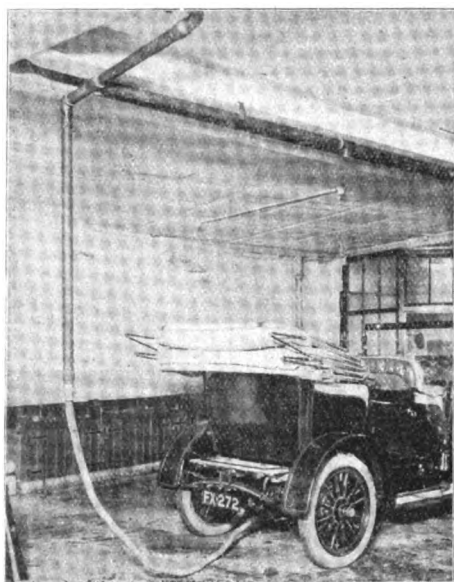
SIR,—As a constant reader of the *M.C.J.*, I am pleased to be able to state my experience of the Boron battery for either charging or lighting. I have a garage set comprising twelve cells, with these I keep all my accumulators in first-rate condition; they are 40 and 60 amp. hour capacity; it costs me about 6d. per charge for this size, using the patent lead negatives as retainers for the zinc, which is a great saving. I usually use two lamps in series, equal to 20 c.p., but can light more when required. Taking everything into consideration, it is very satisfactory to be able to have a good electrical current at one's disposal without the aid of a noisy gas engine and dynamo.—Yours truly,

SATISFIED USER.

EXHAUST FUMES IN GARAGES.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—I noticed in one of your recent issues a description of an apparatus, consisting of a flexible piping and a fan, used by the Automobile Club of France in their garage to carry away exhaust fumes and smoke. You mention this as being new, but I wish to draw your attention to the fact that the Burlington Carriage Co. have had their extensive premises in Oxford Street, W., fitted for the past six months with a



system of piping which extends along the roofs of the various shops. This system was designed by me, and you will notice by the accompanying photograph that I have so arranged the pipes that, in whatever part of the building a car or engine is standing, it is only necessary to connect a length of flexible tubing to carry away any smoke or exhaust gas which would otherwise remain and vitiate the atmosphere.

I think that an arrangement of this description should be compulsory in every garage or similar place where the running of a petrol engine for any considerable time is necessary, as it is otherwise quite impossible to ensure the well-being of workmen in enclosed premises where a petrol engine is emitting its poisonous exhaust gases. I may mention that it was owing to a paper read at the Royal Automobile Club on the noxious effects of carbon monoxide that my attention was directed to the designing of the above-mentioned system for securing purity of atmosphere in the workshop.—Yours truly,

L. DELANEY.

UNDER THE SKIN.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—A great many folk put up with poor compression and consequent loss of power in the belief that re-boring cylinders will possibly weaken them and lead to overheating or other troubles.

Certainly re-boring in the ordinary way is not so advisable as grinding out with an abrasive wheel. The reason is that far less metal has to be removed by the latter process. This is because a worn cylinder has a hard polished surface or "skin," and the boring tool must get a clear cut under this in order to make a true job, and even then a finishing cut is desirable and perhaps subsequent lapping.

Now, in re-truing cylinders by grinding, a little carborundum wheel is employed which revolves at some six thousand revolutions per minute. Only about .001 inch is the depth of the cut taken each time the grinding wheel travels down the bore, and as soon as it is parallel and true no further operations are necessary. In this way the minimum possible amount of metal is removed.—Yours truly,

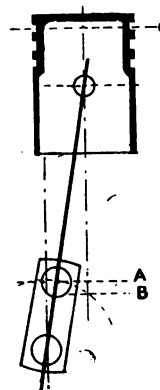
FOR ACER, LTD.

A. E. G. Craig, General Manager.

OFFSET CRANKSHAFTS.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—I see in your issue of the 28th ult. some diagrams intended to demonstrate the advantages arising from the use of cylinders arranged out of centre with the crankshaft, or *desaxé*. I wish to point out that these diagrams are misleading, as it is assumed that the maximum pressure resulting from the explosion is reached after the piston has commenced its downward movement. This is not so; the highest pressure is reached at the dead centre, or when the piston is at its highest point.



I enclose a diagram which makes this clear. The highest point is reached by the piston when the piston pin, crank pin and main shaft axis are in line, as shown in my diagram; when the connecting rod has reached a vertical position, as shown in your diagram, the piston will have made some considerable progress on its downward stroke. The dotted line A shows the position of the crank when at top dead centre and the full black piston corresponds. When the connecting rod is vertical the crank pin will be at the intersection of the line B and the vertical centre line of the piston; the chord of the arc represented by the angle through which the connecting rod will have moved is represented by the vertical difference between the dotted lines A and B. This is set off on the piston by the line C, which shows the amount of descent made by the piston when the connecting rod is vertical.

The point is that at the moment of greatest pressure there is no more turning movement imparted to the crankshaft than when the centre line of the cylinder and crankshaft correspond; there is some slight reduction in pressure exerted on the cylinder wall during the working stroke, particularly in the case of an engine having a very short connecting rod, but the advantage is far less than the diagram published would lead one to imagine. As a matter of fact it is very difficult to say which is the side on which the pressure of explosion comes when examining a worn piston taken from an engine of the ordinary construction.—Yours truly,

INCANDESCENT.

A REMINISCENCE AND THE NEW KNIGHT ENGINE.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—In looking over a cherished heap, one that I suppose most motorists have, I mean my scrap collection, I chanced upon a little memento, a sketch of which I enclose. It brings to my mind a long past episode, when, years ago, proud in the possession of a car that usually did go, I started off one early morn to give an unbeliever in the automobile his first motor drive, which, by the way, he did not get, and the old gentleman I know has not yet forgiven me. He was staying at a boarding house somewhere Hammer-



The remains of the
Mushroom after its fight
with the Piston.

smith way, and I did hear how he awaited my arrival surrounded by his cronies. Alas! I learnt in the school of tribulation the folly of a would-be passenger's expectation, for while on the road I heard an ominous crack and the engine stopped. The plugs were clean, the commutator wipes were true, the transmission gear was healthy, but the starting handle would not respond to the efforts of my arm; after that shrill shriek of death I could not pull the engine round. A horse was obtained and I steered for home, with a single quadruped in front, cheered by the mockery of the small fry of the district. A post-mortem examination soon revealed the complaint. The stem of one of the inlet valves had fractured near to the mushroom, and the latter had fallen into the cylinder and indulged in a combat with the piston. The odds were about even; the piston was cracked, and the poor mushroom had many flats and wounds as a result of its impact with its adversary. When I visited the Olympia Show and saw the Knight engine, I regretted that in those days the sliding sleeve with ports was unknown,

and finding on my return the remains of the mushroom, the echo of the past was recalled, and I seemed to hear the silent footsteps of the future and present boom, against whose coming nought may e'er, at least so we are told, prevail, and thus these reminiscences of the past. Probably other readers may have had similar ones; but, and 'tis always the but, I wonder if the cure and prevention is not rather late. I do not think many valves, or any, now break, as in the present day they are made of hammered forgings, so perhaps the owners of ordinary cars will not have to scrap their old friends just yet. I for one am satisfied now with my motor mount; still 'tis an old saying:—

"Few all they need, but none have all they wish,
Unmingled joys here to no man befall,"
and this applies to motors as well as other things.—Yours truly,

H.

ASCERTAINING ENGINE SPEED.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—I should be obliged if you could instruct me as to the easiest way of ascertaining how many revolutions a petrol engine makes per minute.—Yours truly,

NEW HAND.

[A simple and convenient method is to apply a revolution counter to the end of the crank shaft. As few shafts are manufactured without

In climbing hills, if the engine is allowed to labour on top speed before the change on to second is made, one has usually to drop to first, but if the change is made before the engine slows down the car will go up on the second speed without difficulty.]

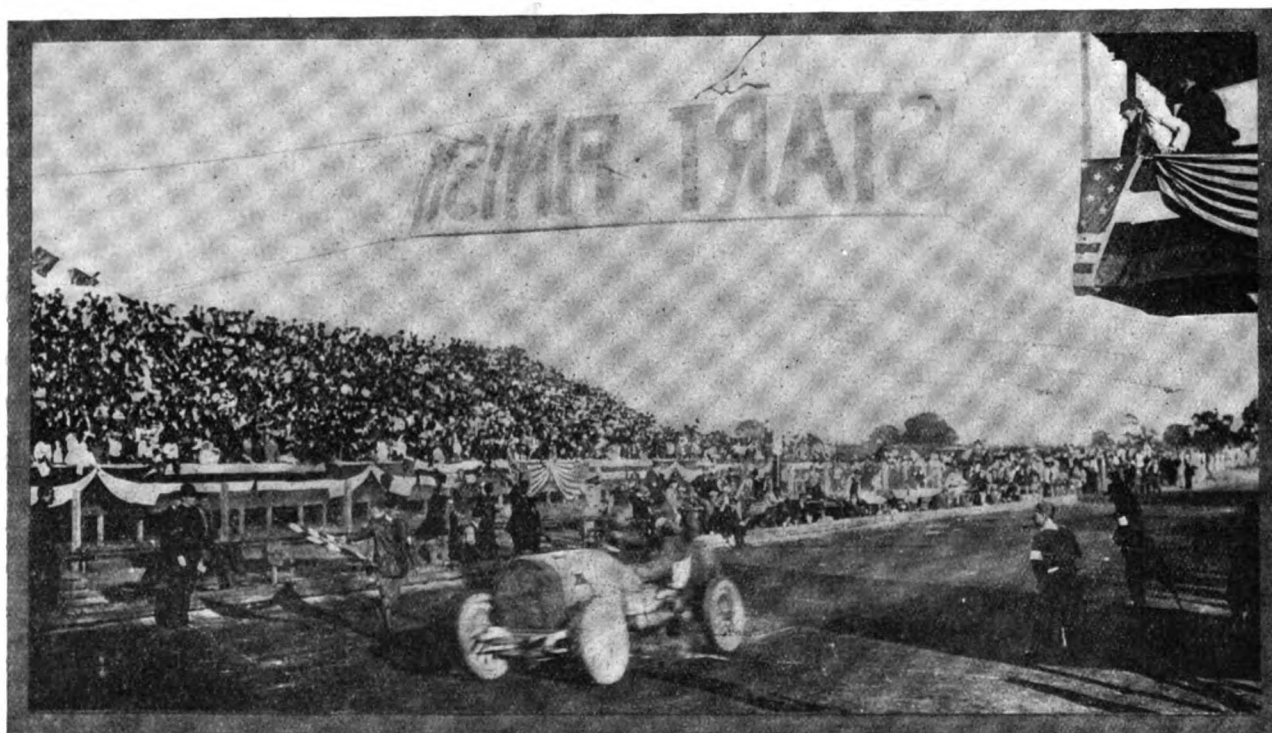
HEATING GARAGES.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—Will you kindly inform me if gas-heating radiators are safe for putting into a small motor garage? Any information on the subject will greatly oblige.—Yours truly,

E. B.

[We do not consider that a gas-heating radiator would be safe in a small garage unless special precautions are taken. To all intents and purposes a gas-heated radiator is a naked flame, and near to the ground, where petrol fumes accumulate. We would suggest one or other of the following methods for warming the garage:—By a gas or oil-heated stove or radiator, in which the flame is entirely enclosed in fine metal gauze (of the mesh employed for miners' safety lamps) in which case the risk of lighting the flame has to be considered, for this can only be done by opening the gauze cover; by a radiator in which the burner is outside the garage, and the heat conducted inside by means of a suitable pipe; or, finally, by one of the new stoves now advertised which burn a special fuel that merely smoulders and does not get hot enough to ignite petrol



The A.C.A. Grand Prix Race.—Hemery (who took second place) finishing at the Grand Stand on his Benz Car.

the necessity, at one time or another, of being centred in a machine tool, a small countersunk recess will usually be found on the end. The pointer of the revolution counter is made to correspond with this recess, so that to use the instrument it is only necessary to insert it in the latter, maintaining sufficient pressure against the shaft to prevent any loss by slipping. One person should hold a stop-watch, while a second operates the revolution counter. By taking half-a-dozen consecutive readings of one minute each and averaging them up, any small errors in the handling of the watch and the counter will be compensated for.]

CHANGE-SPEED GEAR PROPORTIONS.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—The three speeds of my car are designed to give 9, 18, and 27 miles per hour respectively. In practice, however, I find the second speed of but little use, for when ascending a hill too steep to take on top speed without the engine knocking, I have almost invariably to drop to first. I should be glad if you could inform me whether it would be an advantage to have the proportions of the second speed reduced so as to give, say, 14 or 15 miles per hour.—Yours truly,

W. FOSTER.

[We are afraid that our correspondent would not benefit much by lowering his second gear from 18 miles per hour to 14 or 15, as this amount would hardly be noticeable. No doubt if the gear were changed before the engine slowed down this would somewhat remedy matters.

vapour. Adequate ventilation in a garage is a great safeguard, and so also is the adherence to a strict rule never to strike a light inside.]

AN ENGINE QUERY.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—Can you please tell me through the columns of the *M.C.J.* the pressure per square inch on piston end of petrol vapour on any make of motor?—Yours truly,

E. T. B. SIMPSON.

[Assuming that this question relates to the maximum pressure at the moment of explosion, we may say that it varies very considerably in different petrol engines. The explosion temperature is determined from the compression pressure and the ratio of the explosion and compression temperatures. We should say that about 300 lbs. per square inch may be taken as a fair average with good petrol motors when the "mixture" is correct. Charts have appeared in the Press to prove certain points as to torque, &c., which showed a maximum pressure of 400 lbs. per square inch, but there is a lot of difference from an assumed diagram curve and what really takes place. Actual tests with high speed manographs show, in quite small engines, with a mean effective pressure of 80 lbs., a maximum explosion pressure of 240 lbs. per square inch.]

BENZOL.—To the correspondent who asks where Benzol can be obtained, we would refer him to the South Metropolitan Gas Company at Greenwich.

CLUBS AND ASSOCIATIONS.

ROYAL.

THE R.A.C. has decided to raise the entrance fee from six guineas to twelve guineas for the next thousand members. This decision will not apply to applications received prior to the 1st of January, 1909.

A Dustless Road Committee has been formed, consisting of the present Dust Committee of the Club with others who have interested themselves in the matter with a view to making suggestions for future consideration.

The General Committee has discussed the system recently proposed by certain companies interested in the sale of motor spirit, and has come to the conclusion that the offer of money for the return of the seals from petrol cans is contrary to the best interests of the users.

The whole of the capital for the new premises has been subscribed and the plans are practically complete.

The members of the Herts County Automobile Club have decided to associate with the R.A.C. and will in future only be connected with that body.

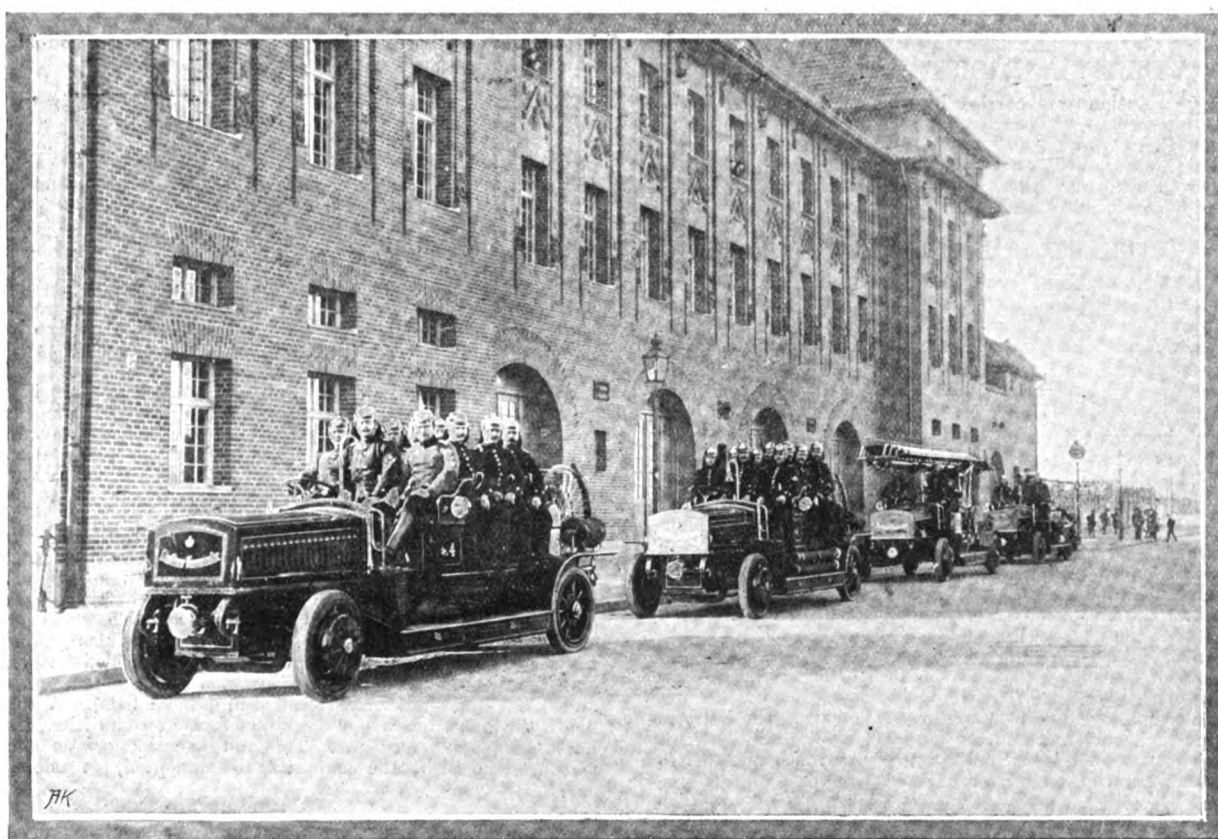
Among the tests which have been suggested to the Technical Committee as likely to prove of importance if carried out are lubrication tests, certain efficiency tests in connection with heavy vehicles, and stability tests as affected by the size of wheels.

your association in placing patrols in this district has undoubtedly been productive of very good results, and complaints that cars travel through the town at excessive speed are far less frequent than they were. The chief offenders now are the drivers of taxi-cabs. The chairman desires me to express his sincere thanks to your association for the action they have taken."

THE INCORPORATED INSTITUTION OF AUTOMOBILE ENGINEERS.

ON Tuesday next a paper will be read before the London Branch of the Graduates' Section of the I.I.A.E., at 1, Albemarle Street, W., by Mr. Rex K. Hubbard, on "The Possibility of Two-cycle Engines for Automobiles."

There are several interesting and essentially different types of two-cycle engines, which will be briefly explained with the aid of diagrams. The principal disadvantages of the two-cycle engine are, according to the author:—(1) Leakage of crank case when used as a pump; (2) The exhaust difficulty. These are not so great as is generally supposed, and may be overcome. Two-cycle engines can be run under conditions usually considered absolutely prohibitive. The exhaust stroke of a four-cycle engine



The Fleet of Motor Fire Engines recently added to the equipment of the Berlin Fire Brigade. The vehicles are of the Mercedes-Electrique type built by the Austrian Daimler Company. *(Allgemeine Automobil Zeitung)*

MOTOR UNION.

THE total number of signs issued by the Union up to the end of November was 530, made up of sixty-nine special caution, 336 school, and 130 concealed turning plates. Rochester City Council is erecting on tramway posts nine M.U. danger signs at the spot where the London road crosses Gun Lane and Cuxton Road, Strood, and at the Angel junction at Strood, which is a dangerous place for motorists now that the tramway system has been constructed. The Sussex County A.C. has ordered five signs for schools and concealed turnings. The new sign to denote concealed turnings will be of the diamond shape approved by the Local Government Board.

AUTOMOBILE ASSOCIATION.

As a result of numerous complaints made by local inhabitants as to the danger and inconvenience caused by the speed of motor vehicles passing through Hounslow, the Automobile Association, at the instance of the Heston and Isleworth District Council, placed special patrols on duty at specified points where the traffic was greatest, for the purpose of regulating and restraining speed. The men have now been on duty for some months, and the secretary of the Automobile Association has received from the clerk of the district council a letter in which he says:—"The action of

is not entirely dependent on the piston. It is better to induce a charge into a cool chamber than a hot one. The principal advantages of the two-cycle engine are:—(1) The same torque with half the number of cylinders; (2) Greater simplicity; (3) Greater power weight for weight when under certain conditions.

Mr. A. Sharp will take the chair.

CHESHIRE.

THE annual dinner of the Cheshire Automobile Club was held on Wednesday last week in the Adelphi Hotel, Liverpool. Mr. T. H. Jackson, J.P., presided, and among those present were Mr. A. G. Jeans, J.P., chairman of the club; Sir Percy E. Bates, Bart., Colonel Blood, V.D., Colonel Hamersley, Chief Constable of Cheshire; Messrs. E. L. Billson, Wm. Jackson, hon. treasurer; J. A. Hassal, hon. secretary; Dr. Edgar Stevenson, Edgar Browne, Dr. Alexander, C. A. Cain, J.P., Dr. Dawson, Dr. Laird Pearson, T. D. Oakshott, Dr. Wilkinson, A. L. Rea, J.P., H. B. G. Warren, J. H. Temple, J. Royston, W. R. Jackson, A. Barker, Jerome L. Smith, C. L. Smith, Dr. E. H. Brien, Clifford Temple, &c.

The loyal toasts were duly honoured on the proposition of the Chairman. In proposing "Automobilism," he said he really did not know what England was until he became an automobilist. Districts which, seen from a train, had appeared flat, became invested with very great interest

when viewed from a motor on the highway. In this way he had been all over England and realised how attractive it was. As regarded legislation, he thought that if the Government wanted to raise more money from the automobilists a good way would be to make every manufacturer pay a tax on tyres. He desired to acknowledge to Colonel Hamersley the very fair way in which the Cheshire police treated automobilists.

Mr. A. G. Jeans, in supporting the toast, said he was very anxious that motoring should always be conducted so as not to make it unpopular. They should do their best to assist in the punishment of reckless drivers and sympathise with every rightful prosecution.

Mr. Edgar Browne proposed "The Cheshire Automobile Club," Sir Percy E. Bates, Bart., briefly acknowledging the toast.

Mr. A. L. Rea proposed "Our Guests," remarking, among other things, that motorists should be ideal hosts, to the great advantage of motoring by inviting, when occasion offered, strangers to the delights of motoring, to a drive in their cars. Having travelled over a great part of England and some parts of Scotland, he must say that Cheshire was the most fairly administered county he had been in.

Colonel Hamersley, in acknowledging the toast, agreed that automobilism had been passing through a rather stormy time, but he thought they could now see clear weather in front of them. He did not agree with policemen hiding behind hedges; he considered it a rotten system. He admitted having traps on the road, but they were long ones, extending from nine to twenty-seven or thirty miles. He had found that of 900 cars which were timed only twelve exceeded twenty-five miles an hour.

DERBY AND DISTRICT.

THE following resolution was carried by the members of the Derby and District A.C. last week:—"That the Derby and District A.C. become associated with the R.A.C. provided that that body consents to withdraw the word 'only' in Clause 18 of their scheme for association; but that, in the event of their refusal to adopt this suggestion, another meeting of the members be called to consider the position."

SOUTHEND AND DISTRICT.

WE understand that the hon. secretary of this club, Mr. A. Warnery, proposes to relinquish his position at the annual general meeting to be held at the end of next month. The committee, however, are gratified to report that Mr. H. Greenfield, captain of the club, will be able to act as his successor.

LADIES.

ON Thursday afternoon the committee of the Ladies' Automobile Club arranged for an illustrated lecture by Mr. Charles Y. Knight on "The Valveless Engine."

CHAUFFEURS.

LAST week we referred to the clubs for mechanic drivers which had been formed in Yorkshire and Kent; and now we learn that the Chauffeurs' Social and Athletic Club, with headquarters at 1A, Lancaster Gate, London, W., is proving popular. It has 120 members. Mr. R. S. Currie, the engineer to the Ladies' Automobile Club, is the president, with Mr. E. G. Evans, 76, Salusbury Road, West Kilburn, as hon. secretary. The primary object of the club is the furtherance of social intercourse between drivers in private service. The committee hope that, in time, not only drivers, but also employers will make use of its services, the latter to secure drivers of good character as well as possessed of mechanical skill. From the rules we learn that it is within the power of the committee to financially help members who are in want of assistance.

CYCLE AND MOTOR TRADES BENEVOLENT FUND.

AT the December meeting of the Executive Committee of the Cycle and Motor Trades Benevolent Fund the treasurer reported a bank balance of £1,248. Two hundred subscribers and thirty-six members were elected, of whom no fewer than eighty-three were obtained by Messrs. Brown Bros. at the Stanley Show. Applications for relief for ten subscribers were dealt with, and the accounts for the financial year ending October 31st were presented and approved for presentation to the annual general meeting.

SCOTLAND.

EXAMINATIONS for driving and mechanical proficiency certificates under the auspices of the Scottish A.C. will be held at Dundee, Aberdeen, Dumfries and Hawick this month and at Glasgow and Edinburgh during January. Information with regard to the same can be obtained from Mr. R. J. Smith, 163, West George Street, Glasgow, and it may be of interest to remind our Scottish readers that the fees for these examinations have lately been reduced.

IRISH.

AT the meeting of the committee, held on the 3rd inst., a communication from Lord Monck was considered, in which he desired that direction posts might be placed at several cross roads in County Wicklow for the convenience of tourists and other visitors. The committee decided, notwithstanding the recent imposition of speed limits through the county, on the application of the county council, and directly against the evidence adduced on the hearing, and also notwithstanding the fact that the club

is in no way liable to put up these posts, that, under the special circumstances, they should be erected.

Arrangements were considered, and directions given for the compiling of statistics for use in the event of future legislation.

The secretary reported that counsel on behalf of the club, had attended an inquiry at Naas, on the requisition of the Kildare County Council, that a speed of six miles per hour should be imposed on the two days of Punchestown Races on all motor traffic proceeding to or from the course, within a limit of two miles therefrom; and that counsel urged, on behalf of the club, that in lieu thereof regulations should be made that all traffic, including motor-cars, should on the roads referred to, when coming to or returning from the course, remain in, and not break from the line of traffic. The club desires to acknowledge the courtesy which their representatives received from the Local Government Board Inspector and the representatives of the county council, and the kindness of Mr. Wisdom Hely, one of their members, in providing his motor-car to convey the inspector over the roads, thus enabling him to ascertain in a practical manner the condition of the roads in question, and their suitability for motor traffic. The committee have every hope that their suggestion will be acted upon.

MR. J. L. MILLER has read a paper before the West of Scotland Technical College Scientific Society on "The Testing of Petrol Engines."

BEFORE the members of the Society of Experimental Engineers of Dundee Mr. W. Raikes Bell has been lecturing on motor vehicles. Mr. W. C. Keay presided, and in the subsequent discussion Messrs. Thomas Shaw, S. Watson and Alexander took part.

THE DUST TRIALS.

A MEETING open to the makers of the cars in the Dust Trials and to the entrants in the "Experimental" class was held on Friday of last week at the R.A.C. In the motor house six of the most interesting cars had been, at the Committee's request, sent for inspection, namely, the three winning cars—the Buick, Reo and Dennis—and the Stanley, Chevrolet-Walcker and Cadillac.

It was pointed out that, as long as cars were as high off the ground as the Stanley and Cadillac, there was apparently no real necessity for the underpart to be smoothly cased in, but that in lower cars, like the first two winners, a smooth under-surface was a necessity. Sketches of variously shaped and sloped under-shields were shown, which the committee had tried successively on the same car; all of them had given practically the same result. Within fairly wide limits, therefore, it appeared of no great importance what exact shape of under-shield was used, so long as it was reasonably smooth. Messrs. Dennis had, at the committee's request, ran a car with various sizes of cross petrol tanks behind, to determine roughly what could be used without bad dust effect.

On returning to the Club, suggestions and remarks were asked for regarding next year's dust meeting. With regard to date, it was mentioned that June was proposed, if possible, and if no grounds were shown against it, it was agreed that, subject to a clear week being allowed after the Scottish Trials, it would be quite suitable. The views of makers were asked as to the desirability of having two classes, and after some discussion, it was agreed that it would be desirable, the general opinion being that the division should be by tyres under 90 mm. and tyres 90 mm. and over, standard size as specified in makers' lists. A suggestion was made that, as all cars now used non-skids of some kind, they should be made obligatory on all cars. This and several suggestions for interesting tests were noted by the committee to be adopted, if feasible.

ACTION AGAINST GARAGE PROPRIETOR.

A CASE has been heard against Mr. W. Davison, proprietor of the Princess Road Garage, 137, Upper Hill Street, Liverpool, where the agency for Ariel cars is also located. This is of some interest to the trade. It was sought to secure an injunction restraining the garage proprietor from continuing an alleged nuisance owing to the arrival of the cars, blowing of horns, &c., in connection with his business. The Vice-Chancellor, in the County Court of Lancashire, has now given judgment, coming to the conclusion that there was no nuisance in respect of the action and that it was impossible for the garage to have been conducted with more consideration for the public and the neighbours. The action was dismissed with costs.

AMONG the new features of Rover cars for 1909 mention may be made of the mahogany front to the dash of the 8-h.p. vehicle. Hitherto the petrol tank has formed the dash, but the necessity for a wooden dashboard on which could be fixed various fittings, such as speedometers, &c., has been felt and has now been supplied.

THE Star Engineering Company inform us that since returning from the Show and carefully surveying the great demand they have experienced, and the anxiety they feel that the quality hitherto found in Star cars shall be maintained, they have considered it advisable to raise the prices of the 12-h.p. and 15-h.p. models to £285 and £325 respectively. In order, however, not to disappoint those who visited their stand at Olympia, this increase will not take effect until January 1st next. All orders placed before that date will be accepted at the present prices, viz., 12-h.p. £275 and 15-h.p. £300.

AERONAUTICS.

A PAPER on "Mechanical Flight" was read before the Society of Arts last week by Mr. Eric Stuart Bruce, who said this year would be memorable in aeronautical science for its demonstration of the possibility of mechanical flight. One of the fundamental principles of the recent experiments—the principle of superposed surfaces—was advanced and elucidated by a Briton, Mr. F. H. Wenham, in 1866. Two great difficulties which would have to be overcome were starting from the ground and stopping in the air. Possibly the future flying machine would consist in the combination of the aeroplane and lifting screw systems. Even in its partially developed state the aeroplane might prove to be a potent factor of war. Dr. Shaw said the issue of the contest that was going on between the dirigible balloon and the aeroplane would depend on the way they managed to accommodate themselves to the weather.

Sir Hiram Maxim said the principal feature of the Wright machine was the flexing of the corners of the wings. This device, of which so much had been said, had been patented by him eleven years ago. Up to this moment the only apparatus produced by mankind that could carry on warfare across the British Channel was a flying machine. The Wright machine, with only a very little improvement, would be a very efficient military weapon. Did anyone doubt that in case we should find ourselves at war with a continental power such machines would be used to bombard English towns?

Major Baden-Powell expressed his conviction that within the next two or three years we should all of us have experienced what it was like to fly through the air. It was of the greatest importance to England from the military point of view that we should push ahead with this subject.

At the annual anniversary meeting of the Royal Society last week an address by Lord Rayleigh was read in which he said "I cannot abstain from including in the achievements of the year the remarkable successes in mechanical flight attained by the brothers Wright, although the interest is rather social and practical than purely scientific. For many years, in fact ever since I became acquainted with the work of Penaud and Wenham, I have leaned to the opinion that flight was impossible as a feat. This question is now settled, and the tendency may perhaps be to jump too quickly to the conclusion that what can be done as a feat will soon be possible for the purposes of daily life."

MR. HERBERT CHATLEY, B.Sc. (Engineering) Lond., read a paper on Monday on "Mechanical Flight" before the Society of Engineers, in which he pointed out the revolution in ideas on this subject which has recently taken place. He proceeded to narrate briefly the theory of the subject, indicating the fallacious bases of the earlier investigations and describing the results obtained by Langley, Rayleigh, Ferber, and Lanchester. In regard to the question of stability it was shown that a gliding aeroplane is subject to two types of increasing oscillations of respectively long and short periods unless it exactly conforms to certain conditions of stability which have been given by Professor Bryan, Captain Ferber and Mr. Lanchester. The efficiency of the propeller was also referred to, the author mentioning the close analogy to the marine propeller, and quoting a formula he has devised to express the thrust and area in terms of the revolutions, diameter and power. He pointed out the effects of slip and transverse feed in which the air propeller differs somewhat from its marine prototype, and indicated the important bearing of this point on the efficiency of the helicoptère.

CAPT. W. G. WINDHAM informs us that 850 members are now associated with the Aeroplane Club, which has arranged with Mr. Henri Farman to give an exhibition of his flying machine on the 13th inst. at Chalons-sur-Marne. The Selection Committee has selected a list of fifty members from whom the election of the thirty to form the committee has just been made.

THE lecture arrangements of the Royal Institution between now and Easter include two discourses by Professor G. H. Bryan on "Aerial Flight in Theory and Practice."

ON Tuesday evening Mr. E. P. Frost, presiding at a meeting of the Aeronautical Society of Great Britain, held at the Society of Arts rooms in Adelphi, London, announced that the gold medal of the society had been offered to and accepted by the Messrs. Wright Bros.

PUBLIC SERVICES.

THE Manchester Watch Committee have renewed the licences for motor-omnibuses granted to Mr. William Stanway until the end of the financial year.

A MOTOR-BUS service has been commenced from Ilford Broadway to Turnham Green—a distance of sixteen miles.

THE motor-bus routes in London are being numbered, the first thirty numbers being reserved for motor-buses, all above that number indicating horse omnibus routes.

THE Automobile Contract Company, Ltd., of 51, Conduit Street, London, W., have issued a preliminary list dealing with the Lee-Trigwell detachable skidless band and tyre protector described and illustrated in our issue of November 14th.

THE proprietors of "Carburine" motor spirit ask us to announce that they do not give any rebate for the return of the seals from the cans in which they send out their motor spirit, but rely upon its high grade.

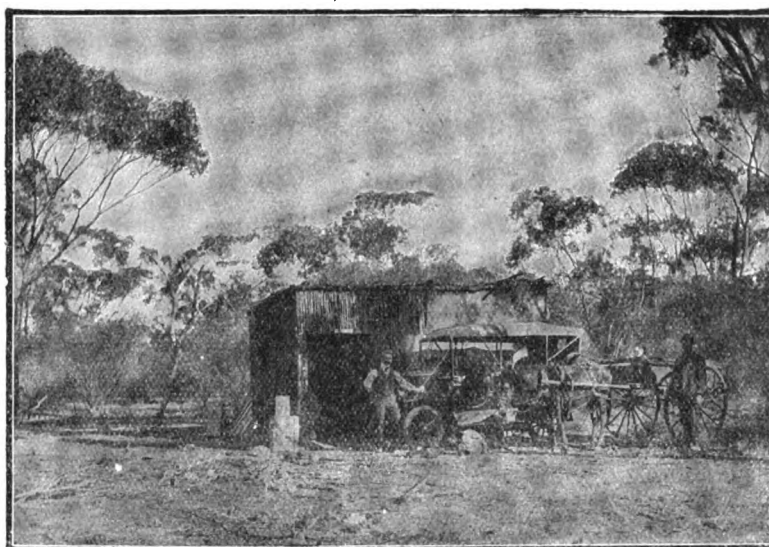
CASES AGAINST MOTORISTS.

THE IDENTITY OF THE DRIVER.

At the Highgate Court, Mr. W. Menzies has been summoned for refusing to disclose the name and address of the driver of his motor-car to the Yorkshire police. A sergeant belonging to the West Riding of Yorkshire constabulary gave evidence that he and two constables were timing cars through the village of Towton. They stopped one vehicle, but it was quickly off again; thereupon negotiations were opened with the Metropolitan police and the inspector called on the defendant to ask the name and address of the driver of his car when it was in Yorkshire on the day in question. No information was forthcoming, the defendant saying "you could do nothing after twenty-one days." In reply he told him the Yorkshire police were proceeding under Section 1 of the Police Act. A fine of 40s. and 10 guineas costs was imposed.

DISMISSAL.

In the Dublin Police Court, Mr. Jonathan Poole was summoned for using a motor-car at Donnybrook on the 17th of October last while the distinguishing number plate was obscured. Constable 117 E, who preferred the charge, said the car was being used to advertise a play, and a placard was placed on the back covering the number plate. Mr. E. H. Byrne (of Messrs. Byrne and Company), who defended, examined Mr. Poole, who stated that there was a ledge between the placard and the number plate and the latter was quite easily seen. Mr. Seymour, advertising agent for the company, was with witness in the car, and both of these saw that the placard did not cover the number plate. The magistrate dismissed the case.



Locomotion, Old and New, in Western Australia.

The above illustration, in which the old and new styles of locomotion in Western Australia are depicted, forms an interesting contrast. The car is a 10-12-h.p. Humbler. The owner set out land hunting from Perth, W.A., some little time ago, and after surmounting several difficulties at length reached the hut shown in the picture. This is built of gimlet wood saplings and is on the land secured by the noted Fremantle footballer, Heinrich, who is seen standing near the wheel of the cart. The other man shown is Jack Beck, an old-time cycle champion. The feat of driving the automobile over trackless stretches to this location was for some time the sole topic of conversation among the bushmen.

BATCHES

There seems to have been a lull in the wholesale capture of motorists of late. Small batches are, however, reported from Kingston (6), Arundel (3), Horsham, East Grinstead (4), and Grantham.

"POLICE CONTROLS."

THE police are exceedingly active against motorists at Coombe, near Kingston, the Portsmouth Road, Thames Ditton, the Kingston Road, Hammersmith, and also in Richmond Park.

SEVERAL traps are reported on the Great North Road, near Grantham.

MESSRS. H. M. HOBSON, LTD., of 29A, Vauxhall Bridge Road, London, S.W., inform us that they are anxious to appoint fitting agents throughout the United Kingdom for the Claudel-Hobson carburettor illustrated and described in our report of the recent Motor Show.

MESSRS. BUCK AND HICKMAN, of Whitechapel Road, London, E.C., send their general catalogue of engineers' machinery and tools, which is in two volumes, consisting of 1,000 and 500 pages respectively. The illustrations and descriptions of machines will add considerably to the value of the work for reference in engineers' establishments.

FORTHCOMING EVENTS.

DECEMBER.

- 13th (Sun.).—Closing day of the Paris Salon.
 15th (T.).—Meeting at University Buildings, Birmingham, to form a local branch of the Incorporated Institution of Automobile Engineers. Mr. B. J. A. Shaw, hon. secretary, Oaks Crescent, Wolverhampton.
 18th (F.).—Society of Road Traction Engineers' Smoking Concert at the Holborn Restaurant, London. The primary object of the concert is to afford an opportunity for a pleasant reunion of those who took part in the Commercial Vehicle Trials last year.
 3rd (W.).—Speed and reliability trials at Nagpur, Central Provinces.
 24th.—30th.—Heavy Motor Vehicle and Aeronautical Display at Paris.

JANUARY, 1909.

- 1st (F.).—Anniversary of [the Motor Car Act, 1903, coming into operation.
 7th (Th.).—Annual Dinner of the Yorkshire A.C. at Leeds.
 8th (F.).—Nottinghamshire A.C.'s Annual Dinner.
 14th (Th.).—Annual Dinner of clubs associated with the R.A.C. at the Hotel Cecil, London.
 14th-25th.—Brussels Motor Show.
 22nd-30th.—Scottish Motor Exhibition at the Waverley Market, Edinburgh.
 26th (T.).—Scottish Motor Trade Association Dinner at Edinburgh.

FEBRUARY.

- 2nd (T.).—Annual Dinner of the Scottish A.C. at Glasgow. H.R.H. Prince Francis of Teck will be among the guests.

MARCH.

- 1st (M.).—The Road Trials in connection with the Army Council Competition for light tractors commence.
 Motor-Car Show at Barcelona.

LIGHTING-UP TIME—LONDON.

| | | | | | | |
|----------------|-----|-----------|-----|-----------|-----|-----------|
| Dec. 12th—4.50 | ... | 14th—4.52 | ... | 16th—4.54 | ... | 18th—4.56 |
| 13th—4.51 | ... | 15th—4.53 | ... | 17th—4.55 | ... | 19th—4.57 |

COMPANY NEWS.

THE subscription list for £40,000 six per cent. convertible first mortgage debenture stock in the London Electro-Bus Co., Ltd., closed on Wednesday. From the auditors' certificate we learn that the operating profits on the company's 'buses have been at the rate of £448 per annum each. The introduction of electric bus services is under consideration at Glasgow, Cardiff, Portsmouth, Bath, Oxford, Liverpool, Sheffield, Edinburgh and York.

DE DION-BOUTON MOTOR CAB CO.—£220,000. (217,000 £1 cumulative preferred participating ordinary and 60,000 1s. deferred). To carry on the business of proprietors of motor-cabs, hackney carriages, and other conveyances, &c., and to adopt an agreement with the Parator Syndicate, Ltd. Purchase consideration, £72,423 4s. (£66,423 4s. in cash and £6,000 shares). The number of directors is to be not less than two nor more than seven. First Messrs. W. S. Leefe and J. Symmons. 250 preferred ordinary shares. Not more than £1,500 per annum, divisible. (100,484.)

THE directors of the Scottish Motor Traction have resolved to recommend a dividend for the year to September 30 last at the rate of 5 per cent., free of income-tax.

HUGHES' PATENT TYRE PROTECTOR (LTD.) is the title of a company registered with a capital of £3,000 in £1 shares. Offices have been taken at 160, Clerkenwell Road, London, E.C.

WITH a capital of £2,000 in £1 shares and offices at Bassishaw House, Basinghall Street, London, E.C., the Resilient Motor Wheel Syndicate, Limited, has just been registered.

THE Northern Automobile Company, Ltd., has held its annual meeting at Bradford. The adoption of the report and accounts was moved by Mr. John Grange, the chairman, and showed a profit equal to 11½ per cent. on the paid-up capital of the concern. The Oak Lane Garage owned by the same company is a well-known depot for motor-cabs, and we understand several additional vehicles of that type are about to be placed upon the streets of Bradford.

THE INTERNATIONAL ROTARY MOTORS, LTD., has been registered with a capital of £3,000 to turn to account certain patents for inventions relating to rotary internal combustion engines, to acquire the factory and premises at Aspley, Nottingham, and the business carried on thereat by Mr. T. H. Shaw.

ARGYLL MOTORS, LTD.—A meeting of the debenture stockholders of the Argyll Motors, Ltd., was held on Monday at the London Chamber of

Commerce. Mr. Robert Hunter presided, and called upon one of the liquidators to address the meeting. Mr. John M. Macleod said that there were three difficulties with which the liquidators had had to contend, viz., the comparatively small amount of the valuations, secondly, the large and varied interests of the different parties, and thirdly, the absence of working capital of the company. They intended that there should be a complete change in the management in the future, but those public men who would become associated with the company did not care to disclose their names until the scheme had gone through. The assets under the scheme were put on a moderate basis, and a cautious start would be made. It was not their intention or desire to strive for immediate profits. Mr. Faithful Begg (one of the trustees for the debenture holders) said that he was not himself a debenture holder. He felt that the present was a scheme which they ought to accept. He regretted at the same time that the proposals were not more favourable to the debenture holders, as they involved a considerable loss of capital. In any steps taken a very large amount of working capital would have to be found, for, at the time that the company stopped operations, there was no working capital at all. The debenture holders were asked to receive 12s. in the pound on the face value of their debentures, to be taken out in debentures of the re-constituted company. The only alternative to the passing of the scheme was a sale of the assets under the hammer. A resolution approving of the scheme submitted was carried unanimously and the liquidators were thanked for their valuable assistance to the company.

WITH a capital of £1,500 in £1 shares the Paraffin Motor Syndicate, Ltd., was registered on Friday of last week.

THE Putney, Roehampton and Wimbledon Motor Cab Company, Ltd., has been registered with a capital of £3,000 and offices at 5-6, Eccleston Place, Belgrave, S.W.

ROAD REPORTS.

SOUTHEND.—The Southend and District Motor Club is lodging an objection with the L.G.B. with regard to the application of the Borough Council for a ten mile speed limit in certain streets of Southend.

CROYDON.—An inquiry has been held into an application to impose a speed limit of ten miles an hour on motor vehicles in various parts of the town. Mr. Rees Jeffreys and Mr. G. D. Dean opposed for the M.U. and the R.A.C. respectively.

LINCOLN-GRANTHAM.—At Navenby, on the Lincoln to Grantham road, a guide post and a milestone stand within three yards of each other, but indicate differences of half a mile on the road. The guide post gives the mileage to Lincoln as 8½ and to Grantham as 16½, but the milestone declares the distances to be 16 and 8 miles, respectively.

MIDLANDS.—At the Conference, on Friday of last week, called by the Midland Association of Local Authorities, the project for constructing two new main roads between Birmingham and Wolverhampton was further examined. Mr. J. R. Cooper, the Town Clerk of Walsall, thought that the scheme submitted would cost £1,000,000, and ultimately the matter was deferred for six months, so that the local authorities concerned might go fully into the practical bearings of the scheme.

NEWHAVEN.—As a result of their inquiry on the subject, the L.G.B. have issued a regulation limiting to ten miles an hour the speed of motor-cars over that portion of the main road from Brighton to Eastbourne within the urban district of Newhaven, extending from the junction with the Lewes road to the junction with the road leading to the harbour on the east side of the railway crossing. The regulation comes into operation on the 21st inst.

RICHMOND.—At a meeting of the Richmond Town Council on Tuesday, it was resolved to apply for a restriction of the speed of motor-cars to ten miles an hour on nearly all the principal roads through Richmond, Kew, and Petersham.

BUSINESS NEWS.

THE London and Paris Exchange Motor Agency, Ltd., are experiencing an exceedingly busy time. Besides despatching large consignments of cars to New Zealand and India, they disposed last week of no less than ten vehicles in four days, ranging from a small 7-9-h.p. to a 40-h.p. six-cylinder, and this in spite of the alleged depression in trade and the time of the year.

MESSRS. GREENBERG AND SONS, of 8, Water Lane, Ludgate Hill, E.C., are the British agents for the Deutsche Celluloid Fabrik, whose specialities are celluloid cases, corrugated separators, vent pegs, &c., for use in connection with the manufacture of accumulators.

MESSRS. G. JOHNSTON AND CO., 110, Cannon Street, London, E.C., draw attention to their Rhinohyd, an improved waterproof canvas.

THE Sheffield-Simplex chassis which was exhibited at Olympia is now on view at the premises of Messrs. H. J. Mulliner and Co., 28, Brook Street, London, W.

THE Anglo-American Oil Company, Ltd., send a specimen of the silver seal which they have adopted, with the suggestion that purchasers of Pratt's motor spirit should see that when delivered the spirit is sealed with this, their recognised mark.

MR. W. T. CLIFFORD EARP, whose experience of motor-cars dates from the early years of automobile racing, has taken an office at 90, Great Portland Street, W., where he is acting as a consulting engineer and expert.

THE Motor-Car Journal.

VOL. X.]

LONDON, SATURDAY, DECEMBER 19, 1908.

[No. 511.]

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NOTICE TO ADVERTISERS.

Owing to the Christmas Holidays the next issue of the "Motor Car Journal" will be published a day earlier than usual, i.e., on Thursday instead of Friday. New copy, and alterations to existing displayed advertisements, should reach us not later than Monday morning, the 21st inst. Official Notices and small prepaid advertisements can be received up to the first post on Tuesday, the 22nd inst.

COMMENTS.

Motor-car Imports and Exports.

A FURTHER marked decline took place during November last in the importation of foreign-built motor-cars and parts into this country. Of complete cars only 203 were imported during the month, of the value of £69,836. The number of chassis imported was 291, valued at £88,165, while parts were responsible for £118,092, giving a combined total for November of only £276,093, as against £367,326 in the corresponding month of last year. The gross imports of cars (3,725 in number), chassis (3,086), and parts during the first eleven months of the current year amounted, however, to only £3,895,781, as contrasted with £4,327,824 in the corresponding period a year ago. Turning now to the section relating to the exports of British automobile productions, these show a slight increase—from, in the aggregate, £124,315 in November, 1907, to £124,983 last month. Altogether 215 complete cars (£83,336) and 16 chassis (£7,261) were despatched from this country during November, as well as parts to the extent of £34,386. The gross shipments during the eleven months ending with November are returned at only £1,152,540, which contrasts with £1,216,485 in the similar period of last year.

The International Road Congress.

AN excellent summarised report of the proceedings at the first International Road Congress held at Paris this year has just been published by Messrs. Wyman and Sons, Ltd. It is edited by Mr. G. M. Harris and Mr. H. T. Wakelam, whose connection with the administrative as well as the technical side of local government gives them special authority to deal with the subject. The contents are divided into four parts, one being devoted to the account of the Congress, together with some description of its social side. The most important, however, deals with roads, this section being divided into about fifteen sub-divisions, so that matters affecting the foundation, construction, tarring, and cleansing, each find a description in its proper order. The effects of new locomotion on the roads are also dealt with, and the editors have come to the conclusion that, without in any way detracting from the value of this first Congress, it may be confidently said that the second, which will be held at Brussels in 1910, will certainly be able to effect far more than was possible on the occasion of the initial effort to bring together men who are practically interested in the subject. They also express the hope

that this country will play an important part in the development of the important questions associated with roads. The work certainly is a valuable contribution to the literature of the road, and the summaries of the various papers that were read and of the reports presented have been admirably done.

Brooklands.

ALREADY those responsible for the conduct of the Brooklands Track have announced three race meetings for next season, and now the new rules are out. New members of the Racing Club Committee are Baron de Zuylen, Mr. F. P. Armstrong and Mr. E. de Rodakowski, the latter of whom becomes a life member of all committees. The annual subscription in the future will be five guineas to all save the first three hundred members and those elected last year under the privileges granted to members of the R.A.C. Apparently from some alterations which occur in the Rules it would appear that the development of the track as a testing ground for cars will be greatly encouraged by the proprietors in the coming months.

The Value of the Car.

IN his letter on another page, Dr. Vipont Brown, of Manchester, says he does not drive a motor-car because he can afford it, but because he cannot afford to do without it. This neatly expresses the position of many motorists and serves to show that the car is not the plaything some speakers would have audiences believe it is, but that it is a practical, reliable, and necessary means of locomotion to busy men. From the motorist's point of view this fact should be strongly impressed upon all who are capable of influencing public opinion, and the formation of a Manchester branch of the Highways Protection League seems to have given good opportunity for reasonable men to enforce the opinions of the great body of motorists upon the local public.

In Scotland.

ON this subject an important gathering was held on Friday of last week, when some of the members of the Road Surveyors' Association of Scotland met the Scottish A.C. in conference. The primary object was to consider the lessons of the recent Road Congress; the real value of the meeting was the opportunity given for the interchange of views between the makers and the users of the highway. Sir J. H. A. Macdonald was in the chair and drew the attention of the surveyors to the evils of dangerous level crossings, "blind" corners, the leaving of unrolled road metal from Saturday to Monday, and similar dangers which the motorist has to risk when travelling. Mr. Robert Drummond, the president of the Association, considered that all roads in urban and populous places might be surfaced with materials treated with tar in some form without unduly increasing the expenditure. If main roads across country were surfaced up with the best metal obtainable, rolled and bound with hard material, and their surfaces kept in good condition, they would probably serve the purpose so long as neither the weight nor rate of speed were excessive. But, whatever further steps may be taken by local authorities towards strengthening and improving our roads, they might have to advise them that, unless moderation both in speed

and weight came about in motor traffic, nothing short of a bituminous binding would serve to keep in good order a macadamised surface, however good the materials, and however well it might be kept.

A Welsh Event.

ONE of the most important events of next year outside London will be the automobile tour which is being organised by the Motor Union for July next; and we would suggest to the secretaries of the various automobile clubs throughout the country the desirability of leaving the dates open so that members may participate in this interesting gathering. The Annual Congress of the Ligue Internationale des Associations Touristes will be held in England from July 7th to 18th, the sittings for discussion taking place on the first four days. They will be followed by a tour by road to Oxford, Leamington, Stratford-on-Avon, Cheltenham, and by way of the Wye Valley to Swansea—a pleasant route which should give visitors a good impression of our island and provide opportunity for that social side of motoring which has long been absent. At Swansea the Welsh A.C. will become the hosts of the party, and an attractive programme for the 15th to 18th has been arranged, including, on the 17th inst., a provincial meeting of the Motor Union.



Touring in Holland.—The Museum, Amsterdam.

A Car Census.

SOME idea of the number of motor vehicles in use has been afforded by a table compiled by the R.A.C., which shows that 154,391 automobiles had been registered in the United Kingdom up to September 30th last. At the time of the Royal Commission on motor-cars statistics were presented showing a total of 74,038 vehicles then registered, so that the aggregate number has doubled in three years—and this despite the outcry which has been raised and the threatened restriction of the rights of motorists by legislative as well as administrative action. The following comparison so far as the most recent returns are concerned is interesting:—

| | Private Motor Cars. | Motor Cycles. |
|-----------------------|---------------------|---------------|
| England and Wales ... | 63,240 | 57,472 |
| Scotland ... | 5,231 | 4,482 |
| Ireland ... | 2,910 | 3,072 |

There are in the United Kingdom 12,104 automobiles engaged in commercial work, and 5,880 employed in public service. Naturally London takes premier place in England and Wales with 34,908 registrations, with 4,777 in Middlesex, followed by Surrey and Kent—the only other counties that go above the four thousand. 3,651 vehicles have been registered at Birmingham, 3,021 at Manchester, 2,440 at Liverpool, and 1,834 at Coventry. Devonport is at the bottom of the list, having registered only eleven cars and fifteen motor-cycles. Glasgow and Edinburgh are responsible for

1,616 and 1,174 registrations respectively, and in Ireland, Dublin and Belfast head the list with 888 and 753. In only two cases throughout the United Kingdom do the returns show a falling off. This in the case of Devonport is a decline from fifty in 1905 to the figure we have already given, and at Portsmouth the number has gone from 463 in the former year to 460 in 1908.

Licence Duties.

THE new methods in connection with the payment of licence fees which will be introduced in the New Year are of considerable interest to motorists, since they bring the payments for motor-cars within the purview of the county authorities. As was explained by Alderman Scott Foster in our issue of the 5th inst., the Inland Revenue licences for carriages, motor-cars, guns, &c., which have always been paid at Post Offices, have hitherto been sent direct to the central authorities and from thence transmitted by contributions to the local authorities. Under the new conditions which will operate after January 1st the payments will still be made to the Post Offices, but will then be sent on by the local postmaster to the county council or county borough in which the particular post office is located. Thus the motorists who are aggrieved as to the policy of any district with regard to automobilism should continue to obtain their Inland Revenue licences in some other locality. The districts that have benefited from the anti-motoring attitude of their magisterial Benches need not be surprised if they lose a goodly proportion of licence fees—motorists not being willing to subscribe in two ways towards the upkeep of councils that show animus towards their work and pastime. It will be interesting to watch the development of the new policy and the effect that it may ultimately exercise on the way in which our local localities secure the administration of the Motor Car Act.

Local Authorities and the Roads.

THE new system will also enable the county and borough councils to ascertain the contributions of motorists in licence fees, registrations, and also drivers' licences towards the upkeep of the roads. We venture to suggest that the aggregate is really much greater than has generally been supposed, and the figures will demonstrate the undesirability of further agitation in the direction of taking more from those who motor. Of course, it is commonly acknowledged that roads cost more to maintain than was formerly the case; for several years the tendency was in the direction of the encouragement of railway transit and the consequent reduction of road traffic. Local authorities grew somewhat negligent of their duties and the roads required re-making in many places when the new traffic came upon them. So that it is not altogether fair to charge the heavy expenses now being incurred to the growth of the new locomotion—as is usually done at meetings of protest.

Another Deputation.

MR. ASQUITH has confessed to becoming quite accustomed to receiving deputations and the President of the Local Government Board is almost equally familiar with delegations from various associations anxious to incline his views this way or the other. Last week thirty-five M.P.'s saw him with regard to the enlargement of his powers concerning motor-car matters, and this week he has received a deputation from the Motor Union with Mr. Joynson-Hicks as the chief spokesman. They waited upon Mr. John Burns for the purpose of laying before him the views of the Union with regard to the applications of local authorities for the imposition of speed limits of ten miles an hour under the Motor Car Act, 1903, and to show cause against any extension of the powers of local authorities in this matter. The President, after hearing the statements submitted to him by various members of the deputation, promised to give them his careful consideration—practically the same reply that was given the earlier deputation of his Parliamentary colleagues.

Motor Cab Service.

SOME interesting and curious comparisons are being made showing variations in the registrations of fares by motor taxicabs. A correspondent who hired a cab from Waterloo Station to Upper Hamilton Terrace, N.W., on one occasion was charged 3s. 4d., and on another day the dial registered 1s. 10d. A further case shows a difference of 2s. in the registration on separate occasions, and suggests that those responsible for the organisation of the motor-cab services will have to give attention to this matter to secure something like accuracy on every occasion if the public is to have confidence in the mechanical devices supplied.

Aerial Navigators.

AN important point raised by the Duke of Argyll in his speech at the annual dinner of the Aero Club should not be overlooked by those who are interested in the future of aviation. In the early days of motoring, both private and in public service, difficulties often arose in getting able men trained in the handling of these machines. These will also appear when the question of rising from the ground into the air becomes more

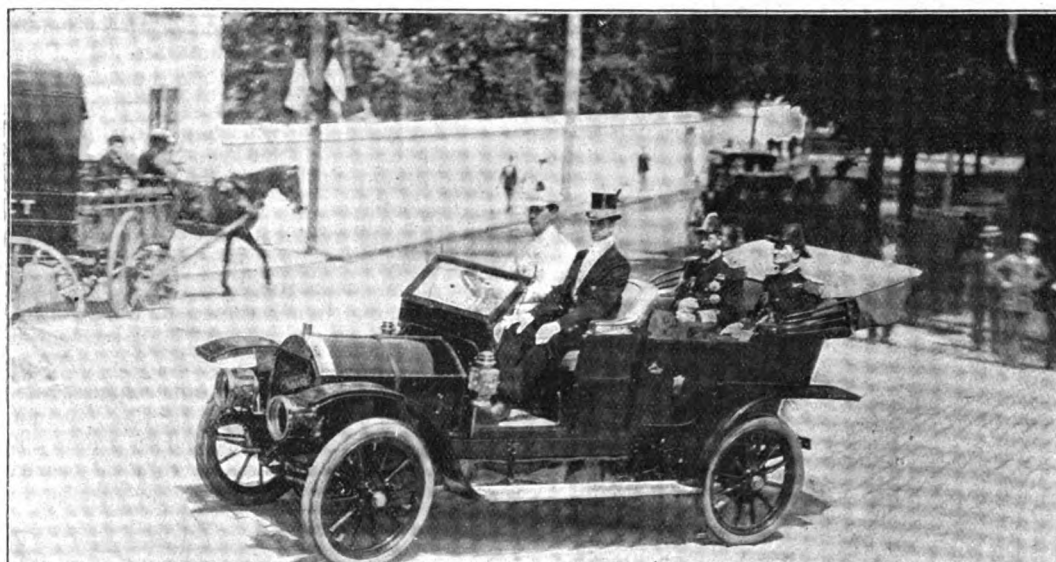
to over-rule the disposition for the most perfect form of ambulance service.

The Provincial Clubs.

SEVERAL annual meetings of the provincial clubs have lately been held, at which most satisfactory reports and balance-sheets have been presented. Altogether the various local motoring organisations seem to be in a very healthy condition, and, although there is nothing like unanimity with regard to the question of affiliation to the central bodies, substantial progress has been made in securing the adhesion of motorists to the county organisations.

Haywards Heath again.

AT Haywards Heath, on Monday, nineteen motorists were concerned in twenty-four summonses, mainly for exceeding the legal limit on the London to Brighton road. Altogether the fines and costs for the day came to a total of no less than £234, this aggregate being considerably helped by four defendants having each to answer two cases on one day for the outward and home-



A Reminiscence of the Prince of Wales' Visit to Canada in July last.—His Royal Highness sight-seeing in Quebec on a Comet Car placed at his disposal by the Comet Motor Company, Ltd., of Montreal.

Quebec is a very hilly city, being built on a rock; one of the main roads traversed by the Prince of Wales was from the Wharf to the Citadel, a climb of 600 feet in less than a mile; notwithstanding the steep ascent the vehicle made the journey without a falter.

generally realisable. The Aero Club and other organisations that are concerning themselves with the subject will do well not to forget the warning of the Duke of Argyll and give opportunities for the encouragement of men offering themselves for training in matters of aerial navigation.

Motor Ambulances.

SOME discussion is likely to take place with regard to the policy of the Metropolitan Asylums Board in connection with the building of the new motor ambulance it intends to put into service at no distant date. The bodies of the new vehicles are to be placed upon cab chassis, and the point is whether it would not have been better to have had the whole ambulance specially designed so as to secure the minimum of vibration and the maximum of comfort for the unfortunate people who may be served by the ambulance. Of course the education of public bodies is a long process, and it required much investigation of the cars on view at one of the motor shows at the Agricultural Hall to convince the members of the Asylums Board that the motor ambulance was really a reliable vehicle. Now that they have had ample evidence of that fact they should not allow a notion of economy

ward journeys. One of the motorists was fined £30 and costs, his licence ordered to be suspended, and he was disqualified from driving for two years. Such heavy hauls have not been so frequent of late, the bad weather generally experienced having led to a lull. The reward of police watchfulness.

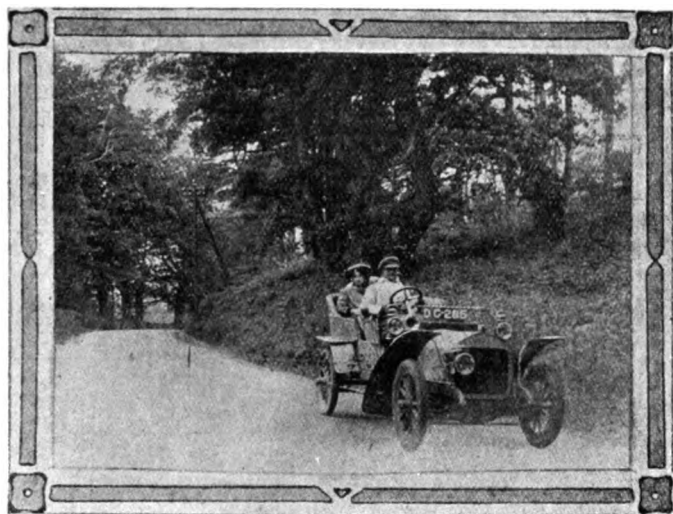
Short Stories.

IN our next issue we shall announce an interesting competition open to readers of the *M.C.J.* who have had interesting experiences when on their motor trials and can weave the same into a Short Story of automobile interest. Stories of from 1,000 to 1,200 words will be welcomed, and the occasion will present a good opportunity for motorists with literary ability to exercise their skill.

THE 1909 15-h.p. White steam car chassis which was at Olympia will spend Christmas and the New Year at the showrooms of the White Company, Albion Street, Gaythorn, Manchester. This first appearance of the new White model in Lancashire should be of interest to our northern readers, who have hitherto only known its merits from the Press.

INCIDENTS OF A RUN TO FOLKESTONE AND DOVER.

AS an objective to a run Dover is interesting. Apart from the international flavour of the place, or rather the people one meets there, quite a lot is to be seen, including the wonderful extensions to the Admiralty harbour. At Dover one comes across hotels, streets, and even private houses, adorned with French names. One can pull up at a French hotel, and partake of genuine French drinks in an atmosphere of French, by which I do not mean to suggest that Dover is in the least smelly, as is the average French port and harbour place. Last, but not least, I would not omit to mention that a genuine and extended view of the French coast is thrown in gratis, and it is quite the best



The Folkestone Road at Leeds.

The road is bounded with cool shady woods, it being a favourite motoring picnic venue. On the right, through the screen of woodland, a view of Leeds Castle and moat is obtained.

obtainable from any road in this country. Luckily there were no fogs on the Sunday that we patronised the town. The chalk cliffs and fields the other side appeared so near that the passenger seriously thought of swimming across.

The A.A., always thoughtful, advises motorists to steer clear of the direct road down. We knew it of old, so the advice was unnecessary. The A.A. suggests an alternative route by way of Eltham, Wrotham and Maidstone, but, not liking the lumpy macadam to as far as Sidcup, we choose the best route, *via* Sevenoaks, which joins the approved route at Borough Green. As far as Polhill we had the usual Sunday accompaniment of cyclists, brakes, &c., but, turning off the Sevenoaks road at Riverhead, we left much of the traffic behind. At Wrotham we struck the tarring, and also nearly struck the left hand bank in taking the very sharp and most awkward turn out of the village.

The Maidstone road is far too interesting to rush over, despite the inducements to speed. Foreigners, particularly Americans, are never tired of praising the splendid scenery; dotted on either side are charming old-world villages and finely wooded country. After Maidstone the road, if anything, increases in interest. Perhaps the most picturesque stretch is at Leeds, where the road runs through the woods of that name. On the right a view is obtainable of Leeds Castle and moat. After the village of Harrietsham the road narrows somewhat into Lenham, a singularly quaint old-world village. Hitherto it was a very loose stretch from here to Charing, but tarring has improved the road out of recognition. The old Swan Hotel, that faces you on entering the village, bears the modern name on a swinging board "The Automobile House." The proprietor stocks petrol and oils and is quite up to the times. Running into the yard at the side, we were soon discussing dinner in an old-fashioned room with big bay windows overlooking the

road. Cars were continually passing in either direction; indeed the place seemed given over to automobiles.

From Charing to Ashford is another fine stretch, and mostly tarred and just sufficiently undulating to be interesting. Most inviting bye-roads branch off on either side to Tenterden and many other places right off the beaten motor track. The final stage of the run to Folkestone sustains the general interest. The steeplechase course at Westerhanger runs parallel to the road and is only used three or four times a year. One gets the freshening sea breeze in descending the long slope into Hythe, past the barracks. Thence along the fine tarred front to Sandgate, which is being rapidly opened up with hotels and private houses. Several of the Thames six-cylinder char-a-bancs were noticed; these run to Dymchurch, &c., and, the weather being fine, they were well patronised. The curious three-horsed trams at this place afford a striking contrast.

Folkestone presented a summery aspect, the Lees being thronged with visitors. In the harbour the turbine boat was seen getting up steam for the afternoon passage. There was quite a lot to see, including some members of a French band from Dunkirk. Leaving the town by the Dover road, we were confronted with the climb up Folkestone Hill, over a mile long and an ideal seaside venue for a hill contest. A motor-cyclist on a powerful machine sped past on the initial portion, but we came on him again at the first bend with the engine stopped and a look of disappointment on his face that betokened failure. It is really a stiff pull, with two bends. However, our car went up like a bird and glided into top speed as soon as the easier gradient was struck. From the summit there was a clear and extended view of the French coast, the cliffs and fields being quite discernible. The road skirts the cliffs for some three-quarters of a mile, and is the nearest road point to France.

There is a four mile drop into Dover, and at the outskirts and tram terminus prominent boards request motorists to drive slowly. What particularly attracted our attention were several modern villas lining the road, each with some French name. For instance, one on the right was called "Mon Repos." It hardly struck us as being a particularly restful spot, with the trams, to say nothing of motor-vehicles, and the adjoining railway station. We ran on to the Esplanade, where there was really a lot to see; the fine smooth road is not cut up by tramlines, and the wonderful extension that has been made to the National



Charing—the "Crawley" of the Folkestone Road. The old Swan Inn displays the modern signboard, "The Automobile House."

Harbour—one wall extending three-quarters of a mile out to sea—was noted. After doing the Esplanade we run along the harbour road, where one sees "On parle Francais" on several hotels and shops. We pulled up at the Hotel de Paris and entering, duly made obeisance to the lady at the counter. "Qu'est-ce que vous voulez?" asked the passenger. We elected café-cognacs; thereafter we lit up French cigarettes of the genuine brand. Several French lady and gentlemen visitors were in the place and it was really most interesting. In fancy, we imagined

ourselves *en tour* in France, partaking of refreshment at a café at some quaint old-world port. Little did we think how soon and speedily the illusion would be shattered! After starting up and rounding a sharp bend of the road the bonnet touched the barrow of a local wheel hawker, who immediately assailed us in unprintable Doverese.

The London road out of the town follows the tram lines by a twisty route, but, after the outskirts had been left behind, we struck tarred road again, and the surroundings are interesting. Lydden, an old-world village, was passed, and a few miles further the road ran parallel with Barham Downs, where, as most people know, an army was maintained for the especial reception of Napoleon's "Army of England" that was gathered at Boulogne for the invasion that was "scratched." The Downs extend for miles, and there is a wonderful view across the valley to the hilly country to the south-west. The road continued in splendid trim to Bridge, which of late has come into some notoriety through its police traps. It is certainly a very inviting bit, nicely tarred and much resembling a French highway to Canterbury, the spire of the Cathedral and the town itself as viewed from the distance being not unlike Chartres. It was too interesting to rush over, so we drifted along quietly into the Cathedral city, where it was decided to follow the Charing and Maidstone road home; this is an additional ten miles, but the detour is worth it.

After Chartham another little detour was made to visit Chilham. The approach is pretty enough, but the village, with its quaint old houses and church, is simply enchanting. It has the distinction with Chiddingstone of being the prettiest village in England, and the title is deserved. The church, church house, schools, forge, &c., in a cluster, and one of the quaintest old inns, all free from any suspicion of modernity, render the place a veritable picture. Not a sign of human life was to be seen that Sunday afternoon, and we felt like intruders in the place; indeed, the presence of the car seemed totally out of place. A sharp descent from the village led into the Charing road again. From this point to Charing hill the road has been tarred, converting what was formerly a loose and flinty stretch into splendid smooth going. The outward route was joined at Charing and several motors were seen at this village. At Malling the number of the car was noted by a policeman, this being part of the new move of the Kent police to check reckless driving, though in our instance it was unnecessary, as the vehicle was being driven with the throttle cut very fine, the Maidstone road being unsuitable for speed at holiday time. Home was reached without any incident worth recording so far as the car was concerned, and, thanks to the tarred roads, there was no dust to speak of either on the vehicle or ourselves. The total run worked out at about 160 miles and was interesting every mile.

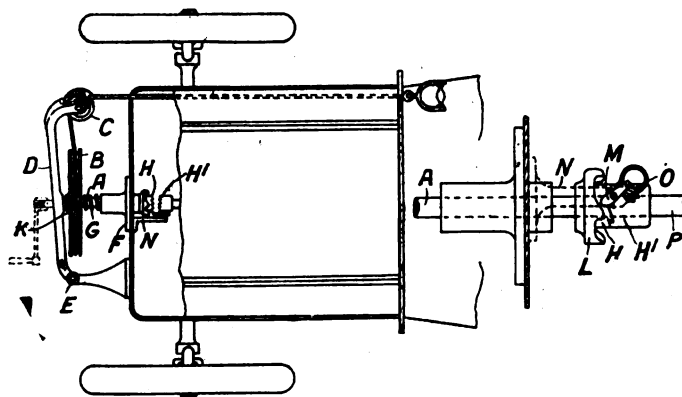
C. F.

MESSRS. SHARP, WILLIAMS AND SHARP is the title of a new firm of automobile engineers which has been established, with offices at Carlton House, Regent's Street, London, S.W., and works at 20, Danvers Street, Chelsea, S.W. The first and third name in the combination are those of gentlemen who have been associated with the motor trade in connection with the Reo car, and their experience will materially assist the firm in obtaining a good position for itself. Their repair works are within a few minutes' walk of Sloane Square Station, and arrangements have been made for the acceptance of cars at their West End offices, where estimates can be given for the execution of the work in the engineering shops. An innovation is suggested in the three months' guarantee which the firm intend to give for all repairs executed by them. One branch of the business will be devoted to the fitting of glass screens, luggage carriers, hoods, and other accessories, and a speciality will be made of the lengthening of chassis and fitting of side entrance bodies, thus bringing cars of older date into line with modern fashion. A large stock of spare parts is kept, as well as tyres of every make, detachable rims, &c. Altogether Messrs. Sharp, Williams and Sharp are well equipped for dealing with repairs of all kinds and supplying spare parts and accessories of every variety.

THE MALLINS ENGINE STARTING DEVICE.

WE are able to illustrate this week the simple and ingenious method of starting the petrol engines of motor-cars from the driver's seat which has been devised by Mr. C. W. Mallins, A.I.E.E., the general manager of the Liverpool Corporation Tramways. As will be seen from Fig. 1, which shows the arrangement in plan, on the starting handle shaft A is fixed a pulley B, around the groove of which is laid one complete turn of a flexible wire cable, the end being fast to the pulley. The other end passes over a small pulley C attached to one end of a lever D, and then inside the bonnet and through the dashboard, terminating in a hand grip or stirrup J fixed at a convenient height for the driver to operate with the right hand. The pulley B is controlled by a spring G, one end being fast to the pulley and the other to some stationary part such as the bracket F. This spring always tends to wind the cable on the pulley after each operation, and also holds the couplings in the normal out-of-action position, thus performing the two operations, viz., rewinding the cable on the pulley and holding the couplings H and H' apart.

To start the engine the driver pulls the grip J sharply towards him; this pull, due to the cable passing around the small pulley C, swings over the lever D (which is pivoted at E). The latter abuts through suitable bearings against the starting shaft at the point K, compressing the spring G, and bringing the coupling H into mesh with the coupling H' on the engine crankshaft. The



Figs 1 and 2.

continued pull revolves the pulley B, and transmits through the couplings H and H' the initial movement or revolution to the engine.

The destructive effect of a back fire or premature explosion is guarded against by the addition of a pawl and crown cam on the starting shaft to throw the couplings out of mesh. In the operation of starting the engine, simultaneously with the couplings coming into gear, the crown cam L (Fig. 2) on the starting shaft A is brought into mesh with a round nosed pawl M, attached to the bracket N. When the starting shaft is rotated by pulling the cable the pawl slips over the teeth; should a back fire occur, and the crank shaft P be rotated in the opposite direction, the pawl M is locked against the stop O, and, due to the formation of the nose of the pawl and teeth of the crown cam, the starting shaft A is forced outwards and consequently the couplings H and H' separated.

The device, which is not only inexpensive but does not prevent the use of the ordinary starting handle, has proved so effective in practice that it has been decided by the Tramways and Electric Power and Lighting Committee to fit it to all the motor-cars in the service of the Liverpool Corporation.

THE "Douche Pneu," illustrated in our issue of the 5th inst., is the invention of Messrs. Mariotti and Tzaut, 10, Rue d'Alger, Paris, from whom full particulars of the arrangement can be obtained.

CONTINENTAL NOTES.

Touring Facilities in France.

The Motor Union's association with the Ligue Internationale des Associations des Touristes is enabling it to provide with increasing efficiency for the wants of British motorists touring on the Continent. With the assistance of the French Touring Club, thoroughly efficient repairers have been appointed in fifteen selected towns. Rather than entrust their cars in a serious breakdown to the nearest mechanic, of whose capabilities and resources they know nothing, motorists will now be able to place their car on the railway for conveyance to an establishment whose equipment both as regards machinery and skilled workmen will ensure that the biggest *panne* will be repaired successfully in a few days. The centres selected are Nantes, Caen, Rouen, Lille, Nancy, Orleans, Tours, Nice, Grenoble, Marseilles, Lyons, Bordeaux, Pau, Toulouse, and Clermont-Ferrand.

International Road Signs.

At a recent meeting of delegates of national automobile clubs and touring associations in Europe and America, held in



Paris, the resolution adopted at the International Road Congress with regard to the adoption of a standard system of road signs was considered. At the last mentioned congress it was decided that the number of signs to be used should be four in number, denoting respectively obstacles on the road, bad turns, level crossings, and dangerous crossings. After discussion, the meeting resolved to adopt the four proposed signs which are shown in the accompanying illustrations. As will be seen, each sign consists of a circular plate bearing a legible device requiring no further written explanation. The groundwork of the sign will be dark blue, with the indication in white. In countries where the authorities object to a round sign liberty is allowed to employ a rectangular form. Practically these signs are the same as were adopted by the Association Générale Automobile, an offshoot of the Automobile Club of France, several years ago; the discs will be 18½ in. in diameter, and fixed at a height of 9 ft. above the ground.

The A.C.F. Grand Prix Races for Heavy and Light Cars.

As a result of the movement against a continuance of the Grand Prix race it seems doubtful if this great international event will be held in 1909. The Sporting Commission of the A.C.F., at its meeting, after having received the deputation from the Anjou Committee, decided, however, to open the entry list. The amount of the entry fee is fixed at £200 for one vehicle, £360 for two, and £480 for three cars. The entries will close on the 31st inst., at 6 p.m. No entries will be received at double fees, and unless forty entries are received the race will not take place. The Grand Prix des

Voiturettes being subordinate to the heavy car race, entries for the former will only be received after the closing of the list for the Grand Prix, and only then if forty entries for the latter have been received. Up to the time of writing only three entries had been received—those of Messrs. Cottin and Desgouttes, of Lyons.

A Good Word for British Cars.

Writing in the "Automobile," M. Henri Baretta, in referring to the fact that the Siddeley was the only British built motor-car on view at the Paris Salon, remarks that in his opinion "it is the equal of our best."

A Competition of Tyre Inflating Devices.

Twenty-five entries were received for the competition of tyre-inflating devices which was held by the Automobile Club of France on the 7th and 8th inst. The tests were carried out on a set of four 935 mm. by 135 mm. tyres; in the category for devices not using a storage reservoir the first prize (£20) was awarded to the Auto-Gonfleur of the Aster Company, the second prize (£12) to the Select apparatus of M. Munili, and the third prize (£10) to the Delpuch device of the Comptoir d'Innovations-pour Automobiles. In the section for inflators using a reservoir M. Saurer carried off the first prize and Messrs. Grouvelle and Arquembourg the second.

Aeronautical News.

The Ligue Nationale Aérienne has received several new prizes to be offered for competition by aviators.—The Mayor of Lannemezan (Haute Garonne) is offering a large area of land as a practising ground for flying machines to the Ligue Meridionale Aérienne.—The parliamentary group for the promotion of aerial navigation has decided to move in the Chamber that an International Aerial Locomotion Exhibition be held in 1910.—A Brussels newspaper is offering a prize of £400 to the first aviator who shall fly from Brussels to Ostend and back between August 15th and September 15th next year. The competitors will be allowed to come to earth at four different points *en route*.—At Anvours, on Wednesday last week, Mr. Wilbur Wright took several members of the Aero Club of Great Britain for trips in his aeroplane.—Some trials are being made at Sanvic (Seine Inferieure) with a new aeroplane designed by M. L. Hervieux.—The German Aerostation Company is the name of a concern which has just been formed in Frankfort on-Main for the establishment of a passenger service in the air between twenty-six German towns. Seven special airships, capable of carrying ten to fifteen passengers, and of travelling in all weathers, have, it is stated, been ordered.—It is proposed to establish stations on the roofs of large hotels at Frankfort, Cologne, Nuremberg, Munich, Hamburg, Mayence, Cassel, Stuttgart, Mannheim, Strasbourg, Hanover, Dresden, Leipsic, Kiel, and also at Copenhagen.

Miscellaneous Items.

La Compagnie Générale de Taximètres-Automobiles is the name of a company which has just been formed in Brussels.—The municipal authorities of Liège, Belgium, have just invited offers for the concession for the running of motor-cabs in the town during the next three years.

Rien à Déclarer.

Les aéroplanes deviennent officiellement des "planeurs." C'est du moins ainsi que les désigne un document administratif qui fait en ce moment le tour des bureaux de l'octroi. Car l'octroi s'est ému—déjà!—des fraudes que pourraient favoriser les "planeurs" passant les fortifications, sinon à la barbe, du moins à quelques dizaines de mètres au dessus de la barbe des bon "gabelous." Il n'y avait qu'un moyen d'obvier à ce danger fiscal, c'était de charger éventuellement les agents de M. Lépine de surveiller les atterrissages des dirigeables ou des "planeurs" dans Paris. Ainsi sera-t-il fait, nous a-t-on dit à l'octroi. Mais la mesure n'est encore que provisoire.

GOSSIP FROM PARIS.

The A.C.F. Grand Prix Race.

Le Roi est mort! Vive le Roi! The Motor Grand Prix is dead! Long Live the Aviators' Grand Prix! It is useless for the French automobile makers to pretend that the decisive reason for boycotting the Grand Prix was the cost and the perturbation it created in the factories. Underlying all their protestations and arguments was the admission that the general public no longer care much to see motor-cars travelling at even 150 kilometres an hour. What is witnessed every day on a frequented high road produces an almost equally intense impression. In any case the manufacturers of automobiles are conscious that their racing cars cannot compete successfully with the aeroplanes in drawing the public. The confession was made to me last week before the Sporting Committee of the A.C.F. had decided the Grand Prix of 1909 should be suppressed unless at least fourteen manufacturers should have the moral courage to class themselves among the "small fry" by entering three cars each before the 31st inst. For the maintenance of the race the total entries must amount to at least forty cars. I say class themselves among the "small fry," because almost all the big firms, that is to say, seventeen of them, signed the engagement to boycott the race. They were Benz, Berliet, Léon Bollée, Brasier, Clément-Bayard, Darracq, Delaunay-Belleville, Germain, Isotta-Fraschini, Lorraine-Dietrich, Mercedes, Minerva, Motobloc, Panhard-Levassor, Peugeot, Pipe, and Renault. I have placed the names in alphabetical order, but from the point of view of initiative in the boycotting the last should be first and the first last. Of course, the suppression of the Grand Prix would entail that of the Grand Prix des Voiturettes.

Efforts to Secure its Continuance.

The Marquis de Dion being, however, convinced of the advantages the French automobile industry would continue to derive from the maintenance of the Grand Prix, is persevering in his efforts to find a compromise. He hopes to get the Sporting Committee of the A.C.F. to reduce the minimum number of cars from forty to thirty, and to accept the organisation of the race even with a smaller number of entries, provided the local committee of the Anjou circuit makes good the deficit in the fees. This arrangement would be only fair, as that committee has, on the invitation of the A.C.F., been working hard for more than a year, especially since last July, and spending large sums of money, to secure the advantage of the race being run in its district. The members of that committee are in any case determined to do their utmost not to lose all the fruit of their labour, and will at the last emergency endeavour to organise an International automobile competition on their own account. Their persevering efforts deserve success.

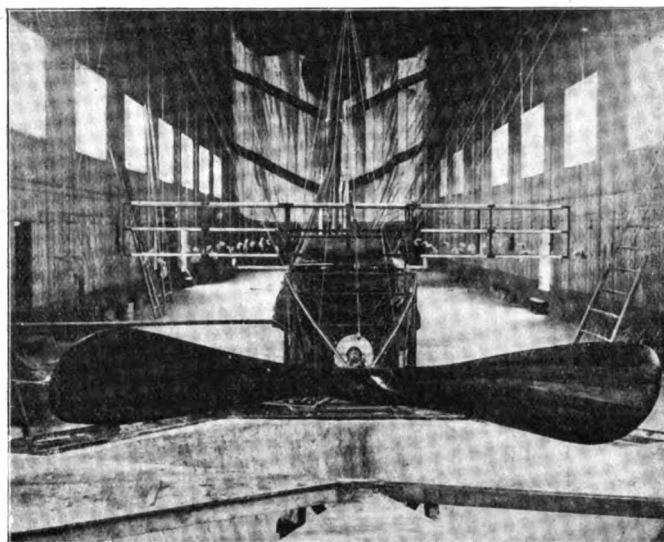
The Cost of Racing.

The acceptance of M. de Dion's suggested compromise or the organisation of a great international race by the Anjou committee will make no difference to the position of the seventeen firms which have signed the engagement to boycott all races in France during the coming year. They cannot enter a single car for a speed competition without having to forfeit £4,000. That being the case, it is to be hoped they will keep their promises and occupy their enforced leisure by working at the wonderful improvements they say they have till now been prevented from perfecting by their racing preoccupations. Most certainly motor-cars are not so perfect as they might be and also they are too dear. To content their customers and to insure at the same time their own continued prosperity, the manufacturers must, while improving their vehicles, also reduce their prices. And that by their own showing will evidently be possible. A couple of weeks ago the managing director of an automobile firm told a friend of mine that the participation in races had cost him so much that to recoup the amount he had been obliged to add £20 to the price of each car he sold.

The Paris Show Question.

La Barbe is a very forcible bit of French slang summing up in two words "Hold your tongue, that is too great a bore." It

was used very often last week in the Grand Palais, where the initiators of the campaign for the transformation of the annual Salon into a biennial show were busy seeking adhesions to their proposal. For the time being, at least, the majority of the exhibitors did not care to consider it. They had enough to do to think of the show which closed its doors last Sunday. What they will do now I cannot say, but if only the second section of the Salon, that is to say the exhibition of the commercial and industrial vehicles, machinery, motor-boats, and flying machines, to be held from the 24th to 30th inst., proves as successful from a business point of view as the show of automobiles did, the partisans of the suppression will have considerable difficulty to obtain anything like unanimity in support of their idea. It may be undeniable that some of the leading automobile manufacturers did not obtain so many orders at the Salon as they had done on previous occasions. That diminution may, I think, be attributed to the fact that the general public, who are buying more motor-cars every year, have rightly or wrongly come to the conclusion that there are at the present moment a great many comparatively small makers turning out moderate-powered cars which can bear comparison with those bearing the names of big manufacturers, and which can be had for a comparatively low price. At any rate, the small fry are not dissatisfied with the result of this



The Clement-Bayard Airship in its shed, showing the propeller and planes.

This successful airship, which is driven by a 120-h.p. Clement Bayard engine, is owned by M. A. Clement, a vice-chairman of Clement-Talbot, Ltd. The car measures some 88 ft. in length, 5 ft. wide and 5 feet high.

year's show. It has, on the whole, been a more "business show" than some of its predecessors, but the business has not been done exclusively by the princes of the automobile industry. The rising generation, if the expression be permissible, has had its share.

MARNEY.

IN our issue of July 25th last we fully described the valuable features of the Torkington tyre, which promises to become a really practical means to automobile economy. Those who are interested in this solid tyre, the segmental construction of which practically secures its admission to the category of cushion tyres, will be pleased to learn that the Torkington Tyre Company are now established at Percy Street, Tottenham Court Road, London, W.C., where we recently saw their staff busily engaged in the conversion of wheels to take the tyre. Many owners who have previously depended on pneumatic tyres are considering the merits of the Torkington solid tyre, and we were particularly impressed with the fact that a powerful Daimler was being thus fitted previously to being employed on a long tour, including a journey over the Italian Alps. This should, at this season of the year, provide a splendid test of the tyre as a non-skid. It certainly reveals the confidence of a practical motorist in the device.

THE SOCIAL WHIRL.

THE forthcoming dinner of the clubs associated with the R.A.C., to be held at the Hotel Cecil on the 14th prox., will be an important social event. An innovation in automobile dinners will be made in the arrangement of the tables, the usual "top table" being done away with, and a series of small tables being set in order to promote the sociability of the guests. Ladies will be invited, and Prince Francis of Teck will preside.

VISCOUNT GERAWLY, who succeeds to the earldom of Annesley, is an enthusiastic motorist and acted as amateur mechanic to Mr. Tom Thornycroft in the "Four-Inch" race this year. The Irish estates of the Earl of Annesley, where Lord Annesley died on Tuesday, are at Castlewellan, Co. Down, and were the scene of the speed trials that followed the Gordon Bennett race in 1903.

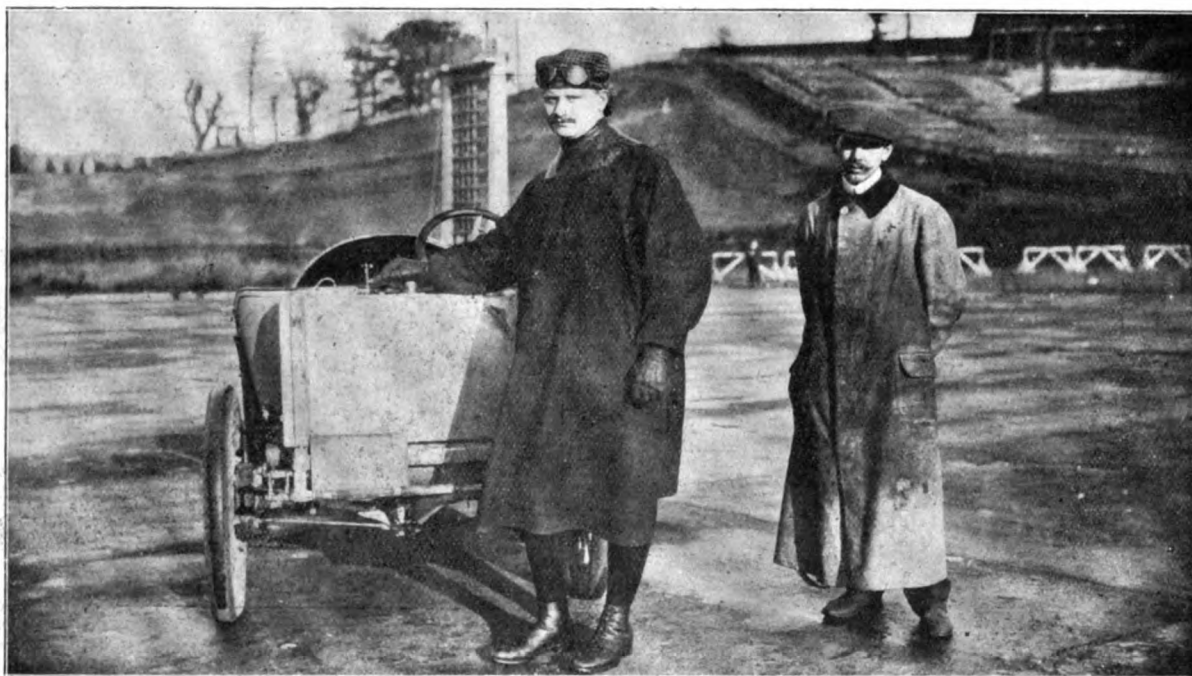
ONE of the obvious facts to be gleaned from the Motor Show recently was the quieter tone of much of the carriage work as compared with that of a few years ago. Not only was this

evidence of means as well as suitability of character has been shown.

MR. HARVEY DU CROS is organising a Marathon Race to be run in Hastings shortly, the idea in view being to draw attention to the town of Hastings as a health resort in the winter months.

As General Smith-Dorrien was motoring from the West End of London to a country place in Essex, a few days ago, he had to slow down when in the Whitechapel Road, London, E., owing to the traffic. Whilst thus delayed a small boy jumped on to the luggage-rack at the rear, and, when the vehicle got into its proper stride, the youngster was too scared to jump off. Thus he rode to Ongar, 23 miles away, without the General being aware of his presence.

DURING the hearing in the King's Bench Division of an action which arose out of the death of a pet dog, killed by a motor-car on Wimbledon Common, a plan of the place where the accident happened was put in by the defence, and Mr. Horace Avory, K.C.,



Speed Trials at Brooklands.—Hieronymus and the Laurin-Klement Car on which he last week attained a speed of over 73 miles per hour.

apparent in the Annexe, where some splendid types of motor bodies were on view, but the tendency was also evidenced in the Gallery, where firms supplying fittings which were originally of brass are now giving attention to oxydised metal, this duller tone coming into greater favour.

THE Chancellor of the Exchequer has informed Mr. Cooper, M.P., that the number of licences issued for motors or vehicles drawn by motors for 1907 was 40,902, and for hackney motors 14,666. These figures exclude motor-bicycles and tricycles.

MR. C. Z. BOOTH, whose motor-car was concerned in an accident near Hatherly recently, is a son of the Right Hon. Charles Booth, whose work in connection with the "Life and Labour of the People" has set a standard for investigators of social affairs.

THE Senate of the University of Cambridge has agreed to the regulations proposed by the Proctorial Syndicate for the more effective control of undergraduate motorists. Now those who wish to keep cars will have to obtain permission from their college tutors and the senior proctor; and that will not be granted until

produced a little china model of a dog, which he asked a witness to show him where to place on the plan. This having been done, Mr. Avory next produced a toy motor-car, and with it the witness, amid laughter, gave a graphic illustration of the car coming quietly along the road, and then suddenly swooping into the ditch, with the object (as one side alleged and the other denied) of running over the dog.

It is some years since I met the Hon. Leopold Canning, J.P., who has just returned from a tour in France, where he covered 4,000 miles with no mishaps beyond a couple of punctures. The inconvenience of these, however, was in a great degree mitigated by the fact that he had wisely adopted the Stepney spare wheel. In the early days of motoring Mr. Canning was identified with the motor-cycle, and during the time of the Gordon Bennett Race in Ireland was one of its leading devotees.

LOLLIUS.

THREE White steam patrol wagons have recently been supplied for Government service in Rio de Janeiro, Brazil.

It is reported that an electric taxi-cab is being built in the works of Mr. Thos. E. Edison, at Orange, N.J., U.S.A.

TROUBLE is arising among the motor cabmen of London owing to the system of the compulsory payment of sixpence a day against third party risks.

THE only car with a three-cylinder engine to be seen at the recent Paris Salon was a 10-h.p. chassis intended for motor-cab work, exhibited by the Brixia Züst Company.

A 20-H.P. Balachowsky-Caire petrol-electric motor-car recently made a successful journey from Paris to Milan, an average speed of about twenty-five miles an hour being maintained.

THE New Zealand Government is running a public service of four Albion twelve-seated cars between Culverden and Hamner and back, a distance of forty-eight miles, for the benefit of tourists.

WE understand that a company known as the Silent Change Gear Company has been formed with a capital of £50,000 to introduce the Fouillaron system of variable speed gear, by means of expanding and contracting pulleys, into this country.

ACCORDING to the London correspondent of the "Manchester Guardian" there is reason to believe that certain investigations are being made by the Treasury, with the knowledge and assistance of prominent men in the motor industry, with the object of ascertaining whether a duty on petrol is feasible.

THE first establishment in America for the sale of airships has just been opened in the Broadway, New York, by a motor-car firm. The prices vary according to capacity, the minimum being £20,000, for which an airship can be bought which will carry eight persons, including the pilot and engineer. The guaranteed speed is thirty miles an hour.

SEVERAL of the leading electrical concerns in Germany, such as the General Electric Company and Siemens and Halske, have for some years had the ambition to enter the motor-car trade, but the idea has hitherto not got beyond the experimental stage. At last, however, the Siemens-Schuckert Company have definitely taken the plunge, having taken over the Protos Motor Works, in Berlin.

MR. J. GORDON BENNETT has offered the Aero Club de France a cup of the value of £500 to be competed for next year in France under the auspices of the International Aeronautic Federation and of the French Society for the Encouragement of Aerial Locomotion. Besides this cup, Mr. Gordon Bennett offers three sums of £1,000 to be awarded to the winner of each of the first three annual competitions.

THE Coventry Chain Company, Ltd., send us a copy of their new catalogue. The list gives full particulars of the Standard and Wormo chains, together with the dimensions of the many sizes now being turned out. Particulars are also given of chains suitable for driving small pumps and magnetos, as also of the Coventry chain wheels and chain wheel cutters and of the Coventry Noiseless chains, the latter being one of the company's latest productions. A usual feature of the catalogue is the table giving a list of the principal chain-driven cars at present on the market, together with the number of the chain suitable for the same.

ON Friday, last week, we had an opportunity of going over the extensive new premises which have just been opened in Store Street, Tottenham Court Road, London, by Messrs. McCurd, Ltd., the well-known dealers in second-hand cars. Including the basement, in which provision is being made for effecting motor-car repairs, there are altogether five large floors available for the storage of automobiles, the total capacity being upwards of one hundred cars. Half of the first floor is being devoted to the offices and to a large showroom for motor-car accessories. An hydraulic lift has been installed, by means of which vehicles can be quickly transported to and from any of the floors. Mr. McCurd, who is nothing if not up to-date, finally took us up to the roof of the building to see, as he put it, his landing place for aeroplanes, but which we may mention is for the present being used for the cleaning down of vehicles. Altogether, the new premises are well adapted for the company's business, and, being splendidly situated, should become a popular resort for all seeking a reliable second-hand car. The work of removal from the old premises in Euston Road, N.W., is not yet quite complete, but already there is a very wide selection of vehicles on hand.

HERE AND THERE.

UNDER the auspices of the Board of Education four lectures on the automobile have just been delivered at the Public Library at Brooklyn, U.S.A.

THE Board of Trade is in communication with the Cheshire Lines committee in regard to the means adopted for protecting the level crossing at Northwich.

A PRISON motor-van has been supplied to the borough of Tynemouth by Messrs. Taylor, Dunford and Company, of Newcastle-on-Tyne.

SPRINGFIELD, Mass., claims the distinction of having the only Chinese laundryman motor-cyclist in America. Chin Yep, a progressive Mongolian of that city, has purchased a carrier motor-cycle to facilitate the delivery of clean collars, cuffs and other articles of wearing apparel that have been entrusted to his care.

IN case of fire the following, according to a Chauffeur's Vade Mecum issued by the Ocean Accident and Guarantee Corporation, Ltd., may be used always at the seat of the fire, i.e., where the petrol (if the cause of the fire) is flowing:—A bottle of Bass may be broken over the flames, or a syphon of soda, lemonade, potash, or any mineral water, or sand or flour, may be used to advantage. A syphon is preferable, as the valve allows it to be used as a hose.



The Stand of the Palmer Tyre Company at the Paris Salon.

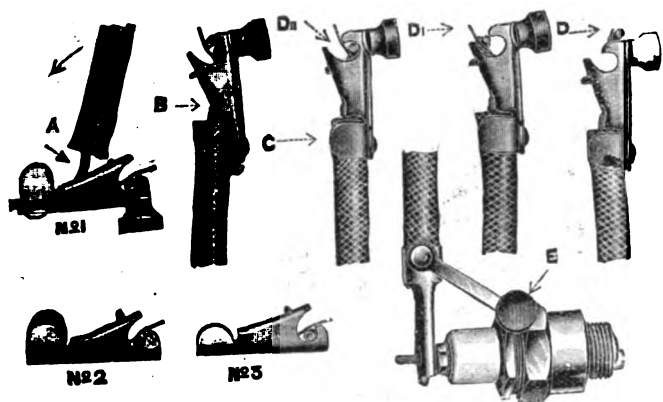
"LE PROBLEME DE L'AVIATION" is the title of a book which has lately been published by M. Ch. Delagrave, Paris (15, Rue Soufflot). The book is practically a reprint of the address given a few months ago by M. Armengaud, jun., at the French Conservatoire Nationale des Arts et Metiers, and deals very thoroughly with the present condition of the heavier-than-air type of flying machine. The book is well illustrated, and should prove of service to all who are interested in the great developments that are taking place in aerial flight.

THE old idea of an *avant train* or motor fore-carriage which can be applied to any horse-drawn carriage, by substituting it for the front wheels of the latter, and so converting it into an automobile, has been revived by the Société des Avants-Trains "Fram," of Paris (10, Rue Lafitte) who exhibited the same at the Paris Salon. The fore carriage is provided with two electric motors, each driving through gearing one of the road wheels; the frame to which the front axle is attached also forms the support for the chest containing the battery of electrical accumulators, one charge of which is sufficient for a run of from 35 to 40 miles. The company claim that one of their *avant trains* can be utilised in connection with a victoria, coupé, or landaulet, the time occupied in detaching it from the one vehicle and attaching it to the other being but little more than is taken up in transferring a horse from one pair of shafts to another.

At the annual meeting of the Highways Protection League, Lord Willoughby de Broke said that seventy villages had requested the Warwickshire County Council to apply for limitations of motor speed to the rate of ten miles an hour, but they had all been refused. Other speakers included Sir Luke White, M.P., Sir Henry Craik, M.P., Mr. J. Cathcart Wason, M.P., and Mr. Harold Cox, M.P.

AN American firm, Messrs. Cisler and Serson, 3,111, Michigan Avenue, Chicago, has recently brought out what is termed a waterproof, coldproof, flexible cap made to fit snugly over the front of the radiator of motor-cars, it being held in place by a snap fastener on either side. The cap is designed to be used in cold weather to keep the water in the cooling system from freezing when the car is standing. Because of its snug fit it is claimed that the hood or cap is much more efficient than the blanket generally used.

WE illustrate herewith the new Snap Spring Terminal for use in connection with ignition wiring that has just been introduced by Messrs. Maxfield and Co., of 156, Victoria Road, Aston, Birmingham. The method of attaching the wire to the terminal is shown at A and B; the end of the insulation is cut away as usual, and the bare wire passed through the hole A and turned towards the rear above the cable; the latter is then firmly attached by squeezing together the clips C. Passing now to the method of attaching the terminal to the accumulator, induction coil, or sparking plug, it will be seen that within the hooked end is a spring D; by pressing this down the part to which the terminal is to be connected can be readily slipped between the body of the device and the spring, an attachment being thus obtained which is not only secure, without the use of any screws



or nuts, but which enables the terminal to be instantly removed at any time. Another feature of the fitting terminal is the cut-out switch E; this consists of a small brass strip with fibre handle, pivoted to the terminal, and when not in use lying immediately above the latter. When it is desired to test the ignition of a multi-cylinder engine the plugs can each be cut out in turn by moving round the switch until it is in contact with the body of the plug, thus creating a short circuit for the current. The snap spring terminal is being supplied both for use in connection with the primary or secondary circuits and with and without the cut-out switch. We understand that it can be obtained in London from Messrs. G. T. Riches and Co., Ltd., Store St., W.C., and Messrs. A. W. Gamage, Ltd., Holborn, E.C.

WHEN at the depot of the Wolseley Company at Westminster, recently, we were shown an exceedingly ingenious hose-pipe nozzle which has been devised by Mr. A. W. G. Harding. The nozzle, which is of rubber and attached to the end of the hose-pipe in the usual way, is so arranged that the ordinary turn-off cock is entirely dispensed with, the mere act of dropping the hose-pipe and nozzle on to the ground shutting off the water supply. This feature is obtained by means of a ball valve, operated by means of two levers within the nozzle. Thus, to allow the water to pass, the sides of the nozzle have only to be slightly pressed between the fingers. The idea is one that is well adapted for use in motor-car garages, as by its means any waste of water is prevented and much time saved in closing and opening the ordinary cocks. We understand that the self-closing nozzle is being put on the market by the Engineers' Universal Supply Stores, 25-27, Sumner Street, Southwark, S.E.

THE worm drive does not seem to be very popular in France, for at the Paris Salon it was only fitted to one car, a 25-h.p. Delahaye.

EASYMAN—Lend you my motor! What's the matter with your own? Speedy—Oh, I don't understand running a car well enough yet to use my own.—*Life*.

FOLLOWING the example set by the milk dealers in the German capital, a milk collection service by motor vehicle has been established by the Polk Sanitary Milk Company, of Indianapolis, U.S.A. The automobile is used between that city and Greenwood in collecting milk cans from the farmers along the route. The cans were formerly conveyed to the depots by the suburban electric railway, and long delays occurred. With the motor-wagon a collection trip from the dairies of the farmers to the city depot of the milk company is made in about three hours.

CONSIDERABLE interest was taken the other afternoon in the progress over London and the eastern suburbs of an airship containing three passengers. It was the "Gamage No 1," as could be discerned from the six feet long letters on the envelope. The passengers were the two brothers Spencer and Mr. L. Talbot, the aerial adviser to the well-known Holborn firm. The ascent was made from the Wandsworth Gas Works at half-past one. The aircraft passed over Wandsworth, Battersea, Lambeth, and Knightsbridge, reaching Holborn at ten minutes to two. After a little manoeuvring there it proceeded to the City and then bore towards Wanstead Flats. The airship descended at Bentley, near Brentwood, before four o'clock, having journeyed in all some thirty-five miles.

LIEUTENANT GRAETZ, the German officer who is motoring across Africa from Dar-es-Salaam to Swakopmund, arrived in Johannesburg on the 12th inst. in the best of health. He left Dar-es-Salaam in August, 1907, but was considerably delayed through having to cut roads and make bridges, besides making stops to repair the car and to wait for petrol. He has covered 3,700 miles in eight months, including many miles of virgin veldt. Crossing Lake Tanganyika with the car was a difficult business, owing to the smallness of the steamer. Lieutenant Graetz had to make a détour of 600 miles and cut a road through the bush in North Nyassaland owing to the impossibility of bridging the river. Continuous delays were incurred through the shortage of petrol and the necessity of sending great distances for supplies. The greatest friendliness and assistance was displayed by the natives in the uncivilised districts. Lieutenant Graetz will proceed during the present week through the Kalahari Desert to Swakopmund, a distance of over 2,000 miles.

THE latest addition to automobile literature is a book entitled "Electric and Petrol Vehicles" (London, Chas. Griffin and Co., Ltd.) It is from the pen of Mr. W. Poynter Adams, M.Inst. Electric Engineers, and forms Part II. of his work on "Motor Car Mechanism and Management." While we have no bias against the electromobile, which as a town carriage comes very near to the ideal, the author takes a somewhat more optimistic view with regard to the immediate outlook for this class of automobile than is, we think, justified by the actual position, for the large supply of electrically-driven cabs he alludes to has not yet made its appearance on the London streets, nor did the recent exhibition at Olympia point to any immediate developments. However this may be, Mr. Adams has dealt with his subject in an exhaustive manner; commencing with the sources of electricity, he deals successively with conductors and insulators, electrical units, magnetism, electro-magnets, dynamos, and electric motors, while in subsequent chapters electrical cars and their main components, the battery and the controller, under frames and chassis, the management of electrical vehicles, &c., are fully dealt with. Descriptions are also given of the leading types of electrical carriages, this section being very complete; the same cannot, however, be said of that devoted to petrol-electrical vehicles—those which are described are all more or less of the omnibus type, and in the experimental stages, while no mention is made of the Hart-Durtnall and Greenwood and Batley vehicles, nor of the several well-known continental types of "mixed" vehicles, such as the Belgian Auto-Mixte, the Austrian Mercedes-Mixte and the French Krieger and G.E.M. machines. The book concludes with a useful glossary of the principal technical terms appertaining to electrical vehicles.

MOTORING THROUGH EUROPE.

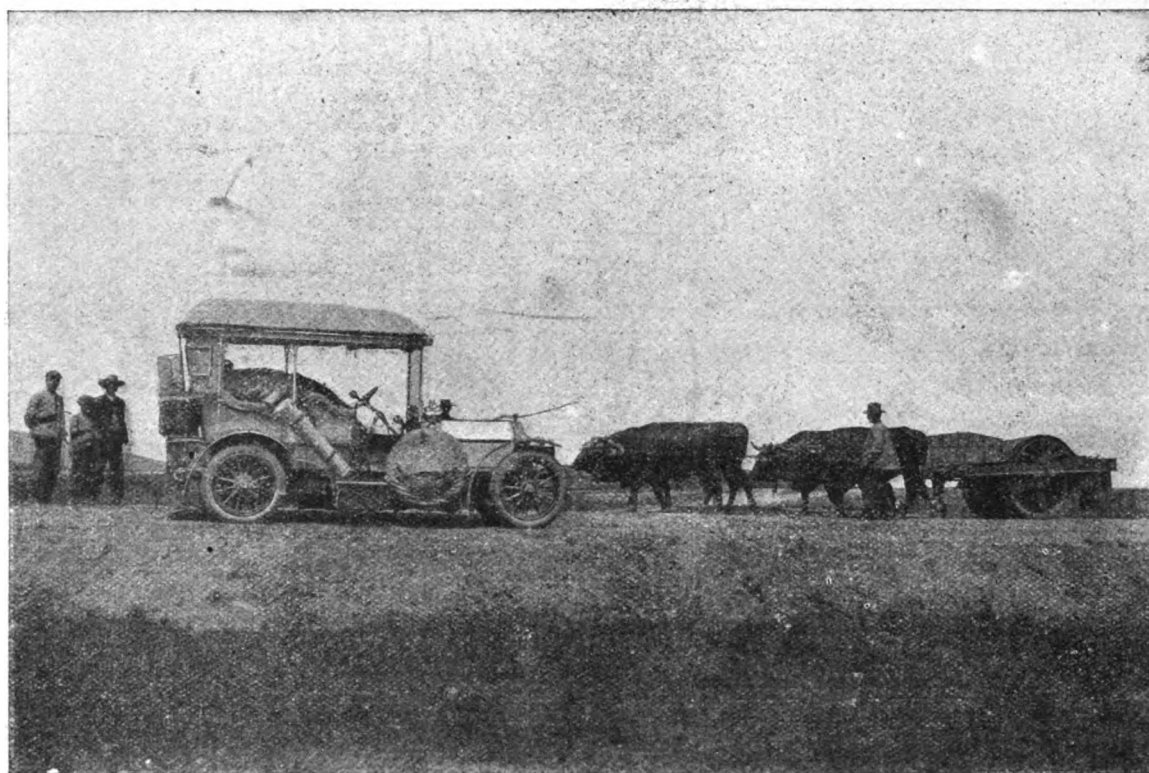
(Concluded from page 896.)

OVER mountain passes and into the Tyrol the travellers journeyed into the heart of the Dolomites and wound their way back to Paris by a historical route which our readers should learn from the book itself—assisted as they will be by the admirable maps in the volume. Having toured Central Europe and written 136 pleasant pages Mr. Trevor deals with the southern portion in equally delightful fashion. We would not anticipate the reader's pleasure by detailing the adventures that occurred, but cannot refrain from quoting the description of Pisa—illustrated by a capital photograph which we reproduced last week.

We had been warned that the road from Spezia to Pisa enjoyed the ominous reputation of being the worst in Italy, because it passes close to the Carrara marble mines and is badly cut up with traffic. This is only too true; the road delights in a collection of deep and deceitful gutters, whose erratic courses forbid anything above the second speed. To our

tically called, never had a foundation; although in dry weather it would doubtless be quite firm, now it exactly resembled a ploughed field. The "Mercedes" wheels sank so deep into the quicksand surface that when they stopped half a mile on the road they found that the ground scraping against the bottom of the car had torn away the tail lamp bracket, and nearly the whole of the luggage carrier. As the wheels at last refused to grip at all, they were compelled to put on the non-skids, while standing knee-deep in mud; by the time they were ten miles upon their journey it was striking nine. The road, to their surprise, actually became worse and worse (they hardly at first thought it possible), and they were reduced entirely to the first speed upon the level, for the wheels sank axle-deep in mud and loose stones. And—

On examining "Mercedes" next day we discovered that the new 935 by 135 tyre that had only run about forty miles was completely destroyed, the rubber hanging in pieces from its side, while the tread was bare canvas, cut and torn in a thousand places. The other back tyre, but a day old, was, if anything, even in a worse condition, and the front tyres were in rags; from this can be gathered some idea of the roads



In Southern Spain.

eft, amidst the green foliage, we caught a glimpse once or twice of the white quarries, and often we met or passed oxen patiently dragging heavy flat carts, on which reposed a massive block of uncut marble. But nothing could damp our expectations of Pisa; the name itself seems to bring back visions of the leaning tower seen long ago in stereoscopic views or old illustrated books.

Why, I wonder, is everyone brought up with the one idea that in Pisa there is but the one thing to see—the Tower? Directly one enters the gates all former visions vanish and new ones take their place never to be forgotten. As we entered the gateway through the high walls we found ourselves in a quiet, isolated square facing the four glories of Pisa. Nearest to us stood the round Baptistery, beside it the Cathedral, and beyond the slanting Campanile; to the left, in the background, is the famous Campo Santo; pure and white they stand as though finished but yesterday. Surely marble seemed never so lovely before!

Travel in Spain seems to have greatly impressed the travellers; while the roads made themselves known to the tyres. They left Andalusia, and the fact was brought to their notice by the weather; it rained incessantly for two whole days—a rest much appreciated, though they shuddered to think of the effect upon the road. It was still drizzling when they left at six o'clock in the morning on a proposed journey of 130 miles to the nearest town, Valencia. Outside the town the troubles began. The road, the "Royal Road" as it was sarca-

The wheels had sunk so deep into the ground that the stones had ripped the aluminium shield beneath the car almost to pieces, while the petrol tank, protected though it was with heavy wire netting, was dented and bruised in half a dozen places. Not a spring, gear, tooth, or vital part of the car was damaged, which is almost beyond belief, after the rough usage to which every part had been exposed.

Part III. of the work describes a journey in Northern Europe, with John o' Groat's as a starting point, and getting along to Folkestone—in three lines. This time the sceptical person of Part I. took his turn at the wheel. They had custom papers from the R.A.C. for France, Germany, Italy, Switzerland, and Austria, and the venturesome tourists also crossed the Danish and Swedish frontiers in their search of new scenes. We have quoted sufficiently fully to give our readers an idea of Mr. Roy Trevor's literary style, and have indicated the itinerary of his delightful tours. It now remains but to say that the volume is illustrated with a wealth of pictures and photographs that is rare—even in these days of *éditions de luxe*. There are nearly a hundred full page illustrations from photographs taken by the author, and some of which we are able to reproduce by the courtesy of the publisher, Mr. Edward Stanford. "En Route" is one of the best of the travel books of the year.

Correspondence.

[Letters to the Editor should be addressed to the offices, 27-33, Charing Cross Road, London, W.C.]

TENDENCIES IN DESIGN. A PLEA FOR GREATER SIMPLICITY.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—Whilst so much attention is being devoted to quieter running valveless engines, &c., it is surprising that the Olympia Show has not revealed any improvement in the direction where it is most urgently wanted, viz., the tyres. So long as the tyres are made of layers of canvas, rubber and leather, so long will they provide a continuous source of expense, trouble, worry and danger. At Olympia I heard complaints on all sides as to the tyres. I questioned several makers as to whether they were prepared to give any guarantee with their tyres. Not a single maker was prepared to do so. Is this not proof that the modern tyre is still totally unreliable? I venture to assert that the air tyre will be superseded. For some considerable time past I have used a new principle of resilient wheel with solid treads on my car and am deriving en-

held in Manchester, I declined, saying that if I did so I might prove a veritable Balaam, but I added that I would attend the meeting if I could. Since then, however, I have been asked to pay a professional visit beyond Oldham, an engagement which, had it not been for my motor-car, I should have had to decline, and this will prevent my being present at the meeting.

That there is a considerable amount of inconsiderate driving I have no doubt, and every man of good-will, whether a motorist or not, must wish this to be suppressed with a strong hand. But in seeking to regulate motor traffic it is well that we should remember that the motor-car is not merely the plaything of the rich; it is often the necessity of the poor. Thus I myself do not drive a motor-car because I can afford it, but because I cannot afford to do without it. A machine which enables me to get some miles beyond Oldham and back in the middle of a day's work is not a plaything. What is more, it has come to stay, and other things will have to be readjusted to some extent



A Juvenile Motoring Party on a Humber Car in Holland.

[De]Ants.

tire satisfaction from its use. The previous feeling of insecurity as to tyres is now unknown. I start and finish a run without a glance at the wheels. Motoring has a charm hitherto unknown. I am pleased to say the wheel is a British invention. The principle is simple. The wheel is of the ordinary artillery type, on the rim of which is secured a number of stout rubber cylinders of tubular section, over these is an ordinary wooden felloe carrying a steel rim, on which are secured the twin rubber treads. The hollow cylinders absorb vibration, and of course the cushioning device is practically everlasting. The cost of the wheel and solid tread but little exceeds that of a first-class tyre alone. Yours truly,

ARGYLL.

MOTORISTS AND THE PUBLIC.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—As I find that the publication of my name in connection with the Highways Protection League has led to a misunderstanding as to my real position regarding motor traffic control, will you kindly allow me to make a brief explanation? When I was asked to speak at the meeting to be

held in Manchester, I declined, saying that if I did so I might prove a veritable Balaam, but I added that I would attend the meeting if I could. Since then, however, I have been asked to pay a professional visit beyond Oldham, an engagement which, had it not been for my motor-car, I should have had to decline, and this will prevent my being present at the meeting.

The fact of the matter is, we have forgotten that the primary object of our roads was to facilitate traffic. Since the introduction of railways our roads have been used chiefly as playgrounds for children and as places where cats and dogs and cocks and hens might roam in safety. But owing to bicycles and motor-cars our roads are fast reverting to their original purpose, and this must prove very inconvenient until we have readjusted ourselves to these new conditions. Until then much consideration will rightly be expected from the motorist, and I am strongly of opinion that the inconsiderate driver who is regardless of the safety of the public should be imprisoned without the option of a fine. But the motorist, too, is deserving of consideration, which he very often fails to get.

In conclusion, let me say that things cannot be put right by cast-iron laws regulating the speed at which motor-cars may travel. Thus before 12 o'clock it may be safe to travel at a rate of 12 to 15 miles an hour, whilst after 12 o'clock, when the children are out of school, it is

not safe to travel on the same piece of road at more than five or six miles an hour. Inconsiderate legislation can only alienate the sympathy of motorists, many of whom are quite as desirous for the safety and convenience of the public as are the members of the Highways Protection League.—Yours truly,

E. VIPONT BROWN, M.D.

BRITISH MOTOR-CARS AT THE PARIS SALON.

To THE EDITOR of *The Motor-Car Journal*.

SIR,—It was mentioned in your report of the Paris Salon that the only British firm showing in the car section was the Wolseley. While all credit is due to this firm for their enterprise, it seems to me a pity that a bigger display was not made by English builders at this important international exhibition. It has been said that the import duty prevents any business being done in British cars in France. I am not, however, so certain on this point. Makers in Germany and Italy, as much on account of their business efforts as by the high quality and reputation of their productions, have been able to sell quite a number of cars to our French neighbours, and it would certainly seem that if two or three leading British concerns were to make a serious effort to develop a trade in France, they would have no reason to complain of the result. In any case, in view of the fact that the exhibitors of cars at the recent Paris Salon comprised no less than nine Italian, three Swiss, three German and five Belgian makers, all of whom are on the same footing as England as regards the question of import duty, it does appear a want of enterprise for the British automobile industry to be represented by a single firm.—Yours truly,

F. S. R.

WHAT IS DANGEROUS DRIVING ?

To THE EDITOR of *The Motor-Car Journal*.

SIR,—I hope the magistrates in country places will read what was said the other day by the Recorder of the Central Criminal Court with regard to motor driving. Whether a man was driving to the common danger or not, remarked Sir Forrest Fulton in charging the grand jury, depended very much upon the place where he was. That is a condition which should be recognised by the police and all interested in motor-cars—whether from the point of view of the man on the road or the man on the car. You have often urged, as have all advocates of automobilism, that when a straight open road presents itself the pace need not be reduced to the snail's pace to be observed in very populous places. But the fact seems to be disallowed by the police, whose traps are frequently set without regard to the conditions prevailing at the time and with no concern as to the local circumstances. Really in this matter the Recorder showed more common sense than whole benches of country magistrates have displayed.—Yours truly,

T. MILES.

THE PROTECTION OF VULNERABLE PARTS.

To THE EDITOR of *The Motor-Car Journal*.

SIR,—There is one feature in connection with the general design and construction of motor-cars that does not seem to have received the attention it deserves, namely, the safe location of the more vulnerable parts, such as, among others, the lamps, the radiator, and the petrol tank. In considering the choice between the gravity and pressure fuel feed systems, there is no question that the gravity feed tank under the front seat is much better protected from mechanical injury than the pressure feed tank at the rear of the car. The latter was introduced by a prominent German firm, and was highly popular at one time. It is clearly apparent, however, that a return movement to the gravity feed system with its better protected tank has set in, and there is really no reason why this arrangement should not be universally used, as the one difficulty, of cessation of feed on steep hills, can be met by the provision of a small auxiliary reservoir near the motor. It is, of course, not possible to build cars so that they cannot be injured by collisions, but they can be designed in such a way that the relatively delicate parts and those whose injury involves personal danger or great cost of repairs are relatively safe, and that those which are damaged can be repaired at a minimum cost. The new spring arrangement of the N.E.C. is a case in point. The practice of locating the radiator at the rear instead of at the front of the engine is also gaining adherents. For some time care has been taken by a certain number of manufacturers to so locate the lamps on their cars that they will not act as bumpers in case of a collision, for which purpose they are poorly adapted.—Yours truly,

W. H. C.

CRACKED CYLINDERS.

To THE EDITOR of *The Motor-Car Journal*.

SIR,—I have a small car with a single-cylinder motor the water-jacket of which is cracked. I believe steel filings mixed with some kind of acid will rust it up. Can you tell me the name of the acid, or where to procure the mixture, and how to apply it?—Yours truly,

C. B.

[The liquid used in conjunction with steel filings for rusting cracked water-jackets is sal ammoniac dissolved in water. The crack should be filled

with filings and the sal ammoniac either placed in the jacket or poured over the filings. If the crack is only small, a little gold size mixed with lampblack will sometimes stop the leakage, but this should be allowed to get properly hard before the motor is used. Our correspondent would be well advised to entrust the work to one of the firms making a speciality of the repair of cracked cylinders.]

MOTOR TAXI-CABS.

To THE EDITOR of *The Motor-Car Journal*.

SIR,—May I suggest that you would do well in the interests of the public who, not being motorists in the sense of owning cars, are, nevertheless, in the habit of using motor-cabs in public service in London, by drawing attention to the gross inaccuracies which are daily registered by the taximeter? On several occasions recently when engaging such vehicles I have found great differences on different dates. The charges, whatever they are, have invariably to be paid, as one does not like to incur the "language" of the average London cab-driver. Those responsible for the direction of these services would do well to give attention to the matter.—Yours truly,

T. ASHMOLE.

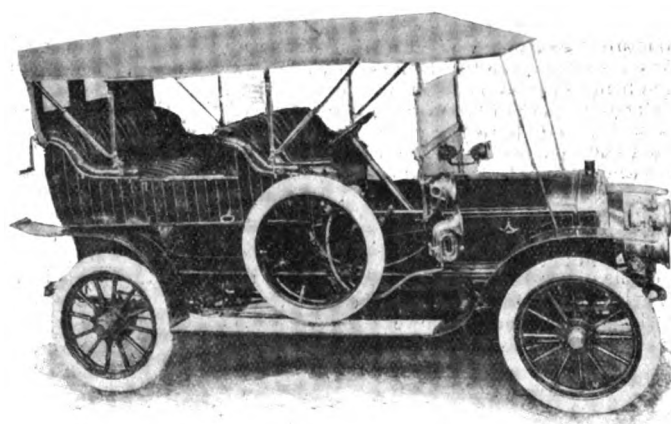
THE DISPOSAL OF PETROL.

To THE EDITOR of *The Motor-Car Journal*.

SIR,—Referring to your article "Petrol in Sewers," I would like to point out that petrol is used by other persons than proprietors of garages. The cost of the spirit is in itself sufficient to prevent it finding its way into the sewers, and, with regard to many establishments, such precautions are taken that this event is practically impossible.

Might I suggest to Mr. Alderman Auglim, of the Marylebone Borough Council, that he and his brother councillors should ask their better halves what they did with that petrol after washing the blouse?—Yours truly,

G. CAMPLING.



The Ariel 20-h.p. Phaeton recently supplied to Capt. Raffan, Sydney, New South Wales.

The vehicle is one of the Ariel Company's new popular-priced 20-h.p. models. The four-cylinder engine (100 mm. bore by 115 mm. stroke) is fitted with magneto ignition; the chassis has a gate-controlled three-speed gear, live axle, ball bearings throughout, except in engine, and Dunlop tyres. We understand that the Ariel Company are shipping a number of these cars to the colonies, Spain and Portugal.

A NEW PETROL ENGINE.

To THE EDITOR of *The Motor-Car Journal*.

SIR,—Being interested in inventions, I was told by a friend of mine to call on Mr. Burgess, Motor Garage and Repair Works, Hay Mill, Birmingham, where I was shown a new petrol engine he had invented, which no doubt will be one of the greatest eye-openers of the present century. The idea, which is a simple one, will enable an ordinary 20-h.p. four-cylinder engine to be altered into a 40-h.p. and made equal to an eight-cylinder, the bore and stroke remaining as before. The invention can be applied to both air and water-cooled motors. The new engine will, I understand, be put on the market early in 1909.—Yours truly,

ENGINEER.

REPLYING TO "A. D." the most recent work on magnetos is that by Mr. S. R. Bottone (88 pp., 35 illustrations), 2s. net, and sent, post free, for 2s. 2d. by Cordingley and Co.

ON Friday last week we received from the postal authorities an addressed label marked "Fragile, with care, urgent," which had been found detached at the London (West Central) post office. The label bears no evidence as to the sender or the matter to which it was attached. If this should catch the sender's eye, perhaps he will communicate with us without delay.

A DIRECT-READING AUTOMOBILE POWER METER.

PROF. C. R. MOORE, of Purdue University, and Mr. J. Harris, of the Central Laboratory Supply Company, of Lafayette, Ind., U.S.A., have recently developed and patented a power and speed indicator, specially adapted for use in testing motor-vehicles, which is unique in the fact that it indicates directly on a scale, without any calculations whatever, the horse-power developed at the road wheels at any speed and the speed in miles per hour. The instrument should be useful to

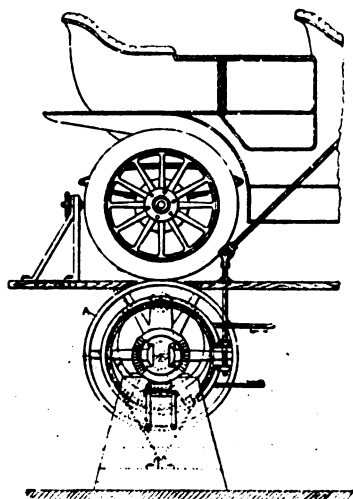


Fig. 1.—Side View.

manufacturers as a convenient method of testing the driving power of a complete machine, the test being easily and quickly made, without any changes being necessary in the car to prepare it.

Referring to the illustrations, it will be seen that the rear wheels of the car to be tested are run upon two wheels A spaced to correspond to the tread and mounted on a shaft B beneath the floor. The front wheels of the vehicle are blocked, and the machine securely locked to a post in the rear. When the automobile is started it cannot move itself, but it drives the two wheels A. To place a load on the engine an absorption brake F is connected to the end of the shaft. The power required to drive the brake is changed or adjusted by means of a hand wheel within reach of the operator. The ingenious part of the apparatus is the device which indicates the power. It is comparatively easy to make an indicator which will show the power correctly at one speed, but to produce an instrument which will indicate the power delivered by the engine at

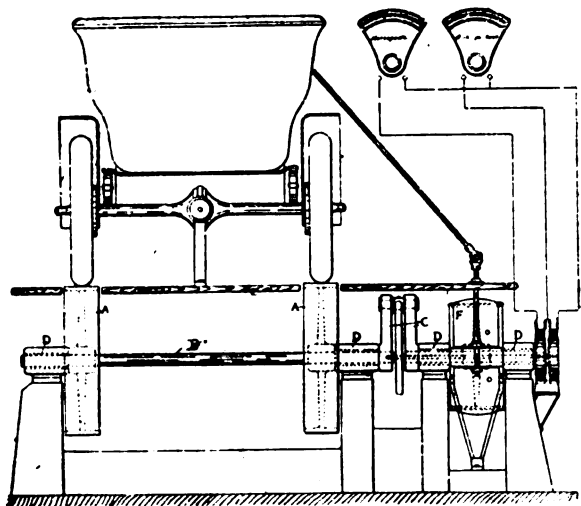


Fig. 2.—Front View.

any speed is not so simple a matter. The power-meter is connected between the shaft B and the spindle of the brake; it consists of two discs C, one fastened to the shaft B, the other to the shaft of the brake, and connected by a spring. All the power developed by the motor vehicle is transmitted to the wheels A and the shaft B, and then through this spring to the brake. The spring is so designed that twice the sine of half the angle of deflection is proportional to the torque deflecting it. When the brake is applied the spring is deflected by the power transmitted through it.

Connecting to each of the discs C is a small revolving field alternating current generator. The latter are exactly similar, and produce sine waves of voltage at the same potential. It is well known that when two alternating currents of the same voltage and wave form are directly opposed to each other no current will flow, but if the alternating waves are displaced, then a current will flow proportional to twice the sine of one-half the angle of displacement. The two generators are connected in opposition and so placed that they exactly oppose each other when there is no deflection of the spring between the discs C. A voltmeter is placed in the circuit between the two small generators. When no power is transmitted there is no deflection of the spring and no current flows, consequently the voltmeter reads zero. When power is transmitted by the spring it is deflected, and the two alternators are thrown out of step by an amount equal to the deflection of the spring. The torque is proportional to twice the sine of one half the angle of deflection of the spring. Also the current through the voltmeter is proportional to twice the sine of half the angle of displacement of the two alternating currents, which is also the deflection of the spring, so that the current through the voltmeter at a given speed is directly proportional to the torque.

The horse-power transmitted is proportional to the torque multiplied by the speed. Likewise the voltage of the little generators also changes with the speed, as well as with the deflection of the spring, so that increasing either the speed or the torque will increase the reading correspondingly. Therefore, the voltmeter gives a reading proportional to the product of the speed and the torque—i.e., it shows the horse-power transmitted. The voltmeter, of course, is calibrated in terms of horse-power instead of volts, and is the only instrument of the kind which has been devised to read horse-power directly on a scale without any mathematical calculations whatever. Furthermore, since the voltage of either of the alternators alone is proportional to the speed, by connecting one of them directly to the second voltmeter, the revolutions per minute or miles per hour can be read off the scale.

The shaft, wheels, brake, &c., of the outfit are all placed beneath the floor so as to be out of the way. The instruments for reading horse-power and speed can be placed on a table or mounted on a wall. The use of revolving field alternators for indicating the displacement of the spring does away entirely with contacts, brushes and moving electrical connections, which makes the apparatus reliable and unlikely to get out of order. The manufacturers, the Central Laboratory Supply Company, of Lafayette, Ind., U.S.A., also furnish recording voltmeters, which may be used instead of or in connection with indicating instruments, so that a complete record of the test can be made. The range of the power-meter can be quickly changed by removing the spring and inserting another of greater or less strength. The brake is supplied with an attachment so that if need be the spring can be quickly calibrated.

THE RULE OF THE ROAD.

At the Worthing County Court, on Monday, before Judge Scully, Reginald Dunn, of Teville Road, Worthing, sued W. J. Slaughter, of Arundel, for £5 for damage to a motor-bicycle.

Plaintiff stated that on October 12th he was riding a motor-bicycle from Portsmouth to Worthing, and when commencing to ascend the hill just above the railway bridge at Arundel Station he saw three horses belonging to the defendant coming down the hill in single file. Witness was on his proper side of the road, travelling at from twelve to thirteen miles an hour, but the horses were not on their proper side, because they were being led. They were on the opposite side of the road and the men leading them were between the horses and the hedge. Cross-examined by Mr. Thompson, witness said he did not at the time know there was any difference in the rule of the road for led horses, and imagined that he was right in keeping to his near side. Mr. Stent, job-master, of Worthing, and a blacksmith named Hanmore gave evidence to the effect that the rule of the road with regard to led horses was that they should always proceed on the off side of the road, and be led with the right hand—just the reverse of the rule of the road for ordinary traffic.

His Honour said he had come to the conclusion that the accident happened through plaintiff keeping to his near side, perhaps under the impression that the horses were not going to cross over, but perhaps because he was in ignorance of the rule of the road for led horses. This latter, he thought, was the true state of the case. Plaintiff ought to have steered over to his right when he saw the horses coming. If plaintiff knew this particular rule of the road he ought to have expected the horses to be led over. Judgment would, therefore, be for the defendant, with costs.

THE MODEL MANUFACTURING COMPANY, of 53, Addison Road North, Holland Park, London, W., have issued a table of diameters of blanks for spur gear wheels, which should prove extremely useful to motor repairers and others who turn out their own blanks but have to get the teeth cut elsewhere. To those not regularly engaged in this work it is a little troublesome to have to calculate the diameter of the blank each time they are going to make one, and a table of this sort ready to hand will be a convenience. The diameters are stated in decimal fractions, and to facilitate measurements a table is also given showing the equivalent decimal and vulgar fractions. The Model Manufacturing Company will be glad to send a copy of these tables to anyone desiring the same on receipt of stamped addressed envelope.

CLUBS AND ASSOCIATIONS.

ROYAL.

WITH the New Year a series of individual trials will be carried out under the Club's official observation, at the request of a number of manufacturers. There are already six applications in hand for such trials.

MOTOR UNION.

PROFESSIONAL motor drivers and mechanics have now an opportunity of securing certificates from the Motor Union. These are given on satisfactory evidence of qualification and on passing an examination.

The poll of members of the Devon and Cornwall A.C. on the question of affiliation has resulted in a decision to affiliate with the Motor Union for 1909. The voting was: for the R.A.C. 16, for the M.U. 71, and neutral 64.

BROOKLANDS.

STEERING a 14-16-h.p. Laurin-Klement, Count Kolovrat made speed tests under the official observation and timing of the Royal Automobile Club at Brooklands last week. Over the flying half-mile his time was 25.8 sec., which represents a speed rate of 69.76 miles per hour, and his speed over a whole lap of 2 11.16 miles, which he covered in 2 min. 24.8 sec., was 68.76 miles per hour.

Otto Hieronymus, on the 11th inst., attempted to beat the speed of 69.76 miles per hour for a 14-16-h.p. car recently attained by Count Kolovrat on the Brooklands track. In this he was successful, his performances being as follows:—

Half-mile Flying Start.—24 2.5 sec. = 73.77 miles per hour.

Five Laps (about 14 miles), Flying Start.—11 min. 22 3.5 sec. = 72.15 miles per hour.

Ten Laps (about 27½ miles), Flying Start.—22 min. 58 3.5 sec. = 72.25 miles per hour.

HIGHWAYS PROTECTION LEAGUE.

At a meeting held on the 11th inst., at Manchester, a local branch of the Highways Protection League was formed, this being the first incursion of the League into the provinces. Dr. Alfred Hopkinson, K.C., Vice-Chancellor of the Manchester University, was in the chair, and urged that in cases of offences under the Motor Car Act not only the chauffeur but the owner of the car should also be brought to book. Mr. A. R. Butterworth, the chairman of the Executive Committee of the League, made a speech on similar lines to those with which he has familiarised the anti-motorists of London, and then a resolution urging the necessity for legislation was moved. This having been seconded, Mr. S. W. Royse raised the question of the upkeep of the road, and the incidence of its taxation, moving an addition to the resolution, to which Mr. W. E. Rowcliffe moved a further addition in favour of a central road authority. This was accepted by Mr. Royse and his seconder, but on being put to the meeting was rejected.

HERTFORDSHIRE COUNTY.

ON Thursday of last week the annual dinner of the Hertfordshire County A.C. at the Hotel Russell, London, was the occasion for the assembling of a number of members and friends. Mr. S. Saker, the chairman of the club, presided, and a most enjoyable evening was spent. Some interesting speeches followed the dinner, among those speaking being Messrs. S. Saker, Ernest Webster, N. W. Colliver, Victor Beveridge, D. Corse Glen, Cutler, T. Williams, and E. H. Arnold. The musical programme was under the direction of Mr. H. Sainsbury. Those present included Mr. and Mrs. S. Saker, Mr. and Mrs. A. Saker, Mr. and Mrs. W. Young, Mr. Ernest Webster, Mr. Barber and Mr. S. S. Barber, Mr. Strevens, Mr. Gray, Mr. Cutler, Mr. E. H. Arnold, Mr. T. Williams, Mr. H. Sainsbury, Mr. D. Corse Glen, Mr. and Mrs. V. Beveridge, Mrs. Bemrose, Mr. H. W. Colliver, Mr. Harper, and Mr. A. J. Salmon.

MIDLAND.

ON Saturday the annual meeting of the Midland A.C. was held at the Grand Hotel, Birmingham, Mr. Ryland being in the chair. Mr. Litchfield Meek, the hon. sec., presented the report, which showed a membership of 299, an increase of 27 during the year. The club's capital account stands at £816.

Mr. C. Vernon Pugh was elected president, Mr. R. S. Foster added to the list of vice-presidents, Mr. Meek appointed hon. sec., and Mr. T. P. Type, hon. treasurer.

HUDDERSFIELD.

LAST week the Huddersfield A.C. held its annual meeting at the George Hotel, Huddersfield, with Alderman W. H. Jessop in the chair. The balance-sheet showed total receipts of £264; the membership was reported to have risen to 181, an increase of 24 during the year. The election of officers resulted as follows:—President, Alderman W. H. Jessop; vice-presidents, Messrs. T. Naylor, H. Greenwood, A. Dawson, H. Broadbent, R. V. Middlemost, W. E. Wimpenny, E. Hoyle, Wm. Ramsden, J. Blamires, and K. F. Campbell; chairman of committees, Mr. W. E. Wimpenny; secretary and treasurer, Mr. E. G. Learoyd;

committee, Messrs. J. W. Crowther, F. Sutcliffe, T. Shires, J. W. Hobson, W. Priest, W. H. Wilson, B. P. Allan, Samuel Russel, Dr. Moore, J. E. Dyson, G. A. Crowther, Councillor Murgatroyd, and Harry Lawton; auditors, Messrs. J. D. Simpson and E. Lawton.

SOUTHERN.

THE Triumph medal for the single-cylinder motor-cycle class in the last hill climb has been awarded to Mr. J. H. Wheeler, 3½-h.p. Triumph; a Triumph was also second.

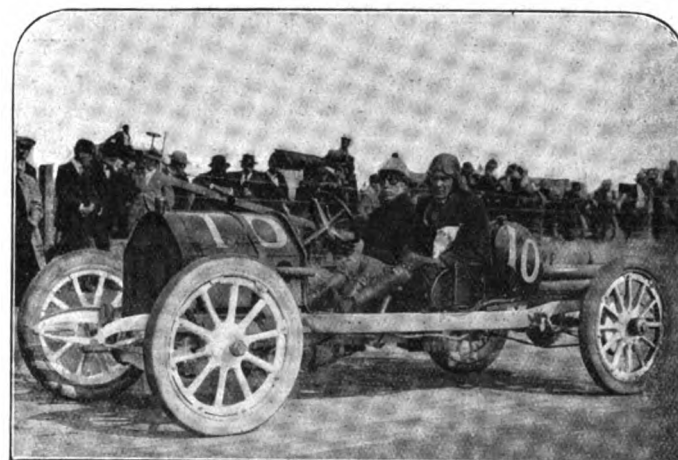
The committee have decided to hold a social evening at the club headquarters every Thursday, commencing at 8.30 p.m.

LINCOLNSHIRE.

A MEETING of the committee was held at the Carre Arms Hotel, Sleaford, on Monday. The result of the postal vote on the subject of affiliation was received as follows:—Motor Union 74, Royal A.C. 67, neutral 4, too late 4. The Club will, therefore, remain affiliated to the Motor Union for 1909. A letter from the G.N.R. Company was read, stating that in response to the request of the club the Weelaby road crossing, near Grimsby, would be kept open except when trains were actually expected.

LADIES.

THE lecture which Mr. C. Y. Knight gave to the Ladies' Automobile Club on Thursday of last week was of considerable interest and was delivered with that freedom which gave so much pleasure to his earlier



T. B. Limer on the Chalmers Detroit Car which finished third in the A.C.A. Light Car Race in Savannah, attaining an average speed of 50 miles per hour.

audiences on the same subject at the R.A.C. The address to the Ladies' Club was at Claridge's Hotel, and Lady Margaret Jenkins was in the chair. Among the other members of the club who were present were the Countess of Dysart, the Hon. Mrs. Assheton Harbord, the Hon. Mrs. Herbert Stourton, Mrs. Edmunds, Miss Honeyman, Mrs. Manville, Mrs. Newton, Mrs. Pennell Tate, Mrs. Walpole, Mrs. Waller, and Miss K. d'Esterre Hughes, secretary of the club.

MOTOR-CYCLING.

THE seventh annual dinner of the Motor-cycling Club was held on Saturday at the Trocadero Restaurant, London, when Mr. Charles Jarrott, president of the club, occupied the chair. The vice-chairs were taken by Messrs. R. G. Booth, R. C. Davis, R. H. Head, and J. Van Hooydonk. Mr. A. Candler replied to the toast of the club, and that of the visitors was proposed by Mr. Van Hooydonk, Mr. Todd responding. During the course of the evening the prizes gained by members during the season were presented by Mrs. Jarrott, the principal awards being:—Albert Brown Trophy, won by Mr. F. J. Jenkins; Schulte Cup (London to Edinburgh and back), won by Mr. J. Platt Betts, who is now the absolute winner of the cup, having won it two years in succession; the Motor-cycling Club Challenge Cup, won by Mr. S. G. Frost, who was also the winner of the cup presented by Mr. Charles Jarrott for the London to Land's End and Back Run.

SCOTTISH.

THE Road Surveyors' Association of Glasgow having accepted an invitation to a conference with the members of the Scottish A.C., a meeting was held in the Central Hotel, Glasgow, on the 11th inst., at which reports by Mr. R. Drummond, C.E., president of the Road Surveyors' Association; Mr. J. R. Nisbet, of the Club Committee, and other representatives to the recent International Road Congress in Paris, were submitted. These formed the basis of a discussion. Sir J. H. A.

MacDonald, K.C.B., Lord Justice Clerk of Scotland, president of the Club, occupied the chair, and there was a large and representative attendance.

Mr. Drummond, who read the first paper, referred to the work that had been carried out by local authorities since the abolition of tolls, and particularly since the inception of the County Councils, and said that since the reorganisation of the methods of road maintenance there had been introduced into the country steam road rollers, boring and breaking machines, motor tractors, and other machinery to a value of about £200,000.

In the course of his contribution Mr. J. R. Nisbet sketched rapidly the work of the Paris Congress, in which even China and Japan had evinced an interest by appointing delegates. Though only semi-officially recognised by the French Government at first, its importance became so manifest as to command the direct support and constant patronage of the Ministers of Public Works and Roads and Bridges. To him the most interesting part of the Congress was the exhibition of methods of road construction and the apparatus used for the purpose. So much of this was the product of the brains of English and Scottish surveyors, and so many of the resolutions of the Congress were based upon British practice, that he came to the conclusion that the inhabitants of these islands were in the enjoyment of the most advanced systems of road construction and maintenance. It was clear to him that the road surveyors of this country were fully alive to all that was demanded of them in providing for modern locomotion. They only lacked the means.

The discussion was opened by the Chairman. The worst thing, he said, that could get into a road was water. Being an automobilist and also having been a driver of horses, his view was that the first thing that let water into a road was the effect of a horse's hoof, and also the feet of sheep. Then the wheel came. The result was that the road became full of puddles in wet weather. He thought road surveyors might consider that when they accused automobilists of making a lot of pits in the road, they must construct roads off which the water would run. He suggested that experiments with this end in view should be carried out.

On Saturday the Junior Institution of Engineers paid a visit to the Walthamstow premises of the London General Omnibus Company, and on Wednesday a paper on Motor Omnibuses was read to the members by Mr. Eric F. Boulton, the latter meeting taking place at the Royal United Services Institution, Whitehall, S.W.

THE American Automobile Association now has 187 clubs and 20,000 members in federation.

A RESOLUTION to form a Birmingham graduates' branch of the Institution of Automobile Engineers was adopted at a meeting on Tuesday over which Mr. Max R. Lawrence presided, and at which Dr. H. S. Hele-Shaw gave an address.

COMPANY NEWS.

In the case of New Companies the file number is given at the end of the particulars.

DE DION-BOUTON (1907), LIMITED.—The second ordinary general meeting of the shareholders in this company was held on the 10th inst., Mr. S. F. Edge presiding. The chairman said that the accounts covered a period of eighteen months, the reason being that it was preferable to make them up to September 30th, instead of in March, which was a very busy time in a business such as theirs. The profit for the eighteen months amounted to £22,411. Since the incorporation of the company there had only been a loss of £29 on account of bad debts, and against that item they had a reserve of £750. The item of unpaid calls, £8,693, referred to calls in arrear by certain shareholders who had brought an action against the company. The turnover of the business was about £250,000, and therefore the amount of £15,000 for sundry debtors was quite a reasonable figure. The orders in hand, as compared with the corresponding period last year, showed an increase of 65 per cent., in addition to which they had sixty cars on order for delivery after September 30th, 1909. Mr. H. H. Fuller seconded the motion, which was unanimously adopted.

DUNLOP PNEUMATIC TYRE COMPANY.—The profit of the Dunlop Pneumatic Tyre Company, Ltd., for the twelve months ended September 30th, 1908, after providing for fees, depreciation, and debenture interest, amounted to £192,941. This, with £19,271 brought forward, makes a total of £212,213. Interim dividends have been paid as follows:—Preference at 5 per cent. per ann., £24,874; ordinary at 8 per cent. per ann., £24,999; and deferred at 5 per cent. per ann., £12,499. The directors recommend: Further dividend on the preference shares at the rate of 5 per cent. per ann. for the half-year ended September 30th, 1908, amounting to £24,874; further dividend on the ordinary shares for the same period at the rate of 8 per cent. per ann., £24,999; further dividend on the deferred shares for the same period at the rate of 11 per cent. per ann., £27,497; reduction of goodwill, £60,000; balance to be carried forward, £12,467. The automobile trade last year received a temporary check. Notwithstanding these adverse conditions, the profits, apart from certain failures in the automobile trade, which caused a loss of about £8,000, were maintained during the year. The recommendations set out above further strengthen and consolidate the position of the company. The original debenture issue authorised was £1,000,000, of which £666,700 has been redeemed and cancelled, leaving outstanding £333,300 redeemable in 1916. If the present rate of progress can be maintained the directors anticipate no difficulty in dealing with this obligation.

PALMER TYRE, LTD.—A dividend at the rate of 12½ per cent. per annum has been made by the Palmer Tyre, Ltd., the accounts also

showing £2,500 added to reserve, and £1,012 carried forward. The annual meeting was held on Tuesday, Major L. Darwin presiding. He said there had been an improvement in the profits of 35 per cent. There had been an increased sale of motor tyres, and he anticipated that next year he would be able to report further progress in the direction of development. The Continental business was increasing, and it had been found necessary to open depots in Paris.

THE ROVER COMPANY.—The annual meeting of the Rover Company was held at Coventry on Tuesday. Sir Frederick Dixon-Hartland presided, and in moving the adoption of the report, showing a loss on the year's trading of £5,388, expressed regret that the result was so unsatisfactory and that the directors were unable to recommend any dividend. The loss was chiefly accounted for by preparation having been made for a motor-car boom which did not come. Important economies, however, had been effected, and he had strong hopes that next year would be better. After some discussion the report was carried, and Sir F. Dixon-Hartland was re-elected director.

THE Motor Barge Syndicate, Ltd., with a nominal capital of £25,000, has been formed this week in connection with an issue of 2,200 shares of £10 each. The registered office is at 10, Philpot Lane, Fenchurch Street, London, E.C., and it is proposed to commence operations with two or more barges of 300 tons each. According to the prospectus there are more than 4,000 motor driven cargo carrying vessels doing sea and river work in Holland.

MESSRS. HATTERSLEY AND DAVIDSON, of 138, Norfolk Street, Sheffield, has been registered as a limited liability company with a capital of £15,000 in £1 shares.

THE Vinet Rim Syndicate has been registered, the capital being £10,000 in £1 shares.

SWIFT CYCLE CO.—Mr. Alfred Du Cros presided at the annual meeting of the Swift Cycle Company, at Coventry, on Monday, when the report, showing a profit of £24,584, was presented for adoption. The chairman said the report, in common with those of the whole of the cycle trade, showed less profit than previous years. The motor department, which they had developed from a very small beginning, had, however, largely increased during the past year, and had been a source of profit. Last year orders taken at the Motor Show exceeded those of the previous year by 40 per cent., and this year that increase had been further exceeded by 18 per cent. He expressed a confident hope of future success. The report was adopted, and Preference—6½—and Ordinary—5 per cent.—dividends were declared.

DARRACQ-SERPOLLET OMNIBUS COMPANY, LTD.—The report of the directors, which is to be presented at the meeting of the company to be held on Monday next, gives a profit and loss account showing a debit for the year of £17,154 and a total debit balance of £24,448. The unsatisfactory result of the year's trading was due to the almost complete stagnation into which the business of supplying motor-buses and similar vehicles had fallen during the last twelve months.

SOME particulars are available of a new enterprise on the part of Mr. Harvey du Cros, J.P., his son, Mr. Arthur du Cros, M.P. for Hastings, and other members of the family. In order to compete with the foreign-made taxicabs which have been introduced into this country, a company has been formed for the purpose of placing about 2,000 motor-cabs on the London streets within the next twelve months. Accommodation for 1,000 is now in course of provision at Acton Vale. Arrangements have been made to train drivers in classes of twenty-five forthwith, and the Messrs. du Cros are giving the first opportunity to join the classes to men from the places with which they are associated either by business or residence.

ARGYLL MOTORS, LTD.—A meeting of the ordinary creditors other than debenture stockholders of Argyll Motors, Ltd., was held on the 9th inst. in Glasgow by order of the Court of Session. Mr. J. S. Matthew was elected chairman. Mr. John M. Macleod, joint liquidator, made a statement, in the course of which he asked the creditors when they were considering the proposed reconstruction scheme to view the matter as a whole and to take into consideration in doing so the three principal difficulties which the liquidators had to deal with. First of all, the comparatively small amount of the valuations; in the second place, the large and varied interests of those concerned in the liquidation; and in the third place, the want of the necessary working capital should the company be reconstructed. As to whether they had been carrying on the work at a profit or loss since the date of liquidation, he said that the work they had been doing, excluding interest, &c., on cost charges, had undoubtedly met the expenditure. They had been realising stock which was valued low at full price, if not more, and he thought he had the backing of the working committee when he said that they had certainly not incurred any loss. In regard to the working capital, he thought there would be, in addition to the sum of £77,000, at least £30,000 or £40,000 of liquid capital. He anticipated that after all the expense of liquidation, flotation and underwriting, there would be at least £100,000 clear working capital. The meeting ultimately unanimously approved of the proposed scheme of reconstruction.

THE Dumfries Motor Company, Ltd., of English Street, Dumfries, send a calendar for 1909, which also serves the purpose of keeping their hiring and motor accessory departments well before the notice of motorists.

THE Automobile Lubricants Department of the Vacuum Oil Company, Ltd., having outgrown their accommodation in Norfolk Street, Strand, W.C., have removed to Caxton House, Westminster, S.W., where Mr. A. E. Newton will in future have his headquarters.

CASES AGAINST MOTORISTS.

NO JURISDICTION.

An important case was heard by the Wimborne (Dorset) County Bench on the 11th inst. A short time ago a serious collision took place between a motor-car driven by Prince Jitendra of Cooch Behar and another car at the cross roads near Wimborne, whereby both cars were seriously damaged and several of the passengers injured. At the hearing Mr. Staplee Firth appeared for the prince and stated that though he was desirous of the magistrates hearing the case, and was willing to submit to their ruling, as he was the son of a ruling prince he was afraid the Court had no jurisdiction to try the case. After discussing the matter with the clerk to the justices the magistrates held that they had no jurisdiction to try the case.

"ROMEO" KILLED BY A MOTOR-CAR.

At the West London County Court the Bishop of Kensington has been the defendant in an action, the plaintiff being Reuben Clarke, a chauffeur, who claimed £100 damages for the loss of a Pomeranian dog, which was run over and killed by the Bishop's motor-car. Mr. Randolph, counsel for the plaintiff, said the accident occurred on July 31st, through the alleged negligence of the Bishop of Kensington's chauffeur. The plaintiff was chauffeur to Captain Lund, whose motor-car was kept at a garage in Ashbourne Mews, and at a neighbouring garage was kept the motor-car of the Bishop. On July 23rd the plaintiff was taking two valuable Pomeranian dogs he owned for a run, when the Bishop's motor-car was driving out of the garage, and, in spite of the plaintiff crying out, "Stop, please!" and whistling to his dogs, one of the wheels of the car passed over the more valuable of the two animals and killed it on the spot. In defence, Thomas Knowles, who said he had been chauffeur to the Bishop of Kensington since October, 1907, denied that there was any negligence on his part. Mr. Glasgow, counsel for the defence, said, personally, the Bishop was not interested in the action, because he was insured, and the insurance company were practically the defendants in the action. The jury, after retiring three times, found for the plaintiff, and assessed the damages at £50 and costs.

UNSUCCESSFUL APPEAL.

Mr. Harold B. Gylee was unsuccessful in his appeal heard on Saturday by Mr. Justice Darling, Mr. Justice Phillimore, and Mr. Justice Walton, against a conviction at the Lewes Assizes for the manslaughter of a girl named Denman. He was sentenced to three months' imprisonment in the second division for manslaughter by reckless and palpable negligence in driving a motor-car along the Worthing road, on August Bank-holiday.

Mr. Justice Darling, giving judgment, said the appellant appealed against his conviction on questions of law, and asked for leave to appeal on questions of fact, but they saw no reason to grant leave. Therefore the appeal must be dismissed. Eight days of the sentence was allowed, as though the appeal had been heard on the previous Friday week.

DANGEROUS DRIVING.

The driver of a Grand Prix racing car belonging to the Princess Waisemski has been fined £10 and costs by the Reigate Bench for driving through the village of Charlwood at a speed dangerous to the public.

The driver of a motor-car, charged with dangerous driving on the Harrogate and Arthington road, at Weedon, has been fined £25 and costs.

ALLEGED MANSLAUGHTER.

A verdict of manslaughter was returned by a coroner's jury on the 10th inst. at Coventry against Mr. Harry Ambrose Smith, works manager of the Deasy Motor Manufacturing Company, as the result of the inquiry into the death of a boy who was killed through Smith's motor-car. Police court proceedings were pending, and were resumed on the following day, when the case was again adjourned till Tuesday. Then the defendant was committed for trial.

ALLEGED OBSTRUCTION.

Before the Wokingham County Bench, Arthur Salmon, of Reading, was summoned for obstructing the highway at Woodley, on November 30th. P.C. Fisher said that at 10 p.m. he saw a motor-car standing on the road with no one in attendance. The driver said he had run out of petrol, and had to go about half a mile to obtain a further supply. A fine of 14s. 6d., costs inclusive, was imposed.

THE SERVICE OF A SUMMONS.

At the Haywards Heath Petty Sessions, on Monday, Lionel Martin, Ryder Street Chambers, St. James's, W., was summoned for a speed of 30 miles an hour between Bolney and Newtimber on July 19th and for 25 miles 5 furlongs speed between Newtimber and Bolney on the same date. Lord Tiverton (instructed by Messrs. Kenneth Brown and Co., London) appeared for the defendant.

P.s. Budgen gave evidence of timing defendant's car at Bolney. P.s. Huntley gave evidence as to timing it at Newtimber. On July 25th he went to London to serve notices of prosecution. He saw the liftman at Ryder Street Chambers, and the latter said defendant was not at home, but was expected home that evening. Witness left the notices with the liftman.

P.s. Waghorn said that on July 19th he was stopping cars to inspect licences at a point south of Slangham cross-road. Defendant drove up, and, seeing what was going on, backed his car about half-a-mile, a very dangerous practice. Witness and another police officer ran after the car, but could not get up to it. The car lacked into a gateway, turned, and went away towards Brighton. On trying to serve the summonses he was told defendant was on tour. On a subsequent date he saw defendant at Handcross. Witness asked for his address. He produced his licence, which had another address

upon it. Witness asked for the correct address, as he had two summonses to serve for offences on July 19th. On Nov 10th he went to serve the summons. He was told defendant would be there next day. Next day he went up the lift, and told the attendant to give his name as "Thompson" to the defendant. The attendant came back and said Mr. Martin did not know a Mr. Thompson and would not see witness. Witness handed the man the summonses, and said, "Give these to Mr. Martin and he will see me." He heard Mr. Martin say, "Oh, the — has turned up. Show him in." He said to witness: "So this is the way you do your dirty business!" Witness replied: "When we have gentlemen like you to deal with." Witness had tried several times to serve the summonses, but without success, and this was the cause of the delay.

Lord Tiverton submitted that there was no evidence of service of notice within twenty-one days. They had no evidence that Mr. Martin was residing at Ryder Street at the time the notices were left with the liftman, who, he contended, was in the service of the landlord and not of defendant.

Mr. Lawson Lewis contended that the notice was served just in the same way as a postman would have delivered it if sent by post.

The Magistrates considered the point and found that the service of the notice was good.

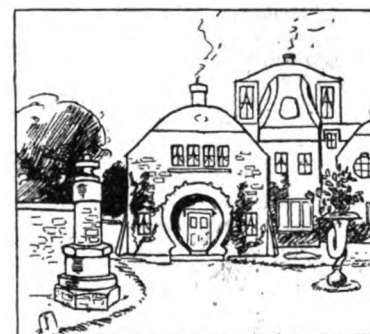
Two previous convictions were proved and defendant was fined £20 and £9, with costs, £1 19s. and 17s. 10d. respectively; licence to be suspended for the remainder of its term, and defendant further disqualified for a period of twelve months.

On the application of Lord Tiverton, the magistrates decided to state a case on the point he had raised.

SEVERAL cases were before the Horsham magistrates on Saturday and others are reported from Wokingham (3) Reigate.

AERONAUTICS.

THE annual dinner of the Aero Club of the United Kingdom was held on the 10th inst. at the Hotel Ritz, London, under the chairmanship of the Duke of Argyll. The company also included Mr. R. W. Wallace, K.C., Admiral of the Fleet Sir Edward Seymour, the Hon. C. S. Rolls,



A New Idea in Country House Design.

[Motor, New York.

Colonel W. J. Bosworth, Sir Hiram Maxim, Messrs. Dugald Clerk, E. Manville, J. W. Orde, A. K. Huntington, Lieutenant A. T. Dawson, Prince Paramjit Singh, Rees Jeffreys, the Hon. Mrs. Assheton-Harbord, Baroness de Heeckeren, Captain Grubb and many others.

In proposing the toast of "The Club," the Chairman said that even to outsiders it was obvious that ballooning had passed out of the region of pleasantries and had become a serious question to be seriously considered by every nation. Much had been done of late with regard to dirigibles and aeroplanes, and the remarkable flights that had recently been made in France, Germany and America had called attention to the necessity of considering the possibility of having every part of the country inspected by transient visitors, who might or might not have hostile intent. Every country was in the same boat, or balloon, with regard to the precautions it must take against intrusions of dirigible balloons or aeroplanes. To balloonists and aeroplanists no country now had frontiers; and dirigible balloons carrying a weight besides equipment of 1,300 lb. or 1,400 lb. could make themselves extremely disagreeable. At Aldershot the Engineers were perfecting some wonderful machines which were kept entirely hidden, like those that were being built in Scotland. These machines navigating the air must be directed by skilled drivers, and it was necessary that the training of such men should be encouraged by public subscription, so that we might have a trained body of men to use such machines, which were as essential for England as they were for Germany or France.

Mr. Roger Wallace, K.C., in responding, said that those who had assisted in achieving success for the automobile movement in this country were now united in an endeavour to develop aerial flight. He was quite certain that those connected with other movements having the same object would work in co-operation with the Aero Club, which had formed a new branch called the Aero Club League, which league would enable them to absorb any of the bodies which did not wish to pay large subscriptions. He announced that the whole question of aviation is to be discussed at a meeting shortly to be held at the Aero Club. This would be attended by

representatives of foreign clubs, to deal with the question of forming new aeronautic rules in this country.

The toast of "The Visitors," proposed by the Hon. C. S. Rolls, was responded to by Sir Edward Seymour and Mr. Manville.

THE new registrations at Somerset House include that of the British Aeroplane Syndicate, Ltd., with a capital of £5,000 in £1 shares.

THE three members of the Aero Club, Mr. John Dunville, Mr. C. F. Pollock and Mr. Philip Gardner, who left Battersea at 9.15 on Friday evening in the former's balloon *Banshee*, descended safely near Crailsheim, in Germany, at 10.15 on Saturday morning, a distance of 500 miles having been covered in thirteen hours. The voyage was remarkable for the great speed attained during the first few hours. The coast near Dungeness, distant sixty miles, was reached in sixty-six minutes, and the Channel crossing of thirty-five miles occupied only thirty-seven minutes. Mr. John Dunville was competing for the Northcliffe Cup, and unless a longer distance is covered by a member of the Aero Club before the end of the year it will become his property.

THE Aeronautical Society of Great Britain has acquired its own experimental ground, which will be opened for the use of members at an early date. The site selected, near Dagenham Station, on the London, Tilbury, and Southend Railway, is well suited for aeronautical work, as it measures some half-mile in length, by about the same distance in width. The greater part of it is flat, and suitable for experimenting with full-sized machines, but on a portion to the south there are steep mounds, some 53 ft. high, well fitted for testing models of all kinds. Sheds to accommodate full-sized machines will be erected, and as soon as funds are available a properly equipped scientific establishment, containing whirling table and other aeronautical testing apparatus, will be provided. This will help the Society to develop its objects, and it is greatly to be hoped that the efforts now being made to bring aeronautical science to the position which it should occupy in a country like this will meet with the fullest support from the general public.

AUTOMOBILE ACCIDENTS.

ON Sunday a car skidded while passing another proceeding in the opposite direction at the bottom of Dale Hill, Pycombe, about five miles from Brighton. It overturned, and all the occupants were thrown out, one sustaining a severe scalp wound.

A MOTOR-CAR and a horse came into collision on Friday near Harlow and the driver of the latter was thrown. After medical attention from Dr. Howard, who was in the car at the time, the man was removed to the Bishop's Stortford Cottage Hospital suffering from a fractured jaw.

THE inquest on the bodies of John Darker, of Coalville, and his wife, Emma Darker, has been concluded. The circumstances of the accident have already been reported. The jury found that the collision was caused by want of care on the part of Darker in not allowing sufficient room for the car to pass, and that Mr. Booth was using reasonable care when driving. They drew the attention of the authorities to the dangerous state of the road at the spot. Mr. Charles Booth intimated his intention of compensating the orphans.

MR. SAMUEL GREENLEES was run over in the Strand, London, on Tuesday by the Marchioness of Donegal's motor-car. Her ladyship was in the vehicle at the time, and caused Mr. Greenlees to be conveyed in the car to King's College Hospital, where he is detained, suffering from severe injuries to the head.

"POLICE CONTROLS."

THE Moortown trap, near Leeds, has again been revived by the local police.

THERE is a police trap on the Harrogate and Arthington road, at Weeton. It is a quarter of a mile in length.

THE Kingston police have been supplied with electric flash lamps for signalling when timing motor-cars which may be exceeding the limit after dark.

THE police are stopping motorists in Twyford, and have lately issued several summonses against them for dangerous driving.

FROM the Lynwood Road to the Gloucester Road, Reigate, the police have a measured distance of 294 yards along which motorists are frequently timed.

AMONG the traps in regular operation in the neighbourhood of Haywards Heath are those between Bolney and Newtimber, Pyecombe and Bolney, Cuckfield and Pyecombe, Cuckfield and Clayton.

A TRAP is reported at Burnham, between Slough and Maidenhead.

THE police are generally active in the Eltham district at the weekends.

IN spite of the fact that the taxicab is to be seen in almost every street in the City and central parts of London, it is almost a rarity in the outlying localities. Just as it has rapidly sprung into public favour within this limited area, the smart private-looking taxicab would quite as successfully establish itself in other Metropolitan districts, to say nothing of its possibilities in many of the busy provincial towns. Incidentally we may mention that an exceptional opportunity of purchasing good new taxicabs of the Leader type at a very low figure is now being offered by the London and Paris Exchange Motor Agency, Ltd.

FORTHCOMING EVENTS.

DECEMBER.

23rd (W.).—Speed and reliability trials at Nagpur, Central Provinces.
24th.—30th.—Heavy Motor Vehicle and Aeronautical Display at Paris.
31st (Th.).—Entries close for Grand Prix of A.C.F.

JANUARY, 1909.

1st (F.).—Anniversary of the Motor Car Act, 1903, coming into operation.
7th (Th.).—Annual Dinner of the Yorkshire A.C. at Leeds.
8th (F.).—Nottinghamshire A.C.'s Annual Dinner.
Mr. C. Y. Knight will lecture on his engine to the Manchester and District Motor Trades Association.
14th (Th.).—Annual Dinner of clubs associated with the R.A.C. at the Hotel Cecil, London.
16th–25th.—Brussels Motor Show.
21st (Th.).—Annual General Meeting of the Southern Motor Club.
22nd–30th.—Scottish Motor Exhibition at the Waverley Market, Edinburgh.
23rd (S.).—Annual Dinner of the Coventry Motor Club at the Craven Arms Hotel, Coventry.
26th (T.).—Scottish Motor Trade Association Dinner at Edinburgh.

FEBRUARY.

2nd (T.).—Annual Dinner of the Scottish A.C. at Glasgow. H.R.H. Prince Francis of Teck will be among the guests.
4th (Th.).—Annual Dinner of the Southern Motor Club.
24th (W.).—Annual General Meeting of the British Motor Boat Club.

MARCH.

1st (M.).—The Road Trials in connection with the Army Council Competition for light tractors commence.
Motor-Car Show at Barcelona.

LIGHTING-UP TIME—LONDON.

| | | | | | | |
|----------------|-----|-----------|-----|-----------|-----|-----------|
| Dec. 18th—4.51 | ... | 20th—4.51 | ... | 22nd—4.52 | ... | 24th—4.53 |
| „ 19th—4.51 | ... | 21st—4.51 | ... | 23rd—4.53 | ... | 25th—4.54 |

ROAD REPORTS.

WEMBLEY.—The Middlesex County Council is appealing to the Local Government Board to restrict the speed of motor-cars through Wembley, on the main road from London to Harrow, to ten miles an hour.

HEMEL HEMPSTEAD.—The Town Council of Hemel Hempstead has scheduled several local thoroughfares in view of an application being made for a ten mile speed limit for motor-cars.

BEXHILL.—The Bexhill Town Council has resolved to apply for an Order restricting the driving of motor-cars in Barnham Road, Bexhill, to a speed of not more than five miles an hour.

BUSINESS NEWS.

WE are informed by the British Petroleum Company, Ltd., that after February 28th, 1909, the Shell motor-spirit "gold seal" bonus offer will no longer hold good.

FROM Messrs. Donne and Willans, Ltd., of Gillingham Street, Victoria, S.W., comes a copy of the 1909 catalogue of the Piccard-Pictet cars. This is a very handsomely got-up list and gives full particulars and illustrations of the various types that are being turned out for the coming season. These include 12, 18 and 28-h.p. four-cylinder and 28-h.p. six-cylinder, all fitted with live axles. The Piccard-Pictet vehicles are amongst the highest grade productions of Switzerland and comprise several interesting features, prominent amongst which is the method of fixing the engine and gear-box in the frame.

TO CORRESPONDENTS.

All communications intended for insertion in this Journal or relating to Editorial matters should be addressed to THE EDITORIAL DEPARTMENT, MOTOR-CAR JOURNAL, 27–33, Charing Cross Road, London, W.C., and must be written on one side of the paper only. Letters must in all cases be accompanied by the name and address of the writer, as no notice will be taken of anonymous communications.

To insure insertion communications and contributions must be in the Editor's hands by Tuesday forenoon of the week in which the same are intended to appear. Disappointment may be caused by non-compliance with this rule, and to avoid this earlier receipt, if possible, is necessary.

Photographers, both professional and amateur, are invited to send photographs of current events or of motoring scenes and incidents. The fee, if any, required for reproduction should be stated in each case, otherwise no liability will be accepted.

The Editors do not hold themselves responsible for the opinions expressed by their correspondents, or for statements and facts which do not appear in the editorial columns.

THE Motor-Car Journal.

VOL. X.]

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PRIZE COMPETITION.

AS announced last week, we offer a prize of two guineas for the best original short story of motoring interest suitable for publication in the *M.C.J.* The story should be between 1,000 and 1,200 words in length, and the main incident should, of course, centre about the automobile.

The latest date for submitting the MSS. will be the first post on Saturday, January 16th, 1909, and the award will be notified as soon as possible after that date, the Editor's decision being final.

With reference to the stories which do not win the prize, the right is reserved to publish any which we may deem suitable, making payment at our usual rate of remuneration.

All MSS. should be forwarded addressed to the Editor, *M.C.J.*, 27-33, Charing Cross Road, London, W.C., the envelopes being marked "Short Story" on the top left-hand corner.

COMMENTS.



AGAIN we take the opportunity of wishing our readers a Merry Christmas and a Happy New Year. The past year has had its vicissitudes, and the trade has not been free from trouble, but, on the whole, the motor movement has advanced and the position of the motor-car has become even more fully established as a factor in the social and the commercial life of the community. Parliamentarians have lately been active against the motorist, but, on the other hand, there are a great many enthusiastic motorists in

both Lords and Commons who believe that the better policy to pursue is that advocated by the Hon. Arthur Stanley, M.P., in the *M.C.J.*, when he suggested that things should remain as now and that there was no urgency to promote legislation. With regard to the trend of the trade, our columns have borne witness to the growing desire on the part of owners to possess cars of smaller power than were popular a few years ago, and the favour with which the less high powered vehicle is now regarded is all to the good. The discouragement of road racing by the various representative organisations of automobilists has also conduced to a better regard for drivers in many centres, and the most virulent and violent opponents will surely begin to realise that it is but a very small minority who bring discredit upon the whole number of those who own motor-cars.

The A.A. in America.

INTERESTING comment on the international character of the automobile movement comes in the news from an American correspondent, and confirmed by inquiries in London, that the Automobile Association will have a stand at the forthcoming Motor Car Show in New York city. The motorists of the United States, who are being subjected to much persecution at the hands of the police, aided and abetted by the magistrates, have sought remedies in many directions, and we have no doubt they will be interested in the methods by which the Automobile Association has been able to assist its members in the moderation of their pace to legal requirements. Apart from that important educational phase of the matter, however, the enterprise of the A.A. is notable, for it will be the first occasion on which a motoring

organisation in the Old World has sought to teach the New World on the other side of the Atlantic. While referring to this Association we may mention that in accordance with its custom there will be no scouts on duty on the roads upon Christmas Day, but, of course, they will be out as usual on Boxing Day. The fourth annual dinner of the Automobile Association has been fixed for Wednesday, March 24th, and will, as usual, take place at the Hotel Cecil, London. The second annual dinner of the Northern Section of the Automobile Association will be held at Manchester early in February.

Rules for Passers-By.

SEVERAL suggestions of a more or less humorous nature have been made with reference to the duties of pedestrians wishful of safety when crossing the roads and avoiding the automobiles that now are found along all the leading thoroughfares. A code which has reached us from a Transatlantic reader has some proposals which are not likely to be seriously regarded, but which may provide a little seasonable reading at the festive period of the year. Briefly set forth the rules are as follows:—

- 1.—Pedestrians crossing streets at night shall wear a white light in front and a red light in the rear.
- 2.—Before turning to the right or left they shall give three short blasts on a horn at least three inches in diameter.
- 3.—When an inexperienced automobile driver is made nervous by a pedestrian, he shall indicate the same, and the pedestrian shall hide behind a tree until the automobile has passed.
- 4.—Pedestrians shall not carry in their pockets any sharp substances which are liable to cut automobile tyres.
- 5.—In dodging automobiles, pedestrians shall not run more than seven miles an hour.
- 6.—Pedestrians must register at the beginning of each year and pay a licence fee for the privilege of living. There shall be no rebate if they do not live through the entire year.
- 7.—Pedestrians will not be allowed to emit cigarette smoke on any thoroughfare in an offensive or unnecessary manner.
- 8.—Each pedestrian before receiving his licence to walk upon a highway must demonstrate before an examining board his skill in dodging, leaping, crawling and extricating himself from machinery.
- 9.—Pedestrians will be held responsible for all damages done to automobiles or their occupants by collision.

The Gate Controlled Change-speed Gear.

DURING the few last weeks, when a large amount of space was devoted, in connection with the Shows, to a description of the features of the many new cars that are being introduced for the 1909 season, frequent reference was made to what has come to be known as "the gate change." This system of controlling the change-speed gear has within the past year or so become almost universal on high-powered cars, and users of such vehicles are doubtless well acquainted with its method of operation and its advantages. Now, however, that it is being adopted on automobiles of medium power, and is consequently being introduced to a wider circle of the automobile world, the article we print on another page of the present issue,

describing its main features, will ~~undoubtedly~~ prove useful and instructive to many of ~~our readers~~.

The Gate Change in France.

due to the fact that the French, while not overlooking the simple method of control it affords, have kept to the front the main idea for which the gate-controlled change-speed gear was introduced, that of arranging the sliding train in two or more sets in place of one, as formerly. The advantage of the system lies in the fact that to change from one speed to another it is, by the modern arrangement, not necessary to cause the pairs of gear wheels of the different speeds to pass through one another ere reaching the desired one. Hence it is that in speaking of the change-speed gear, the French refer to it as being of the one, two, or three *train balladeurs* type, as the case may be.



Touring in Holland.—A Meeting of the Ancient and Modern.

(De Auto.

The Storage of Petrol.

As we were recently able to announce, the Home Secretary has had under contemplation for some time the appointment of a small Departmental Committee to enquire into the sufficiency of the present regulations relating to the storage, use and conveyance of petroleum spirit. It has now been definitely decided that this Committee shall be formed, and the names of the members have just been announced. Sir Henry Cunynghame, K.C.B., will be chairman, a position with which he is perfectly familiar, having been secretary of the Parnell Commission, the Behring Sea Arbitration, and other important public investigations. His colleagues will be Sir Boverton Redwood, who is official adviser on petroleum to the Admiralty and to the Home Office and also consulting adviser to the Corporation of London. His publications on the subject and his interest in motoring are also well known to our readers; Major Cooper Key, His Majesty's Chief Inspector of Explosives, and Mr. James Ollis are the other members of the Committee. The latter gentleman is the Chief Adviser of the Public Control Department of the London County Council, and has been mainly responsible for the policy of that body with regard to the many warnings that have lately been issued to the owners of garages and others in connection with the disposal of petrol in the sewers, &c. Major T. H. Crozier will be the secretary to the Committee, whose headquarters are at the Home Office, Whitehall.

We understand that the intention of Mr. Gladstone in appointing a small expert Committee has been to secure, not only a thorough, but also an early report.

Obstructions on the Road.

ON Wednesday of last week the monthly meeting of the Motor Union of Great Britain was presided over by Mr. W. Ballin Hinde, when a satisfactory financial report was presented and many applications for legal assistance which had been considered by the Committee specially dealing with that section of the work of the Union were confirmed. The Highways Protection Committee has also been doing some very useful work in connection with dangerous bridges, the obstruction of motorists on the road by drivers of horse-drawn vehicles, and in connection with the Lights on Vehicles Act. Mr. Hinde drew attention to the numerous cases of obstruction by drovers in charge of animals, and the Rev. F. W. Hazzard-Short, of Dartford, suggested a petition being sent to the County Council in favour of cattle drovers carrying lighted lamps. This suggestion was endorsed by the Committee to the extent of their agreeing to go thoroughly into the point raised. The policy of motorists has hitherto been to act mainly on the defensive—a work which will be materially assisted if, in some directions, they go further and assume an attitude of challenge to those who claim the whole of the roadway for themselves.

Local Centres of the Auto Cycle Union.

QUIETLY, but none the less thoroughly, the organisation of motor-cyclists has been proceeding under the auspices of the Auto Cycle Union. The latest development in connection with that organisation is the preparation of a scheme for the recognition of local centres which shall stand in much the same relation to the central body as do the affiliated motor-car clubs to headquarters in London. The draft plan suggests the division of the country into eleven territorial divisions, that for the Metropolis being within a radius of twenty miles of Charing Cross Road, at number 27-33 of which, we need scarcely remind our readers, are the offices of the M.C.J. Each district will have representation on a general council, and the Auto Cycle Union will provide it with funds on a scale to be determined. In view of the large number of motor-cyclists in the country their organisation into a really strong and powerful body is much to be desired, and if the new proposals lead to such a result they will well deserve the care which has been bestowed upon their preparation.

Motors and Manœuvres.

FOUR and twenty motor-'buses have just demonstrated anew their value in the mobilisation of the troops. They were driven out from their usual London routes, the other day, as far as Warley Barracks, Brentwood. From thence they conveyed the 1st Norfolk Regiment to Shoeburyness, where manœuvres were carried out in connection with the defences of the Thames Estuary. Narrow and hilly were the roads as the 'buses went along, proving that, if they have supplanted the 'bus horse in the London streets, they can also render similar service in times of emergency. Altogether the military authorities were well satisfied with the experiment; but now a Territorial officer writes to point out that the transportation could have been done more quickly by train.

Trials of 1909.

ALREADY the Scottish A.C. has determined upon the dates of its Trials for 1909, which will doubtless be largely supported by members of the motor-car trade, who have recognised in the past events north of the Border an opportunity for real commercial advantage, as well as for testing the capacities of their particular vehicles. Now we learn that the Irish A.C. propose to hold their Reliability Trial in the last week of May or the first week in June. It is intended that this shall extend for six

running days, and there will also be included tests for reliability, speed on hills, and petrol consumption. In addition to the prizes available for the cars and their owners who take the premier positions in the event, a team competition will be included, gold and silver medals being awarded for the best consistent running of any team engaged in the trials.

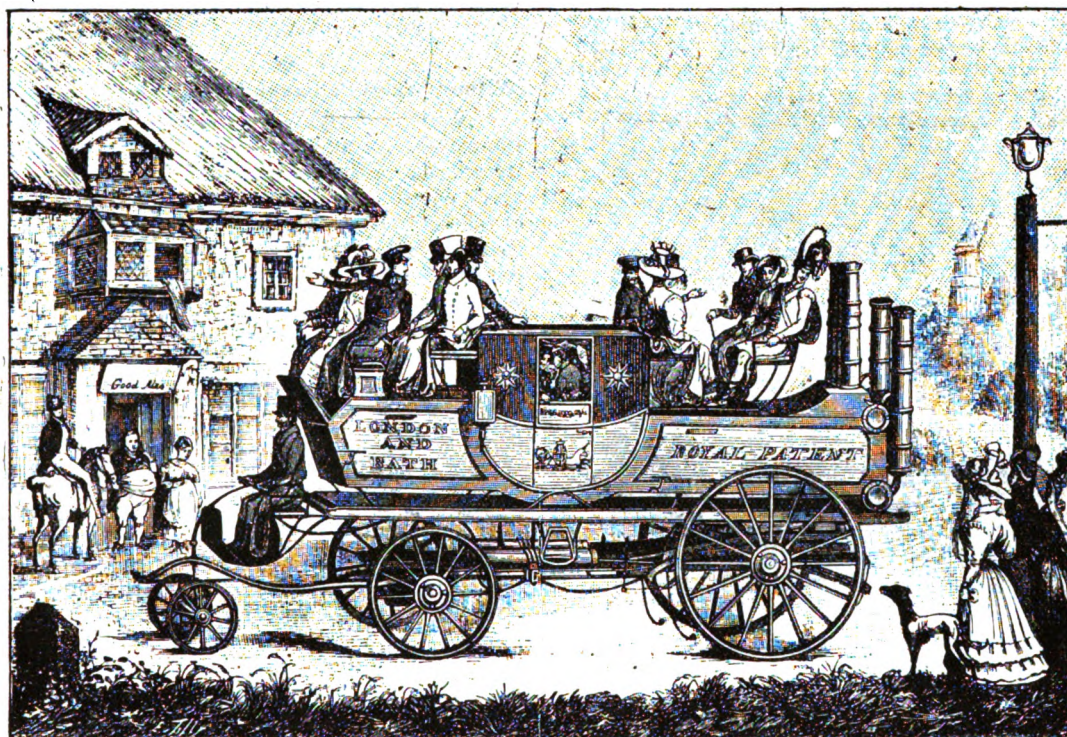
Cars in London.

IN our last issue we referred to a census which has just been taken of the number of automobiles registered in the country. Already substantial additions have to be made to the lists previously published, those giving the figures up to September 30th. Between that date and the end of November applications were received by the L.C.C. for the registration of 997 motor-cars, 26 heavy motor-cars, and 133 motor-cycles, while in the same two months 3,308 drivers' licences were issued. This brings the total registrations in London to 36,044, while no fewer than 92,912 drivers' licences have been issued since the passing of the present Motor Car Act under which we move and pay our fines. From

introduction of checks which it is hoped will prevent this in future. It may be of interest to know that before being placed on the cabs the taximeters are tested at the National Physical Laboratory at Kew, and at intervals unknown to the men beforehand the meters are examined on behalf of the Scotland Yard authorities. The cabmen are feeling the effects of competition, while the Protection and Share-out Club, which was started last spring to pay the fines of members summoned to the police courts, has had its funds heavily drawn upon.

Municipal Encouragement.

THE annual dinner of the Sheffield and District A.C. was an important function, several leading representatives of local public bodies being present to testify their interest in automobilism. Among the speakers were the Mayor of Rotherham, the Town Clerk of Sheffield, and the General Manager of the Sheffield City Tramways. Mr. R. M. Prescott, the Town Clerk of the cutlery centre, is himself a motorist, and believes that but for the development of the automobile industry during recent



An Old Time Motor Vehicle.—Gurney's Steam Carriage on the Way to Bath in 1829.

these figures it would appear that, despite the pessimism of many engaged in the trade, a fair amount of business is passing—a state of things revealed also in the show rooms devoted to cars that are not quite new. The L.C.C. is about to apply to the L.G.B. for an Order assigning to the Council a further index mark. This, they suggest, should be LD, the limit number of four figures under the marks A, LC, and LN having been reached.

Motor Cabs.

THERE are now 2,200 motor-cabs plying for hire in London, and several companies are preparing to place a large number of new vehicles upon the streets early next year. In view of this the variations with regard to the distance registered by the taximeters, to which we referred last week, become a matter of considerable importance, and we are glad to see that it has been raised by Mr. G. Gooch, M.P., in a question to the Home Secretary. Mr. Gladstone acknowledges that in some instances taximeters have been falsified, but adds that the Public Carriage Department at New Scotland Yard has under consideration the

times there would have been a great deal more unemployment than is now the case. He stood for a fair and reasonable use of the roads, and demanded the right of cars on any road in the country with any other sort of vehicle. Mr. A. F. Fearnley, who is associated with the Sheffield City Tramways, declared his readiness to always do what he could to assist motorists, and urged that authorities should be persuaded to adopt the Light on Vehicles Act as an advantage to all classes of traffic. Superintendent Bielby also spoke, mentioning that the West Riding County Council had adopted a by-law compelling vehicles in the district to carry a rear light. During the evening the prizes which had been won during the year were presented by the chairman, Mr. C. F. Coupe, and the toasts of the Royal A.C. and the Motor Union were given, responses being made by Messrs. J. W. Orde and Rees Jeffreys, respectively.

WHEN one of the wheels of a car is to be removed it is not sufficient to jack up that end of the axle; a box or other support of sufficient strength should be placed under the axle to carry the weight in case the jack should be knocked over.

GOSSIP FROM PARIS.

The Exhibition Question.

The revolt, the revolution, the evolution, or whatever it should be called, taking place in the French automobile world is calculated to lead to consequences which were far from being foreseen only a few months ago. The most striking symptom of the situation is perhaps the refusal of the Automobile Club Committee to follow the indications of the leading French automobile manufacturers, who, after boycotting the Grand Prix, would suppress the annual Salon. At least they do not want any more Salons such as have hitherto been organised by the A.C.F. It is contended that exhibitions have been got up more to attract the loiterers from the Boulevards and excursionists from the provinces and foreign countries than the people interested in the progress of automobilism, and especially the buyers. An exhibitor who has joined the movement against what he called "that sort of thing" was, he thinks, justified in declaring that "in the automobile show the cars were treated as a *quantité négligeable*." "The automobile show for the automobilists!" was his cry. The exhibitors do not see the fun of going on paying the piper for the pecuniary and moral advantage of the A.C.F. The revolutionists or evolutionists do not deny it will be advisable to hold an annual or biennial exhibition, but it should, they contend, be organised on the co-



A Reminiscence of M. Henry Farman's Flight from Chalons-sur-Marne to Rheims.

operative system by the exhibitors themselves, and not by the Automobile Club for its own advantage. That is just the hitch. The A.C.F. and its "Société d'Encouragement pour le Développement de l'Industrie Automobile en France" are determined to go on "encouraging" the manufacturers, who declare they do not want any more encouragement, especially of the description they have had recently. They have outgrown their swaddling clothes and can run alone. However, whether the firms who signed the round robin undertaking not to exhibit in any automobile show next year like it or not, the Automobile Club is determined to organise its Salon. This decision was taken by thirty-four votes against eighteen. But those figures are eloquent in a sense which is not apparent from the majority of sixteen votes in favour of the maintenance of the official organisation. Of the thirty-four persons who secured the victory of the A.C.F. only ten are exhibitors, and the eighteen persons forming the minority comprise the chiefs of automobile firms whose annual output is more than 50 per cent. of the motor-cars made in France.

The Grand Prix Race.

Do you think the forty cars will be entered for the Grand Prix before the end of the month? I have put that question to every automobile maker I have met since that minimum was fixed as a *sine qua non* condition for the holding of the race. The replies have not been that unanimous and categorical "No" which I had

almost expected. Those who had boycotted it naturally consider the International competition will not be "great" without them. Other people may hold another opinion on that point, especially as there are some very important French firms which refused to join the boycott and have already entered cars for the race. Even some of the abstentionists are not quite sure their example will be followed so generally as to prevent the inscription of the prescribed minimum of cars. The 130 mm. cylinder bore opens the door of the Grand Prix to a good many makers who may perhaps be even encouraged to enter their vehicles by the abstention of the seventeen big firms. The partisans of the race are, moreover, moving heaven and earth to encourage the entry of racing cars, and there is still the unknown quantity of the attitude foreign makers will assume. Of course if the foreign contingent is sufficiently large to make up for the French abstentions the French will in the case of one of the foreigners carrying off the prize pretend there was no honour in such an easy victory. But was not the consciousness of the probability of another defeat among the unconfessed reasons which induced the majority of the French leading automobile manufacturers to boycott the Grand Prix? At any rate it would be curious to see the French Automobile Club constrained to organise and preside over a sporting event which would profit chiefly foreign competitors.

Wilbur Wright's Great Flight.

Wilbur Wright has once more raised the enthusiasm of the world by a flight of 61½ miles duly controlled and certified by the officials of the French Aero Club. It was a great exploit from every point of view, but not so much for the distance as on account of the marvellous manner in which he handled his machine in a comparatively high wind. The American aviator had previously remained in the air even with a passenger with him on board his aeroplane for more than an hour, which was sufficient to demonstrate he could fly so long as no accident happened to his motor and his stock of *essence* was not exhausted. And that fact was demonstrated again by his record flight being interrupted only by the tap of his petrol tank getting closed. He might and would have continued flying for another couple of hours had that accident not prevented him and if the wind had not become too strong. The same thing may be said of Henry Farman, who has now replaced his Antoinette motor by the new air-cooled Renault engine on which he hopes to be able to rely. He has already remained in the air three-quarters of an hour, and was only brought to the ground by a *panne* of his motor. Wilbur Wright's machine is considered by many people superior to that of his competitor, and it may be so in some respects. But in one particular at least it is inferior; it requires a catapult to enable it to rise from off the ground, whereas that of Farman and those of the French aviators have wheels and can start from any place where the ground is sufficiently even for a bicycle to travel over. For touring it is an immense advantage not to be obliged to wait for the arrival of a catapult to throw the machine into the air.

An International Aeronautical Conference.

How people would have laughed only fifteen months ago if anyone had been bold enough to predict that before the end of 1908 the Governments of Europe would be thinking seriously of fixing the international status of steerable balloons and aeroplanes. But facts are often stranger than fiction. The progress made within the last year in aerostation and aviation has been so extraordinarily rapid and great that last week, on the proposal of M.M. Pichon and Barthou, Ministers of Foreign Affairs and Public Works, the French Ministry, at a Cabinet Council held under the Presidency of M. Fallières, decided to invite the powers to an International Conference in Paris entrusted with the study of the international *régime* to which aerial vessels of all sorts should be subjected. The invitations are to be sent out without delay, but the date of the meeting of the conference has not yet been fixed. Probably before it assembles still more striking exploits will have been achieved both by steerable balloons and aeroplanes, demonstrating the advisability of establishing rules for international traffic by the aerial highway.

MARNEY

THE GATE CHANGE.

A NON-TECHNICAL EXPLANATION OF THE SYSTEM.

ALTHOUGH what is known as the "gate change" system of manipulating gearing to alter the ratios of power to speed in motor-cars is now generally adopted, the precise nature of the advantages thereby obtained, and the way in which its working differs from the ordinary control by notched quadrant, may not be clearly defined in the minds of many who are accustomed to drive cars equipped with one or other of the varieties named. In spite, therefore, of the fact that some manufacturers take it for granted that everybody is thoroughly conversant with the why and wherefore of the subject of these notes, some going so far, indeed, as to print in their catalogues that "the advantages of this design are too well known to need enumeration," I still propose to chronicle them here.

Although, no doubt, the main object of the engineer who first applied the grid or gate sector to the change-speed control of an automobile concerned more directly an improvement in the design of the gear-box and its contents than any benefit which might also accrue in the manipulation of it, I think there is but a small minority of motorists who prefer the trigger lever work

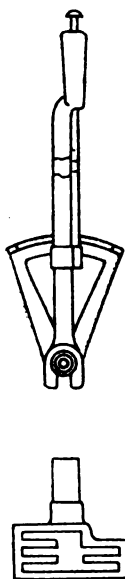


Fig. 1.—Elevation and Plan of Single Lever "Gate" Control.

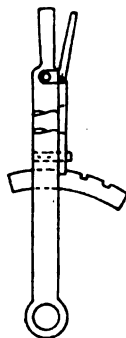


Fig. 2.—Elevation of Ordinary Notched Quadrant Lever.

ing backwards and forwards along a notched quadrant. However, no matter exactly what the designer had in mind, the fact remains that both mechanically, as an advance in construction, and conveniently, as an aid to changing gears surely and easily, the gate system has working as well as merely "talking" points to commend it. Mechanically, the gate has reduced the over-all length of the gear-box considerably, which, besides spelling a reduction in weight and affording it a general appearance of compactness, also means short shafts. Long "whipping" shafts used to be the bugbear of a good number of the old-fashioned gear-boxes, causing the bearings to seize and wear out quickly, as well as making the pinions mesh badly, and consequently grind and groan. Mechanically, also, the gate has made possible a more certain method of positively locking the gears in mesh or in neutral, whilst at the same time the whole action is rendered more robust and wear resisting.

From the driver's point of view it is something to be able to slam the change-speed lever forwards or backwards, as the case may be, safe in the knowledge that he has no notches to "feel" and possibly to over-run. It is something more that, with an upright and central position of the lever, he can get straight-away into any speed; no running the gauntlet of gears he does not want before he can arrive at the "speed" he requires. Reverting to the point of compactness, those who remember the lengthy gear-boxes that occupied a very consider-

able part of the total length of the chassis of some well-known cars of a few seasons ago, find it somewhat difficult to realise that the present comparatively midget cases can contain sets of gears every bit as strong and serviceable as their predecessors. Yet the fact remains. That other means of saving longitudinal dimensions in gearing exist most of us are aware; there are, for instance, certain "always in mesh" ideas, while another system

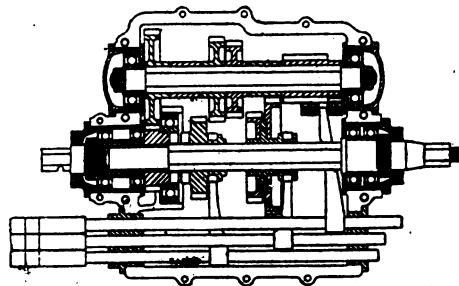


Fig. 3.—Sectional Plan View of Gate-Controlled Gear-Box.

that can be adopted to save space is by letting the shafts carrying the pinions approach in such a manner as to allow the teeth to come into mesh radially; yet another method is the sun-and-planet or epicyclic gearing, both of which last-mentioned systems possess excellent features and work well when properly applied.

All gate-change gears do not necessitate a transverse motion of the hand lever; in the Vinot and De Dion practice, for example, we find a vertical gate with the lever moving fore and aft in one plane, the depression of a plunger, when two of the gears are required, making the hand lever actuate the lower of two selecting levers that control the striking forks. With these exceptions, however, there is but slight difference in the design, generally speaking, of gates and selecting levers; some, it is true, have only two sliding rods, whilst others have three and even four, and in certain designs, also, two change-speed levers are employed, but this latter practice is now confined mostly to commercial vehicles, and in my opinion is somewhat out of date.

To define briefly the essential difference between the gate control and the ordinary notched segment, it may be said that the former controls two or more sliding rods projecting from the gear-box, which in turn actuate two or more sleeves carrying spur pinions, by means of forks that rest in recesses turned in the sleeves, whereas the latter controls merely one sliding rod to which its lever is permanently linked. In the case of the gate lever, too, it is not permanently linked to the sliding rods, but actuates one of them at a time, through the intervention of selective levers, after automatically leaving the other, or others,

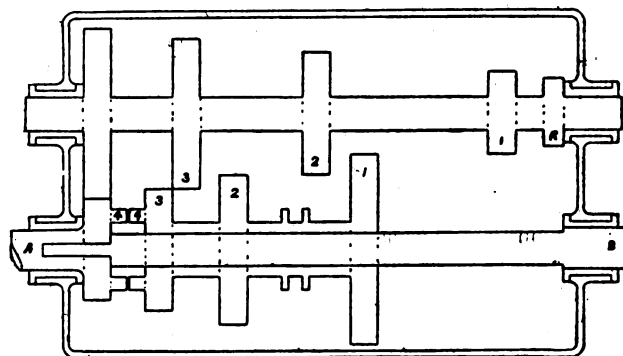


Fig. 4.—Sectional Plan View of the Old-Style Single Sliding Sleeve Gear-Box.

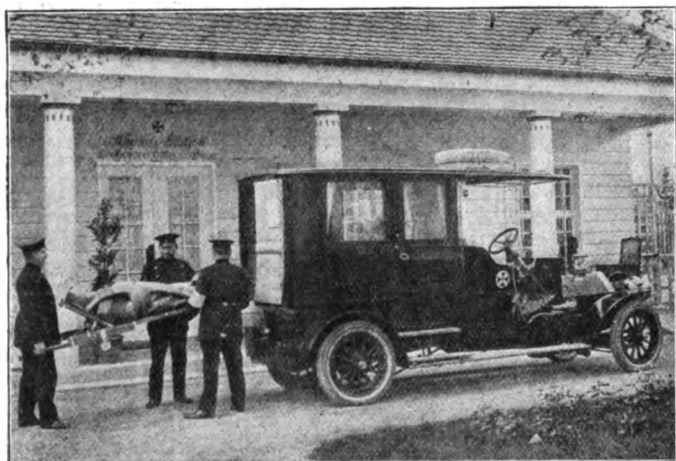
in a neutral position. In the operation of the horizontal grid or gate gear, it is the transverse movement of the hand lever which disengages it from one of the selective levers and connects it to another.

If this explanation is clear, it will be seen that, whereas with only one sliding rod coupled to a lever working in one plane the whole range of gears, forward and reverse as well as the inter-

mediate neutral positions, follow necessarily in one direction (unless some complicated additional mechanism be introduced), with two or more sliding rods it is possible to break up the movement longitudinally by dividing it amongst a plurality of gear sleeves; and that, further, the grid enables these sleeves to each have a central neutral position common to two speeds, and to further divide the motion by making one speed fore and the other aft of the neutral point on each gear sleeve. It is, therefore, easy to understand to what a great extent the over-all dimensions of a gear-box can be thus reduced in comparison with the old-fashioned type, especially when the additional fact is borne in mind that, owing to the reduction in the length of the shafts, it is possible to do away with the extra amount of space entailed by intermediate bearings, and yet have a perfectly rigid and successful range of speeds, whether on the direct drive or when the "back gear" is in operation. A. E. S. C.

MOTOR REGULATIONS IN FRANCE.

M. BARTHOU has not yet presented to Parliament his Bill for the reform of the legislation relating to traffic of all sorts on the highways of France, but he has publicly renewed his promise to do so without unnecessary delay. In a letter addressed by him to a sport-



The Horch Ambulance Car built for the Volunteer Life Saving Society in Munich.

ing journal which had questioned him on the subject the Minister seems to make an unfair distinction between the drivers of automobiles and those of horse-drawn vehicles, whom he describes as "the normal users of the road." Are not motorists and cyclists just as "normal users of the road"? It certainly is not because they are abnormal users of the road that all the motorists in France are obliged to pass an examination before having the right to take the steering wheel, but because it requires more skill to drive an automobile than a wagon, though it is undeniable it is easier and more simple to put on the brake and stop an automobile than it is to master a restive horse. It would, nevertheless, as M. Barthou says, perhaps be excessive to require the possession of a driver's licence by every one entrusted with a horse on the road, but the promised reform will not give satisfaction if, as the Minister's letter seems to indicate, the chauffeur will, in case of accident, be liable to the suspension of his driving licence, and, in certain cases, to its complete withdrawal, while the driver of a horse-drawn vehicle, whatever the accident he may have caused, will be at liberty to take out his team the very next day and continue to create obstructions on the highway by his incapacity, carelessness, or antipathy to motor-cars.

MAJOR F. LINDSAY LLOYD, late of the Royal Engineers, has been appointed manager and clerk of the Brooklands Motor Course. He took up his duties on Tuesday last.

THE SOCIAL WHIRL.

THE King made good use of his car while at Brighton, which he left on Monday morning. Not only were daily runs taken along the Front, but trips to Rottingdean, Seaford and Worthing were of frequent occurrence.

THE Hon. Stephen Coleridge, in an after-dinner speech to the members of the Welsh A.C., recounted an amusing experience he had had near Salisbury. He had been given a hint by a friend to look into a certain pigsty on the road, and when he did so he found a constable lying down. He addressed the hedgehog—told him that his watch had stopped, and ask him the time—a procedure which completely overwhelmed the recumbent policeman.

THE Bishop of Chichester is one of our motoring ecclesiastics. He also found the car a useful text for an after luncheon speech at Burgess Hill a few days ago. In the course of his remarks he suggested an advantage of the automobile which I do not remember to have been instanced before, viz., that he could have complete rest, whereas on railway journeys he was obliged to talk, and "as a bishop I am tired of talking," remarked his Grace. The disadvantage, however, was that, as much more could be done with the aid of a car than without, more was expected of a motoring bishop than of those whose activities were limited by the range of a carriage and pair.

BARBADOES is being visited by many motorists, all of whom seem to return with good accounts of the island—so far as its hospitality to those who drive cars is concerned. The roads, although white and dusty, are very good with fine firm surfaces. Recent visitors include Sir Frederick Treves and Dr. Mortimer Johnson, of Streatham, the latter gentleman taking with him the 10-12-h.p. Humber car upon which he is seen in the illustration, from a photograph taken at Hastings, Barbadoes, on another page. He discovered in Bridgetown a firm of engineers with a charging plant for accumulators, and since his return two other vehicles similar to his own have been imported on the island. He advises anyone who may follow his pleasant example to have a magneto fitted before going and to take as many spares as possible. Such things are at present difficult to obtain, but this trouble will doubtless disappear as the popularity of the West Indies grows among motorists. Dr. Johnson's friends were delighted with the silence, smooth running and ability to negotiate hills shown by his car.

ACCORDING to the latest bulletin of the White Steam Car Company, the concern is going strongly into the motor ambulance business, and has already supplied vehicles to the United States Army and Navy. They should do well on this side, for Mr. Frederic Coleman, who looks after the White steam car, was, when in San Francisco, an acknowledged expert in such matters. He frequently rode with old Denis Kearney, the driver of the Doctors' Daughters' Ambulance, a pair-horse ambulance with rubber tyres, which had been presented by funds raised by an association of doctors' daughters. They had fixed to the front of that light, speedy ambulance, pulled by its team of splendid horses, a gong which was similar in character to the gong now used on our London fire engines. No other vehicle was allowed to use such a gong, and once they had the rubber tyred wheels on the tram-car metals no jars occurred. Many a life Mr. Coleman has known to be saved by such rapid and easy transit—now to be accelerated by the adoption of the automobile.

THE formal opening of the Sussex Motor Yacht Club House, in Middle Street, Brighton, took place on Saturday, when the Rear Commodore, Lieut. C. Sumner, presided over a large company, which included the Mayor of the town. The new home of the Club should prove of great value not only to those engaged in motor yachting at Brighton but also to the seaside resort generally.

LOLLIUS.

SOME NEW PETROL-ELECTRIC VEHICLES.

A NOTEWORTHY feature of the motor industry during the past year has been the appearance of several petrol-electric vehicles, in which the power developed by the engine is transmitted electrically instead of mechanically to the road wheels, the usual clutch and change-speed gear being thus dispensed with. Some of the systems, notably the Auto-Mixte—which is being introduced in France as the G.E.M.—and the Mercedes-Mixte have already been dealt with in these pages. In addition

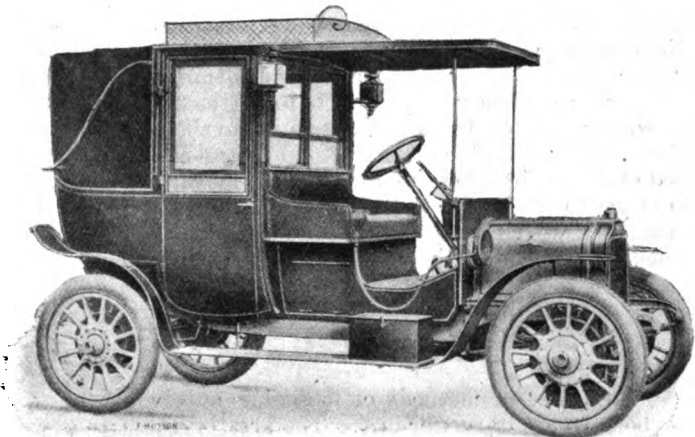


Fig. 1.—The Krieger Petrol-Electric Motor-Cab.

to these, however, the Krieger Company have brought out an improvement on their original design, while newcomers in the petrol-electric field of automobiles include the S.F.A., the Lavo, and the Balachowsky-Caire, some brief particulars of which are appended.

Dealing first with the Krieger petrol-electric cars (Figs. 1 to 4), which, in addition to electrical carriages, are now being turned out by La Compagnie Parisienne de Voitures Electriques Procédés Krieger, of Boulevard Valmy, Colombes, France, the motive power is supplied by a four-cylinder petrol motor, which is located in the forepart of the frame, as usual, and works constantly at full power. It is connected through a flexible coupling to the armature—which forms the flywheel—of a special dynamo. The latter is of the self-regulating type, designed to utilise the

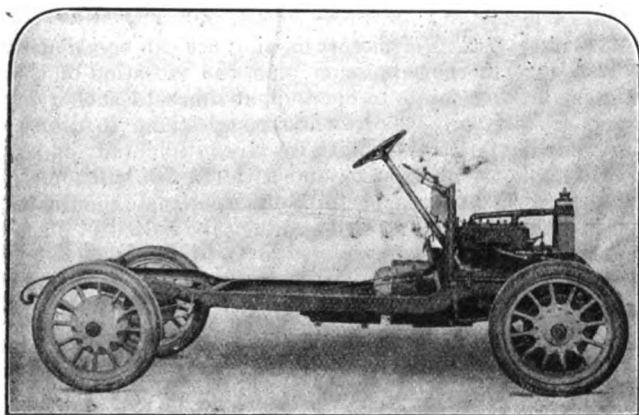
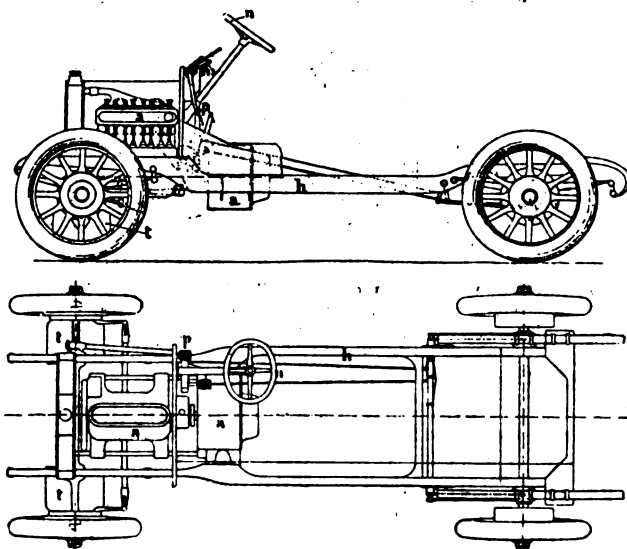


Fig. 2.—Chassis of Krieger Petrol-Electric Car.

whole of the power developed by the engine, either in increased speed or greater driving effort, according to the nature of the road over which the car is being driven. It is provided with a differential compound winding, a few demagnetising turns in series with the armature opposing the shunt coils. Two electrical motors are provided; these are coupled in parallel or in series and work at constant power, but variable speed, driving the two

front wheels—which thus act both as steerers and drivers—through enclosed helical gearing. The speed is regulated by a pedal connected with the controller. The latter is mounted on the dashboard, and comprises a special contact for the dynamo and a reversing switch, the latter being controlled by a small lever on the dashboard. By gradually pressing down the pedal, the speed of the engine, and consequently that of the car, is progressively increased, while by removing the foot therefrom the current is diverted from the motors and the engine slowed down. A further variation in speed is obtained by a lever which alters the degree of excitation of the dynamo. The number of contacts has been reduced to two—one for forward running and one for reverse—and the current is diverted whenever a change has to be made from one to the other. Under no circumstances, however, is the electrical circuit totally interrupted. Two sizes of chassis, for cabs, town carriages and pleasure vehicles, are being made, of respectively 12–16-h.p. and 16–26-h.p.

The principle of the S.F.A. petrol-electric vehicle recently put on the market by the Société Française d'Automobiles De Poorter, 60, Rue Lemercier, Paris, is very similar to that of the Auto-Mixte vehicles—that is to say, under normal conditions the petrol engine drives the rear axle of the car direct through a universally-jointed shaft and bevel gearing. On starting, however, or on any occasion when the load on the engine is greater



Figs. 3 and 4.—Elevation and Plan of Krieger Petrol-Electric Car.

than it can meet, a certain amount of reserve power is furnished by a small set of accumulators carried on the car. On the other hand, when the driving of the vehicle does not absorb the whole of the power developed by the engine, as when on down grades, the excess is employed in charging the battery. The general appearance of the vehicle is similar to the usual design of petrol car. Interposed between the engine and the cardan shaft is an electric machine specially designed to act either as generator or motor. When a hill is, for example, encountered, the engine, and consequently the generator, will slow down, a corresponding fall taking place in the e.m.f. at the brushes. As at the terminals of the battery there exists a constant electric pressure, a discharge of current to the dynamo takes place, and the latter, acting as a motor, adds its power to that of the prime mover. One of the features of the De Poorter system is that the current supplied by the accumulators is limited to that absolutely necessary. The discharge current increases the excitation of the dynamo, and reduces the difference of potential at the brushes, thus restricting the discharge from the battery. As the speed of the engine increases, the voltage at the brushes rises, sending a charge to the accumulators and at the same time reducing the dynamo excitation. In practice, the running of the car is a constant series of changes in the character of the electrical machine, which at one moment

is running as a generator and the next as a motor, the changes all taking place automatically and independently of any action on the part of the driver. The system is exceedingly simple, and, as compared with an ordinary petrol car, not only enables the usual change-speed gear to be dispensed with, but permits the engine to be started from the seat by means of the battery, which also furnishes current for the lighting of the vehicle. Three models are being made—10-12-h.p., 16-20-h.p., and 30-40-h.p.; in the first the engine is of the two-cylinder type, and in the others four-cylinder.

The "Lavo" petrol-electric car (Fig. 5), is being made by La Société l'Energie Electro-Mecanique, of Rue Delaunay, Suresnes, near Paris. In this vehicle the motive-power is furnished by a four-cylinder engine set, as usual, in the fore part of the frame; built up with the flywheel is a dynamo, the current from which passes directly through the controller to the motor, no battery of accumulators being employed. The feature of the "Lavo" system lies in the fact that only a single electric motor is employed, this being of the "differential" type—a machine which comprises two portions rotating in opposite directions and of which the resulting speed is the sum of those of the two parts. Each half of the motor is connected with one of the rear road wheels, rendering the use of the usual form of mechanical differential gear unnecessary. In addition to the saving in weight and the suppression of the differential, it is claimed that the use of a differential motor obviates all the drawbacks attendant on the

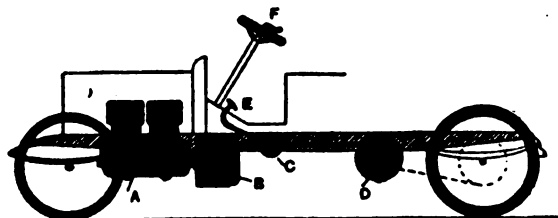


Fig. 5.—Elevation of Chassis of "Lavo" 24-30-h.p. Petrol-Electric Car, showing relative sizes of the different parts.

A. Petrol engine. B. Dynamo. C. Controller. D. Motor. E. Pedal controlling forward and reverse motions and brakes. F. Speed-varying lever.

employment of two electric machines, one for each road wheel. Instead of two collectors there is only one, and consequently no accidents due to a short-circuit in one of the two motors usually employed need be feared. The motor is suspended in the frame by double-acting springs in such a way that no shocks are transmitted to it when starting or braking the car. Starting and stopping, as well as the application of the brakes, is effected by a single pedal, the variations of speed being obtained by means of a lever on the steering wheel. A further lever is provided at the side of the driver by which he can control the forward and reverse motions by hand, as well as by the foot, or the lever may be securely fixed in a neutral position. Three models of pleasure and touring cars are being made, viz., 10-14-h.p., 16-20-h.p., and 24-30-h.p.; all are fitted with four-cylinder engines. As regards the transmission, the drive from the motor to the rear road wheels in the first two sizes is direct, while in the largest car it is by chains.

La Société Electromotion, of Route de la Revolte, Neuilly-sur-Seine, has secured the concession for France for a new petrol-electric vehicle, designed by Messrs. Balachowsky and Caire, who have, it is stated, been engaged in its development since 1903. The main components of the chassis are a four-cylinder petrol engine, a dynamo built up with the fly-wheel of the former, and two electric motors, the latter being contained in the hubs of the rear road wheels. The two points to which special attention has been devoted have been the automatic regulation of the current and the excitation of the generator. The former is obtained by the creation in the centre of the armature—which latter acts as the engine fly-wheel—of a zone, in which circulate compensating currents which ensure the diminution of the flux at the moment when the amperage rises, and maintain constant the power absorbed by the

generator, the speed of the engine being constant. This regulation is claimed to be so exact as to be in operation at all the various speeds, even at the slowest. Thus there is no weakening of the e.m.f. when the speed of the engine is reduced, the power of the latter being constantly utilised at its maximum efficiency. As soon as the engine, after it is started, attains a speed of 180 r.p.m., the dynamo develops sufficient power to drive the car at a low rate—from about $\frac{1}{2}$ to $1\frac{1}{2}$ miles per hour; this quality of self-excitation at a low speed is obtained without the employment of a battery of accumulators supplying energy to a special winding. The dynamo weighs 3 cwt., and can develop 30 kw. at the normal speed, with, it is claimed, an efficiency of 90 per cent. Only four brushes are employed, their position being definitely fixed after experiment to ascertain the exact point. The energy generated is transmitted direct to the motors, the armatures of which form the hubs of the rear road wheels. A feature of the system is the absence of the controller usually found on electric and petrol-electric cars, the speed of the car being entirely controlled by varying the admission of gas to the engine. A double set of brakes is provided on the rear wheels, these being so arranged that, on their being applied, the current to the motors is automatically cut off.

SOME USEFUL NOTES.

THERE are two methods of loosening nuts which stick to their bolts owing to rust or dirt. The first of these is a well-known one, that of moistening both the nut and the bolt with paraffin. Unfortunately it takes about half an hour before the nut can be loosened in this way. The second method is as follows:—Take a socket wrench adapted for use upon the nut and heat it until it is almost red, then apply it to the nut, thus heating the nut and loosening it without heating the bolt. The nut may then be removed with another wrench.

SLIPPING in a leather-faced cone clutch may be due to want of adjustment, and consequently remedied by tightening up the clutch spring. Very often slipping is due to the presence of grease, oil, &c., on the leather, in which case the latter should be well washed with petrol and slightly roughened with a rasp, and adjusted up a little by the spring. Of course, if the leather is badly worn and fired, there is only one remedy, and that is a new clutch leather. The latter gets badly burned by injudicious driving, such as slipping the clutch continually on the high speed on a hill, instead of changing on to a lower speed.

MYSTERIOUS cases of motors missing fire can occasionally be traced to leaks in the admission pipe, the vibration of the car causing the leaking joints to open up, at times to such a degree that enough air will be drawn through them to dilute the mixture until it loses its ability to fire. Soldered joints are especially liable to this trouble, and with them it will sometimes be found necessary to take the pipe down to locate the difficulty, as with the engine standing still and the pipe bolted in place the looseness will not show.

FEW motorists, even those who drive frequently at night, appreciate the importance of keeping the lens mirrors and front glasses of their motor-lamps clean. A greasy or dingy surface such as follows one or two evenings' driving absorbs a considerable percentage of the light from the flame. By far the best and handiest thing to clean the lens mirrors is a mixture of equal parts of alcohol and water; a 50 per cent. solution evaporates more slowly than pure alcohol, so giving time to wipe the glass clean. While on the subject of lamps it is worth mentioning that all tubing from an acetylene generator should slope either downward or away from the generator, and there should be provision for draining it at its lowest point, since there is a gradual condensation of water in the piping which, if it collects in pockets, results in objectionable flickering.

MR. M. A. MIDDLETON has a motor-car garage at Cotton End, Northampton, which should be of service to motorists visiting the town.

THE municipal council of New York now owns no less than 231 motor-cars, which are used by officials and in the work of the various departments.

AT New Scotland Yard, London, on Monday, a demonstration was given of the N.U. motor spirit.

THE Metropolitan Asylums Board has decided to obtain tenders for eight motor-ambulances for its Fulham station.

THE Oldham Council is seeking Parliamentary powers to borrow £568,000, included in which is £16,200 for motor-omnibuses and motor-cars.

ACCORDING to the report of the Secretary of State of California, the number of motor vehicles registered in that State since the law regulating the operation of motor vehicles went into effect in 1905 to November 1st, 1908, is 18,698.

ONE of our readers in Havana writes:—"The roads here in Cuba are ideal for automobiles. One road out of this city has only five turns in fifteen miles, and only three cross roads, and is as level and smooth as a floor. The power of your engine is your only speed limit, but petrol is nearly 2s. per gallon."

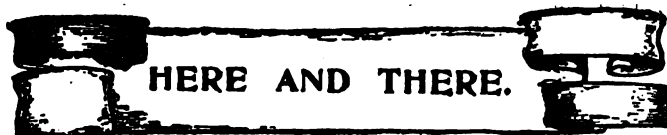
WE learn from Mr. C. Dupin, the manager of Gaulois Tyres, Ltd., that the Gaulois pneumatic tyres are meeting with increasing favour among British motorists. The company are now devoting attention to the production of extra strong tyres for use on motor-cabs and light delivery vans, and at the recent Paris Salon had on view a twin pneumatic tyre which is being introduced for use on motor-buses and heavy touring vehicles.

ACCORDING to Mr. Eric Boulton, who lectured on "Motor Omnibuses" under the auspices of the Junior Institution of Engineers on the 16th inst., the traffic of London will eventually be largely worked by double-decked motor-buses. Those running on the two main arteries east and west will probably seat forty passengers, while single-decked vehicles for from fourteen to twenty passengers would work outwards from the points at Oxford Circus and Liverpool Street, and Charing Cross and Aldgate.

A PRACTICAL work for motorists that should prove of substantial value to the novice is that on Motoring by Mr. R. P. Hearne. It is published at a popular price, and in the course of 150 pages the author deals with such matters as power production, ignition, and power transmission, while useful chapters on handling the car, the making of the motorist and the cost of motoring, add to its value. The volume has forty-eight illustrations and has just been added to the list of books for motorists supplied by Messrs. Cordingley and Co.

ACCORDING to the "Figaro," a company has been formed with the title of the General Trans-aerial Company, which is to start a public service of navigable balloons on May 1st next. The first four will be named the Ville de Bordeaux, the Ville de Nancy, the Seine, and the Gironde. They are to carry fifteen persons, including two engineers and the captain. They will have a capacity of 5,000 cubic metres, and will be provided with motors of 200-h.p. The first trips will be over Paris by night as well as by day, and visits will be made to Versailles, Saint Germain, Fontainebleau and other favourite resorts in the neighbourhood of the French capital.

ONE point brought out at the recent London and Paris Motor Exhibitions is a growing tendency amongst motor manufacturers to adopt the "set spark" system of ignition in preference to the use of the variable timing and hand regulation system which has hitherto prevailed. The advantage secured in ridding the driver of one of the numerous matters to be attended to in handling the machine is obvious. The practice is made possible by the use of magneto ignition. The voltage of the magneto current increases with the speed, and the intensity of the spark consequently increases proportionately. This effect is considered to compensate for the lead which otherwise would be required, so that the regulation is thus made automatic and in direct relation to the engine speed.



A COMPANY has been formed in Toronto to introduce a service of motor-buses in that city. It is stated that fifty thirty-six-seated vehicles are to be acquired.

FIRST Motorist: "You say you had the steering wheel put on the left out of consideration for your wife?" Second Ditto: "Yes; I'm deaf in my right ear."—*Life*.

MR. W. McCURD, the well-known dealer in second-hand cars, is apparently one of the lucky ones, for during the past four years of his motoring career he has only had one puncture. May his luck continue!

WHILE the event of the year has been the adoption by the Daimler Company of an engine of American design, we hear that a large motor-car concern in the United States has secured an option on the American rights in one of the two-cycle engines exhibited at the recent Olympia Show.

THE exports of motor-car parts from the United States during the ten months ending with October last only amounted to £899,300, as compared with £1,056,397 in the corresponding period of last year. The United Kingdom heads the list as being the best customer with £321,015, Canada being second with £209,405, and France third with £105,019.



The Dennis 15-n.p. 15-cwt. Royal Mail Van, with Messrs. Puttock and Son standing by it, which runs between Farnham and Camberley, collecting mails in the Camberley district and meeting the large mail vans which pass each night through Farnham on their way between Southampton and London.

MRS. SPORTINGTON: "I shall want you promptly at ten, Parker." Parker: "Yes, mem, but—beg parding, mem—will you want me as a chauffeur, groom or coachman, mem?"—*Puck*.

IN the Euston Road, which has become familiar to motorists as the centre of a great motor trading district, a new establishment now testifies to the enterprise of the Car Mart, Ltd., which has developed a splendid business in connection with the disposal of second-hand cars. These fine showrooms at 297-299, Euston Road, go back ninety feet to Warren Street, London, W.C., and the several floors give capital opportunities for the storage of cars as well as their thorough overhauling before being offered to prospective customers. The principle upon which the Car Mart, Ltd., does business is to sell on commission and only to take such vehicles as are likely to afford satisfaction to the buyer. They have a painting department on the premises, and are thus able to ensure the cars being sent on the road with a good appearance as well as in good condition. On the roof are extensive washing facilities, and the whole establishment is well equipped for effecting the exchange or sale of automobiles. Several small Peugeots and 1909 Mercedes cars were prominent among the stock at the time of our call, and in range and variety the show of cars was certainly most attractive.

A MOTOR-CAR exhibition is to be held in Toronto, Canada, from the 18th to the 25th February next.

PLANS are being prepared for the construction of a cement race track for the exclusive use of automobiles at Los Angeles, U.S.A.

GENERAL J. FRANKLIN BELL, chief of staff of the U.S. War Department, has acquired a White 20-h.p. steam car with limousine body.

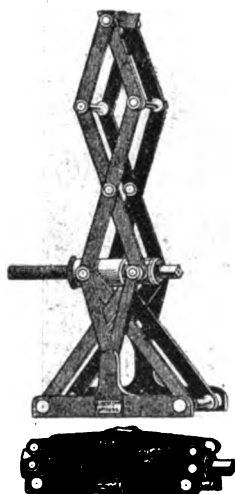
A COMPANY has just been formed in Paris (44, Rue Lafitte) with a capital of £20,000 and the title La Société Française de Construction d'Automobiles Poids Lourds.

MR. W. LAWLEY has opened temporary premises in the Broughton Street Lane, Edinburgh, where he intends to develop his interest in the motor trade, with a view to starting a large garage in May next.

AFTER prolonged deliberation, lasting over two years, the American Automobile Association has condemned motor-car races on circular tracks built for horse racing and of a mile or less in length, and resolved that it will have nothing to do with them in the future.

THE Badminton Register of Social Fixtures for 1909 is to hand from Messrs. A. Webster and Co., 43, Dover Street, London, W. The features of this annual publication are well known to our readers, and a list of automobile clubs gives the work motoring interest.

WE illustrate herewith the ingenious motor-car jack known as the "Passe Partout," exhibited at the recent Paris Salon by M. H. Libert, 10, Quai de Charenton, Charenton-le-Pont (Seine.) As will be seen, the device works on the principle of a lazy tongs and is actuated by a detachable handle. One great point of the new jack is the small space it occupies. When closed, as shown in the lower of the two figures, it is only 2½ in. high, while, when fully opened, its height is just over 16 in.



THE Poetting prize of 2,000 crowns, which is given annually by the Austrian Automobile Club for some invention or work of an Austrian subject calculated to advance the use of automobiles, will next year be awarded for an improvement in the methods of testing pneumatic tyres or for a new method of testing, and the machinery and devices used. The contest will be closed on March 20th, 1909. The Austrian A.C. has contributed the sum of 3,000 crowns for the practical testing of the device or method winning the prize.

THE Registered Date Indicating Blotting Pads of Messrs. Hudson and Kearns, of the Hatfield Street Works, Stamford Street, London, S.E., are the best publications of the kind we have seen. Pads No. 8 and 8a are particularly serviceable and sensible combinations of Blotting Pad and Diary for the desk. They have stood the wear and tear of editorial use in the office of the *M.C.J.* with excellent results, and should prove equally durable and desirable in all automobile offices.

THE Atlas Motor Company, of 172 and 174, Queen's Road, Peckham, S.E., send us a copy of their delightful calendar for the year, which they will be pleased to forward to any reader who will send them the registered number and make of his car. The subject of the picture is of motoring interest and entitled "A Twentieth Century Hold-up."

FROM Madame Lockert (41, Rue de Seine, Paris) comes a copy of the 1909 edition of the "Agenda-Buvard du Chauffeur." This is the seventh year of publication of this useful diary, the noteworthy feature of which are the full-page caricature sketches of prominent members of the French and British motor industry. Madame Lockert also sends us some specimens of the cardboard models of different types of motor-cars, airships, &c., of which she is now making a speciality. These should afford many hours of interesting amusement to the younger generation, as, by carefully cutting the designs and piecing them together, a cardboard model of an automobile can be made.

MR. G. HILL is making a speciality at his Providence Works, Burton-on-Trent, of radiators for heavy motor-cars and vehicles for commercial purposes.

THE Santa Maria de Belsue Drainage Works authorities at Huesca, Spain, are inviting tenders until January 5th for two steam or petrol motor-lorries.

IN connection with the Imperial International Exhibition, which is to be held at Shepherd's Bush next year, a special section will be devoted to the health resorts of Great Britain and Ireland.

As motoring has increased so much in India during the past year or so, it is expected that the Government of India will shortly take some steps in the interests of motorists to regulate motor traffic and indicate dangerous turns, bends, Irish bridges, &c.

MESSRS. R. H. AND F. S. BARNWELL, of the Grampian Motor Engineering Company, of Stirling, have built and are experimenting with an aeroplane of their own design. The apparatus is of the monoplane type, and is fitted with a 40-h.p. V-type two cylinder air-cooled engine.

ACCORDING to the St. Petersburg correspondent of the "Times," Captain Windham has offered to the Russian Government the aeroplane invented by him, and has undertaken within six months to construct a machine which will carry him 300 metres at a speed of 50 kilometres per hour.

THE General Purposes Committee of the Corporation of the City of London have prepared a bill for the better regulation of traffic along the streets within their area. One clause will enable the Corporation to make regulations prescribing the route to be taken by automobiles in the public service.

AMONG the orders recently secured by Messrs. Dennis, Bros., Ltd., Guildford, are a demonstrating van for their Cardiff agents, Messrs. Sully, Penarth Road; Cardiff; a similar vehicle for their Leeds agents, Messrs. Thos. Green and Sons, Smithfield Iron Works, Leeds; and two 28-h.p. char-a-bancs and two 20-h.p. wagonettes for Mr. A. C. Jones, Carberry Tower, Musselburgh.

A PATENT has recently been taken out by Baron R. A. L. Lehmann and M. L. Durand, of Paris, for a method of utilising the mixture from the carburettor as a means of cooling the cylinders. The gas on its way to the explosion chamber is caused to flow through the usual cylinder jacket, the heat of the cylinder walls thus being absorbed and utilised to warm up the combustible mixture. In an alternative method the inventors draw all the air required by the carburettor through an opening in the cylinder heads, and through jackets to the vaporising chamber.

THE Ocean Accident and Guarantee Corporation, Ltd., of Moor-gate Street, London, E.C., issue a Chauffeurs' Text Book, which naturally gives full information of many policies of particular value to motorists issued by the Corporation. Several pages are devoted to the registration of cars and the duty of the driver in cases of accident, while the registration marks for the United Kingdom are a feature. We also notice a full list of motor-cars in general use, this also giving the horse-power and the cost price. Tables of gradients and wind pressures, as well as a diary giving a record of miles run, are other features of a little book which will be of considerable service to drivers.

AMONG the Annuals "Hazell's" occupies a high place both as an authoritative and a comprehensive work of reference. Of the new articles which appear in the 1909 edition is one on aeroplanes, airships, and balloons, the progress during the year being fully set forth, although the Aeroplane Club recently formed by Capt. W. G. Windham might have been included in the list of societies. Four pages are devoted to motor vehicles for 1908, the records on the Brooklands Track being fully given. Attention is drawn to the general tendency towards standardisation and reduction of unnecessary parts, and one of the features of the year is rightly said to be the introduction of low-powered models by firms whose names have hitherto been solely concerned with high-powered machines. The great strides made in connection with public services are also set forth, and mention is made of the serious efforts now being put forth to remove the dust nuisance. The other sections of Hazell's Annual seem to have been equally well brought up to date, and the publication will be of considerable value to the general reader as well as the student of affairs. Messrs. Hazell, Watson, and Viney, Ltd., are the publishers.

CONTINENTAL NOTES.

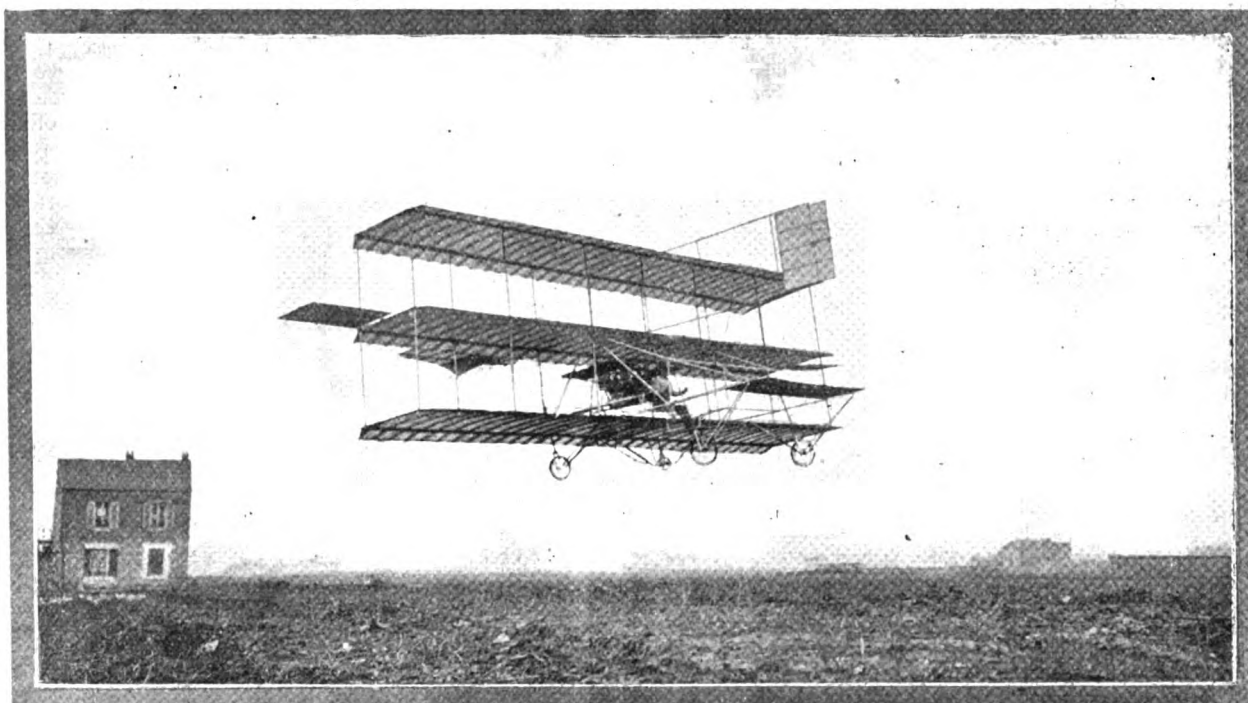
The Paris Heavy Vehicle and Aeronautical Exhibition.

The pleasure cars and accessories have now all disappeared from the Grand Palais, Paris, their place having been taken by the display of industrial motor vehicles, motor-boats, airships, aeroplanes, &c., which is to be inaugurated on Thursday, the 24th inst., and will remain open until Wednesday of next week. Special interest is being taken in the aeronautical section, which it is reported will comprise fifteen or sixteen full-sized aeroplanes, a large airship, the Ville de Bordeaux, and a large number of models of aeroplanes, airships, and flying machines of every kind. The place of honour will be given to M. Adler's Avion, which in 1898 was the first aeroplane on record to rise from the ground. A full report of the exhibition will be given in the next issue of the *M.C.J.*

German Motor Car Imports and Exports.

The imports of foreign motor cars and parts into Germany during the ten months ending with October last only attained a value of £580,126, as contrasted with £790,981 in the correspond-

purpose of judging a small balloon was attached to a cord 100 metres long, and secured by other cords against lateral action by the wind. The balloon was easily cleared by the aeroplane, which had previously been in the air for ten minutes.—The Aero Club of Belgium has founded a prize to be known as the Prix du Premier Kilometre. This consists of a gold medal, which will be awarded to every Belgian aviator who during the course of next year flies a distance of one kilometre.—On Wednesday last week Wilbur Wright made a remarkable flight; he quickly rose to a height of 295 ft., and then, stopping his motor when he was still over 100 ft. from the ground, glided to the earth without the slightest shock.—The Aero Club de France has decided to organise a race for dirigible balloons from town to town over a distance of 250 miles next summer. In addition, a "grande semaine d'aviation" is to be held during the last week of August, when the competition for the Grand Prix d'Aviation and the Coupe Internationale d'Aviation will take place.—It is reported that the German Government has placed an order for four airships of the Zeppelin type.—The opening of the aeroplane demonstration ground at Savigny-sur-Orge, near Juvisy, has been postponed until January 10th.



The Vaniman Aeroplane.

The latest addition to French flying machines is the Vaniman illustrated herewith. It is of the tri-plane type, and is fitted with an Antoinette 70-80-h.p. eight-cylinder engine.

ing period of 1907. On the other hand, there has been a slight increase in the exports of automobiles from Germany—from £573,660 to £594,070.

Motor Cars in Russia.

According to a recent return, there was an appreciable increase in the importation of automobiles into Russia during 1907. The imports of pleasure cars doubled as compared with 1906, and those of industrial motor vehicles increased from 17 in 1906 to 147 last year. The majority of the pleasure cars imported were of French manufacture.

Aeronautical News.

The event of the week has been the magnificent flight of 61½ miles in 1 hr. 54 min., accomplished at Le Mans on Friday last week by Wilbur Wright. He has not only beaten the world's aeroplane record, but has also considerably increased his advantage towards securing the Michelin prize of £400 for the best performance made before midnight on December 31st. On the same day Wright won the prize of £40 offered by the Aero Club of the Sarthe for the first aeroplane flight at a height of 328 ft. For the

Miscellaneous Items.

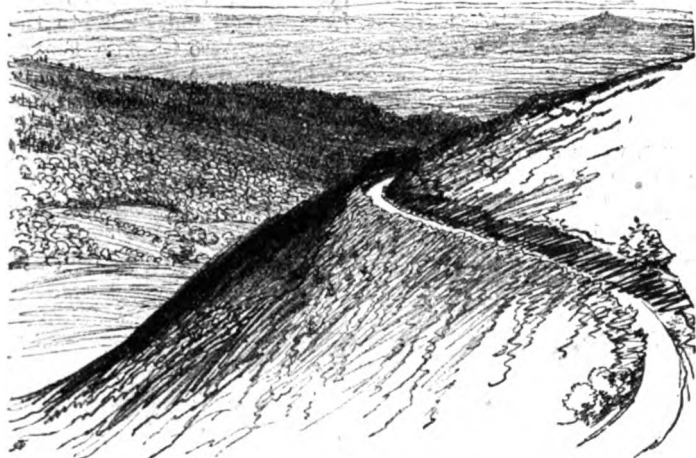
A public motor-car service has been established between Trieste, Abbazia and Fiume. Three cars, two for passengers and one for luggage, will run twice daily for the present.—Some trials were carried out in Paris, on Tuesday, with a Renard road train, the engine of which was using naphthaline as fuel.—So far only seven entries have been received for the A.C.F. Grand Prix Race, viz., three Cottin-Desgouttes, three Mors, and one Guillemain.

L'Auto en Chine.

Les Chinois connaissent les automobiles depuis quelques années déjà. Mais c'est sans enthousiasme qu'ils voient ces voitures inexplicables, et surtout inexploquées, pour leur jugeotte très vieille Chine, circuler de temps à autre dans les rues de Pékin, leur très céleste capitale. L'autre mois, disent les journaux de là-bas, un Français, n'a-t-il pas eu l'idée d'instituer un garage à Pékin. Et dans quelle rue, s. v. p. ? Dans celle de la Grande Tranquillité ! C'était un défi aux traditions—installer ce va-et-vient de monstres trépidants au milieu même d'une voie qui, depuis des siècles, est renommée par son aspect pacifique.

ALONG SURREY HIGHWAYS.

East and west through the county of Surrey runs the chalk ridge of the North Downs, the great highway of Southern England from the Straits of Dover to Salisbury Plain. Of all English roads, it has carried the longest pageant. It saw the beginnings of English history; for four centuries it was one of the best-known highways in Christendom; the vision from its windy heights is one of the widest and most gracious of all visions of woods and fields and hills. By the trackway they made upon the ridge came the worshippers to Stonehenge; Phœnician traders brought bronze to barter for British



The Devil's Punch Bowl, from Gibbet Hill.

tin, and the tin was carried in ingots from Devon and Cornwall along the highway to the port of Thanet; Greeks and Gauls came for lead and tin and furs, and the merchants rode by the great Way to bring them. When Cæsar swept through Surrey on his second landing, his legions marched over the Way before he turned north to the Thames. When the Conqueror drove fire and sword through Southern England, he went down to Winchester by the chalk ridge; and when the great lords under the Conqueror and Rufus, Richard de Tonebridge and William de Warenne, built their rival castles, they built them to command the highway; so did Henry of Blois build his castle at Farnham; and so was Guildford Castle built. Of warfare later than Norman days, the Way saw nearly all that went through Surrey. Simon de Montfort and his barons rode fast by the ridge the year before Lewes; they lay at Reading on the twenty-ninth of June, and on the first of July at Reigate. In the wars of the Parliament, Farnham west of the Way saw the siege of an hour; Lord Holland led his little band from Dorking to Reigate and fled back again. Last of the echoes of Stuart battles, Monmouth, after Sedgemoor, was driven through Farnham to lodge for one night of misery and fear in Abbot's Hospital, in Guildford.

THUS is the claim of Surrey to great importance in the national annals established by Mr. Eric Parker in introducing his readers to "Highways and Byways in Surrey"—a volume of considerable interest to all who know the pleasant lanes and great wide roads of this delightful English county. It is illustrated with fine drawings by Mr. Hugh Thomson, some of which are reproduced in our pages by permission of Messrs. Macmillan and Company, Ltd., the publishers of the volume. These are more than 150 in number, and nearly every one will refresh the memory of the motorist who has gone into Surrey, avoiding police traps by the way. Very interesting is the chapter on the Pilgrim's Way, with its story of the past and its route at the present time. Then we are taken to the westernmost of all Surrey towns, and with pen and pencil a picture is presented of Farnham, with its old and orderly main streets, and recollections of Cobbett, who was born in a farmhouse now known as the Jolly Farmers' Inn, on the outskirts of the town. Readers of the "Rural Rides" will thank Mr. Parker for reviving memories of those pleasant chapters, although Cobbett's characterisations of scenery are not always happy, *e.g.*, when he described Hindhead as the "most villainous spot God ever made." Frensham Ponds, Waverley Abbey, and Moor Park are in the vicinity, and have full descriptions. And then the author grows eloquent over the Hog's Back.

This is certainly the noblest highway in Surrey, and, perhaps, the most characteristic of the county. You may often travel along it and yet not see the finest of the view on either side; in the summer, more frequently than not, the whole countryside, north and south of

the ridge is swimming in a blue haze which dims and muffles the horizon. But there is no other road on which you can walk so far and see so much broad Surrey country open out mile after mile on either side, and from which you can watch so many changes of woodland and common and cultured fields, from the green and golden hops about Farnham to the wheat and oats above Seale and Puttenham, and the long potato drills in the chalk by Wanborough. But the view is not the single beauty of the Hog's Back, though to walk high in the wind along open space is possible only on a few roads in the county. The Hog's Back has a treble charm belonging wholly to the roadway itself; its width, its spacious grassy rides on each side of the broad hard riband of metal that runs white and unswerving east and west, and most gracious of all, its deep and exuberant hedges. The highest point on the road lies a mile beyond Wanborough, on the way to Guildford. Here you are over five hundred feet up, and the roads drop gradually, ending in a sudden slope almost as soon as Guildford, bricly and cheap-looking from this aspect, comes into view.

Naturally, Guildford, upon which eight highroads converge, has much attention. Even Cobbett praised it as one of the prettiest towns in England. Its main street has not changed much for years, and its inns have been famous for centuries. An excellent chapter is that on Godalming, the best view of which is obtained from the hill roads above Farncombe. Not many towns group themselves so well against hills and woods; few have so spacious and quiet a foreground. Unfortunately, the "restorers" were at work on its parish church in 1840—with the result that usually followed in that generation of despoilers. To many readers the section devoted to Haslemere and Hindhead, in association with Sir A. Conan Doyle, George Eliot, Mrs. Allingham, Dr. George Macdonald Tyndall, and other famous names, will have most interest. Hindhead, we are told, is the most superb and most disappointing thing in Surrey. "The worst way to see Hindhead is to follow the motor-cars up the main road. The motor-cars see the road, but never Hindhead at all."

We illustrate one of the distinctive inns of the Fold country—Alfold, Ifold, Durfold, Dunsfold, Chiddingfold, and other



The Crown Inn, Chiddingfold.

"folds," which lie among oak woods and ploughlands that once were oak woods. Alfold has hardly begun to grow, Dunsfold straggles, and Chiddingfold sits compact about its sunny green. The old inn is the Crown, which claims to have been standing for more years than five centuries. It is a pleasant and solid hostelry, dark with enormous wooden beams. Another picture more familiar to the week-end Metropolitan motorist is that of the village street at Ripley.

Ripley itself, but for the traffic, would be the prettiest village on the road. A long string of low-roofed houses lines the highway; little white gabled cottages offer tea and refreshments. Two old inns share most, I suppose, of the custom of fasting travellers. The Anchor, an inn of many gables, has fixed itself in the affections of bicyclists since the days when they rode velocipedes, and its black beamed walls and passages hold drawings of strange souls mounted on wheels which would have scared Ixion. The Talbot, which was once the Dog (but a talbot is a dog always), is a house of imposing squareness. You may see the dog painted above the door, a liver-and-white fox-terrier, all proper. Opposite the inn stretches Ripley Green, a broad and shining level with many memories of Surrey cricket, and in particular of "Lumpy" Stevens, of Send. The motor-car has brought prosperity, even if it is a prosperity that can soil. But the tarnish washes off in night and rain. Ripley may look its best early on a Saturday morning, before the flood rushes down the road. When the little village lies clean and fresh in the sun, and the inns are busy with white tablecloths and cooking potatoes, and the children sit on the edge of the green before the dust comes, there is a sense of orderly bustle and of waiting for a day of hard work and good money that is pleasant enough. One building only has suffered from the business of the road. The little church stands behind arches and canopies of clipped yew, its walls almost touching the highway. It is an interesting little building, though much altered from its oldest form; the chancel has the remains of clustered pillars, and a beautiful string-course of Caen stone running round it. But those have not been the only attractions to visitors. Two miles up the road lies the Hut Pond, opposite an inn that serves many tables. There is no quiet on the pond in the business of the day, but I was once on it on an October evening, and as the sun went down the sky filled suddenly with teal. Bunches of teal wheeled and circled in the cold twilight, whizzed down among the rushes, darted up again and round over the pines, then shot down again and settled, splashing quietly in the sedge.

Battlefields are not numerous in Surrey. There is one at Ockley, the Roman Road of which is a typical illustration from the volume under review. The great battle of Ockley was fought when the Danes came two centuries before Harold fell at Hastings. To-day the "peace that broods over Ockley is born of wooded parks and sunlit spaces," and the green is one of the largest in Surrey, probably the prettiest of them all. Mr. Parker's wanderings have taken him everywhere in Surrey, and we must leave his entrancing volume, which can be dipped into with interest on every page, with a reference to Weybridge. Its silence has been disturbed, according to the lawyers, by the



The Roman Road, Ockley.

coming of the car. Mrs. Kemble was one of its most famous residents for years. "If," says Mr. Parker,

"that charming and brilliant lady could revisit these glimpses of the moon, what would she say of that infinitely larger 'mound' and its surroundings in the new motor track with which it is Weybridge's unhappy fate to be linked to-day? Nearly a square mile of quiet meadow and forest and hill slashed and scarred and scaped into a saucer of cement; acres of pine and cedar and oak and rhododendron smashed and sawn to fragments; the roar of thundering Napiers and Hotchkisses, where once the reed-warblers climbed the meadow-sweet and cuckoos called from the willows—how would she have addressed the originator of that staring, blatant racecourse? Strangely enough, she saw something of the kind befall her beloved Weybridge pinewoods

sixty-seven years ago, and wrote of it in her diary. The motor course led to at least one interesting discovery. When the picks were hard at work in the sand, and day and night were enlivened by steam-engines, and casual labourers sleeping off their wages in other people's summerhouses, there went about a word of a great find. A pot of copper had been found, some said; of coppers, others said; of Roman gold coins, there was a rumour, and all the coins exchanged for beer. Perhaps some coins were found; what certainly was found was a beautifully-made bronze bucket, buried deep below clay and sand in a bed of gravel. It has been classified by the experts as belonging to a Venetian workshop of the seventh century B.C., actually the days



The Village Street, Ripley.

of the early Tarquins. Prehistoric traffic between Britain and Italy may not be an entirely new idea, but the bucket opens a new chapter.

The "Highways and Byways in Surrey" is certainly one of the most interesting books of the season, written, illustrated, and published by recognised authorities in their respective departments of literary activity.

SPEED IN THE ANIMAL WORLD.

TESTING the comparative speeds of various animals and fowls by speedometer is the latest pastime that is being indulged in by some American motorists. Mr. Donald McIntosh, of the Studebaker Automobile Company, declares that his car was paced for eleven miles by a jack rabbit over a fine piece of road near Leavenworth, Kansas, and the speedometer fluctuated from thirty-seven to forty-two miles. According to the same authority the cottontail rabbit does well for about two to three miles at about twenty-three to twenty-six miles an hour, but cannot exceed twenty-eight miles an hour. Of the bovine tribe, observations show that the two-year-old steer is most agile; he is capable of about three miles at an eighteen mile pace and hates to be conquered. In this characteristic he differs from the horse, which invariably seeks a side road when chased by a motor-car. The steer, however, continues straight along the road until exhausted. As regards domestic fowl, Mr. McIntosh declares the goose belies its reputation for lack of wisdom. Invariably it steps from the road on the approach of an automobile, while the chicken loses its mental equilibrium, and cannot decide whether to race the car or select one side of the road or the other. The turkey will stand on its dignity as long as possible—sometimes a trifle too long—but it is not as cautious as the goose.

MESSRS. JARROTT AND LETTS send us some rather interesting figures they have been able to get out in regard to the running of a single-cylinder Sizaire-Naudin car which go a long way to prove that a small-powered car can be run a great distance at a very small cost. The car in question was one belonging to the firm, and was run by Mr. Ernest Gould, who has been travelling on their behalf through various parts of England. The distance covered between August 3rd and September 14th was 7,713 miles, the total cost of running for petrol, oil and garage charges showing an amount of £30 9s. 7d. Three hundred and fifteen gallons of petrol were used on the car during that distance, and twenty-one gallons of lubricating oil.

MOTORING ACCESSORIES.

Aluminium Castings.

Mr. R. W. Coan, of 219, Goswell Road, London, E.C., has become identified in the eyes of motorists with aluminium castings of every variety, as well as the repair of the same. He is a practical worker in the metal and supplies hardened aluminium for turning and other purposes. Of this fact we are reminded by the arrival of a cast aluminium card tray 12in. by 8½in., on which are seen a motor-car on the road, motor-boats, an aeroplane and other features of modern locomotion. These are



Fig. 1.

representatives carrying Coan's clean castings cast in aluminium, and the tray (Fig. 1) should do something to keep Mr. Coan's specialities well before the trade during the coming year.

Speedometer Guarantees.

With reference to the confidence of Messrs. W. S. Searle and Co., 33, Glasshouse Street, London, W.C., in their O.S. First Prize Speedometer, we may mention that they guarantee their device against loss of magnetism for ten years from the date of delivery to the motorist. Further they agree to replace or repair at their own expense within the lapse of one year any defective part, and will also test free any instrument sent to them, while dials will be changed and reset to zero at a moderate charge. An interesting offer by the firm is that of a Certificate of Accuracy, which will be supplied subject to the test being satisfactory. This has several times proved its value in the police court and is becoming increasingly appreciated by motorists.

C.A.V. Magnetos.

A good type of magneto which we have lately seen is the C.A.V., which has proved itself since its introduction in 1907. Simplicity is the feature of the instrument, in which the wearing parts of the cams, &c. are of hardened steel. Parallel ball bearings are used throughout and easily accessible oil ducts leading to the various bearings facilitate lubrication. An important point in connection with the C.A.V. magneto is that the contact breaker can be removed bodily for cleaning or adjusting the platinum points. This is done by simply drawing back a couple of spring plungers. These magnetos are made in various types for cars and motor-cycles. Messrs. Vandervell and Co. are now producing fifteen distinct types of high tension magnetos for automobiles, comprising single, twin, four and six-cylinder machines.

The Lomax Detachable Tread.

Special advantages of real importance are claimed by the Lomax Tyre Company, of Great Charles Street, Birmingham, for their detachable tread now being placed on the market. The rubber tread can be either cross grooved or plain and is built up on a specially prepared fabric. It is attached to the rim by metal clips which engage into the upturned edge. The company has rendered good service to motorists in bringing this detachable tread to their notice.

General Accessories.

The Motor House, of Euston Road, London, N.W., have issued a new list of motor accessories and clothing which will be of service to those who intend to overhaul their car equipment in the New Year. A large selection of head lamps has been obtained, including acetylene lamps for use with separate generators and self-contained acetylene head lamps of stylish model, giving a good light, the gas being generated automatically. The Regal tool kit is also being specialised in by the firm. This is made in two sizes in a stout waterproof case and folds up in a very compact fashion. In electrical accessories the Motor House has a large stock of Regal accumulators, the positive plates of which are made with a special

grid so as to secure a large surface capacity. To prevent the plates breaking from the lug a solid bar is cast, and it is practically impossible for any break to occur with ordinary usage. A large consignment of motor horns has also been secured by this firm, including the Mobile horn, which is a well made and excellently finished model provided with the newest dashboard attachments. Mention may also be made of the Prowodnik motor tyres, which are the subject of a special list by the Motor House, the firm having secured a very large stock, which is now being disposed of at a considerable discount from the prices which have hitherto ruled.

Spare Tyre Protection.

To the car owner at all times the protection of spare tyres is a matter worthy of the most careful consideration, but at this period of the year, when weather conditions are at their worst, it becomes a question of vital importance. One of the most successful devices in this connection is the Brooks patent spare tyre wrapper. There is no lacing with this wrapper; it is exceedingly neat in appearance, goes on like a glove, and, above all, does not gape at the bottom and thus defeat its object by letting in water. Messrs. J. B. Brooks and Co., Ltd., Birmingham, are supplying this useful accessory.

The Usona Bulb Guard.

A useful device known as the Usona motor horn bulb guard has recently been placed on the market by the Usona Stamping Works, 199, Grand Street, New York. Its purpose is to prevent the breaking off of horn bulbs at their joints with the tube. A bulb fitted with this guard can be attached in any position most convenient for use, and can be blown with a push of the elbow or touch of the hand, as it is not necessary to squeeze the bulb in the ordinary way when the guard is used. The device is made of brass and is given a highly lustrous finish. It is tapered to conform to the shape of the bulb and is made in three sizes to fit all standard bulbs.

The Gabriel Horn.

Although not the latest novelty introduced to motorists by Messrs. Brown Bros., of Great Eastern Street, London, E.C., the Gabriel Horn claims recognition as one of those tried devices which have become a standard accessory on the car. Utilising the waste gases from the exhaust to secure its operation, the horn also avoids the complications that ensue when much mechanism is provided to secure a single purpose. The Gabriel note, too, is distinguished by a rich musical tone which will serve to give good warning without adding offence. The device consists of a brass tube shown in Fig. 2, which is divided into three chambers, each producing separate and distinct notes blending into a melodious tone when operated by the foot lever or by a cable attachment fitted to the steering column with a small lever attached on the Bowden principle. In this case all that is required is a pulley fastened at the point where the cable turns in the direction of the steering column. The horn is located by the side of the car and a valve supplied with the instrument is placed on the exhaust pipe at the rear of the silencer, and as closely as possible, being connected with the foot lever by a wire cable, a spring being also attached to secure the closing of the valve when the pedal is released. To allow for the

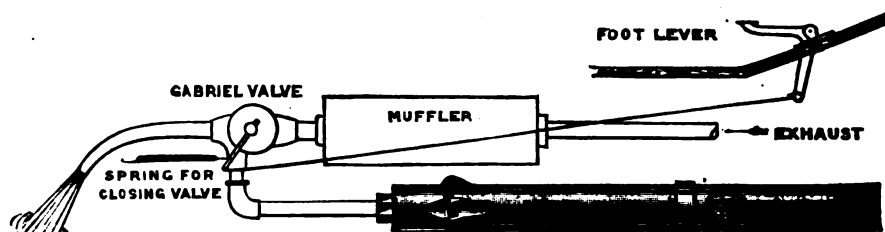


Fig. 2.

varied nature of the exhaust—light or strong—a shorter or longer 1 in. pipe should be used between the valve and the horn, and, in some cases, it will be found advantageous to place a wire screen in the pipe so as to break the force of the exhaust. The Gabriel horn can be easily fixed, and, once in position, requires no attention save for an occasional cleaning, when the parts can be readily taken down and replaced in good working order in a few minutes. The volume of sound is entirely under the control of the driver, and the device is one that has proved popular in a great degree. It is made in four sizes suitable for cars up to 10-h.p., from 10-h.p. to 20-h.p., 16-h.p. to 30-h.p., and 25-h.p. upwards. Inquirers should mention the name and model of their car, together with the outside diameter of the exhaust pipe, in order to facilitate the selection of the particular size horn for their requirements.

Correspondence.

[Letters to the Editor should be addressed to the offices, 27-33, Charing Cross Road, London, W.C.]

THE "SHEFFIELD-SIMPLEX" GEAR-BOX-LESS CAR.

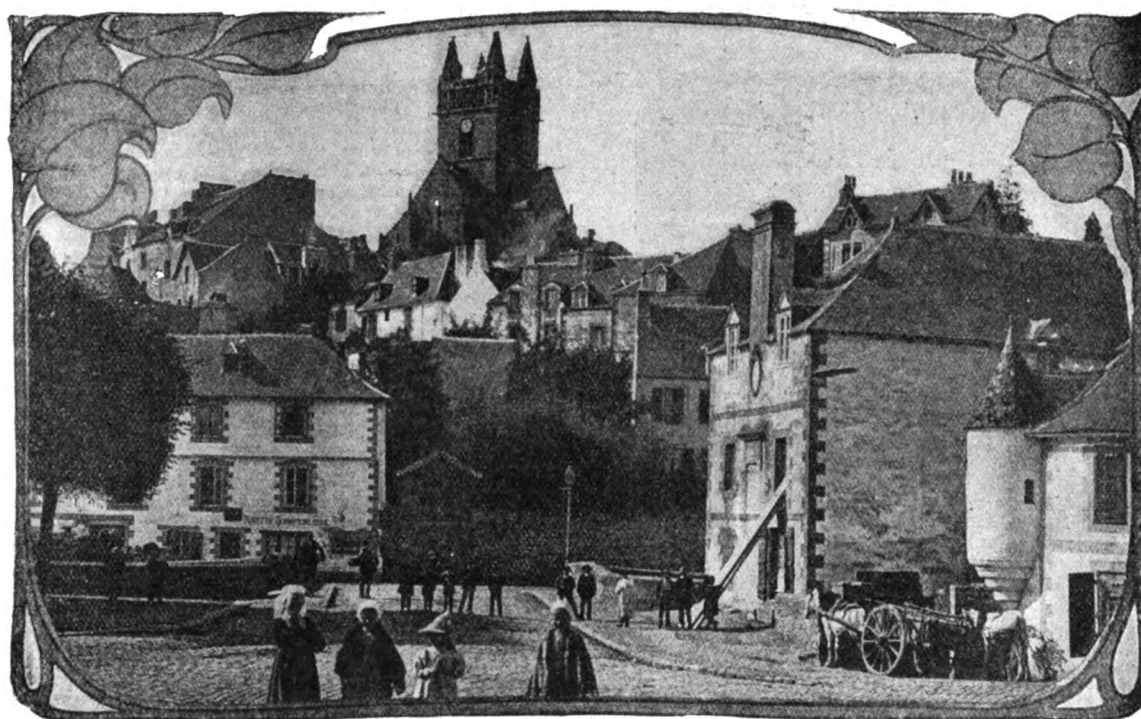
TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—As we believe there is an impression about that in our new model car we have, in dispensing with the ordinary orthodox gear-box, and embodying a two-speed and reverse gear in the torque resisting member, at the same time increased the unsprung weight on the rear tyres to a considerable extent, we wish to take this opportunity of stating that such is not the case. Compared with our other type of live axle chassis, of exactly the same power and dimensions, which generally is of about the same weight as other makes of chassis of the same power, the unsprung weight on the rear wheels is approximately the same—in fact, if anything it is a few pounds in favour of the gear-box-less type of chassis.

The possibilities of this can be readily appreciated by consideration of the following points of construction of the unsprung portion of this new model. In the first case, the method we have adopted in dispensing with the ordinary gear-box has resulted in a saving of 340 lb. (the equivalent of three lady passengers) in the total weight of the chassis, practically the whole of which was previously carried on the rear wheels. This

wheel, it could be made of the ordinary small dimensions if external webs were used, but, considering the casing is of aluminium, the slight additional weight of making it the larger section is unimportant compared with the numerous other advantages this form of construction provides.

We may say that the question of unsprung weight in this new type had our most serious consideration at the time we produced the first, one for experimental purposes, and it is owing to the very careful manner in which we carried out the design of this car that we were able to obviate this much-debated point in motor-car construction. We may say that the first model of this car was put on the road as early as April last year, after which we subjected it to road tests extending over 5,000 miles, in which it covered roads and known hills extending south as far as Devonshire and Somerset, and north over the Scottish Trial Route. During this period it was driven not only by ourselves, but also by a number of private users of cars, and without exception the improvement in running and efficiency was such that all those who had an opportunity of going on the car were astounded what it could do. The increase in efficiency and flexibility is most marked, enabling practically all the driving, including



Touring in Brittany —La Place Nationale, Quimperle

naturally greatly relieves the load carried by the rear axle, in consequence of which, without sacrificing any necessary strength, we are enabled to make the construction of our axle lighter.

In the second case we would point out that in this model, as well as our others, we adopt the arched principle of live axle, which results in placing the same under compression instead of under a bending strain, as is usual with straight axles. This principle at once enables a lighter axle to be constructed of the same or even greater strength than the straight axle. Thirdly, the propeller shaft always running at engine speed also permits of this part being made lighter without sacrificing strength in comparison with the usual type of propeller shaft behind the gear-box. Fourthly, we make a standard of fitting Rudge-Whitworth detachable wire wheels to this model, which are lighter than the artillery pattern wood wheel.

In explanation of the large diameter of the axle casing we would like to mention that this is caused owing to our putting the stiffening webs for this part inside instead of outside, which, besides making a much cleaner casing, obviates the awkward dirt-collecting corners that exist with external webs. We think it will be agreed that this construction is more mechanically sound than the ordinary type with external webs. Further, it also facilitates very greatly the question of accessibility, as in the case of this axle a large inspection cover at the rear of sufficient size to enable the differential gear to be not only examined, but to be taken out if necessary by the removal of four nuts only is provided.

As this axle casing only contains the differential gear and crown

starting, to be done on the direct gear, it even taking difficult and tortuous ascents having gradients of 1 in 7 on this gear; in fact, it was really necessary to get away from the main roads to look about specially for gradients sufficiently steep to necessitate the use of the lower gear, and even then it ascended hills like Porlock on the lower speed at speeds well up to and over the legal limit.

Also, during the 5,000 mile test, the car was driven at high speeds over rough roads with a view to finding out if there were any weak points in the construction, and we can honestly say that from the records we kept, that not only did the car not show any signs of wear at the end of the test, but also that there were no signs of any ill effects from the unsprung weight on the rear tyres.

The actual weight of the chassis of the Sheffield-Simplex gear-box-less car, though of six-cylinders, 48 h.p., is only 21 cwts., as against anything from 23 to 28 cwts. in other chassis of similar h.p. and size, and, owing to the great advance in simplicity it embodies, provides a light high-powered six-cylinder car with, we think we can safely claim, no more parts than any four-cylinder car of equal size and class, whilst the capability of being able to do practically all work on the direct top speed improves the running to an extent that has to be tried to be fully appreciated.

The reduction in the number of parts combined with the corresponding great reduction in weight has also the natural effect of a considerable reduction in cost of running and maintenance.—Yours truly,

PERCY RICHARDSON.

THE DISPOSAL OF PETROL.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—The suggestion made by your correspondent, G. Campling, that petrol is poured down the drain by persons "after washing their blouses" is probably the cause of the fires and explosions which occur from time to time in the sewers. The local authorities are apt to blame the proprietors of motor garages in these matters, but the chief offenders, after all, are most likely to be those persons who use petrol for cleaning purposes in their homes. Are these persons liable to any penalty for doing this?—Yours truly,

G. TROPP.

A WARNING TO MOTOR TRADERS.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—I venture to warn motor agents and dealers in the Metropolis that the police are just now devoting considerable attention to cars bearing trade number plates, so that they would be well advised to keep an extra careful eye on the entering in and out of such vehicles as may be sent out for trial or tuning-up runs.

The other day I heard of a somewhat interesting case, the police stopping a motor-lorry with a trade number and carrying a load of old iron, and asking for the name and address of the driver and the owners. The latter were able to prove that the machine was out on a *bona fide* trial run, the intending purchaser stipulating as a condition of the bargain that the vehicle should carry its full load up a certain hill. The police at first demurred, but finally realised that they had no case and quietly retired.—Yours truly,

A MOTOR AGENT.



Winter Sports in Switzerland.—Skiing on the Righi.
(La Suisse Sportive.)

THE DUST PROBLEM.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—I hope you may find the following note worth recording. As I was driving from Canterbury to Ashford, two cars passed me. One smothered me with dust: the other raised less dust than a bicycle.

The dustless car left a clear impression of the tyre suds on the road: the dusty one left a series of scratches pointing backwards. Both were running at the same speed, about 25 to 30 miles per hour, thus showing the same relative efficiency for travelling purposes; but the dusty car was expending its (excessive) power twirling its wheels round, scratching up the gravel and throwing it backwards, whilst the dustless one was using its (less) power all in propulsion.

The inference is that the one car was *over-powered in proportion to its weight* and lost efficiency by lack of adhesion to the road.

An easy course of experiment might indicate a definite relation that ought to exist between the total adhesive weight of a car and the power of the engine that is to drive it. Perhaps 1 cwt. to 1 h.p. would be found about correct, and such a principle put in force might lessen our troubles.—Yours truly,

THEODORE F. S. TINNE.

THE COST OF A CAR.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—As the majority of makes of motor-cars are now being marketed at a normal value, and the buying public appear to be seeking after cheap cars rather than expensive ones, it might be interesting to give some hints regarding the exact value of a motor-car. It should be noted that we do not take into consideration the cost of experiments, tools, patterns, &c.

necessary to establish the actual type of car supplied by a manufacturer, but take a model which is so popular and standardised that all the initial costs of production have been written off.

On a powerful car, which has a small clientele, and, of course, a comparatively limited output, these items are of considerable importance. In the cost of a car one has to consider:—(1) The raw material; (2) the workmanship; (3) the general expenses and normal profit of the manufacturers and retailers. The Germain works have compiled the following table, showing for their principal type of car, viz., the 14-h.p. Chainless, the cost of raw material and parts which must be purchased before commencing to manufacture a series of chassis.

Table of raw material used in building a Germain chainless chassis:—

| | |
|--|----------------|
| Tyres... | 21.7 per cent. |
| Steel... | 10.6 " |
| Aluminium castings... | 9.2 " |
| Axles... | 8.4 " |
| Rubber tubing, aprons, nuts, bolts, &c. | 8.2 " |
| Magneto and fittings... | 8.2 " |
| Ball bearings... | 7.4 " |
| Radiator... | 6.4 " |
| Chassis... | 3.8 " |
| Bronze castings... | 3.4 " |
| Forgings... | 2.8 " |
| Springs... | 2.6 " |
| Cast iron... | 1.8 " |
| Steel tubing... | 1.5 " |
| Paint work... | 1.4 " |
| Lubricating materials... | 1.4 " |
| Wood-work... | 1.2 " |

100 per cent.

From an examination of this table one can deduce some very interesting points. The proportion of tyre cost is somewhat astonishing, and the first question to be taken into consideration is the great importance of the weight of a car, this weight being the criterion of the initial cost of tyres as well as their upkeep afterwards. The second item of cost is steel. In a car of the 14-h.p. Germain type, 1,300 lbs. of steel of various types and qualities in the rough are required. One penny in the cost of each lb. saved would therefore reduce the cost by £5 8s. 4d. The price of steel can vary from a few pence per lb. to 2s. and more per lb., and one can imagine what difference it can make in the cost of a car to use good or common steel.

By replacing aluminium with cast steel or iron a new economy would be realised, but again the important question of weight would interfere, and the economy would only be for the manufacturer. Then comes the front axle, a point on which rests the safety of the occupants of the car. A good axle costs anything up to £20, some racing axles costing £70 or more, whereas a cheap axle can be bought for £2 or £3. To all outward appearance they are identical, and nobody would be able to recognise the good one from the cheap one simply from inspection.

An expensive magneto and a good radiator can be replaced by common and cheap types, but with this reduction in price there would be a proportional increase of possible breakdown. The sundries and other parts come to a more moderate proportion, and certainly an economy could be realised on most of this material. Having the material, then comes the cost of time of manufacturing same. Of course we presume on absolute standardisation, without which one cannot have a perfect motor-car. With a good equipped works, well designed tools, and if the cost of labour is not excessive, the men's time expended on a chassis amounts to about 10 per cent. of its value.

What is more expensive and important is the case-hardening and tempering, and then the necessary rectification of all the working parts. If these operations are not made, which is often the case in cheap cars, the machines at the beginning would certainly look identical, and the cheap one would run as well, if not better and more silently, than a car more conscientiously made, but after a time all the soft moving parts would start to wear and then rapidly the car would go to pieces, and it would be impossible to have it repaired. Case hardening, tempering and rectification are expensive operations, but the only guarantees against wear and tear.

The general expenses, advertisement and normal trade profit which then come add to the price of a car. These are generally in good firms in proportion to amount of output, and are points which it is more difficult to account for. To sum up, two cars absolutely identical from outside appearance and running as well as each other may vary in value and price up to about 40 per cent. Many buyers are not in a position to realise the difference between these two cars when new, and a trial run cannot give them any guarantee. There is only one point, their confidence in the firm they deal with, and of its stability and experience.

The value of a good motor-car cannot come below a certain sum, and personally we believe that the actual prices in the majority of cases are perfectly normal, and cannot become cheaper, but most probably go higher, as the manufacturers will shortly see that, at these prices, they cannot make the necessary profit to keep alive their industry, which has this drawback, that it rises and falls according to fashion.—Yours truly,

THEO. MASUL.

MESSRS. MARTINS, Bow Bridge, E., have sent us a photo of a 20-h.p. Orion lorry they have recently supplied to the London School Furniture Company, of Islington, N.

CLUBS AND ASSOCIATIONS.

ROYAL.

THE Technical Department of the R.A.C. has received several enquiries with regard to the certified trials of tyres; and its resiliometer is being frequently used for measuring the yield and return of the tyre when subjected to concussion.

Arrangements are also being made for similar trials of the amount of oil consumed by a car of well-known make. The club's speedometer-calibrating instrument is much in demand, members realising that an accurate speed recorder may mean all the difference between a conviction and a dismissal in the police court.

The Guernsey Motor Association has decided to become associated with the R.A.C. at the beginning of 1909.

New members of the R.A.C. include the Hon. E. G. Spencer-Churchill, Colonel Sir Alan Colquhoun, Sir Joseph Jonas, and the Rt. Hon. Thomas Lough, M.P.

MOTOR UNION.

It was reported at the monthly meeting of the Motor Union on the 17th inst., that during the first eleven months of the present year £4,648 had been received in deposits from British and American members for custom duties deposited for Continental tours. The Finance Committee reported that in the same period the receipts had been £15,272, as against £9,887 in the corresponding period of 1907. A committee was appointed to arrange the model direction post to be issued by the Union for placing near schools. A ladies' reception committee was also appointed for provin-

SCOTTISH.

THE General Committee have considered the matter of the Scottish Reliability Trial in 1909, and the recommendation of the Trials and Competitions Committee has been adopted to the effect "that the trial should comprise 1,000 miles, and should take place in the week commencing June 14th, 1909," and the matter was remitted to the Trials Committee with full powers to frame and issue regulations and to carry out the trial.

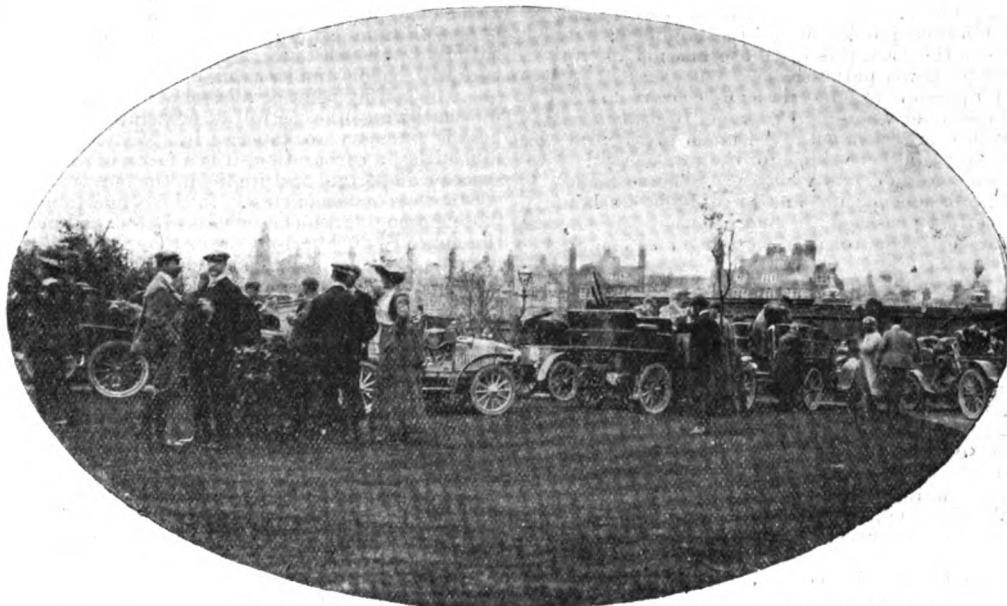
AT the last meeting of the Council of the Incorporated Institution for Automobile Engineers reports were presented with reference to the formation of the Birmingham and Coventry centres of the Institution.

ON Thursday of last week Mr. C. Y. Knight gave a lecture to the members of the Midland A.C. on his "Silent Knight" engine.

ROAD REPORTS.

EALING.—A memorial has been forwarded to the Ealing Town Council on behalf of a large number of residents of Hanger Lane and district, drawing attention to the speed at which motor-cars are constantly driven along Hanger Lane to the danger of foot passengers. The borough surveyor is, as a result, communicating with Inspector Andrews, of the Ealing police, on the subject. The question of the nuisance caused by the noise and emission of grease on the roads from motor-omnibuses is also being dealt with in a similar way.

ISLEWORTH.—The Middlesex County Council Highways Committee have declined to support the application of the Heston and Isleworth Borough Councils for a speed limit for motor-cars on the London main



A Reminiscence of the 1903 Reliability Trials.—The Cars at the Hotel Metropole, Folkestone.

cial meets, and it was decided to issue a small button badge to motor-cycling members.

CYCLE AND MOTOR TRADES BENEVOLENT FUND.

ON the 17th inst. the fourth annual general meeting of the Cycle and Motor Trades Benevolent Fund was held at the Holborn Restaurant, London, with Mr. Albert Brown in the chair.

It was reported that the number of members and subscribers had more than doubled during the year, the total at present on the books being 1,406. The contributions received from the motor trade since the S.M.M.T. gave its donation amounted to £571. The balance sheet, which showed a total of £6,770 standing to the credit of the fund, was then adopted.

The list of ex-official councillors having been read, the following were elected for the motor trade:—Messrs. H. Burford, W. H. Harby, W. Hill, W. Johnson, W. M. Letts, and F. W. Shorland. Following the annual meeting, the Council met, with Mr. Ernest Brown in the chair.

WELSH.

THE second annual dinner of the Welsh A.C. has been held at the Hotel Metropole, Swansea, with Capt. D. Hughes-Morgan, J.P., in the chair. The Hon. Stephen Coleridge responded to the toast of "Motoring," which was in the hands of Mr. T. J. Williams; that of the "Motor Union," proposed by Mr. Basil Valentin, was replied to by Mr. Rees Jeffreys. Councillor D. Davies proposed "The Welsh A.C.," and in response Capt. Hughes-Morgan said it consisted of 180 members and was proving of considerable service to motorists in the Principality.

road at Isleworth, being of opinion that there are no special circumstances which suggest that the road is specially dangerous for motor traffic.

SUNBURY.—The Sunbury District Council have decided to apply for a ten-mile speed limit to be fixed for motor-cars using Staines Road from Shear's Corner to the George Inn, and in Thames Street from Halliford Road to French Street.

RULE OF THE ROAD.

THE Chief Constable of Preston has recently taken steps to secure the better regulation of street traffic, and the more strict observance of the rule of the road. A circular issued to drivers some weeks ago directed attention to the bye-laws, and conveyed the warning that unless these were obeyed offenders would be summoned. At the Preston Police Court, a few days ago, three drivers were each summoned "for driving a cart and not keeping the same on the left or near side of the road." P.C. Fleetwood stated that defendants drove their carts along the centre of Broadgate, and inconvenienced traffic overtaking them. The Chief Constable pointed out that the police did all they could to control the traffic, and in the narrow streets it was essential the bye-laws should be obeyed. The Chairman (Mr. J. Toulmin) agreed, and said it was imperative the rule of the road should be observed. A fine of 1s. and costs, or in default seven days' imprisonment, was imposed in each case, but it was pointed out that the Bench would probably take a more serious view in future cases.

MESSRS. HOLLICK AND PRATT, motor body builders, have removed to larger premises at Mile Lane, Cheylesmore, Coventry.

THE FUTURE OF ALCOHOL AS A MOTOR FUEL.

THAT a majority of motor-car owners and manufacturers refuse to seriously entertain the claims of alcohol as the coming fuel for their motors is due to the fact that they have as yet experienced no difficulty in obtaining all the petrol they require at moderate prices; while the cost of denatured alcohol, compared with that of petrol, remains prohibitive; in addition to which the physical characteristics of alcohol show this fuel at a decided disadvantage with petrol when used in the ordinary petrol engine. In reviewing the subject indicated by the title of this article it therefore becomes necessary, remarks Mr. Frederick W. Barker in the New York "Motor," to consider (1) whether petrol can continue to supply the increasing demand for motor fuel, (2) provided petrol fails to meet the increasing demand, why alcohol should be its successor, and (3) in what manner alcohol may be expected to approximate the results of petrol in the low compression, high-speed motor.

In the first place, the whole art surrounding the automobile motor has been built up in the past quarter of a century with petrol as the fuel, and the engines, with moderate compression and short piston stroke, are the direct result of mechanical skill displayed in utilising to the fullest extent the peculiar qualities of petroleum spirit. Although it is argued by geologists that the world's sources of petroleum are limited, and the supply cannot be kept up at the present rate of consumption, yet that supply is so large that it is difficult to grasp the idea of its becoming inadequate. A reason nearer comprehension why the cost of petrol may be expected to go up considerably in the near future is that as, roughly speaking, twenty gallons of petroleum must be handled in the distillation of one gallon of petrol and the demand for the lower distillates and products is not growing in anything like an equal ratio with the demand for petrol, it cannot much longer be profitable to market petrol at the prevailing prices. Could the petroleum owners find a commensurate use for paraffin their problem would be simplified; but, notwithstanding all attempts in the past, this distillate has not as yet been found generally suitable for power purposes.

When the fuel demand for pleasure automobiles can be so great as to create solicitude concerning the supply, it is surely proper to study this question even more closely in connection with the much greater impending demand, as the commercial motor vehicle for the transportation of goods, cabs and buses come more generally into use. These latter fields are only just beginning to be opened up, and have doubtless lain fallow largely on account of certain phases of the fuel question—to wit, the uncertainty regarding the cost of petrol and the danger attending the storing and handling of this fuel.

With the general use of the internal combustion motor for business purposes, it can readily be seen that the consumption of fuel will be enormous, and hence, with the approach of that era, the economic side of the fuel question is rapidly becoming acute. In France and Germany it has been foreseen for years past that the petrol supply would become inadequate, and the Governments, as well as private enterprise, have sought to provide a substitute. That petrol is as fine a fuel as can be desired is conceded by all, but the fear of its passing is so pressing that Continental legislatures have passed laws removing the taxes on alcohol, have encouraged the farmers to grow crops rich in alcohol-yielding constituents, and have offered rewards for practical means of using alcohol in petrol engines. All these indications point to the coming of a time, which, though it may be deferred for several years yet, is surely near at hand, when a sharp rise in the price of petrol will announce the fact that the supply is insufficient to answer the requirements.

With a shortage in the petrol supply the motor vehicle industry and adherents, as well as the users of motor-boats and stationary engines of the internal combustion type, will apparently be face to face with the problem of either paying an exorbitant price for fuel, or of changing over to another form of engine. It seems, therefore, to be within the province of economists to consider the merits of other existing fuels in an endeavour to provide a substitute for petrol for use in the present motors. The prime consideration for such a fuel must be its availability in sufficient quantities to warrant its fulfilling all possible demands, of course at a price which will not retard the development of the several industries with which the internal combustion engine is allied. It is a *sine qua non* that the new fuel must give service approximating that of petrol.

In considering the claims of various fuels to in part or wholly take the place of petrol only three kinds have received serious consideration by investigators. They are petroleum, benzol, and alcohol. Of these the first two are handicapped because limited in production, alcohol alone being capable of production in unlimited quantities throughout the world. While under certain conditions petroleum furnishes ample power, it is less elastic than petrol in the proportions with which it may be mixed with air to effect good combustion, so that variation of the mixture is only practicable within narrow confines, and it is necessary to run the engine almost at a fixed load. In automobile practice this deficiency involves a more frequent use of the change-speed gear, the penalty for a liberal use of the throttle being poor combustion, the rapid accumulation of carbonaceous deposits on the valves and sparking-plugs, and foul exhaust. Petroleum being harder to volatilize than petrol, requires the addition of heat before it is introduced into the combustion chamber. A great variety of means for applying this heat have been devised, and some petroleum motors are in the market equipped to do good service. But it is due to the peculiar characteristics indicated that this fuel is not generally used and is unawaited to take the place of petrol.

Benzol, which is a product derived in the distillation of coal tar, is, even at the present time, too high in price to appear as a serious claimant to the position now occupied by petrol, and should there be a large demand for this product, its cost would become prohibitive because of its comparatively meagre sources of supply. Benzol appears to serve about as well as petrol in the cylinder, excepting that the exhaust is more obnoxious, and there is more tendency to foul the motor.

With regard to alcohol, when considered from the standpoint of a sufficiency, we find this fuel to be absolutely unlimited in production, its sources being practically all of a vegetable kind, and there being a wide range of crops containing starch or saccharine matter, such as corn, potatoes, beets, sugar cane, peat, &c., from which alcohol can be economically produced. In Cuba alcohol made from molasses is sold for 5d. a gallon. In Germany, where it is chiefly made from potatoes, and where a splendid system of distribution has been established, alcohol is procurable at approximately 1s. 1½d. a gallon all over the Empire.

The price in France is about 1s. 2d. a gallon, beets being largely used in its manufacture. Although alcohol is more extensively used in Europe than in the United States, the demand there is not yet of so vast a character as to warrant its production on a sufficient scale to permit lower prices to rule. Such large demands can only come through the general use of denatured alcohol by internal combustion engines, and thus it appears to be a question in this case of the demand leading to the creation of the supply. Certainly commercial alcohol cannot be cornered by trusts or corporations any more than whisky and other potable spirits. Just as the demand grows so will capital be forthcoming to erect distilleries and engage in the production of commercial alcohol whenever and wherever there appears a demand for it as a staple. Chemists the world over are engaged in working out processes for the economical production of alcohol from various kinds of vegetation, and unless all signs err we are on the verge of making a very broad utilization of this substance, all of which means that the cost of manufacture will be low and its availability most extensive.

The boiling point of alcohol is about 170 deg. Fahr., so that instead of volatilizing like petrol at moderate temperatures, the addition of heat is necessary to vaporize it. While this condition involves some difficulties in carburation, it is a factor of safety in handling and storing. Another important feature lies in the fact that the exhaust from alcohol is odourless and smokeless. In this connection it should be noted that in those thoroughfares of large cities where there is a congestion of motor traffic the nuisance arising from incomplete combustion of petrol mixtures is becoming intolerable. No doubt a good deal of this trouble is caused through the carelessness of chauffeurs in using wrong proportions of fuel and air, and sometimes through a too liberal use of cylinder oil; but the root of the evil lies in the narrow range in the different quantities of petrol which when mixed with air form good burning mixtures.

(To be concluded.)

AUTOMOBILE ACCIDENTS.

A MOTOR accident took place in the west-end of Folkestone early on Sunday morning. P.C.'s Earle and Nash were examining a lamp-post which had been recently damaged, it is thought by a motor-car. A horse-cab was standing near the policemen, when suddenly a motor-car came down the road. The vehicle dashed into the horse-cab with such force that it was completely overturned, and the two policemen were buried beneath it. They were rendered unconscious, and could not move. The constables, still unconscious, were taken to the local Victoria Hospital.

The driver, a man named Herbert, was arrested, and subsequently charged with furious driving and causing serious bodily harm. On Monday he was remanded from the local police-court, it being asserted that he was driving at a great speed, and was also under the influence of drink.

At a Hammersmith inquest, on Monday, on Frederick Thompson, who died from injuries received in a motor-car accident, all the witnesses agreed that the old gentleman, as he was crossing the Chiswick High Road, hesitated and then started forward again. The car was going at a very slow pace, Mr. John Cleave driving. The coroner asked why, as Mr. Cleave was driving very slowly at the time, he did not stop entirely when he saw the man hesitate. Mr. Cleave replied that he frequently did pull up in the case of a lady. The coroner.—But why differentiate between a lady and gentleman?—Because I expect a man could be able to make up his mind more quickly as to which way to go. The jury, in returning a verdict of "Accidental death," expressed the opinion that Mr. Cleave ought to have pulled up, and desired to caution him as to his future driving.

A WONDERFUL performance for a small car was accomplished on one of the hottest days of last summer by Mr. G. V. T. Montefiore, Rochester, who, driving his 10-12-h.p. Humber, successfully climbed a very steep rise on the Old Wyche Road at Malvern. The surveyor to the Malvern Urban District Council has officially certified that the slope in question is 1 in 5 for a length of nearly 500 yards, whilst the portion near the summit has a gradient of 1 in 3.4 feet. The length of the hill altogether is approximately one-third of a mile. Mr. Montefiore has been informed in Malvern that only one other car has ever climbed the hill, although many have made the attempt.

CASES AGAINST MOTORISTS.

SULTAN OF ZANZIBAR'S CAR.

Thomas Sopwith, of 83, Cadogan Gardens, Chelsea, was summoned at Edgware, on the 17th inst., for exceeding the speed limit with a motor-car, and failing to produce his licence. Mr. Staplee Firth defended. P.C. Tallin said that when defendant was stopped he said, "I don't think you can interfere with me. I have orders to drive fast, as I have Royalty on board."

Mr. Staplee Firth, in defence, said that the defendant was driving the Sultan of Zanzibar, and his instructions were that the car was being driven at about twenty miles an hour under the orders of the Sultan. Mr. Firth also contended that the Bench had no jurisdiction in this case, as all sovereigns were exempt from this law.

Sir William Gilbert said the Court was very anxious not to do anything that would strain the diplomatic relations between Great Britain and Zanzibar, and would therefore adjourn the case for the production of an authority in support of Mr. Firth's contention.

DISMISSAL.

On the 16th inst., Mr. H. Jungbluth was summoned at Brighton for driving a motor-car at a dangerous speed on Grand Junction Road. The police evidence was to the effect that the defendant drove at about twenty miles an hour. The witnesses for the police were two taxi-cab drivers, one of whom gave his version of the speed at fifteen miles an hour and the other as twelve. The defendant, giving evidence on his own behalf, agreed with the latter witness, and after a brief consultation with his colleagues the Mayor dismissed the case.

CHANGE OF ADDRESS.

On the 18th inst. the Princess Wiasemsky, of Reigate, was summoned at Brighton for being the owner of a car and failing to inform the Council, with whom the car was registered, of the change in her address. The Deputy Town Clerk said that this was the first case of the kind that had occurred at Brighton, and under the circumstances he asked that it should be withdrawn—a course which the Bench allowed.

ON THE MENAI SUSPENSION BRIDGE.

At Llangefni, on Monday, A. C. Davies, of Treffoo, Anglesey, and Dr. Lloyd Roberts, of Carnarvon, were each charged with exceeding the four-mile speed limit over Menai Suspension Bridge, which is owned by the Government, this being the first prosecution of its kind. Evidence in the first case showed that defendant's speed was from eight to ten miles an hour. For the defence it was argued that a speed limit of four miles for motor-cars was unreasonable low, and that the regulation was honoured more in the breach than by observance. The Bench found that a technical offence had been committed, and ordered defendant to pay the costs, a similar result being come to in the other case.

MOTORIST AND MAGISTRATE.

Before Justices Walton and Jelf, in the King's Bench Division, on Monday, Mr. Tindal Atkinson, K.C. (with whom was Mr. Moresby White), applied on behalf of Mr. M. L. Braithwaite for a rule nisi calling upon Mr. Plowden, Police Magistrate, to show cause why a writ of *certiorari* should not issue to bring up, for the purpose of being quashed, an order directing that Mr. Braithwaite's licence to drive a motor-car should be endorsed and a conviction imposing a penalty of 20s. and 5gs. cost for non-production of the licence. On May 12th, counsel said Mr. Braithwaite was summoned for driving his motor-car in Regent's Park at a speed exceeding ten miles an hour. Mr. Braithwaite was unable to attend the Court, and he sent his chauffeur. The magistrate, however, declined to proceed with the case in the absence of Mr. Braithwaite, and adjourned the hearing for his personal attendance. On the day fixed for the adjourned hearing Mr. Braithwaite was again unable to attend, and the magistrate convicted him and ordered him to produce his licence for endorsement. Mr. Braithwaite did not comply with this order, and a summons was issued against him under the Motor-Car Act, 1903, charging him with having failed to produce his licence within a reasonable time for the purpose of endorsement. He was convicted, and ordered to pay a fine of 20s. and 5 gs. costs. Counsel contended that the regulation under which Mr. Braithwaite was convicted of having driven his car at an excessive rate of speed was made under the Parks Regulation Act, 1872, which contained no provision for the endorsement of a motor-car licence, and that therefore the magistrate had no jurisdiction to direct that Mr. Braithwaite's licence should be endorsed, or to convict that gentleman for not producing his licence for the purpose of being endorsed. The court granted a rule nisi.

Fines amounting to £100 were imposed on motorists at the Barnet Sessions on the 17th inst.; on Saturday several drivers were charged for driving at an excessive speed on the Great North Road.

THE Anglo-American Oil Company, Ltd., have decided to reduce the price of Pratt's Perfection motor spirit in tin to the trade 4d. per gallon.

THE Gas Lighting Improvement Company, Ltd., have decided to reduce the prices of their "Carburine" and "Glico" motor spirits by one halfpenny per gallon.

A SUCCESSFUL sale of second-hand cars was held by the Brompton Motor Company, of 78, Brompton Road, London, S.W., at the Cadogan Rooms, Hans Road, W., and Messrs. Arkwright, Koecher, and Williams, the proprietors of the Brompton Motor Company, are so satisfied with the result that they contemplate holding them monthly.

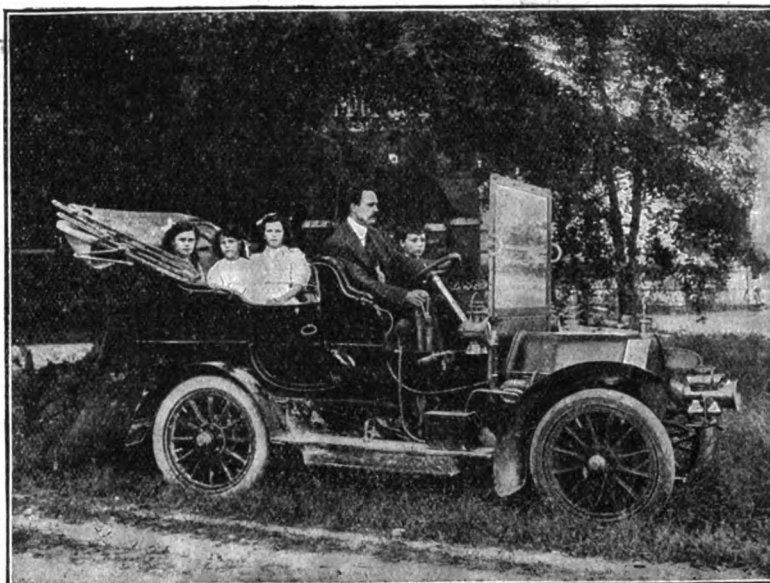
COMPANY NEWS.

In the case of New Companies the file number is given at the end of the particulars.

THE VULCAN MOTOR AND ENGINEERING COMPANY, LTD.—Mr. Walter Hamer presided at the second annual meeting of the shareholders of this company held at Southport a few days ago. Mr. Thomas Hampson, the managing director, explained that the accounts were made up for eleven months only, during which time the deficit of the previous year had been cleared off and a credit balance placed to the profit and loss account. Orders had been secured for Vulcan cars which would ensure plenty of work for some months to come, and the London and Parisian Motor Company had been appointed agents for them in London and the South of England. The works manager, Mr. Joseph Hampson, said that the stock was as low as it could be for turning out the work at a competitive price. It was mentioned that the question of making motor-cabs was under consideration, and the report having been adopted unanimously, a vote of thanks to the chairman concluded the proceedings.

SOCIETE FRANCAISE DES PNEUMATIQUES DUNLOP.—The report for the year ended July 31st, 1908, stated that the balance of profit brought forward was £28,590. Including interest, and after making provision for management expenses, directors and auditors' fees, reserve for bad debts and depreciation, there was a net loss on trading during the year of £11,744, leaving a balance of £16,845. The directors can only recommend the dividend on the preference shares at the rate of 6 per cent. per annum for the period, leaving £13,851 to be carried to next account. The directors believe this set-back to be altogether of a temporary nature, and that beyond the loss of the moment the future of the business has not been seriously affected.

THE Metropolitan Auto Cab Company, Ltd., has been registered with a capital of £100,000 and offices at 46, Gresham Street, London, E.C., to place motor-cabs on the streets of London. Two hundred and thirty



Dr. Mortimer Johnson on his Humber Car in Barbadoes.

Vinot cabs are to be supplied within twelve months, and the St. Pancras Iron Work Company, Ltd., has agreed to maintain and see to the upkeep of the vehicles for five years.

CENTRAL GARAGE.—£5,000 (£1). To take over the business of a motor garage proprietor carried on by Thomas Dyson, Ltd., at 4, Town Hall Square, Bradford. (100,651.)

H. G. NORTON AND CO.—£15,000. Motor-car, aerial machine and cycle engineers and agents, &c. To take over the business of Mr. H. G. Norton, trading as H. G. Norton and Co., in Cheltenham and Gloucester. Private, 1-6, Bath Road, Cheltenham. (100,655.)

ROLLS-ROYCE, LTD.—The report for the year which ended on October 31st last shows a net profit of £9,063 7s. 11d., which, with the amount carried forward, makes a disposable balance of £10,243 6s. 7d., and the directors recommend that a dividend of 6 per cent. be paid on the amount paid up on the preferred ordinary shares, and that the plant and preliminary expenses are to be written down to the extent of £5,375 11s. 8d. and the balance of £1,021 0s. 6d. is to be carried forward.

CAR AND GENERAL INSURANCE CORPORATION, LTD.—Mr. E. Manville presided at the fifth annual meeting of this company, held on Friday of last week, and regretted that for the first time in the life of the Corporation the results as shown on the balance-sheet did not indicate the considerable progress that had been experienced in a marked degree from year to year. In this reckless and unintelligent rate of cutting of competitors had been a factor. At the same time the foundations of the company were solid, good and substantial, with a net premium income of £174,000. The statement of accounts was adopted after some discussion, and a vote of thanks to the chairman closed the proceedings.

DUNLOP PNEUMATIC TYRE.—Mr. Harvey du Cros presided on the 17th inst. at the general meeting of the Dunlop Pneumatic Tyre Company (Limited) and said that he could congratulate the shareholders upon the result of the past year's operations, for it had been a very good one for the company. He thought that the shareholders would be well satisfied with the position and prospects of their company, for since the year 1896 they had distributed by way of dividends no less a sum than £1,595,720. The company had secured excellent results at a period when both the cycle and automobile trades had been bad. It could be taken that the profits shown had been made at a period when things were at their very worst. If there was an improvement in trade the business of the company would also show corresponding improvement. He felt that he was justified in expressing confidence as to the future of the company. The only competition which they had to consider came from Germany and France. In conclusion, the Chairman dealt with an invention for the rapid changing of punctured motor tyres and drew attention to the sample wheels shown in the hall, upon which the operation of changing was demonstrated by mechanics. He further made reference to the proposal for establishing a factory in Japan, and said that a meeting of shareholders to consider the question would be called at an early date. The report was adopted.

REGISTRATIONS which were notified during the last few days have been those of Messrs. Huntley Walker and Co., with a capital of £5,000 in £1 shares, the Marble Arch Garage, Ltd., with £3,500 in £1 shares, and the Mercedes Cab Company, the capital of which is £100.

F.I.A.T. MOTOR-CAB COMPANY.—The report for the period August 1st, 1907 (the date of the incorporation of the company), to November 24th, 1908, states that considerable delay was experienced in the delivery of the cab chassis, but recently these have been coming forward satisfactorily, with the result that the company have now 180 complete cabs. This number is being added to almost daily. The delay before referred to, the instruction of drivers, the work of organisation, and the loss of revenue from forty cabs, for a period of about four months, which were prevented from plying for hire owing to the dispute with the Thames Bank Wharf Motor Works (the maintenance contractors), have naturally affected the first profit and loss account, and, after allowing for depreciation on the company's cabs, the debit balance carried forward amounts to £3,766. The company's cabs are now running efficiently, and the average revenue being earned is in excess of that estimated at the formation of the company. The garage is now situated at 10, Pancras Road, adjoining King's Cross and St. Pancras Stations. The balance-sheet shows that the expenditure to date on cabs and cars, including deposits on chassis and bodies, is £92,038. Plant, machinery, tools, furniture and fixtures stand at £1,200 and the stocks on hand at £3,238. The preliminary expenses amounted to £10,550, underwriting commission to £15,000, and brokerage to £1,874. There is a suspense account of £8,725, and the cash at bank and in hand amounts to £7,481.

MR. J. S. SMITH-WINBY presided at the meeting of the Darracq-Serpellet Company on Monday. He spoke of the severe competition among the motor-bus companies of London. On the Continent appearances were improving. He moved the adoption of the report, which was seconded by Mr. R. L. Harmsworth and agreed to.

AERONAUTICS.

MR. E. STUART BRUCE has suggested to the Royal Meteorological Society the necessity of establishing a national aerial observatory in this country for the investigation of the upper air.

The following have been appointed to serve on the Committee of the Institution of Automobile Engineers to collect information with regard to aeroplanes: Mr. Dugald Clerk, Dr. H. S. Hele-Shaw, Col. R. E. Crompton, Capt. L. A. Kingston, Messrs. F. W. Lancaster, Mervyn O'Gorman, F. R. Simms, G. J. F. Knowles, J. S. Critchley, D. J. Smith, L. A. Legros and Sir Hiram Maxim.

It has been suggested to the Council of the Society of Motor Manufacturers and Traders that an aero section should be formed to deal with any matters of interest under the above head.

The Council of the Society of Engineers has awarded the Bessemer Premium of Books to Mr. Herbert Chatley, for his paper on Mechanical Flight.

BUSINESS NEWS.

A NEW preparation, known as "Tirecote," for preserving motor-tyres, has lately been put on the market by the Eagle Rubber Mills, Eagle Wharf Road, London, N.

MESSRS. MAXFIELD AND COMPANY, Birmingham, inform us that they entered one of their auto-tyre inflators, through their French agents, for the competition of such devices lately held by the French Automobile Club. Unfortunately the apparatus was delayed in transit; in fact, up to the 18th inst. it had not reached its destination, and Messrs. Maxfield are consequently claiming compensation from the railway company.

COVENTRY chains were fitted on the first, second, third and fourth cars to finish in the recent A.C.A. Grand Prize race in Savannah.

IN celebration of their forthcoming taxi-motor cab service for Wimbledon the proprietors of the Wimbledon Motor Works, Messrs. Oates Bros., recently entertained their employees to dinner at their High Street Garage.

THE British Petroleum Company, Ltd., announced on the 17th inst. that their "Shell" and "760" motor spirits were then reduced in price one halfpenny per gallon.

FORTHCOMING EVENTS.

DECEMBER.

30th.—Heavy Motor Vehicle and Aeronautical Display closes at Paris.
31st (Th.).—Entries close for Grand Prix of A.C.F.

JANUARY, 1909.

1st (F.).—Anniversary of the Motor Car Act, 1903, coming into operation.
7th (Th.).—Annual Dinner of the Yorkshire A.C. at Leeds.
8th (F.).—Annual Dinner of the Nottinghamshire A.C.
Mr. C. Y. Knight will lecture on his engine to the Manchester and District Motor Trades Association.
12th (Tu.).—Extraordinary General Meeting of the Automobile Association.
14th (Th.).—Annual Dinner of clubs associated with the R.A.C. at the Hotel Cecil, London.
16th-25th.—Brussels Motor Show.
21st (Th.).—Annual General Meeting of the Southern Motor Club.
22nd-30th.—Scottish Motor Exhibition at the Waverley Market, Edinburgh.
23rd (S.).—Annual Dinner of the Coventry Motor Club at the Craven Arms Hotel, Coventry.
26th (T.).—Scottish Motor Trade Association Dinner at Edinburgh.

FEBRUARY.

2nd (T.).—Annual Dinner of the Scottish A.C. at Glasgow. H.R.H. Prince Francis of Teck will be among the guests.
4th (Th.).—Annual Dinner of the Southern Motor Club.
19th-27th.—Manchester Motor Show.
24th (W.).—Annual General Meeting of the British Motor Boat Club.

MARCH.

1st (M.).—The Road Trials in connection with the Army Council Competition for light tractors commence.
Motor-Car Show at Barcelona.
20th-27th.—Cordingley's 14th Annual Motor-Car Exhibition and Market, Agricultural Hall, London.

JUNE.

14th (M.).—Commencement of the Scottish Reliability Trial.

LIGHTING-UP TIME—LONDON.

| | | | | | | |
|----------------|-----|-----------|-----|-----------|-----|---------------|
| Dec. 26th—4.54 | ... | 28th—4.56 | ... | 30th—4.58 | ... | Jan. 1st—4.58 |
| „ 27th—4.55 | ... | 29th—4.57 | ... | 31st—4.58 | ... | „ 2nd—5.0 |

FROM the Star Engineering Company comes a copy of the 1909 catalogue of the well-known Star cars. For the forthcoming season no less than seven models are being turned out, viz., 8-h.p. and 10-h.p. two-cylinder, 12-h.p., 15-h.p., 20-h.p., and 25-h.p. four-cylinder, and 40-h.p. six-cylinder. The list gives very complete particulars of each of these types, while several pages are devoted to particulars of the bodies which may be fitted to the chassis. The catalogue is well illustrated and concludes with a number of pages giving reproductions of letters from satisfied users of Star cars, which, in view of their relatively low prices, are of special interest to motorists of moderate means. We would specially refer to the 15-h.p. car, which is fitted with an engine giving under the R.A.C. rating 20-h.p.; the Bosch type of high tension dual ignition is provided, as also a White and Poppe automatic carburettor. Throughout the details are on the most up-to-date lines, and fitted with either an open or covered body it should prove not only a quiet-running vehicle, but one which is economical in upkeep.

TO CORRESPONDENTS.

All communications intended for insertion in this Journal or relating to Editorial matters should be addressed to THE EDITORIAL DEPARTMENT, MOTOR-CAR JOURNAL, 27 33, Charing Cross Road, London, W.C., and must be written on one side of the paper only. Letters must in all cases be accompanied by the name and address of the writer, as no notice will be taken of anonymous communications.

To insure insertion communications and contributions must be in the Editor's hands by Tuesday forenoon of the week in which the same are intended to appear. Disappointment may be caused by non-compliance with this rule, and to avoid this earlier receipt, if possible, is necessary.

Photographers, both professional and amateur, are invited to send photographs of current events or of motoring scenes and incidents. The fee, if any, required for reproduction should be stated in each case, otherwise no liability will be accepted.

The Editors do not hold themselves responsible for the opinions expressed by their correspondents, or for statements and facts which do not appear in the editorial columns.

THE Motor-Car Journal.

VOL. X.]

LONDON, SATURDAY, JANUARY 2, 1909.

[No. 513]

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PRIZE COMPETITION.

AS announced last week, we offer a prize of two guineas for the best original short story of motoring interest suitable for publication in the *M.C.J.* The story should be between 1,000 and 1,200 words in length, and the main incident should, of course, centre about the automobile.

The latest date for submitting the MSS. will be the first post on Saturday, January 16th, 1909, and the award will be notified as soon as possible after that date, the Editor's decision being final.

With reference to the stories which do not win the prize, the right is reserved to publish any which we may deem suitable, making payment at our usual rate of remuneration.

All MSS. should be forwarded addressed to the Editor, *M.C.J.*, 27-33, Charing Cross Road, London, W.C., the envelopes being marked "Short Story" on the top left-hand corner.

COMMENTS.

The Butterfly and the Beetle.

SUCH are the only terms by which to express an opinion of the Exhibition which was in progress at the Grand Palais in Paris until Wednesday last. A more incongruous mixture of exhibits was never seen, and although both classes suffered from their contiguity, it was the heavy vehicles which were the greater victims. They could not be ignored, inasmuch as they occupied the centre of the hall, but they did not appear to attract attention. There was no doubt that the tens of thousands who attended the display were drawn to the Grand Palais by the Aero section, which was indeed a remarkable one and showed a great advance upon that which was held two years ago in the Agricultural Hall, London.

The Commerce of Aviation.

WONDERFUL as has been the progress of the automobile on the road, it is nothing in comparison with the strides made during the last two years in Aeronautics. It has now been proved without doubt that flight by means of "planes" heavier than air is not only possible, but that they are really dirigible. As in the progress of automobilism engineers are now beginning to centre their attention on the production of engines specially lightened to suit the new conditions. How earnestly and enthusiastically this is being done was shown at the Salon. The ultimate intention of those who have given most thought to this matter is that the weight of the engine shall not exceed one kilogramme per horse power. Already this desideratum has nearly been obtained in the Gobron-Brillie engine, that on view being one of eight cylinders with sixteen pistons, as also in the Farcot described elsewhere in the present issue.

Christmas Motoring.

NOT for years has Christmastide been associated with such ideal motoring weather as prevailed last week-end, and of which full advantage was taken by automobilists. We were out on the Portsmouth road on Christmas morning, and it was a real pleasure to see car after car come bowling along, each with its merry party. King Petrol was again much *en evidence*

on Boxing Day, when quite a number of motorists wended their way to Burford Bridge, at the foot of Boxhill, where a record meet of the Surrey Union Foxhounds took place. The scene outside the old hostelry was a memorable one, the red-coated huntsmen having to wend their way through a long line of motor-cars and a crowd of interested spectators. A wonderful change came over the scene on Sunday, with the result that roads which only a few days ago were as clean as the proverbial whistle are now covered with snow. No doubt many motorists will have strange tales to tell of their adventures when out driving during the past few days, and, needless to say, should any readers have had novel experiences of this kind we shall be glad to hear from them.

The Cold Snap.

THE year went out with a cold snap indeed, and the 29th ult. was a notable day in London. As the hours wore on and the snow continued to fall, traffic was carried on under increasingly difficult and slippery conditions, until by the afternoon even such a busy thoroughfare as the Charing Cross Road became a deserted highway, and the silence was only broken occasionally by the rumble of a motor-car pursuing its way heedless of the conditions of the street. Motor-buses struggled along gamely enough until their number became appreciably less, while much of the horse-drawn traffic was entirely suspended. At these times such hints as were recently given in our article on Cold Weather Precautions become of primary importance to the motorist, who has to consider his car as an occupant of the garage as well as a moving force on the road.

Mud and the Motorist.

THOSE whose business it was on Monday to make a peregrination of the deserted streets of London, to find most of the automobile establishments still closed for holidays, must have felt some consideration for the plea raised a few days ago by Colonel Hotham, who wrote to the papers complaining of being bespattered with mud thrown by the wheels of passing motor-cars. While walking a short distance on the Lymington and Brockenhurst road he was passed in half an hour by three automobiles, the drivers of which did not slow down when passing him. Result, he was splashed with mud from head to foot, despite the fact that he kept as far as possible to his own side of the track. Undoubtedly it would be well if motorists were careful of the comfort of pedestrians as well as of the convenience of other forms of wheeled traffic. But is not some of the blame to be directed towards the road authorities?

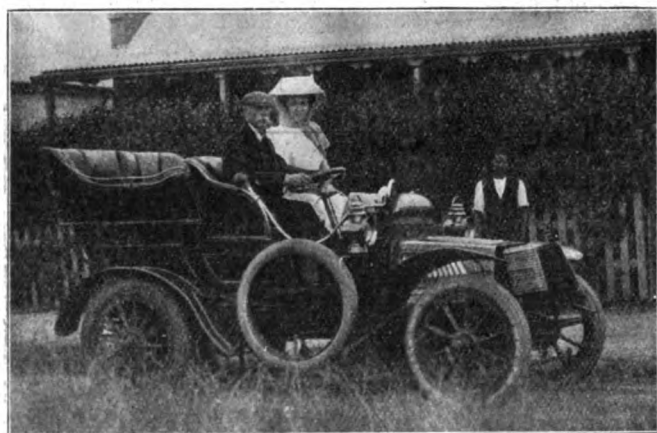
1909.

OPTIMISTS have taken heart during the last few days, and the orders that have been placed with makers of cars of good repute have lent a certain air of confidence to the New Year's greeting with which everyone is being assailed. This cheerfulness is encouraging to those who have seen a lull in trade-prosperity these last few months. Retrenchment is the order of the day in many leading establishments which have hitherto been distinguished by a lavish expenditure in diverse directions. The proprietors of these are beginning to recognise that the avenues of direct benefit are really few, and that they have to reach the pro-

spective motorist as well as those who have got beyond the initial stages by means of exhibitions in the spring and through the papers that motorists read all the year round. The lesson has not been quickly learned by several concerns, which, however, having had experience in many ways, are now seeing the truth of the statement.

A French Congress in London.

THE programme for the congress of the Ligue Internationale des Associations Touristes in July next, has been prepared, and includes the following events:—July 7th, arrival of delegates at the London headquarters, Hotel Great Central; 8th, official session of the congress and banquet. The sitting will be continued on the 9th, and the final session held on the morning of the 10th. The official tour will commence on the morning of Sunday, July 11th, leaving London for Oxford by way of Taplow and Reading. At the University city the headquarters will be the Clarendon Hotel. On the night of the 12th Leamington will be the stopping place, on the 13th Cheltenham, and on the 14th Swansea. On July 15th, the programme arranged by the Welsh A.C. will include visits to various local works and on the following day there will be speed tests at Pendine Sands. The Motor Union Committee meeting will take place on Saturday, the 17th, and the dinner in the evening, the return to London being arranged for Sunday, July 18th.



Mr. and Mrs. S. J. Cook, of Clifton, East London, on their 12-16-h.p. Daimler Car.

The above illustration is reproduced from the Christmas Card sent us by one of our South African readers.

Local Centres of the M.U.

A NEW development of the work of the Motor Union is the establishment of local committees which are intended to serve the Parliamentary Divisions of the counties in which they are formed. Thus it is hoped to bring the influence of the organisation to bear upon the representatives in Parliament more directly than can be done by associations which embrace larger areas in a less definite way. The plan has been inaugurated in the West Herts County Division, and Mr. Charles McWhirter and Mr. A. C. Bournier have been appointed chairman and hon. secretary respectively. Centres for the Mid and East Divisions of the county are about to be organised by Mr. T. Williams, of Watford, who has been appointed hon. secretary for the whole of the county, and a North Herts centre has also been established with headquarters at Hitchin, and Mr. P. H. Sharman as hon. secretary. Already a scheme of work has been outlined, and a deputation will wait upon the Hertfordshire County Council in a few days urging them to adopt three new bye-laws so that (a) All vehicles shall show a rear light from an hour after sunset until an hour before sunrise, (b) That all slow moving traffic shall be obliged to use the left hand side of the road, and (c) That men in charge of cattle or sheep on the public highways shall be com-

pelled to carry a light during the same hours that insistence is made upon the rear light of vehicles.

Contradictions on the Roadside.

IN connection with the efforts made to improve the surfaces of the roads of the country, and to bring the system of construction into keeping with modern demands, we trust the importance of efficient signposting will not be entirely overlooked. Many years have flown since anything like a measurement of the main roads was undertaken, and in many places the distances indicated on signposts are at variance with actualities. In others they are contradictory of each other, as is the case in the Lincolnshire village, a curiosity of which is reproduced on the opposite page. The discrepancy has probably arisen from the dual control with regard to indication posts and those which serve as distance recorders. That such a state of things could be allowed to continue until the camera brings the absurdity into publicity is scarcely creditable to the powers of observation among the responsible people. We want a really national overhauling of such matters with a view to securing uniformity and, of course, accuracy.

Rules for Motorists.

LAST week we gave some suggested rules for pedestrians anxious to escape the terrors of the streets. In the same vein are some further regulations prepared for the use of the Wasau (Wis., U.S.A.) Chauffeurs Club as follows:—

1. On discovering an approaching team, the automobilist must stop offside and cover his machine with a tarpaulin to correspond with the scenery.
2. In case a horse does not pass an automobile, the tarpaulin to the contrary notwithstanding, the automobilist will take his machine apart as rapidly as possible and conceal the parts in the grass.
3. The speed limit on country roads will be secret this year, and the penalty for violation will be £10 for every mile an offender is caught going in excess of it.
4. On approaching a corner where he cannot command a view of the road ahead, the automobilist must stop awhile, then ring a bell, fire a revolver, halloo, and send up three bombs at intervals of five minutes.
5. Automobiles must be seasonably painted; that is, so they will harmonize with the pastoral ensemble and not be startling; thus in spring, green; in summer, golden; in autumn, red; and in winter, white.
6. Automobiles running on country roads at night must send up a red rocket every mile and wait for the road to clear. They must proceed carefully, blowing their horns and shooting roman candles.
7. In case an automobile approaches a farmer's house when the roads are dusty, it will slow down to one mile an hour, and the chauffeur will lay the dust in front of the house with a hand sprinkler worked over the dashboard.

Speedometers on Cars.

IN the Parliamentary papers issued on the day following the prorogation of Parliament the President of the Local Government Board replied to several questions which had been addressed to him with regard to automobile matters. Mr. Bowerman, one of the thirty-five M.P.s who recently waited upon Mr. Burns with regard to motoring matters, suggested that regulations should be made compelling all mechanically driven vehicles to carry speedometers. Mr. Burns replied to the effect that the Royal Commission on motor-cars had considered the matter but had come to the conclusion that they could not recommend that, in respect to motor-cars, speed indicators should be made compulsory. So far as he was concerned, he could not see his way to depart from the recommendation of the Royal Commission in this matter. There is no doubt, however, that motorists are voluntarily following to a large extent the advice given by

Prince Francis of Teck and are fitting their cars with such instruments. Such precautions have proved of service in several instances in the police courts of late.

The Scottish Club.

AFTER many years of excellent work without a clubhouse the Scottish Automobile Club has now found a habitation which will doubtless be appreciated as the centre of motoring organisations north of the Tweed. The Club has just purchased the house at 11, Blythwood Square, Glasgow, which was formerly the town residence of Mr. Alexander Baird, of Gartsherrie, and which has been for the last twenty years occupied by the late Mr. Joseph Henderson, the well-known artist. The premises have a western outlook and comprise four flats, including the basement, with some public rooms of commodious dimensions. In addition there is a handsome saloon at the rear, erected above the stable and coach house, the latter of which will be converted into a motor garage with accommodation for a considerable number of cars belonging to members visiting the clubhouse from time to time.

A Diary.

THE Motorists' Diary and Year Book for 1909 comes to hand in a size convenient for the pocket, and containing 400 pages of useful information to owners of motor-cars. The legal section is contributed by Mr. C. C. Macklin, who has often rendered motorists considerable service in the Courts. That portion of the work referring to touring matters is complete, and in addition to particulars with regard to travel abroad contains much information as to the main roads in this country—not only so far as garages and hotels are concerned, but also with reference to the system of patrols established thereon by the A.A. The records of racing are brought up to the end of October, and the addresses of the makers of the best known British cars occupy several pages. This, too, has been carefully checked, although one or two corrections might be made, notably in connection with the entries relating to the Brotherhood, Buick and Thames cars.

Petrol Risks.

SEVERAL references have lately been made as to the necessity for the utmost care being exercised in dealing with petrol. It would appear from our Correspondence columns, notably from the letter from Mr. T. W. Kemp which appears in this week's issue, that many of the dangers that have been noticed and attributed to carelessness in motor garages can be traced to a more domestic source. One result of the discussion, however, should be to secure a general observance of care with regard to the allegations of the disposal of petrol in drains, and also a closer attention to the highly inflammable character of the spirit. Even in such weather as we have been experiencing its risk should not be ignored, for at temperatures as low as 32 deg. Fahr. it will evaporate naturally in quantities sufficient to form, with air, a mixture which may become highly dangerous.

The Lady Chauffeur.

CONSIDERABLE notice has been taken this week of the appearance at the wheel of a motor-car in London of a lady chauffeur known as "Miss Sheila O'Neill." This name is a *nom de plume* of the daughter of a military officer. She obtained both the Queen's and King's medals as a nurse in the South African War, and now wears them on her motor coat. She has been trained by Mr. A. R. Mills, the owner of a garage in the central district of London, which was recently referred to in these columns, who has already arranged some contracts which will secure her services being regularly requisitioned. The Scotland Yard authorities have not yet seen their way to grant licences to lady drivers to ply for hire with a cab on a rank; hence the necessity of getting over this difficulty by taking instructions from Mr. Mills instead of the "fares" she conveys. Miss O'Neill's first

experiences were sympathetic so far as the public were concerned, while the decoration of her 12-h.p. car with a metal figure of a policeman has evidently propitiated Robert; but Jack Frost has apparently given her a cold reception, and her arrival on the streets on Monday was followed by a real Arctic experience on Tuesday.

Ladies and the Car.

WHILE the Ladies' Automobile Club continues its way successfully and socially, the Motor Union is endeavouring to form a Ladies' Committee, the initial purpose of which will be to help the organisation of the forthcoming international meeting to be held at Swansea. Mrs. Joynson-Hicks, the wife of the chairman, is taking an active part in the matter, and the fact that there are 200 lady members of the Union should secure a good working committee being formed for this purpose. The interest that ladies have taken in the automobile movement has been very remarkable. From the early days they were eager participants of the pleasures of motoring, and now their interest is often keenly displayed in the mechanical parts of the car.



Contradictory.

At Navenby, near Lincoln, a milestone and guide post stand side by side, the former recording the distances to Grantham and Lincoln as 16½ and 8½ respectively, and the latter as 17 and 8.

The Good Driver.

WE agree with the writer in the "Times" who says that black sheep among the professional drivers of motor-cars were more numerous five years ago than now. The greasy, dirty mechanic with his swagger and half contemptuous manner has been educated into decorum, or has gone into some other business, and, as a rule, the present breed of motor drivers are intelligent, mannerly, and resourceful knights of the wheel. A good temper is a necessary quality in the making of an acceptable driver, and he must have knowledge beyond the technical matters which are, of course, the primary consideration. A smattering of French as well as a talking acquaintance with good English is an advantage; the habit of reading maps so as to take in the location at a glance, and a general interest in the legal position of motorists will be found useful. In fact, once the driver has acquired facility in mechanical matters, the way to take corners around which pedestrians may be crossing, the repair of tyres, the management of lamps, and the score of other "little things that matter," the wise driver will, by becoming a regular student of automobile literature, qualify for the higher positions which are open to those who add general knowledge to expert skill and understanding.

BRIGHTON'S MOTORING CHRISTMAS.

THE number of motorists who made Brighton their Christmas headquarters is, like the sum total of the thousands of smart people who flocked down to the popular watering place for the festive season, quite beyond computation. All the best hotels and boarding houses in the town—and, indeed, all the rest of lesser repute—were full to overflowing as they have never been before. The Metropole, where over a thousand people sat down to dinner on Christmas Day, the Grand, the Old Ship, the Royal York, and many more, all had to turn away late-comer supplicants for rooms literally by the hundred. The latter is particularly popular with the motoring fraternity, and mine host thereof, Mr. H. J. Preston, began refusing would-be Christmas patrons before the end of November, and during Christmas Day itself he booked several parties for the Yuletide of 1909?

THE historic Old Ship is the local headquarters of the A.A., and so 'twas only natural that Colonel Bosworth, in Brighton for

in the exhilarating conditions so many motoring parties were out to enjoy.

ALL types, makes, sizes, and powers in the car world were represented, it being, however, impossible to draw reliable distinctions and deductions from such a restless scurrying to and fro of traffic. Among more or less well-known visitors driving Daimlers were Mr. Peters, Mr. Woollard, Mr. Blofeld, Mr. Sam Mayo, of music-hall fame, Mr. Littleton, Mr. Wagg, and Mr. E. Robb. Lady Clarke Jervoise was in a White steamer. Mr. J. W. Benson—who supplies a goodly portion of the world with its domestic apparatus—had a handsome Renault, while his brother, Mr. F. J. Benson, favoured a Fiat. Mr. M. A. Copchili was another Renault owner, Mr. Martin Scott seemed to be having an excellent time of it in a Siddeley, and a Tony-Huber car of Mr. King Smith's added an unfamiliar name to realms of car-nomenclature, with whose expansion it becomes difficult to keep pace.

MR. JEFFREYS and Mr. Pearce had Napiers; Mr. Carlisle



Sir Bache Cunard at the wheel of his Sheffield-Simplex six-cylinder Car at Nevill Holt, Market Harborough.

Christmas, should spend it there. No doubt he found plenty of congenial companionship in the society of many other ardent devotees of the sport with which his name is so prominently identified, amongst them being Mr. Harry Taylor, Mr. L. Barrow, and Mr. and Mrs. A. E. Cohen, of London, Mr. R. Jeffries, who had motored from Manchester, Mr. and Mrs. Bishop, Mr. Roberts, Mr. T. Christie, of Chelmsford, and Mr. R. E. Casares, who came from London, where he is staying at present, but really hails from far-distant Buenos Ayres.

THE Front on Christmas morning—more especially towards the luncheon hour, when everyone came whirling back with appetites sharpened by excursions in the keen bracing air and radiant sunshine of a brilliant winter's day—made a wonderful panorama, emphasizing to a locally unprecedented extent the all-dominating sway of King Petrol's influence on modern methods of locomotion. If only the numberless motor-brougham the eager crowds on the Front had watched for and seen every day during the fortnight before Christmas week had still been there, mingling with the vehicular kaleidoscope, it would have been a royal Christmas indeed, and no one more than King Edward would have revelled

drove an Ariel; Mr. Ritchie, Mr. Hines, and Mr. Doherty were of the Darracq section; and Mr. Ramsden and Mr. Skipper of the Decauville ditto. Other motorists holidaying it at Brighton included Mr. Mackenzie Fairfax and Mr. Coward (Panhards), Major Castrell (Humber), Mr. Ansell (Argyll), Mr. Rendle (Gladiator), Mr. W. F. Clarke (Humber), Mr. Crisp (Thornycroft) and Mr. Wright (Leon Bollee). It is worth adding that, as far as we could ascertain, the Sussex police allowed everyone to pass their Christmas in peace!

SAXONIAN.

A SERIES of speed trials over a distance of 10 kilometres was recently held near Buenos Ayres, Argentine Republic, when the best time of the day—5 min. 55 sec.—was made by M. H. Van der Heyden on a 30-h.p. Spyker. In the 15-h.p. section victory went to Baron de Marchi's 15-h.p. six-cylinder Delaunay-Belleville (6 min. 7 sec.), in the four-cylinder (up to 90 mm. bore) class to M. Genonceaux's 12-h.p. car (6 min. 54 sec.), in the two-cylinder category to M. Nigri's Peugeot (8 min. 13 sec.), while the single-cylinder class was won by a Sizaire-Naudin in 6 min. 56 sec.

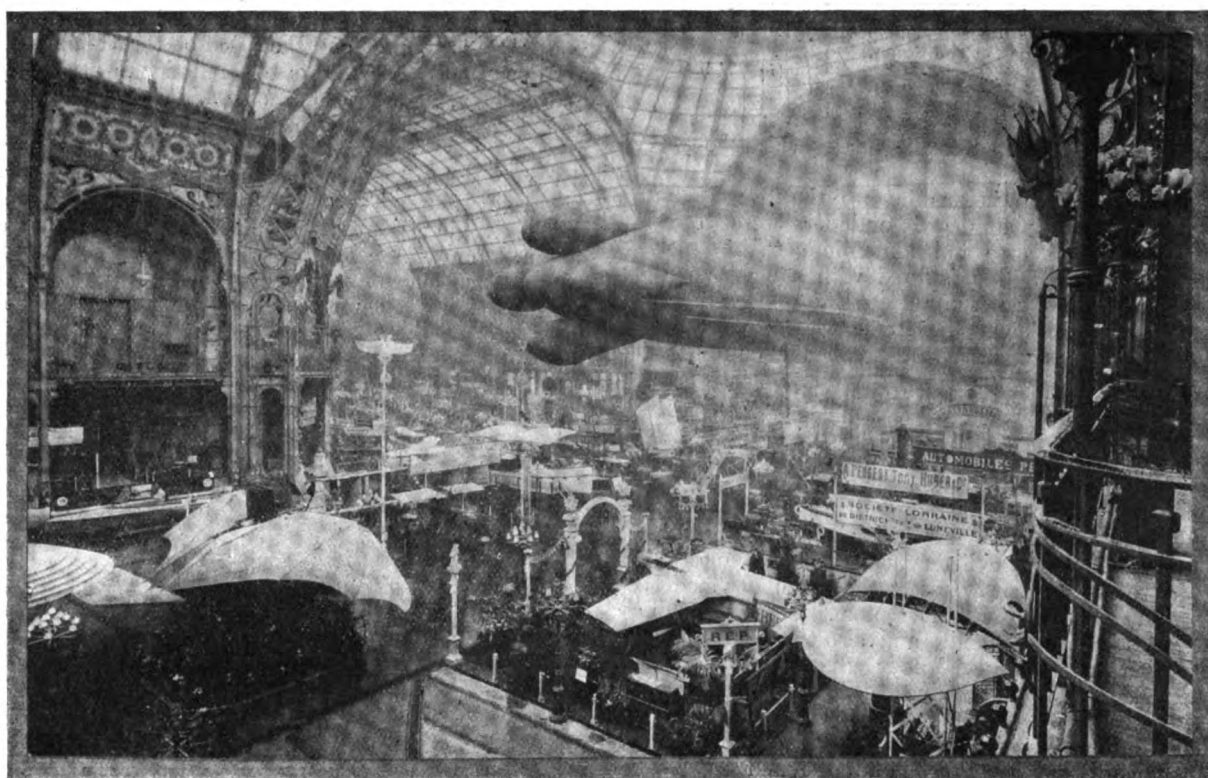
The Paris Industrial Motor Vehicle and Aeronautical Exhibition.

[BY OUR SPECIAL REPRESENTATIVE.]

THE second part of the eleventh Paris Salon, devoted to industrial automobiles and motor-boats, also includes the first aeronautical exhibition, the interest in which, as anticipated, by the organisers of the show, surpasses that shown in the other portions of the display. The industrial cars in general have not departed from the standard set by the last two exhibitions, while the taxicab designs were so well represented in the first part of the show that very few are to be seen in the second. Small private and hotel omnibuses are well to the fore, but the heavy city omnibus is not being pushed by the various makers. It is probably recognised that the local conditions attending the service of

aeroplanes of Wright, Farman, Delagrangé, Bleriot, Esnault-Pelterie, Santos Dumont, and the pioneer of aerial flight, the "Avion" of Ader. This contrivance dates from 1893, and was experimented with up to 1897 under the eye of the French military authorities who advanced some £20,000 towards the expenses of the experiments. It is stated that the latter cost in all some £60,000, the balance being paid by the inventor, Ader, who is still alive. This bat-like flying machine is fitted with a flash boiler, 40-h.p. steam engine, two four-bladed fans, and is exceedingly light in weight.

The stand of the R.E.P. firm presents great interest. In



General View of the Industrial Motor Vehicle and Aeronautical Exhibition at the Grand Palais, Paris.

On the left of the picture will be seen the "Ader" Aeroplane, built about fifteen years ago, and lent by the Authorities of the Museum of the Arts and Metiers, while in the centre is the large airship "Ville de Bordeaux."

omnibuses merit special study, which cannot be exemplified to any extent in a few chassis displayed in an annual show, and in a general way the purchasers of omnibuses or industrial automobiles are not likely to be greatly influenced in their choice by the inspection of a car at the exhibition.

It is in the light motor section that all the public interest is centred, and it is very evident that quite a considerable amount of work has already been done in this line, and more than one would expect in the course of the short space of a year. The fact is that there were numbers of light motors almost ready a year ago, but they were not sufficiently advanced to be exhibited. This accounts for the splendid display at the present show.

Strung up in the vast building of the Grand Palais is one of the series of five war airships, the "Ville de Bordeaux," identical in appearance with the "Ville de Paris" and the "Clement-Bayard." The motor installation has been handled throughout by Renault Frères, who have put in an 80-h.p. engine. Further back is arranged a stand of honour, on which are to be found the

addition to the actual aeroplane with which Esnault Pelterie has accomplished some flights at Buc, near Versailles, there are several light motors of his distinctive design on view. At the time the inventor was developing the aeroplane he was unable to find a suitable motor for the work, hence the design of the engine, which attracted so much attention at the last Salon. The cylinders are all arranged fan like, the shaft being at the apex. There are several seven-cylinder and ten-cylinder motors on view, which have some of them been sold to the present-day notabilities in the line of aerial flight.

The aeroplane of Wilbur Wright is not the one which he has used for flying, but a duplicate made at Dunkirk. The light motor, however, is the one actually used for some time by the daring "flyer." A comparison of the motor with others advanced for aeroplane work does much to answer the enigma of his success. Wright has stated that he can fly with any good motor taken from a car without requiring a specially light engine. This remark shows where the problem of flight really is. What is wanted is

not so much the aeroplane, since it seems admitted that there are several forms which will fly with suitable propelling power, but a light motor which will give a better and more regular service than the engine installed in the best of motor-cars. And this is where the motors have failed to come up to expectation. The service required is hard, comparable only to that in a motor-boat, the constant drag of the propeller being equivalent to the demand of maximum power to be maintained uninterruptedly. Here the comparison between boat and aeroplane ends, since in the former the weight need not be cut to any extent, whereas the aeroplane requires the lightest of construction to give the maximum efficiency. A perfect regularity is what is required of the light engine, in addition to maximum continuous output, and if the



The President, M. Fallières, and his suite, inspecting the airships and aeroplanes at the Salon.
From a Caricature Sketch] [in "L'Auto."

aeroplane has come to stay, this is what the motor constructor must produce in order to obtain that hold on the market which he will richly deserve.

The Antoinette motors are just as much to the fore as ever. The firm show an extremely simple 16-cylinder, water-cooled group, with aluminium crank case and aluminium tube cooler. Another 8-cylinder group of 50-h.p. is fitted with a new type of cooler. The latter forms the strakes of a canoe-like wooden frame, there being 45 tubes on each side of the frame, with a collector at the apex. Each tube is 4 metres in length, and the 90 tubes, with junctions and wooden frame, weigh less than 30 pounds. The Antoinette motors were the first of a series now made which can produce, in running order, one brake horse-power for less than 5 lbs. weight. This has been achieved in the majority of cases in the motors shown by the suppression of the heavy fly-wheel and counterbalancing weights and more especially by the adoption of multi-cylinder models, in which the crank shaft has fewer throws than the number of cylinders, two or more connecting rods being fixed to the same throw. In fact, multi-cylinder models are a *sine qua non* in the light weight motors. Some makers, notably the E.N.V., Pipe and Renault, and also the Fiat, retain certain features common to the usual four-cylinder car engine. The number of cylinders has been increased and arranged in the form of a V., with one cam shaft on the inner side of the apex. The crank shaft and cam shaft in this arrangement are of course not much heavier than that in a four-cylinder model, while with the adoption of a large number of cylinders the fly wheel may be dispensed with. One or two makers still retain a fly-wheel of the bicycle spoke type, with a comparatively light rim, this being held to be as efficient as a smaller but heavier wheel.

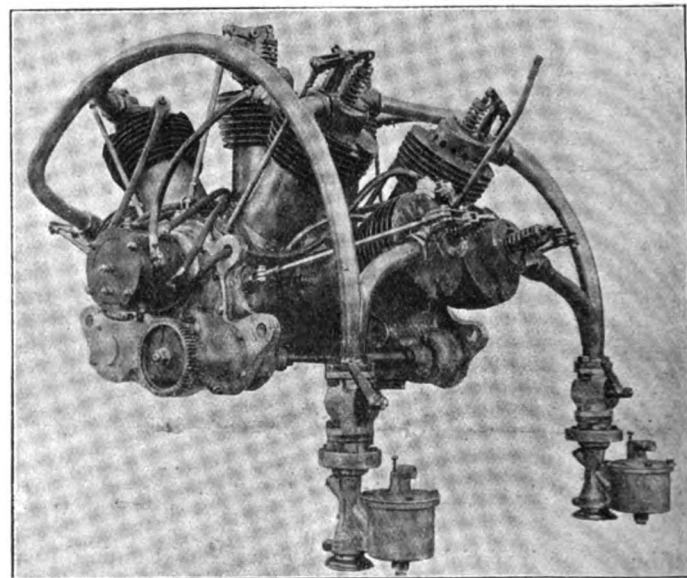
Another detail is the difference of opinion regarding water and air cooling. All would like to have their engines cooled by air, but some makers are evidently doubtful as to whether this can be done with the continuous maximum output demanded of the group. Air cooling has its partisans in Pipe, Fiat, Renault, Farcot, and others, whilst the Bayard-Clement, R.E.P., Gobron, and Antoinette motors are water cooled. There are one or two rotating air-cooled motors shown, which contain laudable efforts to overcome the difficulty of cooling.

The Fiat light motor, which is just out of the factory of the Turin firm, has eight separately-cast air-cooled cylinders surrounded by a sheet-iron cover, through which air is driven from a fan on the main shaft of the engine. One carburettor is set between the cylinders, which are arranged in the form of a V, and the cam shaft, which is geared to the main shaft, also, engages by means of a double reduction the two high-tension magnetos, one for each set of four cylinders.

Pipe is again showing an interesting eight-cylinder engine also with cylinders arranged in V shape. The bore and stroke are

both 100 mm., and at 1,500 revolutions per minute the engine is stated to give 70-h.p. The weight is 285 pounds. The crank case is of aluminium; the crank shaft is in one piece, and each of the four throws has two connecting rods attached to it. The casing of the engine is of aluminium, with an aspirator at one end; the air inlet is made at the bell-shape base of this casing. A single camshaft operated mechanism is fitted over the tops of the cylinders, the valves being inside the heads. Inlet and exhaust valve are combined in one valve for each cylinder, this being arranged according to the compression of a double concentric valve. There are, however, two cams and separate mechanism for inlet and exhaust. A single magneto is carried at the rear end of the engine. An ordinary carburettor is lodged in the inside of the apex of the V formed by the lines of cylinders.

The designer of the Clement factory, M. Clerget, has brought out a seven-cylinder water-cooled motor, which has its axis arranged vertically, with a circular crank case and horizontally arranged cylinders. Cooling is provided for around the cylinders by means of copper jackets. The walls of the cylinders are $2\frac{1}{2}$ mm. in thickness and the bore and stroke are 3.9 in. and 4.4 in. respectively. A high compression of 10 lbs. per square centimetre is adopted and the speed of the engine is 1,400 revolutions per min. The head of the cylinder is separately brazed on to the body, and is dome shaped, and overhead mechanism opens and operates both inlet and exhaust with one tappet, the valve chamber forming one piece with the cylinder head. The crank shaft has a single throw and the connecting rod and secondary rods are quite neatly arranged on the single pin; balance weights are used inside the crankcase to obtain evenness of running, since the flywheel has been dispensed with. The Clement Bayard people evidently believe that the increased weight attaching to the cooling arrangement is more than



The R.E.P. (Esnault-Pelterie) seven-cylinder Motor for Aeronautical Purposes.

The engine is rated at 30-35-h.p. and weighs 194 lbs. A 20-25-h.p. five-cylinder motor, weighing 115 lbs. and one of 40-50-h.p. with ten cylinders, turning the scale at 216 lbs., are also made.

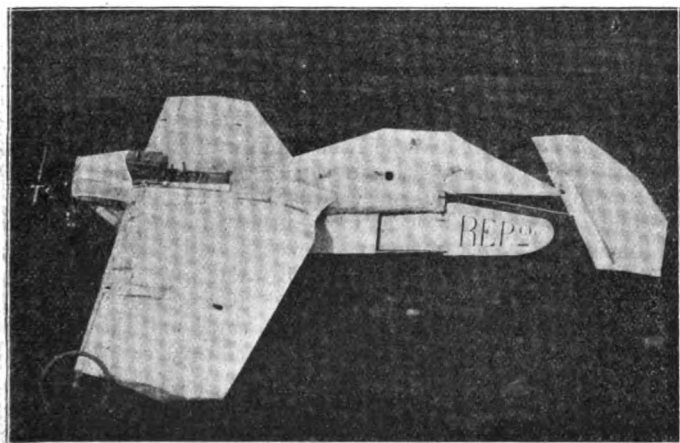
counterbalanced by the efficiency of the engine. The centrifugal pump is arranged in the base of the crank case and has a separate duct for each of the seven cylinders. A single cam with eight bosses run with a gear reduction of eight to one and operates all the valves. The same casing contains the gearing for the magneto, the latter mechanism being fitted at the top of the crank case. The carburettor is of very light weight, about a pound, and is made of aluminium. A splash lubrication method of lubrication is employed. The oil is led to the main bearings and drops into the crankcase, where the cylinders take it up. No pump has been found necessary. Any excess of oil which may find its way into the cylinder head is expelled from the

exhaust port, which is situated at the lowest part of the horizontal cylinder. The shaft extension carries a bevel gear on the top of the engine for connecting to the propeller shaft, which, of course, may be geared to the extent desired.

The Renault light motor was produced a year ago and has since been through some changes. Two ventilating fans were formerly employed to force and to aspirate the air through the sheet iron casing surrounding the cylinders. One fan has been retained, which throws the air on to the cylinder heads and then it is deflected on to the exhaust box beneath the crankcase. The propeller shaft is really an extension of the cam shaft, this being an ingenious manner of reducing the speed of the propeller without extra gearing, since with the engine shaft running at 1,200 rev. per min. the propeller shaft is normally running at half this speed. The engine is rated at 50-h.p., but is stated to give 15 per cent. more at 1,800 rev. per min. The cylinders are 90 by 120 mm. bore and stroke.

A somewhat novel motor is that presented by Laurent Seguin; this is a rotating engine, of which there were one or two examples at this year's show. The S.C.A.R. is again shown in an industrial car this year, and the Gnome seven-cylinder is another of the same type. The Seguin motor has a hollow crank shaft with an aluminium crank case, carrying seven cylinders, all connected to the single crank of the shaft. The base of the cylinder passes through the crank chamber and is locked to the latter by means of a split ring in a groove on the cylinder body. The cylinders are all bored out from solid steel, and the radiating fins of the cylinders are also an integral part of the metal forming the cylinder. This would appear to be a difficult piece of work. The inlet valve is in the piston head and is of course automatic. The mixture passes through the inside of the hollow shaft. The latter also encloses a pipe which carries oil to the centre of the crank chamber, from where it is distributed to the rotating cylinders by centrifugal force. The engine, which is entirely constructed of nickel steel, has seven cylinders of a bore and stroke of 110 by 120 mm., being rated at 50-h.p. at 1,200 revolutions per minute. The weight of the engine with magneto, carburettor and lubricator is about 166 lbs.

The new Gobron light weight motor is well worth a study, in view of the very ingenious application which is made of the Gobron type of piston arrangement. As is well known, the explosion takes place between two pistons in each cylinder, the uppermost piston



The B.E.P. (Esnault-Pelterie) Aeroplane.

being connected to the crank shaft by connecting rods on the outside of the cylinder proper. The lower cylinder is connected to the crank shaft in the usual manner. In the model on view the eight cylinders are arranged in the form of a cross, two being arranged on each of the four arms. The motor really forms two twin motors, since the idea has been carried out of making each group of four cylinders independent by means of two magnetos, so that in case of a breakdown of one set the motor could work on at a sufficient speed to allow the aeroplane to descend. The cylinders are water-cooled, and separately cast with copper jackets,

the bore and stroke being 90 by 160 mm. The main piston or that directly connected to the crank shaft has a slightly longer stroke than the upward travelling piston. At 1,200 revs. per min. the lineal speed is stated to be about 20 ft. per second, and the output is given at 80-h.p.

Some idea of the importance of the Aero section is gathered from the fact that altogether there are no less than sixteen full-sized aeroplanes on view, representing the most successful types of machines yet constructed. In addition there is a very large number of models of flying machines comprising almost every con-



The Antoinette Aeroplane on which M. Welfringer last week made a flight of one kilometre at Issy-les-Moulineaux.

ceivable design calculated, in the opinion of the inventors, to give maximum of stability, speed, and load carrying capacity.

Altogether the 1909 Salon presents a very creditable lot of light motors, and a fair choice can be made amongst the dozen first-class makes represented. The number of light motors on view is a proof of the genuine interest being taken in the subject by the leading French motor engineers, and it is certain that before long there will be on the market several types of motors capable of giving that continuous maximum output which is so desired by members of the aerial fraternity before they can proceed beyond the experimental stage of the art of flying. Just now, however, it seems to be more a question of men to fly than machines to enable them to fly. It is sure that the aeroplane will support the motors if the latter will work continuously. There are, however, but half a dozen men in this line who can be said to have really done anything laudable in the air, and if the men can be found, the motors will certainly soon be developed for the demand arising. The French Aerial League, which has a stand in the Grand Palais, shows that there are prizes to the value of over eight thousand pounds awaiting successful flyers, and these prizes do not include the well-known Prix Michelin or any others which have been made known directly to the public independently of the Aerial League.

On February 1st Mr. C. J. Glidden will resume his travels by automobile, his route including Algeria, Tunis, Tripoli, the Sahara Desert, and Sicily. At the present time he has 46,528 miles to his credit, to reach which total thirty-nine countries have been visited.

The Marquis of Tullibardine has been holding a series of political meetings in West Perthshire, utilising his motor-car in getting from place to place. One evening his car broke down between Strathloch and Killiecrankie, but fortunately he was able to obtain another one from Pitlochry to continue his campaign.

The new individual associates just elected by the R.A.C. General Committee include Mr. W. E. B. Priestley, M.P., whose recent letter to the *M.U.J.* attracted some attention at the time of its publication, Sir R. P. Beauchamp, Bart., Mr. Mortimer Menpes, the eminent artist, and several ladies, including Lady E. A. Gordon, Lady Rose Lyon and Miss Edith Joseph.

GOSSIP FROM PARIS.

The A.C.F. Grand Prix Race.

Though at the time of writing the short delay of eighteen days allowed by the French Automobile Club for the inscription of cars has not yet expired, it is not rash to predict that there will be no Grand Prix in 1909. In spite of all the efforts of the partisans of the race, with the Marquis de Dion at their head, up to last Saturday night only nine cars, one Guillemin (Le Gui), three Cottin-Desgouttes, three Mors and two Rolland-Pilains had been entered; thirty-one inscriptions were still wanting to make up the number of forty entries required as the minimum for the maintenance of the race. The Marquis de Dion had, it is true, announced his intention to enter three cars, and one or two other French firms were expected to follow his example. As for the foreign automobile makers, the Sporting Committee of the A.C.F. had heard that three Italian firms and perhaps a couple of German manufacturers would enter cars. No news had been received concerning the intentions of British builders of motor-cars. It was therefore foreseen that thirty entries was the most that could be expected. However, if the great French International competition which was created to supplant the Gordon Bennett Cup is suppressed, there are plenty of other automobile races for those who find pleasure in witnessing cars travelling at high speed. The majority of the provincial and foreign automobile clubs have already sent to the A.C.F. for inscription in



Messrs. Wilbur Wright and Henry Farman, the Heroes of the Flying World.
From Cartoons Sketches by Mich. [in L'Auto.]

the racing calendar the denomination and exact date of the competitions they propose to hold in 1909. There are already more than sixty, and it is pretty sure the number will be increased before the publication of the calendar towards the end of January.

The Aeroplane Exhibition.

This year the "Salon des poids lourds" deserves to be named the "Salon des poids légers." It is not because there are not plenty of heavy self-propelled vehicles, omnibuses, delivery vans, &c., on show, but because the general public goes to see the balloons and aeroplanes, and pays but little attention even to the motor-boats and yachts, of which, however, there are a goodly show. When I visited the exhibition on the opening day with a friend who is greatly interested in machinery in general, and more especially in the new light motors, I was struck with his remark as he glanced at the spherical balloons at each end of the nave, the steerable balloon occupying the centre of the building, and the aeroplanes of all descriptions filling the transept. Pointing to the crowd contemplating with wonder the mysterious looking apparatuses, he exclaimed, "Yes! There is enough there to set the brains of the people working." Most surely he was right. There was Santos Dumont's "Butterfly," with which the Brazilian tried to win the Deutsch-Archdeacon prize, Wilbur Wright's marvellous machine, with which the now celebrated American astonished the whole world, Delagrangé's aeroplane with which the Frenchman flew at Rome in the presence of the King and Queen, the monoplane on which Bleriot experienced so many mishaps before he recently succeeded in flying across country for a matter of some twelve miles, Esnault-Pelterie's elegant machine which carried him so high into the air against his will

that he for a few weeks held the unofficial record of height attained on a machine heavier than the air; Henry Farman's bi-plane, with which the English aviator led the way by flying a kilometre out and home again, and by quite recently making the first trip from town to town, and numerous other flying machines with which their inventors expect to gain fortune and renown. The exploits achieved are recorded on placards at the foot of the various machines and constitute the history of the first victories in the campaign for the conquest of the ethereal realm. They are calculated to inspire emulation and unbounded confidence in ultimate victory, but the world must not imagine that the battle is already over. There remains much to be done. Yes, even more than has yet been accomplished, before the ordinary mortal can enjoy the sublime pleasure of travelling in safety through the air high over the fields and forests and over mountains and the highest monuments of towns and cities.

Motor-Buses in Paris.

The Municipal Council of Paris is in a quandary. The concession of the Omnibus Company will expire in May, 1910, and it must either be renewed without much further delay or the new concession must be given to one of the numerous other companies which have tendered for it. But the unfortunate Municipal Councillors do not know exactly what they want, or more correctly speaking, they know that the Parisians, while demanding the generalisation of the motor-bus, would strongly object to the multiplication of the type of vehicle introduced by the old company. If these vehicles were to be taken as a specimen of what the Omnibus Company would give the Parisians if its concession were to be renewed there would be almost another revolution! It is quite understood that from 1910 the horse-drawn omnibuses are to be done away with, but no one knows what type of vehicle is to be adopted in their place. With the object of settling that question the technical advisers of the city authorities last week brought a certain number of new types of motor-buses to the Place de l'Hotel de Ville for examination. Some of them were regarded as too light and others as too heavy. It is useless to describe them as no selection was made, but several were provided with the new twin or triple pneumatic tyres which, if adopted, would meet many of the objections raised against the Paris motor-buses now in use.

The Champion Flyer of 1908.

Writing on Boxing Day I learn that Wilbur Wright intends to fly over the Auvours military manœuvring ground all day long—that is to say for at least five hours, before the end of December. He wishes to do so to make certain that neither Henry Farman nor Delagrangé will at the last moment rob him of his world's record flight of close on 100 kilometres, and to secure the prize of £800. Should the American aviator fail to accomplish that feat everyone knows that it will be due to nothing but his motor or to the intensely cold weather. Not only Wilbur Wright but Henry Farman and Delagrangé can fly an indefinite distance, and during the length of time their motors will hold out without a *panne*, and, indeed, so long as their petrol tank is not exhausted. That has been demonstrated over and over again. For 1908 Wilbur Wright will in all probability carry off the Michelin prize, and he will unquestionably have well deserved it. Since he commenced his demonstrations at Le Mans he has led the way, showing the French aviators what to do and how to do it. There is very little chance of Henry Farman being able to compete successfully with him at the present moment, for the good reason that he has put the new Renault air-cooled motor on his machine, and has not yet had time either to put it into good working order or to practice with it. It seems, therefore, extremely probable that Wilbur Wright will be proclaimed the Air King, the Champion Flyer of 1908!

MARNEY.

In connection with the Industrial Vehicle and Aeronautical exhibition in Paris this week, a number of papers have been read, among them being one by M. Kapferer, on dirigible balloons, one by M. Voisin, on Aeroplanes, one on Aerostation and Aviation by Commandant Renard, and one by M. Lumet on the Exhibits in the Marine Section.

A Siamese Motor Carnival.



The King of Siam (in the centre of the picture) at the opening of the new Birthday Bridge, Bangkok—His Majesty's decorated car can be seen in the background.

THE anniversaries of the coronation of His Majesty King Prabach Somdetch Phra Paramindra Maha Chulalongkorn Phra Chula Chom Klao, of Siam, are always celebrated with considerable *clat* in the Siamese capital, but this year Bangkok has been more than usually *en fete* on account of the king's reign having exceeded that of any of his august ancestors. The people of Siam, not alone the natives but also the members of other nationalities residing in the land, subscribed to celebrate His Majesty's forty-first coronation anniversary by presenting him with a bronze equestrian statue of himself, which was placed in the big boulevard near the new royal palace and unveiled by the king with great ceremony on November 11th. The celebrations, however, lasted for three days, and included a big meet and review of gaily-decorated motor-cars, a review of some 20,000 troops, a long procession of the various Government Departments, &c., and there were magnificent fireworks and illuminations.

The Europeans subscribed some £2,900 to the statue, which is quite an artistic production in bronze on a Carrara marble base. The Siamese excel in temporary decorations and illuminations and their fireworks are both elaborate and pretty.

His Majesty each year celebrates his birthday by presenting one or more bridges to the town, and this year gave a very fine one. There was a big garden party held at the new palace grounds, at which practically everyone of social standing was present, as all who subscribed to the statue received invitations, and several royal dinner parties were also held.

Of course everyone culled out a holiday for the occasion, and the place was in a state of high carnival. The Royal Palace was the centre where the public got their *panem et circences*, the scenes being extraordinarily picturesque on account of the brilliant colours worn by nearly everybody, and the gaudy uniforms. The various Rajahs and Sultans of the little Siamese Suzerain States in the Malay Peninsula and the various Shan and Laos chieftains made quite an imposing appearance, as they were for the most part much bejewelled and kaleidoscopically clad. There were some 130 motor-cars in the big procession which escorted the King to the opening of the new bridge, and they certainly made a brave show.

Quite an elaborate set of rules had been laid down for the guidance of the motorists, who were told *inter alia* that "the appropriate space between cars when on the march can be gauged by observing the dust raised by the car in front," and they were instructed not to raise more dust than they could help when passing the King. The cars were ranged in three divisions according to power, and this no doubt did much to obviate possible accidents. Of these there were happily none worth chronicling. In addition to the festivities several other events transpired of more or less importance to the country at large. A new 67 kilometre section of the State railway line which runs north to the Burman frontier was opened, and the new gold coinage was issued from the Treasury for the first time. As seems to be usual on such occasions nowadays, a special set of postage stamps was also issued. The presentation of the statue to the King, it may be mentioned, was made by His Royal Highness the Crown Prince of Siam in the presence of an enormous gathering.

EVIDENCE of the growing importance of the motor movement in India is seen in the receipt from Messrs. Oakes and Co., Ltd., of the Motor Garage, Madras, of a catalogue of motor-cars, cycles, launches, accessories, &c., which extends to about 150 pages, on each of which a number of illustrations are given. The first portion of the list deals with the numerous cars for which the firm are agents, following which are no less than 108 pages dealing with motor accessories. Messrs. Oakes have endeavoured to make the catalogue not merely a price list, but a book of reference to car owners in India, and with this object the work includes hints on the care and management of cars, hints and tips on the Causes and Treatment of Misfiring, the R.A.C.'s table for rating the horse-power of motors, and metric and English tables; notes on the charging and care of accumulators, diagrams of wiring system of one, two, and four cylinder engines with trembler and non-trembler coils, and simple instruction for adjusting trembler coils, besides a great quantity of other useful hints to car and cycle owners.

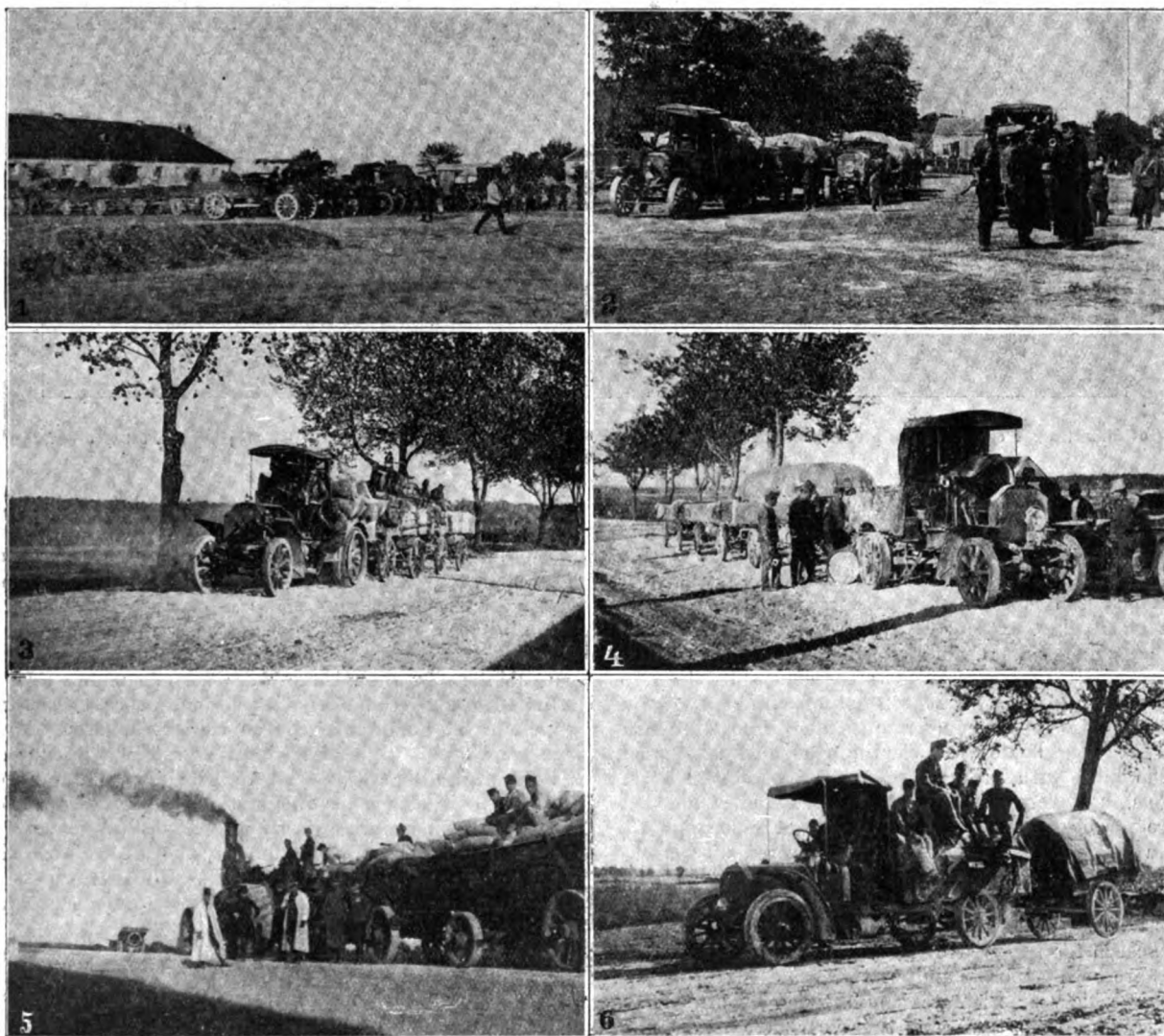
CONTINENTAL NOTES.

The Improvement of the Roads.

Baron Merlin, the president of the Roads Committee of l'Automobile Club de l'Oise, considers that roads should be divided into two classes: Roads of general interest and roads of local importance. The first should be carried straight to their end without regard to the demands of individual neighbourhoods. With the second bring all local interests to the front. Roads of general interest should be open to all sorts of locomotion; pedestrians, cyclists, and light carriages or heavy vehicles for hauling, whether moved by mechanical or animal power. They should be laid for all kinds of locomotion, and in such a way as to establish the responsibility of individuals on every part of the road. In order

the same space as in Vienna. The Ringstrasse is the broadest and most beautiful street in the world, and along it are nearly all the monumental buildings in the city. Vienna roads are beautifully macadamised, and offer every attraction to the motorist, in fact, we found the Austrian roads to be of a very high degree of excellence, their only drawback being the fact that in the spring they are sprinkled with fine stones, whose edges are somewhat detrimental to tyres. But when these are worn down they are the making of the roadway.

"Some of the trips which we regularly made from Vienna were to Schönbrunn, Leising, Baden and Carlsbad. While Austria is a most interesting country in which to spend a holiday, Hungary is even more so, because of the mediæval atmosphere which still exists. The peasantry in many sections retain the old



Motor Vehicles in the recent Austro-Hungarian Military Manœuvres.
 (1) The open-air Garage at Warasdin. (2) Reserve machines at Pacsa. (3) A road-train near Alsó-Lendva. (4) Another of the road-trains. (5) A steam road-train near Belovar. (6) The travelling motor repair shop near Warasdin. [Allgemeine Automobil Zeitung.]

to meet these several conditions the roads should be wide, with a sensibly horizontal running surface. Grades should not be too much reduced, to the detriment of the straight line. The limit of grades should be 1 in 20, and the minimum limit of curves 50 metres.

Austria and Hungary for Motor Tourists.

A Canadian motorist, who has recently returned from a lengthy stay in Austria and Hungary, writes enthusiastically of these countries from a motoring point of view:—"Vienna is," he remarks, one of the most charming cities in the world, being noted for the vivacity and good nature of its inhabitants; moreover, it is rare to find in any great city so many fine structures contained in

picturesqueness of their garb, while imposing castles crown many of the mountain heights. The enjoyment is lessened to some extent by the fact that the roads are often very bad, and that spare parts also present a great problem, they being hard to procure, and often do not fit."

French Motor-car Exports.

The French export trade in motor-cars and parts continues in a very depressed condition. The shipments during the eleven months ending with November last, according to the returns now available, only amounted to £4,783,480, as compared with £5,366,040 in the corresponding period of 1907, a decline of £582,560.

Reliability Trials in Sweden.

The Royal Swedish Automobile Club, of Stockholm, is organising an automobile reliability trial "to develop capable and careful drivers and to create motor-car types suitable for Sweden in every season, and to increase the interest for motoring, especially in winter." The event, which will be held in February, from Stockholm to Gothenburg, a distance of 500 kilometres, will follow very much the lines of the early reliability trials in this country, stops being penalised at the rate of one mile a minute, &c. Repairs to tyres will involve a penalty at the rate of one-fifth of a mark per minute, and putting on or taking off non-skids will be treated in the same way. There are to be two classes, one open to cars driven by members of recognised automobile clubs, and the other for cars costing not more than 6,000 kronen. In the first the prize will be the Winter Cup, valued at 2,500 kronen, while the Gothenburg Cup, valued at 1,500 kronen, will be the chief award in the other class, which is intended for strong small cars. Entries, accompanied by a fee of 100 kronen, should be sent in at once.

The Nice Automobile Week.

The programme of the automobile fêtes which are to be held at Nice in March next has been provisionally drawn up. On the 17th there will be a motor paper-chase, on the 20th an automobile excursion, on the 24th an elegance competition at Monte Carlo, on the 25th a series of speed trials over the flying kilometre, and on the 28th a hill-climbing competition on La Turbie.

Aeronautical News.

It is proposed to establish professorships of aviation at the Göttingen University and at several technical colleges in Berlin.—The sum of £12,000 is being included in the next Spanish Budget for the purpose of acquiring a number of flying machines.—The Aero Club Liège-Spa, has just been formed at Liège, Belgium.—Some trials are about to be made with a new aeroplane of the monoplane type fitted with a 50-h.p. engine, built by Messrs. Raoul and Vendome.—It is announced that Wilbur Wright will remove to a new trial ground at Pau early in the new year.—M. Delagrè is now practising with a new aeroplane fitted with a 60-h.p. Chenu engine, in anticipation of the competition at Monaco.—The latest society in connection with the French aeronautical world is the Union Française Aérienne, which has just been formed in Paris.—A somewhat novel prize is being offered by M. Lortet; it takes the form of an ingot of solid gold weighing one kilogramme and worth approximately £136, and will be presented to the first aviator who flies from the centre of the town of Tarbes, France, to a point ten kilometres away.—In the presence of a small company of official personages, on Saturday last, Wilbur Wright made a short flight lasting about ten minutes, during the course of which he performed a series of daring manœuvres. Owing to the intense cold Wright did not attempt any ambitious flights, but the skilful exhibitions of steering which he gave during the short time he was in the air moved the spectators to enthusiasm.

Belgian Motor-car Imports and Exports.

The value of the foreign motor-cars and parts imported into Belgium during the eleven months ending with November last amounted to only £127,248, as compared with £153,652 in the corresponding period of last year. On the other hand, there has been an increase in the exports of Belgian motor-cars and parts—from £397,792 in the first eleven months of 1907 to £422,152 in the similar period of the current year.

Les Autos Militaires en Allemagne.

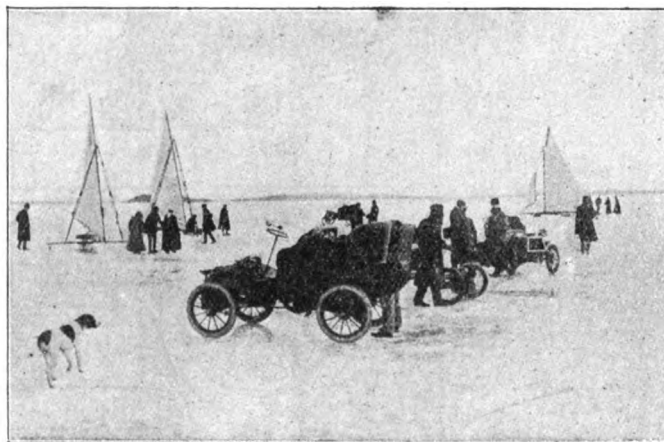
Le ministre de la guerre d'Allemagne vient de recommander aux chefs de corps de contribuer à l'initiation de tous les officiers à la conduite et à l'entretien des automobiles. Ils devront également aviser à pourvoir chaque régiment d'au moins dix mécaniciens-conducteurs d'automobiles, rompus dans le maniement et aux soins à donner à ces véhicules. Le ministre insiste aussi sur l'utilité qu'il y a à pratiquer les sports aériens, les dirigeables et les aéroplanes de préférence aux ballons libres.

SOME USEFUL NOTES.

A FREQUENT cause of leaks in radiators is said to be that the vents in the filling caps become choked with sediment or dust, with the consequence that steam accumulates in the radiator, and the pressure, seeking an outlet, forces an opening at the weakest point. A little attention to the vent will remove the cause of the trouble, while a mixture of red lead, white lead, and gold size will be found an excellent means of stopping any leaks of the kind.

BEWARE of putting resin and other concoctions on the leather of a cone clutch; the cure by such agents as resin is only temporary and very detrimental to the leather, and resin, it should be noted, has the unfortunate property of becoming heated by the friction, and consequently sticking up the clutch, so that sometimes it cannot be withdrawn when required.

WHEN a motorist has become somewhat expert in the running of his car it will be found advantageous to gradually cut down the petrol feed until the point is found at which the motor runs well, but will not stand a further reduction. The smaller the proportion of petrol the more economically the motor will run and the cleaner it will keep. This can, of course, be carried to extremes and the efficiency of the engine interfered



Motoring on the Ice in Sweden.

with; but the proper feed can be determined without great difficulty. The same process should be applied also to the cylinder lubrication. When the petrol and lubricating oil are feeding into the cylinder in the smallest quantities that will produce good results, the motor should run for a long time without fouling the compression space or the sparking plugs, and on the minimum amount of oil.

WHEN motor lamps have been subjected to the weather, or have been in storage for a time, without being cleaned, ordinary cleaning polish or paste may not remove the coating of verdigris which forms. Even the application of considerable "elbow grease" helps matters but little, but the following mixture will remove the verdigris, and if it will not thoroughly restore the lamps to their original brightness, at least will prepare a surface which can be highly polished by the use of the ordinary article. Mix a good metal polish with wood alcohol, and apply the resulting mixture to the brass portions of the headlight, allowing it to dry. In a short time rub with the regular woollen cloth; the verdigris and stains should then come away, leaving a fine surface.

A MATTER which should be guarded against in the operation of combination contact makers and synchronised high tension distributors is the prevention of any collection of carbon or metal dust in the high tension compartment. If this accumulates uncertainty ignition is likely to result.

HOW TO USE ACETYLENE GENERATORS SUCCESSFULLY.

THE usual experience of motorists with acetylene generators is almost too familiar to need mention. When the generator is brand new it works fairly well, although quite possibly it develops a trick of causing the lamps to flare and burn dim alternately, to the endangering of the lens mirrors in the one case and the jeopardy of the owner's neck in the other. In the course of a few weeks, or even of a few cold evenings, the owner notes a gradual failure to obtain good flames. The pressure at the generator appears to be normal, so far as the water supply and other indications show, but nevertheless the lamps burn dimmer and dimmer. Presently the lamps flicker themselves out. "Water in the pipes" is said to be the cause, and the pipes are blown out with a tyre pump, or with compressed air. Water comes out, sure enough, and for a few nights the lights burn almost as well as ever. Then the trouble begins again, and repeated blowing-out of the pipes does little to remedy it. Some feet of rubber tubing, temporarily substituted for the piping, works well for a few hours, but soon the old flickering reasserts itself.

By this time the owner, unless he understands the nature of his trouble or is sufficiently interested to find out, is probably in a frame of mind to pronounce anathema on the whole tribe of generators.

After all, the way of obtaining a steady and reliable supply

of lamps it feeds—of course, up to the point where the heat of generation becomes excessive. Such a generator, provided with two separate outlets, is very convenient when it is desired to supply both the side lamps and headlight from the same source, and to use the latter only on occasion. Again, some generators continue to work for a considerable time after the gas or the water feed has been shut off. This is owing to imperfect separation of the lime from the carbide. The lime receives part of the water which should go direct to the carbide, and until the moisture in the lime has been absorbed by the carbide generation will continue. A generator in which the carbide is kept clean will stop generating very soon after the water drip is cut off. Such a generator, if large enough to carry a good supply of carbide, can be used much like a gas cylinder, the gas being turned on and off repeatedly as required.

2. THE PIPING.—The small copper tubing ordinarily used to connect the lamps and generator is destitute of every merit except convenience in installing. It is too soft to keep its shape, and so small that, when it acquires the inevitable serpentine form seen on every car more than a few months old, the slightest depression acts as a pocket to receive condensed moisture. It is this condensed water which causes the acute flickering so often seen. In addition, the small pipe clogs rather quickly, especially at the ends, and if not properly supported it becomes brittle and cracks from vibration. The proper connection from a generator to the side lamps is a brass pipe of $\frac{1}{2}$ in. pipe size, or about $\frac{1}{4}$ in. inside

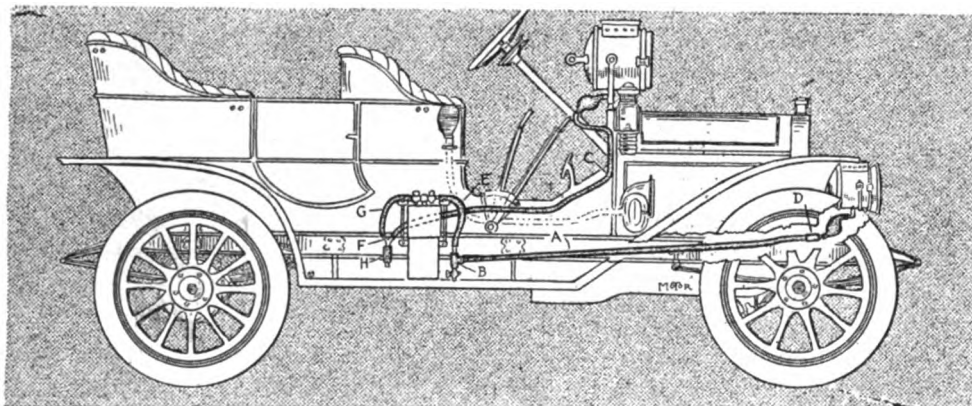


Diagram of Piping System from Generator to Lamps.

of gas from an acetylene generator is simply a question of enlightened common sense and a little intelligent study of the unalterable properties of carbide, lime and water. This article is not written, remarks Mr. H. L. Towle in the New York "Motor," for people whose common sense is a quality too precious for common use—such people, for example, as do not take the trouble to keep their lens mirrors clean, or to clean the burner tips when the two little tongues of flame shoot sideways past each other owing to particles of soot in the burner orifices. It is assumed here that the reader is as much interested in extracting pleasure from his night motoring as he is, for example, in keeping the tyres sufficiently inflated or the engine fed with oil.

To get a steady gas supply from a generator four principal things are needed:—(1) A good generator; (2) Large piping; (3) Provision to drain condensed moisture in the gas; (4) Provision for occasionally blowing out and cleaning both the piping and the generator outlet.

Each one of these requirements is simplicity itself. Let us consider them in order:—

1. THE GENERATOR.—Any generator will make gas after a fashion, and if it is not too small it will make gas as fast as needed. There is, however, a great difference in the ability of different generators to govern their gas production automatically, which can only be done by having the water feed controlled directly by changes in the gas pressure. A strictly automatic generator will feed either one or several lamps with equal ease, and will maintain the same pressure regardless of the number of

diameter. A similar pipe, or rubber-fabric hose of the same size, should be used to supply the head light. Cheap rubber tubing is very unreliable.

3. DRAINAGE.—It is of the very first importance that the connection from the generator should slope directly downward to the lowest point in the pipe line, and that at this point there should be either a drip outlet, which may be opened at will, or a pocket sufficiently large to hold at least a teaspoonful of water. The reason for this is that the water in the gas is mostly condensed close to the generator, and if the pipe runs upward from the latter, some of the water will run back into the generator, causing clogging and corrosion of the gas valves. From the lowest point the pipe should rise continually to the lamps. If brackets and other things on the frame are in the way, the pipe should bend laterally around them rather than over or under.

4. PROVISION FOR CLEANING.—The larger the pipes, the less frequently will they need cleaning. Brass pipe properly installed may not need to be cleaned as long as the car lasts. When cleaning is needed, however, it should be easy to attach a compressed air hose to the highest point of the pipe line and blow it out. It is also necessary to clean the generator outlet once or twice in a season, since it clogs with lime dust unless the latter is separated by an efficient hair filter.

The accompanying illustration shows how a generator may be piped to the lamps, following the principles above set forth. A is a $\frac{1}{2}$ in. brass pipe having its lowest point close to the generator, and its front end arranged so as not to be in the way of the

mud guard bracket and the bonnet catches. At its rear end is a T-piece B, with a drip cock and a short length of tube to which the hose C from the generator connects. At the front end is a T-piece D, from which a pipe goes across to the other side-lamp. It is desirable, but not essential, that this cross tube shall be of brass, and shall slope upward to the second lamp. The chances are that whatever moisture is in the gas will condense before the point D is reached. Besides this, the warmth of the radiator is generally sufficient to prevent condensation in the cross pipe, especially if the latter is placed behind the radiator and out of the way of the air passing through. The pipe leading up the dashboard to the headlight should be of the same kind as A, and should slope continuously upward from the generator to the lamp. The illustration shows a fabric rubber hose E connected at its lower end to one branch of the Y-tube F. A short length of hose G, from the generator, connects to the other branch of the Y, and a short rubber tube H, with a brass plug in its lower end, affords means of drainage.

To guard further against accidental fluctuation in the gas pressure, and to prevent possible flickering due to unforeseen accumulation of water, a gas bag is attached directly to each of the lamps. These bags perform the further function of settling chambers to prevent any minute solid particles from being carried to the burners by the flow of gas. Obviously few or none of these functions would be properly performed if the gas bags were close to the generator instead of at the lamps.

To blow out any of the piping it is sufficient to disconnect the gas bags, open the drip outlet, and blow through with a tyre pump or a compressed air hose. By opening the generator and the generator gas valves and closing the drip outlets, it is also easy to blow out accumulated lime in the generator outlet. In a generator of the type shown, the two hose connections at the gas valves may be detached, the two valves opened, and a wire passed through them. The bottom portion of the generator may be removed as if for recharging, and a wire run straight up inside the gas passage to the branch connection to clean the latter. Closing one of the valves, a short length of rubber tube may be connected to the other, and the user may blow through this tube while "twiddling" the cleaning wire which he has pushed up into the connection. That will blow down the material detached by the wire, and leave the whole passage clean. This is but a few moments work, and needs to be done but once in a season's ordinary use. Most generators have a wad of curled hair in the gas passage just below the connection to stop the lime dust. Occasionally this should be removed by a bent wire and shaken clean. One can easily tell by blowing through the generator outlet, by means of a test piece of rubber hose, whether the passages are open. An occasional drop of oil on the gas valves will keep them from sticking.

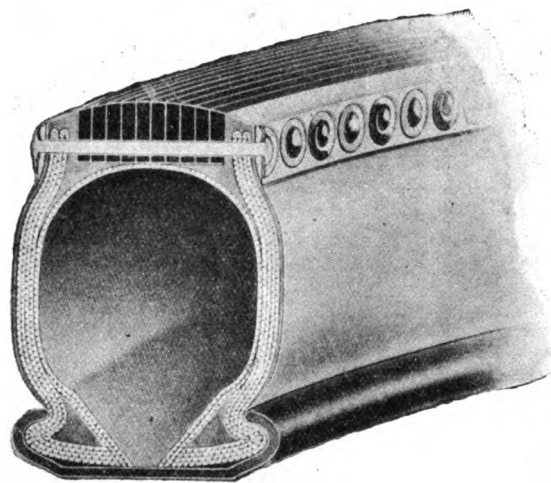
Instead of a drip outlet or small pocket, a gas reservoir may be used. This is a section, ten or twelve inches long, of one-inch iron or brass pipe, which may be located horizontally over the fly-wheel of the engine, lower than the generator outlet, and from which the feed pipes to all the lamps are to be carried. These pipes should slope upward from the reservoir, as the generator connection slopes downwards to it, but it is unnecessary to make provision for draining the reservoir, since whatever moisture gathers is evaporated by the heat of the engine during the day. The condensation is, in fact, so small that it is almost never necessary even to open the drip outlets of the arrangement shown in the sketch, day to day evaporation taking care of the moisture excepting during periods of extremely low temperature.

While on the subject of cold weather, it is worth while to touch on anti-freezing precautions for the generator. Some types of the latter are so extravagant of carbide that the heat of their own internal reaction will keep them from freezing in almost any weather. It is possible to prevent freezing by the addition of salt, but this is more or less objectionable, since the corrosion, although slight, is liable to clog the drip valve and the gas outlet. A better plan is to add wood or denatured alcohol in a proportion of from one-to-ten to one in twenty, according to the temperature. A one-to-ten solution freezes at about 15 degrees Fahrenheit. It is hardly desirable to use a stronger solution than

is actually necessary, because the alcohol is wasted and the water tank becomes emptied faster than if no alcohol were present. Since the vulnerable point is the drip, it is best to use as weak a solution as possible, this not being put into the generator until it is to be used; the apparatus is then protected from freezing partly by its own heat. An additional safeguard would be a hood, such as may easily be made from flannel-lined rubber cloth similar to the hoods frequently carried on the lamps. With a protection of this kind no alcohol need be added unless the temperature gets considerably below that which the greater number of motorists find agreeable.

THE RIPERT MOTOR TYRE.

WE illustrate herewith a sectional view of the new motor tyre lately brought out by the Société des Pneumatiques Ripert, of 7, Rue de Normandie, Asnieres, Paris. As will be seen, the feature of the new tyre is the tread, which consists of a number of strips of chrome leather, set on edge and held in position in the specially shaped outer cover by studs passing laterally through the



cover and the leather. The studs are made of Swedish iron, while the washers are of ferro-nickel. The outer cover is so formed that no part of the leather comes in contact with the inner tube. It is claimed for the new tyre that not only is it extremely durable but that it does not heat.

MOTORISTS who indulge in golf—and their name is legion—will be interested in the formation of the Temple Golf Club at Temple Park, between Maidenhead and Marlow, in the Upper Thames Valley. Viscount Royston, whose interests include motoring and ballooning, is on the committee, and we hear that a motor service will be established from the railway station at Maidenhead, so that members may be on the first tee within an hour of leaving London.

THE chauffeur anxious to keep his car in good condition and to reduce the running expenses will use a rainy day to good advantage by painting the rims to protect the tyres from rust. After removing the tyres the rims should first be cleaned of all dirt and rust and then given a coat of japan. Another coat should be applied after five or six hours, and the tyres replaced only after the japan has become hard and no longer feels sticky when touched. Rust is very destructive to tyre fabric, and a protective coating on the rims tends greatly to preserve the beads of outer covers.

IN the connecting up of batteries and coils it has generally been recommended that the trembler screws be made "positive," so that whatever platinum is carried away by the continual passage of the current may be taken from the screw and deposited upon the contact point of the trembler. The theory is that the screw is cheaper and easier to replace than is the trembler, and that, with this arrangement, the trembler point builds up rather than wears away, requiring only the smoothing off of the extra metal deposited upon it to keep it in perfect condition.

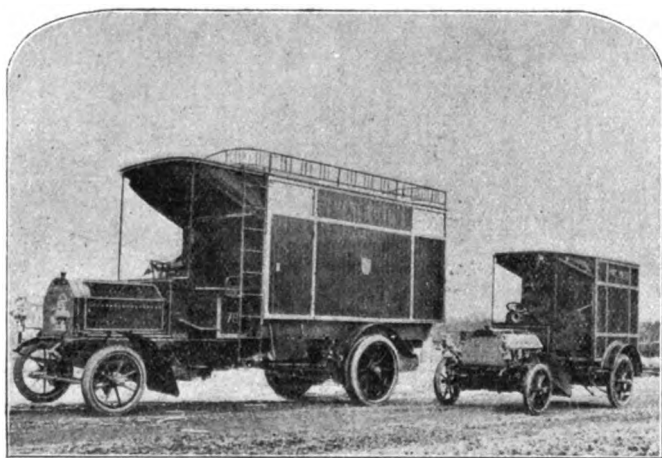
SCOTLAND YARD MOTOR-'BUS TEST.

INCIDENTS AND IMPRESSIONS OF A LONDON TRAFFIC AND HILL TRIAL.

HAVE an invitation to attend Scotland Yard this morning with the 'bus. Will you join in?" Thus came the message over the 'phone a few mornings ago, from the engineer of a suburban motor company, and I at once accepted the invitation.

Fortified with a notebook and a camera, I presented myself at the depot just as preparations had been completed for the journey to town—some fifteen miles. The 'bus was one which had been especially purchased and prepared for the requirements of a new outer suburban service, or rather a projected service, for the official permit of Scotland Yard has first to be obtained for the running of the vehicle.

An outer suburb, I would explain, considers itself as something distinct, and perhaps rightly, from the common or garden variety, as there are no cheap fares, trams, theatres, music-halls, &c., of suburbia proper. The roads also are considerably smoother and better than nearer town; there are no trams, and, thanks to enterprising road treatment, no mud or dust. To be in keeping with such, the 'buses would naturally need to be of a high standard of



The German Daimler Motor Company has recently supplied about fourteen motor delivery vans for use in connection with the Parcel Post Service in Bavaria. The above illustration depicts two of the vehicles, the large one being of 28-h.p. and the smaller one of 16-h.p.

excellence. The one referred to certainly appeared to fulfil these requirements.

It boasted of a body of polished teak that would do credit to the most reputable firm. The interior was tastefully upholstered, with acetylene gas installation and other refinements. The engine was powerful, quiet-running, and free from smoke or smell, whilst the vehicle, newly painted and varnished, presented an eminently respectable appearance.

As it was raining, I donned a waterproof before taking my seat beside my friend at the wheel. A mechanic travelled inside to keep an eye on small boys and others. The engine was in excellent tune and started with a turn of the handle. For several miles the way lay over smooth suburban roads and the best speed of the vehicle was registered. I say best speed, because the top speed even of a powerful and modern 'bus, less passengers, is not greatly in excess of twenty miles an hour. It is a phase of motoring that cannot be said to be very pleasurable and highly exhilarating. On account of the low gears, and at the high speed at which the engine runs, travelling seems extremely slow, there is little response to the throttle, and the narrator of car runs is somewhat at a loss to describe the experience. I can imagine no more drastic punishment for the worst type of road hog. A month or

two's enforced 'bus driving would cure him of his speed proclivities for ever.

The unmistakeable warning of a Gabriel came from behind, and a big Renault landaulet skimmed by, and seemed to leave the 'bus as though standing still. Instinctively my friend kicked at the accelerator pedal and the speed of the 'bus increased a mile or two. The Renault was soon lost to sight around a corner of the road ahead. Running into the outskirts of town, with the trams and traffic the regulation twelve miles per hour was necessary. One cannot accelerate as on a car, and it is advisable to follow in line behind such things as trams, as overtaking and repassing is attended with considerable risk.

We reached Scotland Yard with a clean sheet, and, driving into the yard, took up position beside two other 'buses and a row of cabs. My friend thereupon decided to advise the licensing officials of his arrival. To find them, however, was no easy matter; but, by dint of much elbowing in a chamber packed with would-be drivers and others, he at length gained access to a functionary seated at a desk. The latter, however, gave no hope that an interview would be accorded within an hour for the very least. Leaving the mechanic in charge of the 'bus, my friend and I accordingly adjourned for lunch to a neighbouring hostelry.

Returning to the Yard we found the 'bus was coming in for a good deal of attention from the drivers and deadheads who frequent the precincts of the place. After a further wait two individuals attired in long drab coloured overalls appeared and advanced towards the 'bus. Interest was now centred in their operations. One with a long flat rule took careful measurements of the height, wheel base, wheel track, &c.; for this purpose a reel tape was also utilised. The writer took a snapshot, but unfortunately the poor light resulted in an inadequate exposure and a record of the proceedings was lost. The measurements finished and duly entered in a notebook, an inspection was made of the engine and general details of the machine. These completed, my friend was instructed to make the running test. One official seated himself next to the driver, the other took up his position on the step, the writer and one or two others electing to travel inside. The engine was started and the trial commenced. Along the Embankment the 'bus ran smoothly and well, passing some trams and other vehicles. The official elected to remain on the step. Now and again he would cast a glance round and sniff for petrol and smoke fumes.

Certainly the vehicle travelled well. Glancing at my friend at the wheel I noticed he drove calmly and without any fluster. The 'bus was directed up Arundel Street. I am not sure of the gradient, but the surface was decidedly greasy. Half-way up the bus stopped. Only a brake test, and it continued. Another stop. This time with a jerk, and the official who was walking alongside made an entry in his notebook. At the word go the machine again started with a do-it-again-as-often-as-you-like air that must have satisfied the most critical, and there were a fair number of spectators of the trials. Doubtless they took it for a new type of vehicle undergoing a trial run.

Thus far the test had been successful. Despite the sudden calls for acceleration there was little trace of smoke. The 'bus, indeed, travelled quietly in comparison with certain of the "regulars." Thence along the Strand into Fleet Street. Here the difficulties inseparable from the passage of that crowded thoroughfare began to make themselves felt. A covered-in van suddenly turned on to the wrong side of the road, calling for hasty application of the pedal brakes. The vehicle answered the test well and was evidently comfortably settling down to the trial. The official observer on the footboard appeared by no means perturbed by the enquiry of a boy as to how far we went for a penny, and with a wave of the arm he checked an individual who would have boarded the 'bus during a traffic stop. Then through the thick of the traffic at Ludgate Circus on to the Embankment again, and the starting point was soon reached, the 'bus being deftly steered into the somewhat narrow portals of the Yard.

The trial was over, and the official observers dismounted and after another brief inspection and further notes they departed. And the judging and award. Only Scotland Yard can decide!

C. M. F.

THE SOCIAL WHIRL.

THE King, with the Prince of Wales, Prince Arthur of Connaught, and several of his Majesty's guests, motored from Sandringham on Monday morning to Houghton Hall, to honour Colonel Ralph Vivian with a visit. Lunch was served at the Hall, and the King and the Princes returned to Sandringham House in the afternoon.

QUITE early one morning just before Christmas the Princess of Wales and her son, Prince Edward, made a surprise visit to Gamage's Emporium in Holborn, arriving from Marlborough House by motor-car, attended by an equerry. They went through nearly all departments of the extensive premises, making several purchases, and showing much interest in the Christmas bazaar. On the next day Princess Victoria of Wales, attended by Lady Eva Dugdale, followed their example, and spent a considerable time in Gamage's.

ON Saturday Lady Llangattock went to her country residence, the Hendre, from Monmouth by balloon. The trip was made in her son's "Mercury," and by utilising the air currents after leaving the ancient city they were able to land on the lawn in front of the house. The Hendre will be remembered by the older generation of motorists as the scene of one of the most successful meets of the central motoring organisation when it was known as the A.C.G.B.I.

WHEN returning from a Christmas Day party to friends at Llandudno, Mr. J. Edwards, of Coed Mawr Hall, near Conway, who was driving his motor-car, collided with the Llandudno Post Office mail van near Llandudno Junction. Mr. Edwards, who was driving the car, had a remarkable escape from injury, but his wife was thrown out and received a severe contusion on the back of her head. Her maid, seated in the back of the car, was unhurt, and the horse attached to the mail van was also uninjured. Unfortunately the driver of the Post Office vehicle sustained severe injuries.

MR. W. BECKETT HILL, the Liverpool manager of the Allan line of Canadian steamers, whose death took place on Saturday, was greatly interested in automobilism. He was the chairman of the Liverpool A.C. and Self-Propelled Traffic Association, and did much to secure the success of the early commercial vehicle trials in the city on the Mersey.

CONGRATULATIONS to Mr. Richard Sutton Clifford, of Loughborough, on his marriage to Miss Constance Wright, of Leicester. Mr. Clifford is a member of the Leicestershire, Derbyshire, and Nottinghamshire clubs, and well known in Midland automobile circles generally.

MR. T. W. STAPLEE FIRTH was the solicitor who instructed Mr. Tindall Atkinson, K.C., in the case reported last week, in which the Motor Union secured a writ of *certiorari* to issue against Mr. Flowden to show cause why the conviction of a motorist should not be quashed.

MAJOR LINDSAY LLOYD, who, as already announced, is the new Clerk to the Course at the Brooklands Track, took an active part in the organisation of the Gordon Bennett eliminating races held by the R.A.C. in the Isle of Man. He was for some time the Secretary of the War Office Committee on Mechanical Transport, and is also interested in marine motoring. For the last seven years he has been a member of the committee of the R.A.C.

THE death of Mrs. Neville in an unfortunate motor-car accident throws many leading families into mourning. She was the wife of Mr. Ralph Neville, of Wellingore Hall, near Lincoln, and a cousin of Lord Lovat through her mother, Mrs. Scott-Murray, who is now living, at an extremely advanced age, at Bourne-mouth.

LOLLIUS.

HERE AND THERE.

THE Fife Motor Company have a well-equipped garage and motor repair workshops in Victoria Terrace, Dunfermline.

A NEW motor puncture-proof tyre, made under Thorne's steel-woven patent, is being put on the market by Tesama Limited, 6, Major Street, Manchester.

THE most popular mechanical toy with Parisian children this Christmas has undoubtedly been the aeroplane, this having quite displaced the motor-car in juvenile estimation.

A NEW addition to the list of engineering societies is the Internal Combustion Engineers' Association, which has just been formed in Chicago. The society aims to advance, in the broadest possible manner, the interests of internal combustion engineers.

ONE more has been added to the already long list of those who claim to be the original inventors of the motor-car. It has just been recalled that Elijah Ware, of Boston, U.S.A., a well-known railway construction engineer in his time, invented a steam automobile as early as 1861 and ran it on the streets of Boston.



The Gross Airship passing over the Brandenburger Thor, Berlin.
[Allgemeine Automobil Zeitung.]

AN electric motor-car has been designed by the engineer-in-chief of the Metropolitan Asylums Board to convey to the inmates the cottages of that authority, which are scattered over a site of 100 acres, their hot meals. The car can be arranged to run forty miles on a single charge and the maximum speed is sixteen miles per hour.

THE Daimler Motor Company (1904), Ltd., have built and equipped an extensive repair establishment at Highgate Hill, Upper Holloway, London, N., where skilled mechanics and a modern plant will ensure the prompt and effective execution of orders entrusted to them. The repair works at Brownlow Mews, Guilford Street, W.C., have been closed, and all work previously done there will be carried out at the new address.

WE announced some months ago that Messrs. Dennis Bros., Ltd., of Guildford, had added to their many activities that of the construction of petrol motor fire engines, a department which, judging from the experience thus far, promises to become an exceedingly important one. In connection with it the firm have just issued a special motor fire engine and ambulance catalogue, in which full details are given of the Dennis-Gwynne motor fire vehicles, as well as a tabulated statement of their advantages and particulars of the various tests they have been put to in different parts of the country during the past few months. The second half of the list deals with the Dennis motor-ambulances, illustrations and specifications being given of vehicles similar to those supplied to the Metropolitan Asylums Board and other bodies.

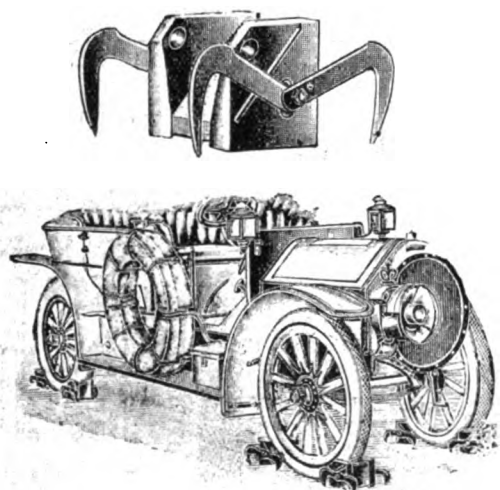
MESSRS. J. T. HARMAN AND CO. have lately supplied a 24-h.p. Vinot car with limousine body to the directors of the Anglo-American Oil Company, Ltd.

MR. W. G. BELL, of Milford-on-Sea, Hants., sends, with compliments, the "X.Y.Z. of Bridge," a reminder of the Victoria Motor Garage which Mr. Bell directs for the convenience of visiting motorists.

THE SOCIÉTÉ DES AUTOMOBILES PEUGEOT have taken out a patent for the cooling of the brakes of a motor-car by a circulation of air in the brake drums produced by an ejector operated by the exhaust gases or by a pump or blower driven by the motor.

WE learn that Messrs. Swan, Ltd., of Pentonville Road, King's Cross, London, N., are bringing out a new car, which is to be called the "Williams." The vehicles, which are being built for the company by Vauxhall Motors, Ltd., will comprise two models of respectively 15 and 20-h.p.

THE Komet, Maschinen und Motorenfabrik (Gebrüder Buchholz), of 63, Koppenickerstrasse, Rummelsburg, Berlin, has recently brought out the device illustrated herewith, which should prove extremely useful to motor-car transport agents and packers, as well as to railway companies having much motor traffic. As will be seen, it consists of a wheel-holding block made up of a wedge and hooks; one of the blocks is placed in front and behind each



of the road wheels, and securely held in place by knocking the hooks into the platform of the lorry or railway waggon. The device is stated to be already in use on some of the railways in Germany, and enables a car to be transported without any risk of the paint being damaged, as often arises when the vehicle is secured by ropes.

THE BRADFORD VULCANISING COMPANY, of 96, Manningham Lane, Bradford, who introduced the "Bradford" non-skid tyre, and who have plant for vulcanising tyres of every description on the premises, send an attractive calendar. This will serve to remind Yorkshire motorists of the facilities possessed by the company for dealing with tyres which have had considerable wear.

MR. D. J. CHANDLER, of Fitzroy, Victoria, has recently returned from a tour of about 800 miles on his 16-h.p. Bentall through that state and the adjoining one of South Australia. He writes, that "We were unfortunate in meeting rain, and had wet weather five and half days out of seven and half. At Strathdownie we were delayed by rain two days, and the country being level and swampy, we had to travel through four and half miles of water in one stage of fourteen miles; at one spot it was so deep it came up over the engine and stopped us for two and a half hours. We bound rope around the tyres and got through many greasy spots. The time taken to do fourteen miles from Strathdownie to the border was four and a half hours. After crossing into South Australia the roads were in perfect order, and we cut out the fourteen miles from the border to Mt. Gambur in thirty-five minutes. We had many other experiences on this trip. I could mention on two occasions having to dig out the car when it had sunk in the wet sand right down to its bed."

MESSRS. MARTINS, Bow Bridge, London, E., have just supplied a 35-h.p. Saurer motor lorry to a firm of brewers in Gothenberg, Sweden.

MR. C. C. MARTIN, of the Station Hill Garage at Chippenham, is commencing to run motor-cars for hire in connection with his business as a job master. He also is putting in a repair plant, and will, when this is complete, be in a position to undertake any class of motor repair. Already he has garage room for between twenty and thirty cars, and intends to commence the New Year well equipped for dealing with the requirements of any motorists who may be passing that way.

DURAY, the well-known driver of Lorraine-Dietrich racing cars, was last week concerned in a motor accident. He was being driven in a limousine from the company's works to the exhibition at the Grand Palais, when, to avoid a man with an unlighted hand-cart in the Boulevard Maillot, Paris, the driver swerved. The car mounted the pavement and ran into a tree. The driver had to be taken to the hospital, while Duray sustained an injury to one of his knee-caps which will confine him to the house for some weeks.

THE Dennis motor fire-engine, recently purchased by the Bradford City Council, is doing some wonderful feats in the matter of getting to fires quickly. The other day, in response to an alarm, it did the journey to Odsal (some three miles) in seven minutes. It had no sooner been berthed again at the Central Fire Station than another call was received—this time from Gomersal, six miles away. The engine got to the scene in the short space of fourteen minutes, as against about thirty-five minutes "horse time."

MESSRS. ACER, LTD., Hanwell, W., are at work on the construction of a new motor tractor for agricultural and general haulage purposes. The motive power is supplied by a 27-h.p. engine of the double-cylinder, opposed horizontal type, adapted to use either paraffin, petrol, or other spirit as fuel. In addition to a pulley for driving a threshing machine or other stationary work, a special feature of the tractor is a winding drum, which can be rotated at four different speeds, and by means of which a powerful hauling or lifting effort can be obtained when desired.

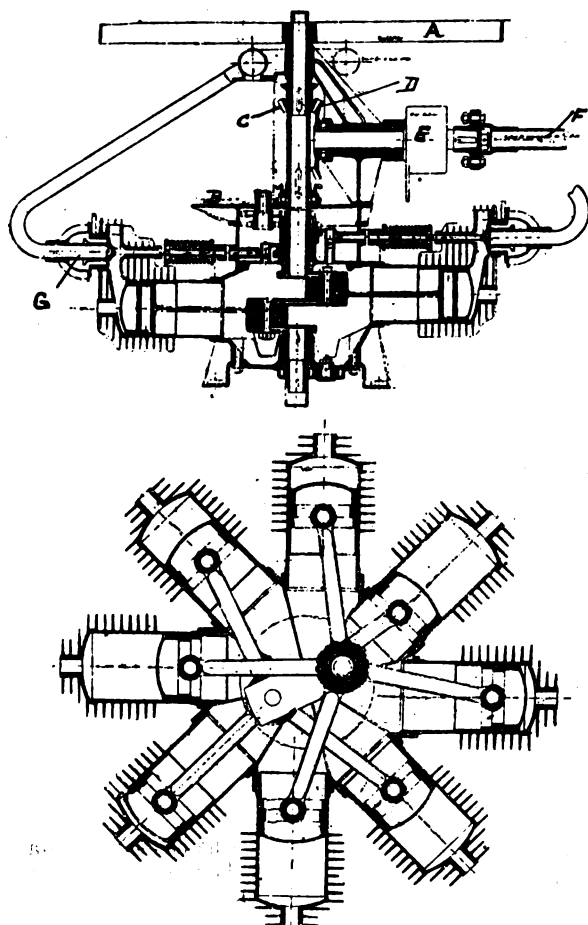
THE latest patent of the Daimler Motoren Gesellschaft, the makers of the Mercedes cars, is one relating to water circulation on petrol cars, provision being made for circulating the water round the change-speed gear-box and the engine base chamber as well as through the cylinder jackets. The water first passes from the radiator to the lower part of the gear-box, and is thence conveyed by bent tubes to the intermediate and upper sections of the same. It is then passed round the crank chamber and through the circulating pump to the cylinder jackets, and back to the radiator.

FROM the Sheffield-Simplex Motor Works, Limited, comes a copy of the 1909 catalogue of the Sheffield-Simplex six-cylinder cars. In the introductory pages of this particulars are given of the special claims made for these cars, and of the gear-box-less model. Attention is also directed to the specially favourable conditions under which the cars are manufactured in the heart of the Sheffield steel industry. A number of testimonials bearing witness to the general satisfaction from satisfied owners of the vehicles are followed by the reproduction of some photographs depicting actual incidents which occurred during the exhaustive tests undertaken before it was decided to adopt the gear-box-less model for open touring cars, and some interesting particulars are given of the many well-known severe hills which were surmounted during these trials. Independent evidence of the genuine nature of these performances, and of the successful running of this new type of car, is furnished by the testimony and impressions of various motorists of experience. Very complete chassis specifications of both models follow, and the catalogue concludes with a number of body illustrations and quotations, and a handy table which gives at a glance the price of sundry extras and accessory equipment, including various brands of tyres in applicable sizes, the aim of the company having been to put before their clients under one cover all the necessary information required to facilitate the ordering of a chassis or fully-equipped car, without reference to the considerable number of catalogues which so frequently have to be resorted to in calculating the complete cost of a vehicle.

THE FARCOT AERONAUTICAL ENGINE.

WE have already described and illustrated several of the special motors designed for use in connection with flying machines which were on view at the Paris Salon. This week we are able to illustrate another very interesting motor—the Farcot, made by M. J. Ambrose Farcot, of 9, Boulevard Denin, Paris. It will be seen from Figs. 1 and 2 that this comprises eight horizontal air-cooled cylinders, set at equal distances around the central vertical crank shaft. The cylinders are arranged in two planes, four working on to one crank pin and four on to the second, set at 180 degrees to the other. For the purpose of keeping the cylinders cool, a fan A is mounted on the upper end of the crank shaft. Two systems of ignition are provided, accumulators and high tension magneto; the latter is intended to be located on the platform B, and to be driven off the crank shaft by bevel gearing.

A novel feature of the engine is seen in the combination inlet and exhaust valve fitted to the cylinders. Two views of this valve, as also of the valve operating cam, are given in Fig. 3. It will be seen that the valve works in the opposite direction to the usual method, that is to say, when closed for compression purposes it abuts against the upper portion of the valve pocket. The latter is surmounted by a perforated dome D, to the centre of which the admission pipe is connected. This pipe extends a cer-



Figs. 1 & 2.—Sectional Elevation and Plan of Farcot 50-h.p. Eight-Cylinder Engine for aeronautical purposes.

tain distance within the dome as shown at F. To the top of the valve S is attached a hollow cylinder with bell mouth C, in which at a certain height holes are formed in the sides. For exhaust purposes the valve only opens a certain distance, the holes in the cylinder being then just above the end of the admission pipe, so that no new gas can then find its way into the engine. The dome D acts as a silencer, the burnt gases passing out to the atmosphere through the holes formed in it. A wire gauze is provided to prevent any flame from being emitted to the outside air. On the suction stroke the valve opens a further distance

than for the exhaust, the gas then finding its way from the admission pipe through the holes in the cylinder piece C into the explosion chamber, as shown by the arrows. The arrangement is such that as the fresh gas passes in a suction action is set up within the dome D, a small supply of additional air being drawn in to dilute the mixture.

As already mentioned, the crank shaft is arranged vertically; mounted towards its upper end is a bevel pinion C, in mesh with

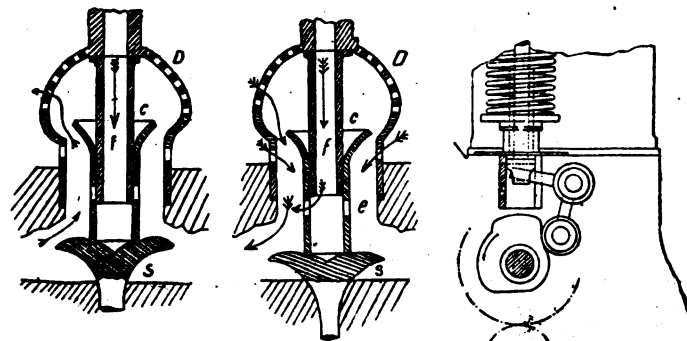


Fig. 3.—Sectional Views of Farcot Combination Inlet and Exhaust Valves and Valve Gear.

The drawing on the left shows the position of the valve at the period of exhaust; the central view shows the valve open for admission, while the illustration on the right depicts the double-bossed cam.

the large bevel wheel D, on the shaft F, on which the screws for propelling the aeroplane are mounted.

M. Farcot is making three sizes of the eight-cylinder engine, viz., 30 h.p. (80 mm. bore by 90 mm. stroke), 50-h.p. (105 mm. by 120 mm.) and 100-h.p. (130 mm. by 135 mm.) The 50-h.p. motor measures 3 ft. 8 in. by 3 ft. and weighs complete in running order 112 lb., or about 2½ lbs. per horse-power. During a long test on the bench it is stated to have developed 69-h.p. at a speed of 1,200 revs. per minute.

THE "Trader" handbook and diary for 1909 comes to hand in its usual excellent form, with several new features adding considerably to its interest. This has become a standard work, and many of the lists and much of the information contained therein will be of value to those engaged in the automobile trade.

It is apparently of little avail to urge upon those who conduct some of the great journals the necessity for careful differentiation between accidents in which the automobile is involved as the victim and those in which the motor-car is the aggressor. All such mishaps are generally reported as "motor-car casualties," being headed in such a way as to convey to the casual reader the impression that the motor-car is really responsible for such accidents. Now that an organisation has been formed which bolsters up its case for the protection of the highway by statistics which require careful classification before publication, the warning may, however, be again repeated in the hope that some effect may be made upon the policy.

A CONFERENCE to consider the resolutions passed at the International Road Congress held at Paris in October is to take place in London early in May. This is being convened by the County Councils' Association, of which Mr. G. Montague Harris is the secretary, with the assistance of representatives of the various associations concerned with Corporations, District Councils, Municipal and County Engineers, County Surveyors, &c. All who are interested in the problems of highway maintenance are invited to support the Conference, the membership of which can be obtained at a fee of £1, and it is to be hoped that the motoring organisations will take care to see that the automobile position is clearly understood at the Conference. The points under discussion, apart from the matters of administration and finance, include road signs, dust, the protection of the footpaths and motor traffic. In the latter division we notice the subject is to be discussed in various aspects, including contributions to rates and taxes, licences and registration, speed, weight, wheels, tyres, identification marks, and the disposal of penalties inflicted on motorists for contraventions of the Act of Parliament.

Correspondence.

[Letters to the Editor should be addressed to the office, 27-33, Charing Cross Road, London, W.C.]

MOTOR TAXI-CABS.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—In answer to Mr. T. Ashmole *re* taximeter charges, I wish to point out the correct method is to take the number of the cab and report its inaccuracies to Scotland Yard. The cabman naturally resents being paid short money, as he is obliged to pay into the company whatever his meter records. I might also add that the meter is a combination of time and distance, therefore varies according to the traffic.

In respect to the latter part of your correspondent's letter I venture to remark that nearly a century has passed away since Mr. Pickwick was engaged in fisticuffs with his cabman, and times have changed for the better. If Mr. T. Ashmole stands in Regent Street, he will see that ladies prefer the taxi not simply for its speed, as speed is not required in shopping, but because the driver is invariably polite; he leaves his seat to open his cab door, minds the parcels during the absence of his fare, hands in their cards at the houses of their friends, and on dark evenings always waits till he sees them safely in the house to which he is directed to take them. I do not say there are no cads driving motor-cabs, but what I do say is that the cad will not show the cloven foot, and his Billingsgate will not be forthcoming unless he is cheated and he is certain that the fare in his cab is the same type of being as himself.—Yours truly,

LEWIS WILSON.



The Annual Dinner of the Long Island Automobile Club.

The annual banquet of the Long Island Automobile Club, lately held at Brooklyn, N.Y., took the form of a "Beefsteak Dinner," at which the members and their guests, to the number of nearly 200, were dressed in the unusual costume seen in the above illustration.

INDIVIDUALITY OF DESIGN.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—I have been quiet for quite a long time, but after reading the several motor papers I feel that I must express some views that I have until now bottled up. Olympia has left me in a wilderness of nothingness. Why has the Daimler firm left the ranks of orthodoxy and built and fitted such an engine as the Knight, and, in short, any engine but their own, to apparently the entire elimination of their standard design? I have read all the papers on the new engine, and I have been so surfeited with enquiries of the Silent Knight, as has everyone else knowing anything about motor-cars, that I am now more silent than the night about them. I made a steam engine in 1902 with sliding ports arranged similarly to those in the Daimler engine, but in this case the crosshead move the inner shell radially and I am bound to say it worked all right until the shell stuck. One more thing before I leave the subject. Why did the designer allow the opportunity of adopting an auxiliary exhaust port to go unheeded? Surely this would have been advantageous where two shells are expected to work vertically under tremendous heat and enormous frictional contact.

Now, why has the Lanchester firm left their own beaten track, and eventually submitted to the prejudices of the buying public? They might just as well now build the ordinary bonnet and radiator and so drop one of the finest cars that was ever built. Ask any driver of a Lanchester, new or old, which form of steering he would prefer, and I am quite certain that ninety-nine out of a hundred would plump for the tiller. You could

drive the car through the eye of a needle with it, comparatively speaking. The control is modified, too. I cannot imagine anything neater or more efficacious than their hand speed lever control, without pedals and side levers, and certainly their cars cannot be driven anything like so gracefully as was possible with the tiller steering and left hand control. I believe all owners and drivers of the typical Lanchester are faithful to it, and I should strongly advise prospective purchasers of these cars to try the original. The difference is the beauty of it, and surely the man who rows a boat can paddle a canoe and enjoy the change of position and condition. How many of the advocates of the chain drive, too, are giving their attention to live axles? I quite expect to see Mercedes steam cars and Panhard electromobiles, for instance, in the near future.

Now that the show has gone past, which is the car, the best value for money, handiest, simplest and most reliable, of course? All makes were not represented. One of my choice was not on show. I shall endeavour to say more on these matters, and on steam cars in particular, at some future time.—Yours truly,

HERBERT J. CHAPMAN.

THE PETROL PERIL.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—I find our sale of petrol in small quantities for domestic use, viz., cleaning small articles of wearing apparel (mostly belonging to the fair sex), is greatly increasing, and I think it a duty to issue a note of warning against the use of this highly-inflammable spirit for cleaning purposes. The growing familiarity with petrol has a tendency to make those who are not familiar with the use of this spirit careless. Gunpowder remains where it is placed; petrol, being volatile, does not. There is an authenticated case of the vapour from this spirit having travelled a distance of 30 feet, taking fire, and bringing about a serious conflagration.

It cannot be too strongly impressed that the use of petrol in a room where there is a naked light or fire is highly dangerous. It might also be pointed out that to pour this spirit down a drain is an infringement of the law, and lays one open to proceedings being taken against them. In more than one instance the result of such an action has been to cause serious damage. In case of a fire, the use of water to extinguish petrol only increases the danger, as the light spirit burns and floats on the water, and the tendency is to increase the zone of danger. The method to adopt is to use one of the patent fire extinguishers, a syphon of soda water, sand, or soil, and, in cases of a small fire, to beat it out.—Yours truly,

THOMAS W. KEMP.

A CASE OF POOR WATER CIRCULATION AND THE CAUSE.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—For some time I was troubled with overheating of the engine in my Clement-Talbot car. I tried solutions galore, had the pump down, pipes off, in fact, ran through the whole procedure, but could not find out the cause of the trouble. The circulation seemed all right, apparently, inasmuch as the water was circulating, though not effectively. This being so, I naturally thought that it occasionally became air or steam locked. On my runs I had to fill up about every fifteen miles, the water having boiled away. At last I acquired the services of Mr. Downs, who styles himself "The Car's Physician," and I got him to come and spend an hour or two on the circulation. After a quarter of an hour he found the overheating was caused by an irregular lump of metal in the water tank, which evidently jumped about and sometimes got over the water outlet from the tank and at other times freed itself. I need not tell you how pleased I was, as, previous to this, I was contemplating selling the car.

To others suffering from overheating troubles this might be a good tip, as one never knows what is in a water tank; it is the last place you would expect to find an obstruction like this.—Yours truly,

S. L.

EXPLOSIONS IN THE INLET PIPE.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—I should be glad if you could assist me in ascertaining the cause of explosions in the inlet pipe, and sometimes in the carburettor. The latter is inclined to flood when the air inlet is half off or closed. If it is a bad carburation, how is it ignited in inlet pipe? The car is a four-cylinder one and runs well, but suddenly developed explosions. Both high tension accumulator and low tension magneto ignition are fitted.—Yours truly,

W. FERGUSON.

[The trouble referred to by our correspondent is usually caused by a leaky inlet valve allowing a portion of the ignited charge to

pass back into the inlet pipe. Sometimes too rich a mixture will cause this, especially when the engine is suddenly throttled down. We would advise the grinding in of the inlet valves. Also see that they are well down on their seat; they may be touching the tappets, slightly holding them off their seating.]

TROUBLE WITH AUTOMATIC INLET VALVES.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—I have an old car fitted with a two-cylinder engine. After starting motor I find it blows back into the carburettor every now and then, especially when running quick. I have ground the automatic inlet valves in and also fitted new ones, but this does not alter it. Would it be caused by the exhaust valves? I also find the water gets very hot although there is good circulation with the pump. I shall be obliged if you can be of any assistance in solving the cause of the trouble.—Yours truly,

NOVICE.

["Novice's" trouble is no doubt caused by the valve springs having become weak. We would advise putting stronger ones on to remedy the firing back in the carburettor. The overheating is in all probability

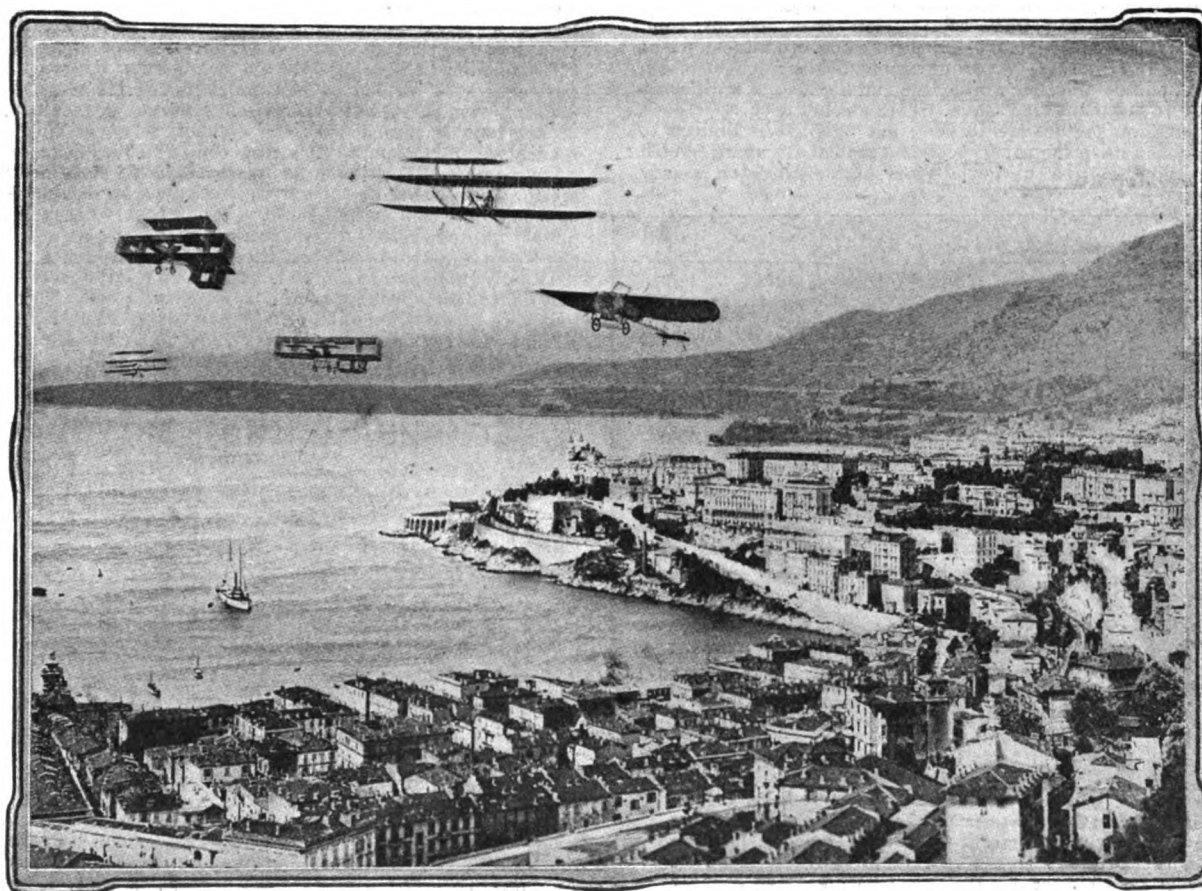
USING THE ENGINE AS A BRAKE.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—Some two or three years ago there was quite a long discussion concerning the merits and demerits of using the engine of a petrol car as a brake. Week after week whole columns were filled with letters from people who were chary of attempting to find out for themselves how the idea would work, because they were afraid the engine might be damaged. Others—and these were in the majority—altogether derided the efficacy of the plan, even when the few who knew what they were writing about testified by the light of hard experience.

Being very much interested in the subject, I made a careful inquiry at the recent Olympia and Paris Shows and found that quite a number of makers have now so arranged their engines and carburettors that when running downhill with the throttle entirely closed a charge of fresh cold air can be drawn in at each suction stroke of the pistons. In this way not only is the cylinder thoroughly scavenged, but a braking effect is obtained which saves the ordinary brakes considerably, and gives a greater feeling of security to the driver in going down long steep hills.—Yours truly,

MAZAGRAN.



An anticipation of the Aeroplane Competition which is to take place at Monaco from the 24th inst. till the end of March.

caused by the cylinder head being carbonised inside; to remedy this, it will be necessary to remove the cylinders and clean out the same. This should effect an improvement if the water circulation is good.]

THE POSITION OF HEADLIGHTS.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—There seems to be some difference of opinion among motorists as to the proper method of setting the headlights of a car which is to be given any great amount of night work over rough roads. By some drivers it is held that it is best to place the lamps in such a way that the rays of light shall be thrown out in perfectly parallel and horizontal planes. Others hold that the light should be focussed on the road at a point not too far distant from the front of the vehicle. To this end the lenses are sometimes placed so that the light is concentrated on a single point, while in others the rays from one of the headlights are directed forward and at only a very slight inclination below the horizontal plane, while those from the other are directed at the ground only a short distance from the front of the car. I should be glad to hear the opinions of other readers of the *M.C.J.* on the matter.—Yours truly,

A. LAWRENCE.

TENDENCIES IN DESIGN.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—Re correspondence "Tendencies in Design," having been unfortunate with tyres, I agree with the writer of the letter, "Argyll," that the real improvement now lies in the direction of a really effective substitute for pneumatic tyres, and as there have been several resilient and spring wheels each claimed to be an improvement on the pneumatic tyre, I should like to know the name of the makers of the wheel "Argyll" refers to.

I notice he says nothing about the solid treads, which I understand are somewhat of a trouble. What size is used, what is the average life, and what method of fitting to the rim is used?—Yours truly,

TYRED.

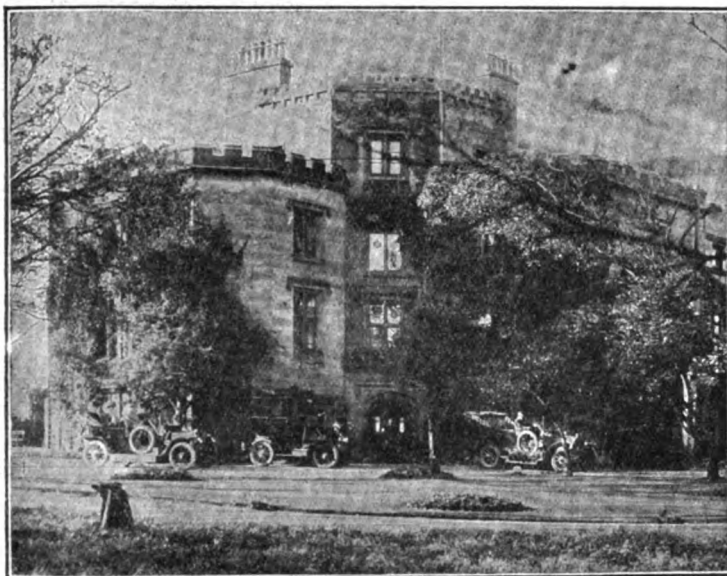
MR. N. G. NEER suggests that the R.A.C. should adopt the Proportional Representation plan in the election of the Club committee:

TENDENCIES IN DESIGN.—As we have mislaid his address, we should be glad if "Argyll," whose letter appeared in our issue of the 19th December, would communicate with us.

THE FUTURE OF ALCOHOL AS A MOTOR FUEL.

(Concluded from page 942.)

ALCOHOL can stand admixture with air in proportions varying from 4 to 13 per cent. (about three times the range of petrol), burning with odourless and smokeless exhaust, a consideration of no small account. This increase in range of admixture also permits the operation of the engine under widely varying degrees of load and speed; and, by rendering the throttle so much more flexible, brings the internal combustion motor nearer to the steam engine in this respect; in so doing sensibly diminishing the need of some of the different speed gears. For the reasons cited, and provided alcohol can be found to approximate the power-giving qualities of petrol, under similar conditions, there can be no doubt that when it becomes necessary to provide a successor for petrol, that successor will be found in alcohol. One of the main essentials of a fuel for the internal combustion motor is that it shall burn rapidly, the efficiency of the engine depending on the complete combustion of the charge during the first fraction of the power stroke. This is more especially true of the high speed motor, in which alcohol, which is a slow burning fuel when under moderate compression, has not time enough to burn completely, and is expelled at the exhaust partially unburned. This characteristic of alcohol is modified when the vapour is more highly compressed, and when compression is carried to from 150 to 200 lbs. to the square inch, alcohol proves an even more efficient fuel than petrol. But increase in compression means a longer piston stroke and slower speed—in other words, the employment of a different style of engine. In Germany and Cuba, where alcohol is cheap, a good many high compression engines are in use; but this use is limited to places where they can have the supervision of a skilled attendant. With the high compression required the initial force of the explosion is very



The practice of converting historic houses into hotels or boarding establishments is growing. A recent instance is found in Leasowe Castle, near Birkenhead. It is a very popular resort for motorists in the Liverpool district, the illustration showing three Humber cars outside the Castle.

great—from 600 to 800 lbs. per square inch—necessitating a heavier and more bulky engine, and, besides the danger attending even the experienced handling of such an instrument, constant care must be exercised to keep the piston rings tight, the loss of compression meaning a large reduction in efficiency. For these among other reasons it is not thought that the high compression motor will ever come into popular favour, and we must look to some means for increasing the speed of flame propagation of alcohol in the low compression motor to arrive at a satisfactory solution of the problem. In the low compression motor of from 200 to 500 revolutions per minute, having a long piston travel, alcohol shows to better advantage than in the low compression high speed engine, the reason being that more time is given for burning the fuel; so that, though it be bad practice to burn the fuel throughout the stroke, it is better to do that than to exhaust unburned fuel.

Coming to a consideration of the efficient use of alcohol in engines running at 1,000 revolutions per minute and upwards, we find that the most practical suggestions have been along the line of enriching alcohol with carbon, and accelerating its rate of flame propagation in the cylinder, in order to bring alcohol into the same plane of action as petrol. In this connection it may be pointed out that in Paris the motor-buses use a mixture of half benzol and half alcohol; which, though not forming so good a fuel as petrol, yet, owing to the high price of the latter, proves economical and fairly satisfactory. But if this combined fuel

were entirely suitable, it could not attain a prominent position in the fuel controversy, because a supply of benzol at a moderate price could not be maintained. Investigation shows that acetylene, which contains the same percentage of carbon as benzol, can be used with alcohol to enrich the latter, and acetylene, when thoroughly mixed with a gaseous charge of alcohol and air, is found to possess the further property of vivifying the mixture, and, upon ignition, to cause the alcohol to burn with rapidity. A peculiarity of this vivifying effect of acetylene upon alcohol vapour is that the acetylene is only required to be used in very small proportions, it being essential, however, that the small quota of acetylene employed be thoroughly mingled with the explosive charge, and not pocketed or stratified therein.

In the event of acetylene being extensively used with alcohol as fuel for the explosion motor, there need be no concern about its ample and cheap supply, for calcium carbide, from which, by the action of water, acetylene is generated, can be manufactured in practically unlimited quantities, whenever and wherever it is required.

It appears therefore that alcohol is to be brought up towards the petrol standard through the medium of some agent which both enriches it with carbon and quickens its combustion. As against such method, other attempts have been chiefly in the direction of changes and modifications of petrol carburetors to suit the new fuel—in atomizing, vaporising, and mixing devices—overlooking the fundamental characteristic or physical deficiency of alcohol to be its slow rate of flame propagation, and that no matter of carburation can affect that peculiarity.

Difficulty in starting internal combustion motors when cold is experienced with alcohol as the fuel, this trouble usually being met by priming with petrol until the cylinder warms up. When either benzol or acetylene is mixed with the alcohol, however, the engine may be readily set in motion. With respect to the formation of acetic acid in a low compression cylinder using alcohol as the fuel, and the consequent erosion and pitting of the valves and valve seats, this is probably due to incomplete combustion, for it is found that where the alcohol is completely burned there is an entire absence of these deleterious effects.

To sum up, the whole situation may be epitomized in the statement that petrol is bound to go, and, since alcohol is its most likely successor, it is not too early for serious minds, in the interests of the motor industry, to devote earnest thought to the important subject of the efficient use of alcohol with the present high-speed, low compression engines.

CASES AGAINST MOTORISTS.

REASONS FOR SPEEDY TRAVEL.

At Bearsted (Kent) Petty Sessions, a Bristol motor-car driver has been summoned for driving a motor-car at a dangerous speed. The gentleman who was being driven by the defendant said that he was trying to catch the Boulogne boat at Folkestone. The driver had forty-five minutes in which to do nearly thirty miles. A fine of £15 and costs was imposed.

A chauffeur charged at Blackpool for recklessly driving a motor-car urged in defence that he had a doctor on the car, who had been called from a party to attend a dying man at St. Anne's. The Bench thereupon allowed the summons to be withdrawn on payment of the costs.

ACCELERATION.

At Penrith, Charles Sinclair, Grahamslaw, Roxburghshire, has been charged with driving a motor-car at Penrith in a manner dangerous to the public. Four witnesses gave evidence that the defendant was travelling at a very fast speed along the road from Penrith to Carlisle on December 5th. At Milestone House the wrong turning was taken, and in a few seconds the car was travelling down a steep hill at a terrific speed and seemingly got beyond control. At the bottom of the hill the car dashed into a cart containing a ton of coals, horse, cart, and driver being thrown into the dyke, and both cart and car badly damaged. The defendant's explanation was that the car was a new one, and inadvertently he had put his foot on the accelerator pedal instead of on to the brake, with the result that the car rushed down the hill, and it was a miracle the occupants of the vehicle were not killed. A fine of £10 and costs was imposed.

NOT SOUNDING APPROACH.

Before the Towcester Divisional Petty Sessions George Wright, chauffeur to Mrs. Singer, Coundon Court, near Coventry, was summoned for driving to the common danger at Towcester on November 21st. The offence was denied by Mr. W. Y. Groves for the defence. Inspector Slaughter said the car was driven past the cross roads at Northampton turn at between twenty-five and thirty miles an hour. The hooter was not sounded, and having regard to the traffic the pace was dangerous. Wright deposed that he left the Hotel Cecil, London, at 10.30 in the morning. On entering Towcester he slowed down, and then, having observed the danger signal, he went by the turn at about fifteen miles an hour only. He admitted not blowing the horn, but said his attention was concentrated upon keeping the car under control. Fined £5 with 16s. 6d. costs. The chairman said the reason for that penalty was that defendant did not sound the horn.

BATCHES.

At Highgate seven motorists have just been fined sums ranging from 20s. to £10 and costs. Caught in the trap between Cuckfield and Clayton four motorists have been summoned to the Haywards Heath bench, fines of £3 being imposed in all cases save one, where £7 10s. was the amount.

CLUBS AND ASSOCIATIONS.

R.A.C.

DURING the week preceding Christmas the Engineers' Department examined a score of motor-cars, furnishing a written report in each case. They also settled two disputes which, if taken into court, would have involved considerable expense.

Requisite notice not having been given by the Guernsey Motor Association to the Motor Union of the termination of their affiliation with that body, the Guernsey Motor Association has had to postpone affiliation with the R.A.C. for a year. The West Surrey A.C. has resolved to associate with the Club forthwith.

MOTOR UNION.

THE Chorlton-cum-Hardy Ratepayers' Association has passed a resolution of thanks to the Motor Union for supplying the three danger signs which have been fixed in Chorlton-cum-Hardy.

The committee of the West Herts centre of the M.U. consists of the following gentlemen:—Messrs. H. Arnold, M. Arnold, Dr. Fisher, F. D. Hindley, R. H. Harrison, H. G. Harper, W. E. Newcombe, Dr. A. L. Reid, T. Williams, and the Rev. A. W. Wilson, with Mr. Charles McWhirter as chairman and Mr. A. C. Bourner, Hilandale, Bushey Heath, hon. secretary.

LANCASHIRE.

At the last meeting of the committee of the Lancashire A.C. it was reported that a provisional arrangement had been arrived at with the Manchester A.C. for the demarcation of their respective spheres of influence.

COMMERCIAL MOTOR USERS' ASSOCIATION.

At the last meeting of the Executive Committee of this association Mr. Horace Bell, of the London General Motor Omnibus Company, Mr. R. S. Tilling, of the London Omnibus Owners' Association, and Capt. Dum-bell, of the London Motor Omnibus Association, were appointed to serve on the Standing Traffic Rules Committee. New members include Messrs. Rose Bros. (Gainsborough), Messrs. Brook and Frances (Huddersfield), Eccles and Pollock (Holsworthby), Imperial Flour Mills (Ellesmere), and Mr. William Rolles, of Romford.

SHEFFIELD.

ON Boxing Day the Sheffield and District A.C. met in Surrey Street, opposite the Town Hall, for a run to the Hop Pole at Ollerton. On the 1st inst. the members will foregather at the same point for a run to the Bell Hotel at Barnby Moor.

A postal vote of the members is to be taken as to whether the club will be associated with the R.A.C. or affiliated with the M.U.

AERONAUTICS.

At the last monthly meeting of the Royal Meteorological Society, Mr. Eric S. Bruce read a paper on "Some Forms of Scientific Kites," in which he brought to the notice of the society some forms of scientific kites other than the well-known box-kite invented by Mr. Hargrave. This is heavier and more breakable than many other forms of kites, but it possesses the indisputable advantages of stability, ascending steeply and exerting great force. When there is wind enough to fly it, it would appear unsurpassed. It is, however, considered advisable that meteorological kite ascents should be carried out as continuously as is possible, and that as many as possible of those days when the heavier box-kite will not rise should be utilised for obtaining information. On this account Mr. Bruce considers that lighter forms of kites, which are specially adapted for use in very light winds, would be of great service. He then described the Brogden six-winged bird-kite, the Salmon eighteen-winged kite, the Barclay honey-combed kite, the Cody bat-winged box-kite, the Balston butterfly-kite, and the Burgoyne aluminium kite.

"POLICE CONTROLS."

THE police have a measured distance at Hillmorton, near Rugby.

THE police trap in Shen Road, Richmond, has been frequently in operation of late. It is a furlong in length.

A TRAP three miles in length on the Great North Road has been established at Long Bennington and is in frequent operation.

AT Brampton, near Huntingdon, the police have lately been displaying considerable activity against motorists.

POLICE activity in watching motorists has been reported from Brighton of late, particularly on the Madeira Road and on the Old Steine.

AT Sendhurst Bridge, near Ripley, the police have a measured distance in frequent operation.

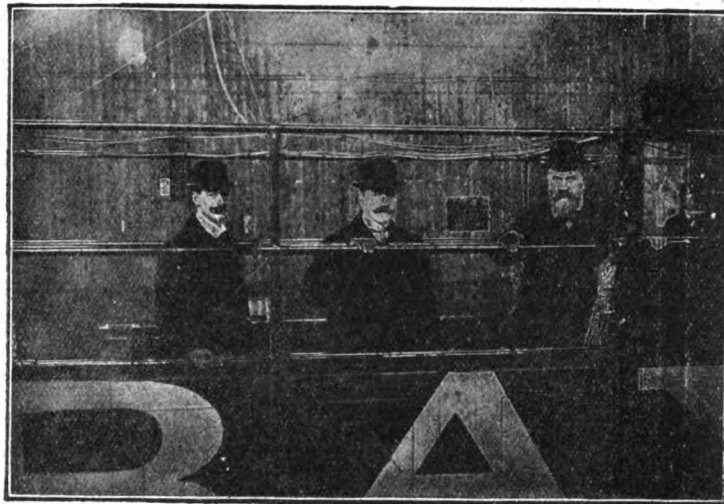
FROM the Fischer's Ball and Bearing Company, Ltd., of Hineley Street, Birmingham, comes a catalogue of their ball bearings and thrust washers. Their ball bearings are well known, and their specially light Journal Ball Bearings are being adopted for magnetos and other purposes.

COMPANY NEWS.

In the case of New Companies the file number is given at the end of the particulars.

RILEY CYCLE COMPANY.—The directors' report presented at the meeting at Coventry on December 30th stated that the company had suffered owing to the severe depression in trade, which has seriously affected the cycle department. The tri-car branch, in which large preparations for output had been made, proved unsatisfactory, sales having decreased considerably, and a loss thereon resulted in consequence. The demand for cars had been very well maintained, and if quicker deliveries of the larger type of car had been possible during the early months of the season the trading results would have been different. The business done at the recent show was well in excess of that of the previous year. The balance-sheet showed that there was a loss for the year ended September last of £1,148 10s. 10d.

HUMBER, LTD.—The directors of Humber, Ltd., for the year ended August 31st, 1908, report a loss on trading of £23,082. Whilst in the early part of the financial year the trade was quite satisfactory and the contracts obtained for cars in excess of those for the same period of the previous year, the business done in the car branch in the spring and summer months fell off considerably, a large proportion of those contracted for not being taken. Steps were taken to reduce the establishment charges immediately on its becoming known that a reduction in the sales would occur. This served to minimise the loss, but as the reductions were made late in the season their full effect is not shown in these accounts. The concentration of the manufacturing at Coventry will, it is confidently believed, lead to considerable economies in production. Efforts are now being made to dispose of the company's freehold works at Beeston and those in Lower Ford Street, Coventry, but the depression in the local industries makes this, at present, a difficult task. To meet the public demand, the company is now producing a small two-cylinder car, which



Some well-known Motorists in the Clement-Bayard Airship. The accompanying illustration depicts the Earl of Shrewsbury and Talbot (in the centre), Mr. Frank Shorland and M. Clement on the bridge of the Clement-Bayard Airship.

has met with much approval. It is proposed that a new company (with the same board of directors) be registered with a capital of 550,000 shares of £1 each, of which 250,000 shall be preference shares entitled to a cumulative preferential dividend at the rate of 8 per cent. per annum, running for dividend from January 31st, 1909, and entitled to preferential repayment of capital, and the remainder shall be ordinary shares. It is then proposed to sell to the new company the whole of the assets of Humber, Ltd., subject to the liabilities thereof. The members to be entitled, within twenty-one days of the date of the agreement being accepted, to claim one preference share of the new company credited with 13s. 4d. paid up thereon for each fully-paid preference share of the old company, and one ordinary share of the new company credited with 15s. paid up thereon for each fully-paid ordinary share of the old company. The balance of 6s. 8d. on each preference share and 5s. on each ordinary to be payable as to one moiety on the shares being claimed and the other moiety on March 31st, 1909.

THE Motorists' Protection Association, Ltd., has been registered with a capital of £1,000 in £1 shares.

LONDON ELECTROBUS COMPANY.—The second annual general meeting of the London Electrobus Company was held on Monday at the Hotel Cecil, London. Sir Henry E. Dering, Bart., who presided, said the figures for the last three months showed that their 'buses were running at a very satisfactory operating profit, and indicated that it only needed to put more of them on the streets to earn good net profits. The horse 'bus must gradually disappear and give place to the mechanically-driven omnibuses, and, without being in the least unkind, he (the chairman) thought they must say that the steam and petrol 'buses were not a success, either as 'buses or financially.

THE MERCEDES BROUGHAM AND LANDAULETTE COMPANY (LTD.), has been registered with a capital of £100 in £1 shares.

THE METROPOLITAN (CHENARD-WALCKER) CAB COMPANY (LTD.), has just been registered with a capital of £3,500 in 1s. shares (60,000 pref. ord. and 10,000 def.).

LORD GRIMTHORPE (chairman), presiding at the second annual meeting of the F.I.A.T. Motor Cab Company at the Midland Hotel, London, said considerable delay had been experienced in the delivery of cab chassis, but these had recently been coming forward satisfactorily. When the report was issued the company had 180 cabs on the streets, and now about 200 vehicles were running. The dispute which the company had had with the maintenance contractors happily had now been settled, but it involved the loss of revenue from forty cabs for a period of four months. This, in addition to the delay he had spoken of, the instruction of drivers, and the work of organisation naturally affected the company's accounts, but their cabs were now running efficiently, and the average revenue was in excess of that estimated when the company was formed. They had also some private 15 to 20-h.p. landaulets for hire, and these were already a popular feature. Without being unduly optimistic, the directors were distinctly sanguine as to the company's future, and they believed the concern was going to be very successful in its operations. The report and accounts were passed unanimously.

BELSIZE MOTOR CAR COMPANY.—At the annual meeting of the Belsize Motor Car and Engineering Company on the 22nd ult. at the Midland Hotel, Manchester, Mr. E. P. Dawson, who presided, announced that the gross profit was £77,584, subject, however, to debenture interest and depreciation amounting to £8,219, leaving a net loss on the eighteen months of £634. The balance brought forward from last year amounted to £9,810 18s. less dividend, directors' and auditors' fees £4,616, leaving a total of £5,194. With regard to future prospects, the directors felt that the coming season would bring to them its share of the trade. They had orders for upwards of two hundred cabs and commercial vehicles, in addition to those they had already put on the London streets, which by the end of the month would be upwards of fifty.

ROAD REPORTS.

LINLITHGOW.—Figures having a bearing upon the increase of motor traffic upon roads in Scotland were given in a report presented at the last meeting of the Linlithgow County Council by Mr. Ramsay, highway surveyor. During the three years, 1903-6, the years prior to the advent of certain motor-bus traffic, the average quantity of metal applied to the 2½-mile section with which the report deals was 600 tons per annum. In 1906-7 the figures rose to 856, while last year it reached a total of 1,950 tons. For the current year a still increased quantity will be required. As regards cost, the maintenance upon which was formerly expended some £135 per mile has now reached the approximate figure of £450.

NOTTINGHAM.—Mr. E. P. Hooley, the County Surveyor, states that the road between Workson and Mansfield is dangerous at night in the parish of Warsop through drainage operations. These repairs are expected to last some time. The road between Mansfield and Arnold (Nottingham) will be unsuitable for motor traffic for some weeks.

LONDON.—It is intended to lay a tramway track along the Regent's Park Road, London, and we understand the work will shortly be begun, when the avoidance of the road by motorists will be advisable in their own interest.

AUTOMOBILE ACCIDENTS.

At an inquest held at Wellingore Hall, on Saturday, concerning the death of Mrs. Neville, the victim of a motor-car accident which occurred on Christmas Eve near Lincoln, a verdict of "Accidental death" was returned, the jury finding that no one was to blame. The car, which was being driven by Miss Neville, was turning a corner when it ran into one of the shaft horses of a team of three, and turned a complete somersault. Mrs. Neville was pinned down with the car across her body for twenty minutes.

FOUND lying on the roadside at Deeping St. James's, Lincolnshire, suffering from severe injuries to the spine, a man named William Tibbett has explained that he had been run over by a motor-car. He added that the occupants of the car pulled up after the accident, carried him to the side of the road, and then left him. The man, whose condition is serious, alleges that he spent the whole of one night on the roadside before being discovered.

MOTOR CYCLE RECORD.

At the Canning Town track, on the 22nd ult., O. C. Godfrey on a 5-h.p. Rex motor-cycle covered 268 miles 285 yards in six hours, beating the previous record of 244 miles 1,650 yards by H. Martin as well as all records from 101 to 268 miles.

In the form of a Christmas booklet we have received from the London and Parisian Motor Company, Ltd., of Davies Street, W., a series of testimonials from satisfied users of Hotchkiss cars, for which the firm are the British agents. Judging from the letters, these vehicles are giving very good service to their owners, and are steadily increasing their popularity in motoring circles.

FORTHCOMING EVENTS.

JANUARY, 1909.

- 7th (Th.).—Annual Dinner of the Yorkshire A.C. at Leeds.
- 8th (F.).—Annual Dinner of the Nottinghamshire A.C. Mr. C. Y. Knight will lecture on his engine to the Manchester and District Motor Trades Association.
- 12th (Tu.).—Extraordinary General Meeting of the Automobile Association.
- 14th (Th.).—Annual Dinner of clubs associated with the R.A.C. at the Hotel Cecil, London.
- 16th-25th.—Brussels Motor Show.
- 21st (Th.).—Annual General Meeting of the Southern Motor Club.
- 22nd-30th.—Scottish Motor Exhibition at the Waverley Market, Edinburgh.
- 23rd (S.).—Annual Dinner of the Coventry Motor Club at the Craven Arms Hotel, Coventry.
- Annual Dinner of the Lancashire A.C. at the Park Hotel, Preston.
- 26th (T.).—Scottish Motor Trade Association Dinner at Edinburgh.

FEBRUARY.

- 2nd (T.).—Annual Dinner of the Scottish A.C. at Glasgow. H.R.H. Prince Francis of Teck will be among the guests.
- 4th (Th.).—Annual Dinner of the Southern Motor Club.
- 19th-27th.—Manchester Motor Show at Belle Vue.
- 24th (W.).—Annual General Meeting of the British Motor Boat Club.

MARCH.

- 1st (M.).—The Road Trials in connection with the Army Council Competition for light tractors commence.
- Motor-Car Show at Barcelona.
- 20th-27th.—Cordingley's 14th Annual Motor-Car Exhibition and Market, Agricultural Hall, London.

MAY.

- 14th (F.).—British Motor Boat Club meeting at Erith.

JUNE.

- 14th (M.).—Commencement of the Scottish Reliability Trial.

LIGHTING-UP TIME—LONDON.

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|--------------|-----|---------|-----|---------|-----|---------|
| Jan. 2nd—5.0 | ... | 4th—5.3 | ... | 6th—5.5 | ... | 8th—5.7 |
| „ 3rd—5.1 | ... | 5th—5.4 | ... | 7th—5.6 | ... | 9th—5.8 |

BUSINESS NEWS.

THOSE interested in the question of front wheel brakes, more especially if they contemplate fitting such to an existing car, should make a point of getting the new catalogue of the E. M. Bowden's Patents Syndicate, which deals fully with this phase of the question.

MESSRS. DUCROS MERCEDES, LTD., have just had the honour of receiving the Royal Warrant of Appointment to King Edward as purveyors of motor-cars. His Majesty has at the present time in use 40-45-h.p. 1905 type and 45-h.p. lat. st 1908 type Mercedes cars.

MESSRS. WHITE AND POPPE, LTD., of Foleshill, Coventry, inform us that they have arranged to transfer their agency for London and the South from Messrs. Burgess and Harvey, Ltd., of Oxford Street, W., to Mr. W. H. M. Burgess, of 40, Glas-house Street, Piccadilly Circus, London, W. The new arrangement takes effect as from January 1st, and we are asked to call attention to the address at which W. and P. specialities will be exhibited in future.

THE Gracile Motor Car Company inform us that that company purchased the whole of the assets and goodwill of the Gracile Motor Car Company, Ltd., and have since December, 1907, been trading at 52, Regent Street, London, W., as the Gracile Motor Car Company.

THE authorities of the Borough of Kensington having renumbered Ladbroke Road, Notting Hill, London, W., (the address of the Mass Car Depot will now be 99, Ladbroke Road.

TO CORRESPONDENTS.

All communications intended for insertion in this Journal or relating to Editorial matters should be addressed to THE EDITORIAL DEPARTMENT, MOTOR-CAR JOURNAL, 27-33, Charing Cross Road, London, W.C., and must be written on one side of the paper only. Letters must in all cases be accompanied by the name and address of the writer, as no notice will be taken of anonymous communications.

To insure insertion communications and contributions must be in the Editor's hands by Tuesday forenoon of the week in which the same are intended to appear. Disappointment may be caused by non-compliance with this rule, and to avoid this earlier receipt, if possible, is necessary.

Photographers, both professional and amateur, are invited to send photographs of current events or of motoring scenes and incidents. The fee, if any, required for reproduction should be stated in each case, otherwise no liability will be accepted.

THE Motor-Car Journal.

[VOL. X.]

LONDON, SATURDAY, JANUARY 9, 1909.

[No. 514.]

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PRIZE COMPETITION.

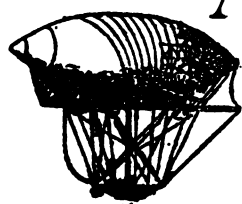
AS recently announced, we are offering a prize of two guineas for the best original short story of motoring interest suitable for publication in the *M.C.J.* The story should be between 1,000 and 1,200 words in length, and the main incident should, of course, centre about the automobile.

The latest date for submitting the MSS. will be the first post on Saturday, January 16th, 1909, and the award will be notified as soon as possible after that date, the Editor's decision being final.

With reference to the stories which do not win the prize, the right is reserved to publish any which we may deem suitable, making payment at our usual rate of remuneration.

All MSS. should be forwarded addressed to the Editor, *M.C.J.*, 27-33, Charing Cross Road, London, W.C., the envelopes being marked "Short Story" on the top left-hand corner.

COMMENTS.



AS will have been observed by regular readers, the *M.C.J.* has, from the first, chronicled the development of aeronautics; its series of articles on "Mechanical Flight" in 1902 was a substantial contribution to the literature of the subject, and subsequent articles have kept our readers informed of the progress of aviation. The Cordingley Motor Show of 1907 afforded the first real effort in this country to demonstrate the fact that serious study was being given to the matter—an occasion which enabled us to become even more closely associated with the movement. Latterly our Paris correspondent has kept our readers *au fait* with the men and methods engaged in aerial navigation in France; in other columns the doings of inventors elsewhere have been recorded. We were waiting for an important development to take place in the British aeronautical world to draw the special attention of readers to the considerable space we are devoting to the possibilities of travel by dirigible machines above the earth. This comes in the special meeting of the Fédération Aéronautique Internationale, which will be held in London on Monday next, when the rules to govern the various international competitions for heavier-than-air machines will be formulated and settled, and the appeal of the Aero Club of the United Kingdom against the decision of the Berlin Aero Club in not awarding the first prize in the recent Gordon Bennett balloon race to the English balloon Banshee will be heard. The latter point is particularly interesting, for, should the decision of the Berlin Club be reversed, this year's contest will take place in Great Britain.

Cars v. Trams.

of law on the subject. Much depends upon the actual circumstances of the moment. In some places passengers alighting leave so little room between the tram and the pavement that to attempt to pass on the near side would be to hazard a murder; but to go on the

off-side might involve suicide to the motorist and injury to others. To suggest, as did the Brentford J.P., by his warning to the defendant, that motorists should pass on the off-side shows little regard for the conditions of traffic. The driver of a car by crossing to the off-side would certainly be risking much. The circumstances of the moment must be considered by the person driving; and passengers on trams should not leave while such vehicles are in motion.

Technical Instruction.

EVIDENCE of the practical nature of much of the automobile instruction that is now being given throughout the country comes in the appointment of Mr. William Morgan, B.Sc., to the newly-established chair of motor-car engineering in the University of Bristol. This appointment has been made by the governors of the Merchant Venturers' Technical College, in which it is proposed that the work of the Faculty of Engineering at the new University will be carried on. Mr. Morgan is a member of the Institution of Automobile Engineers, and is the manager of the Pupils' Department of the Daimler Motor Company. We understand he will continue his connection with this concern, spending part of each week in Coventry. Already he is engaged in preparing designs for the equipment of the motor-car engineering department at Bristol, and this association of the professorial element with the actual work of the engineering shop is a matter of considerable promise for the future success of this new department in one of the latest Universities.

In the Snow.

Now that the snow has disappeared official experiences with regard to the value of the motor-car in postal work are forthcoming. The recent storm had little effect upon London's mail service. Inquiries at Mount Pleasant have elicited the information that a conspicuous feature was the success of the motor service. The blizzard was the first serious touch of wintry weather since motor vehicles superseded the horse coaches, and the result proved beyond doubt the superiority of the new system over the old. Almost without exception they ran nearly up to correct time, the only coach which did not start being that from Brighton. It was in that instance found impossible to make the journey to London owing to the heavy snowdrifts.

Motor Cars and Property.

ONE of the great pleas urged against motoring in the early days was the depreciatory influence it would have upon house property in the centre of great towns. Many times in the first three volumes of the *M.C.J.* we urged that such a tendency would at most be only of a transitory character, and that matters would right themselves ere long. This view receives endorsement in a letter by Mr. Lionel Brown, a member of one of the best known West End of London house and estate agents, who mentions that "it was thought with the advent of the motor-car there would be a great depreciation in the value of London houses, on the ground that entertaining would be more largely carried on in the country with the means of transit so greatly improved. This view," continues the authority already mentioned, "for a time

was substantiated, but it has now been clearly shown that the threatened danger was but a passing one," and the past year was remarkable for renewed activity in the market for Mayfair and West End houses generally. As a matter of fact the greater mobility of the people made possible by the adoption of the motor-car has been a boon to the house and estate market.

Income Tax.

AN interesting suggestion has been made with regard to the motor vehicles owned by medical men and used by them in the course of their professional visits, viz., that a deduction should be made in the Income Tax assessment for the depreciation of the car. So far there has been no authoritative ruling on this particular point, and in the absence of such the Motor Union recently advised a member to apply for the deduction of one-sixth of the original cost. In filling in his Income Tax returns this has been allowed by the Surveyor of Taxes, and should be duly noted and acted upon by our readers in the medical profession.



The Danger of High Hedges.

Reference has frequently been made in the *M.C.J.* to the risk of accident owing to high hedges at bad turnings. When out on a 15-h.p. Clement-Talbot recently we came across a particularly bad spot at Arkley, between Elstree and Barnet. As the place is approached there merely seems a slight bend in the road ahead, and it is with some surprise that one finds this to be almost a right angle turn.

The Night Trappers.

At the Epsom Police Court, on Monday, the police explained to the magistrates their system of timing motor-cars in the dark, the signalling from one constable to another being by means of an electric torch. This is a Christmas innovation in this part of Surrey, and it was explained that considerable experiments had been made before it was finally decided to adopt the device for the timing of motorists. In one case a defendant said that he did not see the flash of the electric torch, and he should say it would be impossible for it to have been used without his seeing it. On his behalf a solicitor pointed out that the system of timing was a very crude one, and drew attention to the fact that between the times registered by the two constables concerned there was a difference of three-fifths of a second. This, however, did not avail with the Bench, who finally fined the defendant £5. Another instance in which a motorist was summoned for exactly the same offence in the daytime was dealt with, and a fine of £3 only inflicted. Should this system of timing by night develop it will add another terror to motorists, and so far as Surrey is concerned tend to give point to the suggestion of an Epsom correspondent,

Mr. J. Crow, who suggests that motorists should avoid Surrey post offices when taking out their Inland Revenue licences for 1909.

An Australian Club.

VERY satisfactory is the progress of automobile organisation in the colonies, and the history of the A.C. of South Australia is typical of that of several other Australian associations of motorists. This began in September, 1903, with Sir George Le Hunte as patron—a position he has retained ever since. In the following year the first motor race meeting was held in South Australia, but was scarcely a success, only a 15-h.p. Darracq car showing to anything like advantage. Early in 1905 a reliability trial was organised, and then in 1906 the club found it necessary to watch the Legislature with a view of protecting the interests of motorists generally. Deputations to the law officers were a factor in securing a more reasonable Motor Car Act than was originally intended, with the result that motorists, perceiving the benefits of association, joined the club in considerable numbers. Then came a period of study of problems associated with the road, the end of which was the recommendation of the system of diagonal scarfing in connection with repairs—a plan now universally carried out in South Australia. Apparently the motorists of the colonies are engaged upon much the same class of troubles as those in the old country, for we learn by the last mail that an agitation is being raised with regard to the placing of danger signals at the open railway crossings in the neighbourhood of Adelaide.

Good Work in Dublin.

THE Corporation of Dublin have been considering a report from their Paving Committee on the question of motor traffic, to the observance of which they have been incited by the circular recently issued by the Local Government Board. It is satisfactory to find that the committee have come to the conclusion that motor traffic in the city is conducted with the minimum of risk to public safety. This is evidence of the impartial nature of the observations of the members of this public body. They also show an enlightened view with regard to the duty of the Corporation as to dealing with the dust nuisance. Several macadamised streets in Dublin have been treated with a preparation of tar oil, and this is a policy that is recommended, if the Irish city is anxious to keep well abreast of the times and somewhat in front of many English towns of importance.

A Heavy Fine.

NOT often does such a case occur as that which has just happened at the Shoreham Petty Sessions, when the owner of a motor-car was commended by the Bench for attending the court and explaining that the chauffeur—who was summoned, resulting in the suspension of his licence—was driving faster than ordinarily by his orders. Thereupon the magistrates compromised the matter by taking off the suspension and increasing the fine from £20 to £30—an amount which the owner said he would pay.

Doctors and Speed.

TWO or three cases have lately been heard in the courts in which medical men motoring to the relief of the sick and suffering have been summoned for furious driving. Such instances are, of course, somewhat isolated, but are of sufficient importance to suggest that special treatment should be meted out on such occasions. The doctors summoned to the bedside of dying patients or called in cases of accident naturally proceed as rapidly as possible, and the suggestion of a Harley Street specialist that doctors who are satisfied that a patient's life depends upon their speed should be allowed to display a red cross as a badge on the car is interesting. This, he adds, should be recognised by the

police, and no embarrassment caused to the driver thus hurrying on his mission. The fire and the ambulance bell is familiar enough in the City of London; the red cross has equal reason for its advocacy in connection with errands of mercy such as we have mentioned.

Fire at a Kentish Mansion.

MUCH sympathy will be expressed with Mr. Huntley Walker in the loss he has sustained by the fire at Pickhurst Mead, Hayes, Kent, in the early hours of Monday morning. The mansion is an old-fashioned building which has been modernised so completely as to have, as an outbuilding, a well-designed and fitted motor house. At the time of the fire there were more than a dozen motor-cars in the building. The flames spread from the dwelling house to the garage, which was soon demolished and the contents burnt out. When daylight dawned what had been a motor house of galvanised iron was but a mass of blackened iron, the cars and their accessories being completely destroyed and twisted into all kinds of shapeless forms. Only a few gears and cylinders will be recoverable for service. One of the vehicles was the six-cylinder Darracq which Mr.

—are the great delinquents in disposing of it down the drain and in other situations of danger.

The Motorist's Diary.

LAST week we favourably reviewed the Motorists' Diary and Year Book for 1909—a little pocket volume of nearly four hundred pages, and containing much information with regard to the past year, as well as space for notes during the present twelve-month. This is now being supplied by Messrs. Cordingley and Co., from their list of books for motorists.

A Licence Point.

AMONG the statements made in the southern police-courts of late has been one to the effect that 70 per cent. of the motorists in the county of Sussex neglect to renew their licences at the proper time. This assertion was made at the Shoreham Petty Sessions last week in connection with one of those periodical hauls at Southwick which generally prove profitable to the county exchequer. It appears that the police, in



The Scene at Pickhurst Mead, the residence of Mr. Huntley Walker, at Hayes, Kent, after the fire. The debris of the cars that were destroyed is seen in the foreground.

Huntley Walker had driven on the track. There were also four Weigel cars (one of which had a special chariot body), a six-cylinder Napier, two 45-h.p. Mercedes, the two 90-h.p. Darracqs on which Mr. Walker established records at Brooklands, the 100-h.p. racer of 1907, and 24-32-h.p. and 10-12-h.p. Darracqs. Fortunately Mr. Walker's new 1909 Mercedes was away at Beckenham at the time of the fire. The trophies won by the well-known motorist were saved, and all the family escaped danger.

Petrol Dangers.

THE discussion now proceeding with regard to the dangers of petrol will serve to remind many people that the spirit which is doing so much to accelerate the progress of the world cannot be carelessly handled with impunity. As chairman of the Public Control Committee of the L.C.C. Mr. William Haydon has sent a letter to the Press which seems to absolve the motor industry from much of the blame which that department has hitherto heaped upon automobilists. Undoubtedly those who use the spirit in a domestic way—for cleaning garments, &c.

addition to testing the speed of motor-cars along the highway, also took a census of the licences, with the result that many were found slightly out of date, and others more so. In the area of the East Grinstead Petty Sessions, too, the same neglect to renew the licence has led to proceedings being taken, while the magistrates there have declared the action of the police in summoning motorists who travel without their licence to be fully justified—a subtle way of encouragement in such work. The point is a small one, but inattention to it may prove expensive. In connection with this, too, care should be taken by motorists who remove to acquaint the registering authorities with their change of address; the omission of such notification has proved expensive in many cases of late. In fact, it has been noticeable that, during the recent dull weather, when muddy roads have been the order of going, the police have been assiduous in stopping cars to ascertain whether the drivers have their licences about them. And when such is the case, inquiries with a view to the verification of addresses. &c., frequently follow.

WE hear that the recent frosty weather has played havoc with a large number of the engine cylinders of the taxicabs of one of the leading metropolitan motor-cab companies.

THE MOTORING OUTLOOK.

WHILE 1909 will probably attain most distinction in motoring annals in association with aerial flight, the steady progress of the motor vehicle on *terra firma* is likely to constitute a substantial contribution to mechanical advance. The sporting section of automobilism may deplore the absence of the Grand Prix contest of the A.C.F., and a minority may dislike the cautious attitude of the R.A.C. with regard to road racing in this country. But already in our columns British makers have declared they want no more 2,000 miles trials; and it is clear that the industry is settling down to a normal condition of things. Still, the year will not be uneventful. The War Office trials for light military tractors will attract attention in the spring, and then the summer season will see the Scottish Trials followed by the Irish event. Various minor contests are being undertaken by the R.A.C., and the appointment of Major Lindsay Lloyd to the management of the Brooklands Track is augury of developments at Weybridge which may prove of value to the technical side of the industry.



The new Clubhouse in Glasgow of the Scottish Automobile Club.

With regard to "the year that's a'wa'" gains have been made by the industry, but in the cases of some individual concerns the losses have been great. The profits and rewards of 1907 widened the circle of investors in the motor trade, and they scarcely expected such a sudden slump in fortune as has been chronicled by balance-sheets issued since the Olympia Show. A sense of uncertainty has prevailed, and it has been difficult to arrest the feeling of pessimism which has overshadowed that section of the trade concerned with the disposal of new cars; although the business that has been done in second-hand vehicles, and, in some cases, the surplus of the factories, proves that new owners are constantly being found.

In London motoring continues its popularity, and the year has seen the advance of the motor-cab, which is displacing the old-time hansoms and growlers, while the motor-'bus pursues its way with more silence and with greater acceptance than was the case two years ago. In the country the public service vehicle, with its seats rising in tier-by-tier-like fashion, has enabled tourists to speedily become acquainted with the beauties of the districts round about, and the provinces generally have awakened to the value of the automobile as against the trams for many localities. A notable instance of this was the decision of the

Manchester Corporation to licence motor-'buses—after an embittered and prolonged opposition. Several Yorkshire towns are seeking Parliamentary powers to run motor-'bus services, and Oldham and Salford will seek similar rights from Parliament in the coming session. In this connection mention may be made of the progress of the motor fire engine and the motor ambulance—the latest evidence of the development of the latter being the invitation for tenders for eight motor ambulances lately issued by the Metropolitan Asylums Board.

At a time of transition, when the sporting side of the industry seems to be in a by-path, as it were, the merest chronicle of recent events will suffice. Honours on the Continent were divided. The Mercedes won the Grand Prix, and the Prince Henry race went to the credit of the Benz, while in America the Fiat and Lancia cars gained distinction, and the former secured the American Grand Prize. In this country, apart from Brooklands, the run of Mr. Lee Guinness on his 200-h.p. Darracq on Saltburn Sands at a speed equivalent to 121.6 m.p.h. was really notable, as was the 66 m.p.h. run of the Siziare-Naudin voiturette in October. The "Four Inch" race was won by a new car of the year—the Hutton, the consistent running of the Daracq team in that event being a remarkable performance. Mention, too, must be made of the International Touring Car Trial, in which the class awards went to the following cars:—De Dion, Adler, Cadillac, Singer, Vauxhall, Talbot, Armstrong-Whitworth, Ariel, and Rolls-Royce.

Among motor organisations the Royal A.C. continues its progress, and has recently concluded agreements with the Transvaal A.C., and also the Automobile Club of Egypt, while the fact that during last year it examined 1,358 candidates for driving certificates is proof of the way in which it is appreciated. Of these 70 per cent. were successful. 620 certificated drivers' badges were issued, and 340 men were placed in situations through this department of the Club's activity. At the close of the year the association with the Motor Union came to an end, and it is to be hoped that the two organisations, which are now working on parallel lines in so many ways, will act in friendly consonance whenever the interests of the motor movement seem to require unity of action. The Automobile Association, too, continues its effective service on the roads, and the opening of a Paris dépôt testifies to the international character of its work.

An incident of more than ordinary concern in the programme of 1909 is the Conference in May next to consider the resolutions of the recent international gathering at Paris. This will doubtless be made the occasion for many diatribes against motor-cars in the public press; but motorists will welcome the serious deliberations of those who look at the road-way from the administrative point of view. These should suggest valuable improvements with regard to road construction and do something to educate public opinion in the direction of the National Road Department which Mr. Ballin Hinde so admirably advocated at the Paris Congress. From the social side of things 1909 should have pleasant associations, and both English and Welsh motorists will welcome the members of the Ligue Internationale Touristes, who will hold their annual meeting in London during July. This will recall many memories of the pioneer days with all their camaraderie and good fellowship. Thus the year will have its incidents and its value to the automobile world. There are many who look anxiously to the course that may be taken by Parliament with regard to legislation; this, however, beyond helping to promote unity among motorists in the presence of a common danger, is not likely to disturb the present legal position. The President of the Local Government Board holds the key of the political situation, and thus far he has shown himself to be a strong man not likely to be cajoled into harassing a growing industry by the blandishments of deputations from fellow M.P.'s and others susceptible to local influences. Motorists should seek to preserve the *status quo* rather than try to re-open the question. There is hope for the motorist, too, in the general Parliamentary programme, which is already so full that little time is likely to be assigned for the introduction of motoring matters into the Legislature during 1909.

The Great Lakes of Connaught.

BY J. LL. WARDEN PAGE.

TO my mind, Galway is not an interesting place. For a western town it is pretty large and, on market day, fairly lively, for then you will see, if you have luck, quite delightful Charles Leverish-looking old Irishmen and Irishwomen, but the rest of the week it is very dull. Ichabod is writ largely upon it. Its glory hath departed.

It was not always thus. Men say that in the past Galway had an important trade with France and Spain and a "prosperous mercantile community." The community does not strike the casual visitor as very prosperous nowadays, for decayed or decaying warehouses are far too common, while signs of activity about the harbour seem to be confined to one or two big ships and a fleet of fishing boats. Indeed, one wonders how the sixteen thousand odd inhabitants manage to pick up a living.

Nor, considering the size of the place, are there many objects of interest. The principal lion is the Lynch mansion, in the main street, a really fine mediæval house, enriched with sculptured stone window and corbel, one of the said sculptures representing a monkey holding a Lynch infant (which legend says it saved from fire!) in its arms. These Lynches were among the greatest of Galway merchant princes. One of them, James Lynch Fitzstephen, a sort of Irish Brutus, is specially commemorated by the Lynch Stone let into the churchyard wall. This gentleman, as warden, sat in judgment upon and condemned to death his own son, who had slain a Spaniard. Nay, more, he saw to his execution, for, a crowd having assembled to prevent the same, this stern father hung him from the prison window.

The church of St. Nicholas, close by this Lynch Stone, where Brutus and many a descendant lie interred, is worth looking into; and there is a certain quaintness about the Claddagh, a collection of thatched cabins down by the harbour, where the fisherfolk abide, and where they were once ruled by their own "king." Talking of fishing, if you want to consider salmon *en masse*, stroll on to New Bridge, and, if you have seen more salmon at one spot anywhere else, then you have seen more than I have. I have watched them lying three deep, and have counted over forty in a square yard.

This Corrib river, which flows right through Galway, comes out of the lough of the same name, a mighty sheet of water hard by Galway's gates. We will now proceed to see something of its shores. Unhappily the road thereto is none of the best. For eight miles, even into Moycullen, it is indeed abominable. But nobody is ever in a hurry in Ireland; we are on pleasure bent, why should we hasten? The river, a placid and navigable stream, lies on the right, with Menlough Castle, where the Blakes live, almost mirrored in its waters. Further on flat meadows spread out, and over them we presently catch a gleam of the lower end of the lake. Soon comes Moycullen and a better stretch of road running between the moorlands and the boulder-strewn flats that stretch away to the blue waters. Here and there is timber; here and there smaller lakes glimmer in the sunshine. It is all very pretty and peaceful. And so, seventeen miles from Galway, we come to Oughterard, a long-drawn-out village town where, if need arise, I counsel you to

stay with Mrs. Monaghan, who runs the post office and a little hotel which, if small, is cleaner than most in Ireland.

Oughterard is very nearly on Lough Corrib, which, indeed, seems the chief excuse for its existence. For the lake is becoming known among the sons of Zebedee for its fishing, and Oughterard is slowly expanding in the warmth of a prosperity induced by sport in its waters. Lough Corrib is got at easily enough by motor-car. Quite a good road winds along its western shore and affords splendid views over the lake and its many islands. But I hope you will not meet with such bad luck as did a friend of mine on this very road. As he wheeled merrily along one night there came unto him a cow of the moorland. Whether actuated by ferocity, curiosity, stupidity, or a little of all these I cannot tell, but that vile cow got her horns mixed up with the chassis. Result, a dead cow and a damaged motor-car. It cost my friend £30 in repairs, not to speak of £5 for the cow.

The scenery along the lakeside is, as I have hinted, delightful; but this, to my mind, is not the finest part of Lough Corrib, which will be found where the mountains close in at its northern end. To get there we "bout ship" (for this lakeside road ends in the wilderness), and, running back to Oughterard, pass over lake-studded moors to Maam Cross. And now Leckavrea heaves up ahead, his quartzite rocks glittering with points of light. Rounding his flank we drop down the long descent to Maam Bridge, hard by the north-western arm of Corrib. Here the surroundings are splendid. In front, overshadowed by Leckavrea and Carn Seefin, stretch the narrowing waters with the wooded hill of Doon pushing out from the northern shore, and, for background, the rugged line of the Mamturk mountains. On a rock islet rises Castle Kirke, once a

stronghold of the O'Flaherties. They were a strenuous race. I have read somewhere that the citizens of Galway did not forget them even in their prayers—"From the fury of the O'Flaherty good Lord deliver us." But this is suspiciously like the old supplication against the Norsemen—a *furor Normannorum libera nos, Domine!*

We take the road round the head of the lake to Cong. After descending the hill above Claggan—rather a nasty one—the road runs close to the shore. We look right down the great water. Were it not for the innumerable islands, I believe that by climbing the rising ground we should see most of its length, and that is thirty miles or more. To our left, but invisible, for Mount Gable shuts it out, is another great sheet, Lough Mask, and across the narrow strip of land separating it from Lough Corrib we find our way into Cong.

To the outside world Cong is only known for the "old person" (whoever he may have been) who figures in a well-known limerick. In reality, however, it is celebrated for other things—its cross, which stands in the village street, and its abbey, the ruins whereof fill a corner hard by in the demesne of Lord Ardilaun. This abbey, founded as long ago as the seventh century, is well worth a visit, for the pointed architecture is of great beauty. In the chancel of the abbey church is a tomb said locally to cover the remains of Roderick O'Connor, the last native

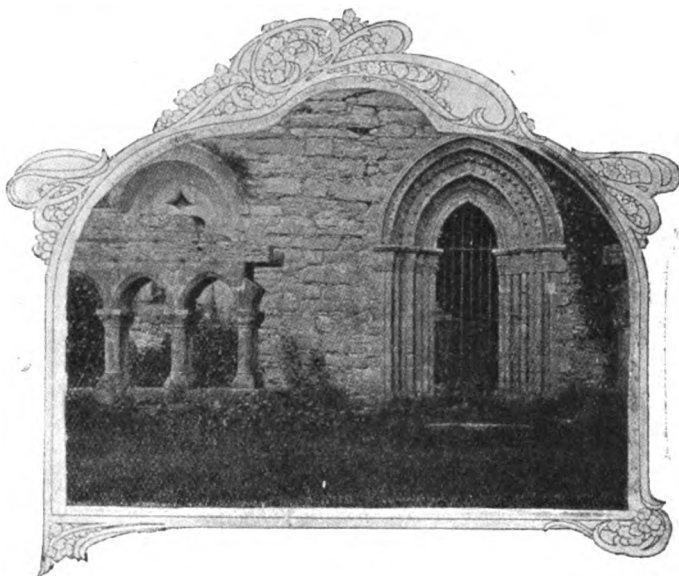


Photo by]

Cong Abbey.

[Miss M. Monaghan.

king of Ireland. But though he died at Cong, he was not, it seems, buried there. His bones lie at Clonmacnoise.

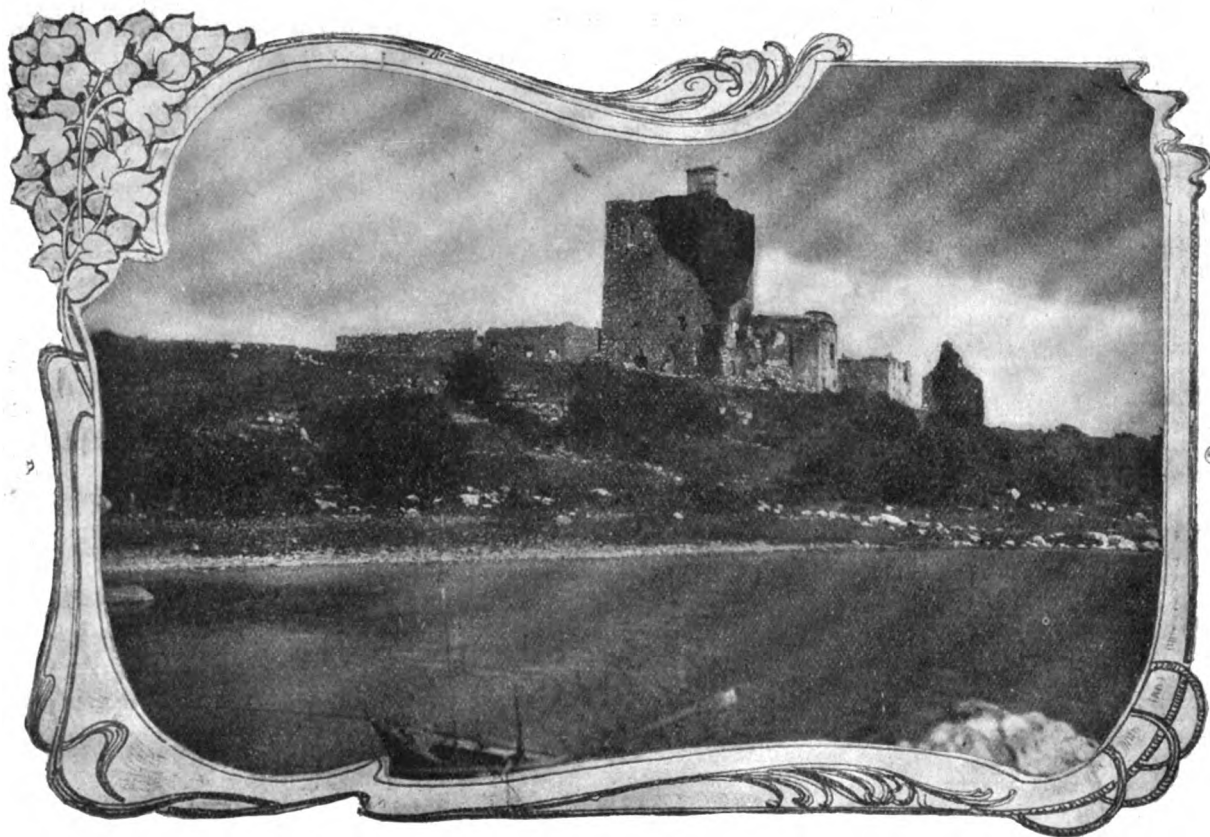
At Cong the subterranean river connecting Lough Mask with Lough Corrib comes to light, and there are all sorts of caves in the limestone, in one of which, Pigeon Hole, the mysterious river may be seen, though it must be confessed that in dry weather very little of it is manifest. Some years ago an attempt was made to unite the two lakes by means of a canal; but, like a good many other modern enterprises, the canal would not hold water. Like the river, the water disappeared in the limestone. And so the St. Patrick (the Galway steamer), and the big sailing boats, called *puckhauns*, which are the traders of Lough Corrib, stop short at the little quay at the river's mouth, right under the shadow of Lord Ardilaun's big mansion.

Lough Mask is only three miles from Cong, but it might be three hundred for all one can see of it. Neither is it so accessible as Lough Corrib. Still it may be "got at" here and there; and, perhaps, as good a view-point as any is the

other respects the road is uninteresting. Little of Lough Mask is seen, though the Partry mountains that rise over its further shores stand out prominently against the western sky.

The loftiest of these, Maamtrasna, looks down upon the broken walls of a cottage that in 1881 was the scene of one of the most horrible deeds that have marked with blood the history of Irish agitation. The man who then lived there was suspected of informing against "Moonlighters." Suspects in those days received short shrift, and one dark night masked men broke into the cabin and did him to death.

Except that it is the only town in these parts, Ballinrobe is of no interest to the traveller, and as for the way out of it it is simply abominable. The soil is the everlasting limestone, and limestone, as we all knew, has a habit of producing pits and hollows which, if not carefully tended, soon become objectionable. The inequalities of this, the main road to Castlebar, are not carefully tended, and for four or five miles progression resolves itself into a series of bumps. The merciful man who



Castle Burke (Lough Carra), co. Mayo.

road to Kilbride Bridge (which crosses an arm). It is off our route, certainly, but only about half a dozen miles, and the prospect from the ruins of Ross Abbey, near Clonbur—and, indeed, that from the bridge itself—is, perhaps, as fine as any on the lake. Another road passes up the side of the lake near the ruins of Lough Mask Castle and the remains of Inishmaine Abbey, which stand on an island close to the shore. Near this is the whilom residence of Captain Boycott, of famous memory—the man who added a now familiar word to the English language. But what this road is like I do not know, having myself followed the more direct route from Cong to Ballinrobe. This passes over the Plain of Moytura, on which, according to Irish annals, occurred that tremendous three days' battle between the native Firbolgs and the Tuatha de Danaans. As this "battle grim and great" took place twelve hundred years before Christ, one naturally expects a good deal of romance to be mixed with reality. Still, to this day, great cairns and other traces of the fight remain, the most prominent being an enormous tumulus near the village of Neale, which is said to contain or to cover an unknown number of the slain. In

regardeth the life of his motor will do well to go slow over this vile bit of road. And if he girdeth at the highway authorities of County Mayo, surely it will be forgiven him.

The road passes between Lough Mask and Lough Carra, and we get a view of both lakes, for at Keel Bridge we cross the channel connecting the two sheets of water, and note that the shallows of Lough Carra are quite milky with lime deposit. This little lake is worth a closer inspection than is afforded by the road. Parts of its shores are prettily wooded, and the ruins of Castle Carra and Castle Burke stand up boldly above its waters. For the rest, limestone crops up everywhere; every field seems to have its portion of boulder and rock, and the whole countryside presents an appearance bleak and stony that only disappears as we approach Castlebar.

(To be concluded.)

WE regret to learn of the death of Mr. George Singer, the chairman of the Singer Motor Company, which occurred on Monday at his residence, Coundon Court, near Coventry.

THE D.S.R. CAR.

ONE of the most novel cars exhibited at the recent Paris Salon was that known as the D.S.R., and shown by the Société d'Etude des Automobiles D.S.R. As will be seen from Fig. 2 the motor is of the four-cylinder air-cooled type, it is rated at 18-h.p., and has a bore of 62 mm. and the relatively long stroke of 112 mm. The main feature is the adoption of a single compound valve (Fig. 1) for both inlet and exhaust. As will be seen this is located in the cylinder head, and is actuated from the cam shaft through a vertical rod K and a combination overhead tappet E.F. The latter

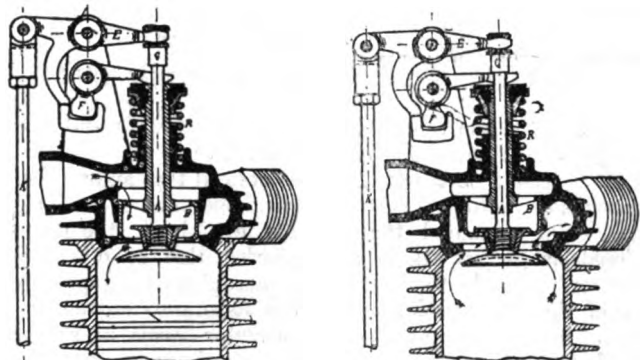


Fig. 1.—Sectional Elevation of Cylinder Head of D.S.R. Car, showing the concentric inlet and exhaust valves. The first view shows the inlet valve open and in the second the engine is exhausting.

is connected with the stem C of the valve A. This is of a special form, one surface seating against the top of the combustion chamber and the other so arranged that when the engine is exhausting it rests on the movable seating B, so closing the inlet passage entirely. On the suction stroke the cam, giving a greater lift to the rod, causes the valve A to open further, and at the same time, through the tappet F, the movable seating B is pushed down to close the exhaust ports. It is claimed that as all the inrushing combustible mixture comes in contact with all parts of the valve and the movable seating, the exchange of temperature that ensues not only keeps the parts relatively cool, but is of advantage to the car-

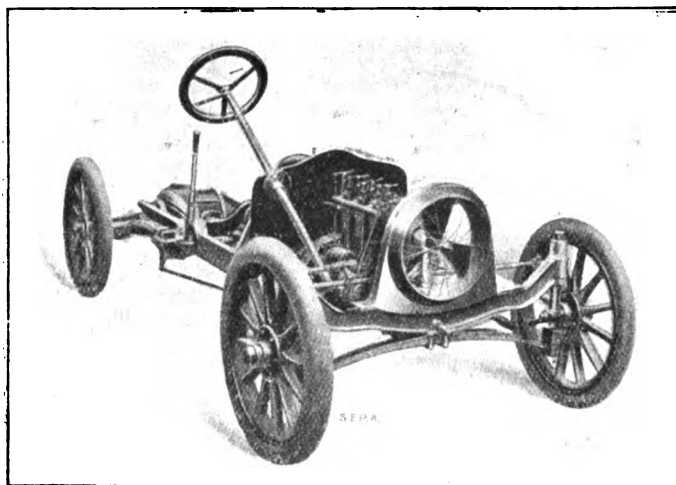


Fig. 2.—Chassis of D.S.R. Car.

duration. The crank shaft is mounted on three bearings, the central one being of the ball type.

The next point of notice lies in the transmission, the usual clutch and gear-box being replaced by a special type of change-speed gear (Fig. 3) mounted on the back axle. The cardan shaft terminates in a bevel pinion P in mesh with two equal sized bevel wheels B and C. To the wheel B are secured the two satellites

pinions of a planetary or epicyclic gear, in mesh with an internally cut toothed ring fixed to the differential casing D and with a central pinion F. The latter is connected by means of the sleeve M with a cone K. The bevel wheel C is in one with a dished piece C, between which and the corresponding surface K are mounted four rollers G, the frictional contact being maintained by the spring R. The position of the rollers can be varied by means of a lever. When horizontal they roll between equal diameters of the dished piece C and the cone K. The centre pinion thus runs at the same speed as the satellites, and the whole planetary gear rotates with the differential, thus giving the top speed; to obtain a direct drive the rollers are brought slightly below the horizontal and are put entirely out of gear; at the same time the *bloc* formed by the cone K, the sleeve M, and the central pinion slide a little to the right, bringing the dog clutches FF into action and giving an absolute direct drive. Intermediary speeds are obtained by inclining the rollers G at an angle, the cone K thus being driven at a greater angular speed than C; the central pinion consequently runs faster than its satellites, imparting a retarding action to the latter which reduces the speed of the internally toothed wheel and of the differential. A further movement of the rollers brings them into such a position that the cone K is driven in the opposite direction to R, the reverse motion being in this way obtained.

The frame of the car is also somewhat novel; the front axle forms the forward crossmember of the frame, while at the rear there

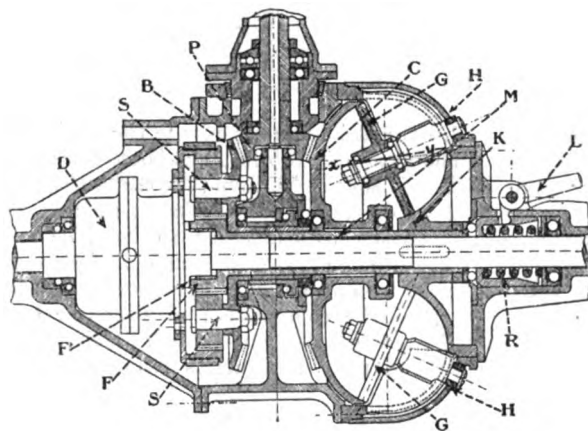


Fig. 3.—Sectional Plan of Combined Change-Speed Gear and Back Axle on D.S.R. Car.

is no cross member whatever. The front axle, which is carried on a single transverse spring, also forms the support for the starting handle. A pair of vertically sliding pins, which also act as the stub axles, are mounted in sockets formed in the ends of the front axle. To the under part of the central portion of the axle is anchored the inverted transverse semi-elliptical spring, the ends of the latter being shackled to lugs at the base of the vertical sliding stub axles.

The steering pivots are of special design, and the cross rod is carried across the top of the frame behind the fan which takes the place of the usual radiator. The rear springs consist of halves of inverted semi-elliptics arranged somewhat on the lines adopted in the Lanchester cars. The back axle is of the floating type, and the cardan shaft is surrounded by a sleeve which is supported at four points and acts as a torque tube.

As will be seen, the whole design of the car is on extremely novel lines. Whether the same will, however, give good results in practice remains to be demonstrated.

IN the case of cars in which the water has been drawn off to prevent freezing in the winter season, it is well, when the time comes to fill up again, especially if the weather is still cold, to use warm water.

ACCORDING to an American motor trader who has recently returned from a brief trip to Cuba, the market for motor-cars of medium price may be expected to undergo a decided increase in that quarter within the next few months.

THE PIPE AERONAUTICAL ENGINE.

WE have already briefly referred to the new light petrol engine, specially designed for aeronautical purposes, exhibited at the recent Salon in Paris by the Pipe Company, of Brussels. This week we are able to publish drawings of the new air-cooled engine, which clearly show the construction. It will be seen that it comprises eight cylinders arranged in two sets of four in the form of a V. The bore and stroke are both

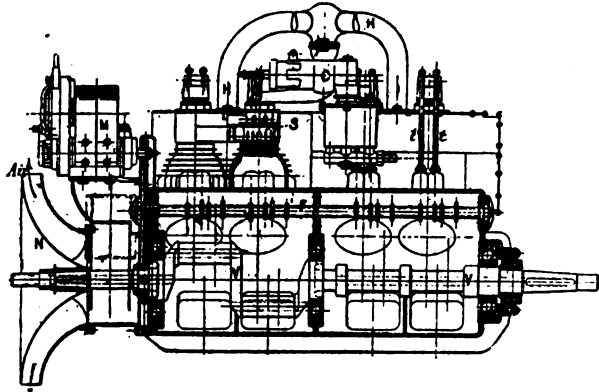


Fig. 1.—Sectional Elevation of Pipe 70-h.p. Aeronautical Engine.

A.—Vertical cooling ribs on cylinders. M.—Magneto.
B.—Connecting rods. N.—Air inducing fan.
C.—Carburettor. S.—Inlet and exhaust valves.
E.—Exhaust pipes. V.—Crank shaft.
F.—Cam shaft. tt'.—Valve tappet operating rods.
H.—Admission pipes.

100 mm., and at 1,500 revolutions per minute the engine is stated to give 70-h.p. The weight is 285 lbs., or about 4 lbs. per horse power. The crank case is of aluminium; the crank shaft is in one piece and is supported on three ball bearings; each of the four throws has two connecting rods attached to it. The inlet and exhaust are combined in one valve for each cylinder, the combination valve being located at an angle in the cylinder heads and arranged according to the compression of a double concentric valve. The cam shaft, which also runs on ball bearings, is located centrally at the apex of the V and carries two cams per cylinder,

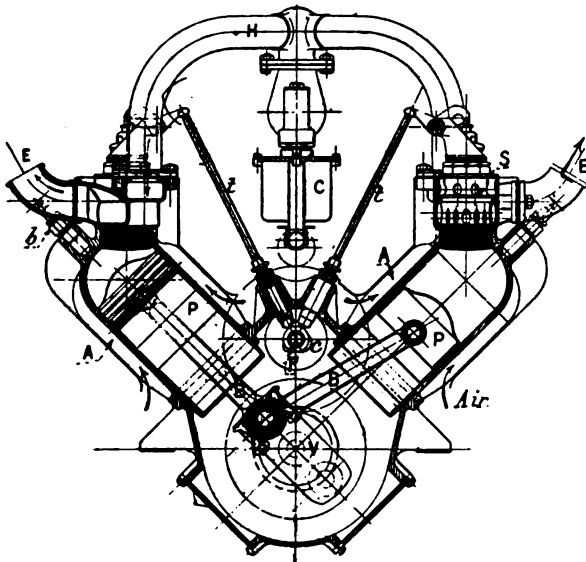


Fig. 2.—Cross Sectional View of Pipe 70-h.p. Aeronautical Engine.

each operating the valves through separate push rods *tt'* and tappets, one of which opens the inlet and the other the exhaust.

The mixture is furnished by a single float-feed carburettor, from which branch four admission pipes—one for each pair of cylinders. A single high-tension magneto is provided for ignition purposes, the contact maker being so arranged that no two cylinders on one

side of the V fire at the same time. The engine, as already stated, is air-cooled; the cylinders are provided with vertical ribs *A* in place of the usual horizontal flanges; each group of four cylinders is enclosed in an aluminium jacket or cowl, through which a powerful current of air is drawn by an aspirator at one end. The aspirator is designed to draw in air at a greater rate than is necessary at the normal engine speed, so that the cooling shall be efficient even when the motor is running slowly. The inlet is at the bell-shaped base of the casing; the air is then drawn over the surface of the radiating flanges and round the cylinder heads and expelled through the aspirating fan on the rear end of the crankshaft. Other details of the motor, all adopted with the view of reducing the weight, include the adoption of steel pistons and nickel steel connecting rods.

MOTOR TERMS IN ESPERANTO.

DURING the course of the Industrial Vehicle and Aeronautical Exhibition in Paris, which came to a close on Wednesday last week, it was noticed that among the many thousands of visitors was a party of Esperantists in charge of a guide, who explained the different exhibits in the new International language. It is also recorded that at one stand the exhibitor was able to describe his aeroplane in Esperanto. In view of the growing interest in the Esperanto movement "Les Sports" has drawn up a short list of motor terms in French and Esperanto in the hope that it may prove of use to motoring tourists. We reproduce below the vocabulary published by our French contemporary, and in order to make it more complete have added the corresponding English terms.

| English. | French. | Esperanto. |
|-------------------------|-----------------------------------|---------------------|
| Accumulator. | Accumulateur. | Akumulatore. |
| Battery. | Batterie. | Baterio. |
| Brake band. | Ruban de frein. | Bremsorubando. |
| Breakdown. | Panne. | Panei. |
| Cam. | Came. | Kamo. |
| Carburettor. | Carburateur. | Karburatoro. |
| Chain tension rod. | Tendeur de chaîne. | Cengustigilo. |
| Chassis. | Châssis. | Casio. |
| Chauffeur. | Chauffeur. | Veturigisio. |
| Electric motor. | Moteur électrique. | Elektra motoro. |
| Exhaust. | Echappement. | Gasforfluo. |
| Exhaust box (silencer.) | Boîte d'échappement (silencieux.) | Silentibujo. |
| Exhaust valve. | Soupape d'échappement. | Forfluo valvo. |
| Fill. | Remplir. | Plenigi. |
| Garage. | Garage. | Remizo. |
| Gas. | Gaz. | Gaso. |
| Generator. | Générateur. | Generatoro. |
| Goggles. | Lunettes. | Okulvitroj. |
| Hill. | Côte. | Deklivo. |
| Horse-power. | Force en chevaux. | Cevalpovo. |
| Ignition. | Allumage. | Ignitigilo, ignito. |
| Leak. | Fuite (d'eau.) | Ellaso. |
| Lever. | Levier. | Levilo. |
| Motor (engine) | Moteur. | Motoro. |
| Motor-car (automobile.) | Automobile. | Automobilo. |
| Lamp. | Lampe d'automobile. | Lanterno. |
| Petrol (motor spirit.) | Essence. | Petrolo. |
| Reservoir. | Réservoir. | Rizervujo. |
| Spark. | Étincelle. | Sparko. |
| Sparkling plug. | Bougie. | Sparkilo. |
| Starting. | Mise en marche. | Ekiriga mekanismo. |
| Starting handle. | Levier de mise en marche. | Ekirigilo. |
| Steering wheel. | Volant. | Guidstango. |
| Tyre protector. | Protecteur de pneus. | Krom bendo. |

ACCORDING to a recent consular report, motor-cars have not so far been in much favour in Nova Scotia, mainly owing to the poor condition of the roads throughout the province. There has, however, been a decided effort to overcome this defect, a bill having been passed authorising the establishment of a Department of Roads, and a sum of £35,000 appropriated for the improvement of roads and £5,000 for small bridges. There are ninety-seven automobiles registered at the office of the Provincial Secretary, divided as to origin as follows:—United States, sixty-one; Canada, thirty-two; Great Britain, four.

AERONAUTICAL NOTES.

THE King of the Belgians' prize of £1,000 will be awarded this year to the author of the best work on aerial navigation.

THE Marquis de Mouzilly de St. Mars has, it is announced, placed an order for a Breguet aeroplane which is to be fitted with one of the Gobron eight cylinder (sixteen piston) aeronautical engines.

THE event of the past week in the aeronautical world has undoubtedly been the wonderful performance of Wilbur Wright with his aeroplane. Following a flight of sixty miles in 1 hr. 52 min. 40 sec. in extremely cold weather on Wednesday, the 30th ult., on the last day of the old year he started out to establish a new record, an attempt which was entirely successful, as he remained in the air for no less than 2 h. 20 min. 23 sec., during which time he covered an officially recorded distance of 77½ miles, notwithstanding that the thermometer stood at freezing point. Wilbur Wright thus secured the Michelin prize of £800 for the longest flight on a heavier-than air machine recorded in 1908, a replica of a fine piece of statuary called "The Triumph of Aviation," and the Triaca prize of £20.

THE following are the principal flights made by Wilbur Wright in France and the dates of the same:—August 8th, 1 min. 45 sec.; August 13th, 8 min.; Sept. 3rd, 10 min.; Sept. 5th, 19 min.; Sept. 16th, 39 min.; Sept. 21st, 1 hr. 31 min.; Oct. 6th (with passenger), 1 hr. 4 min.; Dec. 18th, 1 hr. 54 min.; Dec. 30th, 1 hr. 52 min.; Dec. 31st, 2 hrs. 20 min. In addition to the prizes mentioned above, the daring aviator has, since he went to France, won a number of others, including one of £200, another of £100, and one of £40, so that the past year has not been an unfruitful one for him from a financial point of view.

A NEW addition to the long list of aeroplanes with which experiments are being made in France is the Bonnet-Labranche aeroplane. The machine consists of an upper surface 7 metres long and 10 metres wide in front, tapering to 4 metres behind. There is a double box below the stem; two side wings are below the front, and a vertical rudder is located forward of the seat. This rudder is, however, only used in emergencies, vertical steering being done ordinarily by means of a small propeller in front whose shaft can be turned up or down. The driving propeller is behind the driver's seat, and is driven by a 70-h.p. motor. The machine is intended to carry two persons, and is stated to have shown great stability and rigidity.

M. DUFAYEL has placed at the disposal of the French Automobile Club, who are charged with the organisation of the event, a sum of £800 to constitute four prizes in an aeroplane race from Bagatelle (the Bois de Boulogne, Paris) to Sainte-Adresse. The event is to take place on July 18th next, and it is specified that the journey must be finished on that day. The prize money is to be divided in such a way that the actual winner will receive £400, the second to arrive £200, the third £120, and the fourth £80.

THE French Minister of War has just asked for specifications for an aerial cruiser to fulfil the following conditions as to speed, capacity, &c. A speed of thirty-one and a quarter miles an hour is required for a period of fifteen hours, with six passengers of average weight of 11½ stone each. Navigation also is to be possible up to an altitude of 6,560 ft. The maximum total volume of the cruiser is to be 6,500 cubic metres, and the total length 295 ft. During trial trips the aerial cruiser must accomplish a minimum circuit of 312 miles against a wind of 23 ft. per second within the space of fifteen hours, the circuit to be made without landing, and at least two-thirds of the voyage to be made at an altitude of over 4,260 ft. A bonus of £200 will be awarded to the designer of the plans of the cruiser, which will be classed No. 1, and smaller prizes, in proportion, will be given for the next best designs.

THE Automobile Club of Belgium has decided to interest itself in aeronautical matters, and has appointed a committee to deal with the subject.

AN anonymous donor has, through Count de la Vaulx, given another prize of £400 to the Aero Club of France for the encouragement of aviation.

THE first annual dinner of the Aeroplane Club will be held at the Savoy Hotel, London, on Wednesday next. Cinematograph pictures will be exhibited and a discussion will follow the dinner. The club has already reached a membership of 870.

THE Rhenish Westphalian Airship Company is the name of a new concern which has just been formed in Elberfeld, Germany, with a capital of £5,000. The object of the undertaking is to construct a new airship which will be 180 ft. long, and have a capacity of 2,200 cubic metres; it will be fitted with a 50-70-h.p. engine, and will be able to carry six passengers.

NEW additions to the growing list of experimenters with aeroplanes are being made daily. It is announced from Chalons, France, that M. Pasquier, of Rheims, is about to carry out some trials with an aeroplane of the bi-plane type. The engine is of a special design, and, although developing 60-h.p., is stated to weigh only 88 lb., or under 1½ lb. per horse-power; this will be connected up to two propellers each 7 ft. 6 in. in diameter. At

Amiens Mr. Henri Robart is experimenting with an aeroplane having an area of 50 square metres and fitted with a 40-h.p. motor. At Sainte Cecile (Bouches du Rhone) M. Morgue is building an aeroplane in which the stability is maintained by means of a gyroscope. The apparatus, which is of the bi-plane type, will shortly be tested on the racecourse at Orange.

MR. WILBUR WRIGHT brought his stay at Le Mans to an end on Sunday last, when he began to make preparations for transferring his aeroplane to Pau. The machine, which was found to weigh 7 cwt. 38 lbs., was packed up, together with the starting appliances. Mr. Wright does not believe that during the present year aeroplanes will become sufficiently perfected to be of general utility, but as far as his own machine is concerned he is hopeful that when his new engines are ready he will be able to remain in the air for four or five hours, and to cover distances of from 200 to 300 kilometres. With regard to modifications of his system, he states that while for the present he proposes to preserve his starting and landing apparatus in its present form, he is engaged in devising a method of rising from the ground which would enable him to dispense therewith.

MR. ORVILLE WRIGHT, accompanied by his sister, sailed for France on Tuesday on board the Kaiser Wilhelm, in order to join his brother Wilbur in France.

WE hear that Mr. H. R. Pope, of the Itala Automobile Company, Ltd., has ordered two Wright aeroplanes, and that he will be shortly going to Pau, France, to receive a course of lessons in the handling of the machines from Mr. Wilbur Wright.

THE aeroplane "Silver Dart," constructed by the Aerial Experiment Association, recently made four successful flights at Hammondsport, N.Y., U.S.A. The association, at the head of which is Mr. Alexander Graham Bell, the inventor of the telephone, has constructed four aeroplanes to date, each being an improvement on its predecessor. The machine, which weighs complete with operator 850 lb., is fitted with a 50-h.p. engine. The propeller is driven by a V-belt, the same as in a motor-cycle.

MR. HOWARD WRIGHT's helicopter is now completed, and has been sent out to Italy. The tests of this flyer carried out in England have been eminently satisfactory. Mr. Wright is now building, for an English enthusiast, a large bi-plane, which he hopes to complete early in February. Both his workshops in High Street, Marylebone, and his larger premises at Battersea Park are now busily employed on machines which are being constructed to order.



A Poor Aeroplane Inventor at the Paris Show.

As was the case at the Agricultural Hall Exhibition a couple of years ago, among the exhibitors at the recent Salon in Paris of models of suggested flying machines, were several shown by poor inventors, one of whom is caricatured in the above sketch from the "Auto."

GOSSIP FROM PARIS.

The End of the A.C.F. Grand Prix Race.

The boycotters of the Grand Prix have carried the day. At the expiration of the delay on the eve of the New Year no one had added a single car to the list of entries published in the *M.C.J.* last week. Even the Marquis de Dion, who had taken the lead of those favourable to the maintenance of the international competition, confessed he had been beaten and consequently found it useless to inscribe his cars. The great official speed race is therefore suppressed at least for this year. "Will it ever be revived?" is a question which the most interested parties, that is to say, the automobile manufacturers, are loth to answer. Indeed, they themselves do not know. One of them, however, said to me on January 1st, "Thank goodness the Grand Prix is as dead as a door-nail." It may be so; but, as one of the leading motor car agents remarked with much truth, it will depend a good deal on the sale of French-made automobiles at home and especially abroad. He affirmed, "If the exports fall off considerably, as I fear they will, it would not be astonishing to see the very same men who were the chiefs of the boycotting campaign transformed into the most ardent champions of the great International race in 1910."



Touring in France.

At Pons, a little town in The Charente, on the direct road from Bordeaux to Paris, the great Route Nationale runs straight through the vaulted substructure of an old monastery.

The Champion Flyer of 1908.

Wilbur Wright has won the Michelin prize of £800 and the bronze reproduction of the annual cup. His performances on 30th and 31st December, executed in spite of the intense cold, were perhaps yet more remarkable than his previous flights and show he is incontestably worthy of the title of "King of the Air." On the first occasion he flew during 1 hour 26 minutes 10 seconds, covering a distance of about sixty miles, and on the second he remained in the air no less than 2 hours 20 minutes 44 seconds, flying an officially controlled distance of a trifle over seventy-seven miles. M. Barthou, Minister of Public Works, and the champion of aviation in the Cabinet and in the French Chamber and Senate, had gone from Paris to the Auvours camp on purpose to see the wonderful spectacle. It was the first time he had witnessed a flight, and it astounded him more than he had expected. I noticed he watched the aeroplane with intense interest while the aviator made it sometimes soar to an altitude of more than 100 yards and at others caused it to skim the ground before rising again to the height of twenty-five or thirty-five yards, which was maintained for the greater portion of the record flight. When the signal was given that the sun had set and that consequently it was useless for him to prolong the experiment Wilbur Wright brought his machine gracefully and softly to the ground close to the spot where M. Barthou was standing. In a few minutes the Minister had accepted Wilbur Wright's invitation to take a seat on the aeroplane. What his sentiments were when, after a few minutes' flight,

he set foot again on *terra firma* may be judged by his exclamation, "Yes, indeed M. Wright you have proved once more to-day that aviation has entered the phase of practical utility." On the same day Henry Farman and Moore-Brabazon at the Chalons camp were to have tried to beat the American aviator's record, but they both had difficulties with their motors, which refused to work properly. The consequence was that Henry Farman made three flights of only a few minutes' duration, while Moore-Brabazon failed to get his machine to leave the ground.

The Aeronautical Show.

The Salon de l'Aeronautique has closed its doors. It was a huge success at least in so far as the attendance of the public was concerned. Many tens of thousands of Parisians had witnessed the flights of aeroplanes at Issy-les-Moulineaux, and all the inhabitants of La Ville Lumière had at one time or another seen the steerable balloons navigating the air high above the loftiest monument of the city. But at the Grand Palais the people came to touch and to examine closely the mysterious machines which, till then, they had only seen from a distance. The dense crowds that collected round them during the whole time the show remained open demonstrated the extraordinary interest taken in them. If, however, the manufacturers did not profit by that circumstance to take large orders, it is pretty sure that the show will facilitate the floating of aviation companies. Whether that result is an advantage may be questioned. Of the aeroplanes which were exhibited only a very few had ever flown, and it may be taken for granted that most of them will never leave the ground. Nevertheless capital will doubtlessly be found to construct them for sale, because now every one's ambition is to have a flying machine. When it is at length discovered that 75 per cent. of them are built in such a fashion that they cannot possibly fly, it is to be feared that capital will begin to fight shy of even those aeronautical investments which promise success. That is one of the dangers threatening the new-born industry, and it is certain it has been increased by the phenomenal success of the Salon.

Paris under Snow—The Triumph of the Automobile.

"It's an ill wind which blows no one any good." The wind which blew the snow to Paris last week blew the horses off the streets in less than a couple of hours, but the motor-cars, private vehicles, taxi-cabs, and even the lumbering top-heavy buses proved themselves equal to the emergency. While the horse-omnibuses and cabs had to be taken home or left standing by the roadside till a few horses having been rough-shod were at last able to drag them to their respective depots, the motor-buses and cabs were rushing about without a moment's rest as if nothing unusual had happened. The petrol motors thus once more proved their superiority over the "moteurs à crottin." It was a veritable triumph for the new means of locomotion. Most of the taxi-cab drivers did not think much about that, but, applying the economic principle of supply and demand, raised their fares proportionately. To take a party home from the theatre the price charged was rarely under 20 francs, especially if the distance was at all considerable.

MARNEY.

FROM Washington, U.S.A., comes the report that the motor-car will be the official vehicle at the White House after March next, when two vehicles are to be placed at the service of the newly-elected president, Mr. Taft.

At the recent Paris Salon Messrs. Iglésis and Regner, of 32, Rue Reunequin, Paris, had on view an interesting little dynamo known as "La Magicienne," intended for lighting and ignition purposes, as well as for the mechanical starting of the petrol engines of motor-cars. The machine is arranged to be driven off the engine by suitable gearing; it is entirely self-regulating, and maintains the small battery of accumulators for lighting and ignition purposes in a fully-charged condition. To start the petrol engine, the dynamo is made to act as a motor, being supplied with current from the battery.

CONTINENTAL NOTES.

A Motor Sleigh Competition.

The Touring Club of France is organising a motor sleigh contest, which will take place at Monestier-de-Clermont (Isere) on the 24th inst. The sleighs will be submitted to different level-way and hillside experiments which will have the character of tests rather than of races.

La Coupe des Voiturettes.

The "Auto" is determined that the suppression of the Grand Prix shall not entail that of the race for light cars known as the Coupe des Voiturettes. As the A.C.F. refuses to organise it, that journal will undertake the task alone. The competition, which is to be International, deserves to succeed, as it will certainly stimulate manufacturers to improve the light cars which are in such demand at the present time. The "Auto," which has published the rules and regulations for the competition, is looking about for a suitable

that in the case of there being more than sixty entries elimination trials shall be held, leaving thirty cars to compete in the final race.

An Automobile Meeting at Cannes.

The Automobile Club of Cannes is organising a number of motor events for March next. On the 14th of the month there will be a series of speed trials over the flying kilometre, on the 15th a hill climbing competition, on the 16th a fuel consumption contest, and on the 17th a brake trial.

Miscellaneous Items.

The Pipe Company have lately supplied a motor vehicle with a collapsible escape ladder to the Brussels Fire Brigade.—A motor-car exhibition is to be held in Prague from April 11th to 18th next.—A company has just been formed in Breslau with the title Die Breslauer Electromobil-Transport-Unternehmen



The recent Military Manœuvres in Germany.—Some of the Motor Vehicles at Bingen.

[Allgemeine Automobil Zeitung.]

circuit, which cannot be that of Anjou because it is to be situated within 62 miles of Paris and not to measure more than 25 miles or less than 15 miles. It is proposed to hold a race of 500 kilometres (311 miles) in the month of June next. The minimum weight of the cars is fixed at 600 kilogrammes. Both detachable rims and wheels are to be allowed. For the single-cylinder motors the bore may vary between 100 mm. and 120 mm., and the stroke between 250 mm. and 124 mm. For the double-cylinder motors the bore may range between 80 mm. and 95 mm., and the stroke between 192 mm. and 95 mm. For the four-cylinder engines the bore may vary between 65 mm. and 75 mm., and the stroke between 140 mm. and 75 mm. The entrance fees are £20 for one, £32 for two, and £40 for three cars. Some people seem to think the undertaking not to participate in the Grand Prix with heavy cars will not preclude those who boycotted the great race from participating in the Coupe des Voiturettes. However that may be, the "Auto" counts on a large number of entries before the expiration of the last day for the inscription of cars, on May 31st next, as the regulations stipulate

Gesellschaft (Betu), to establish a parcel delivery system in that town by means of electrical vehicles.

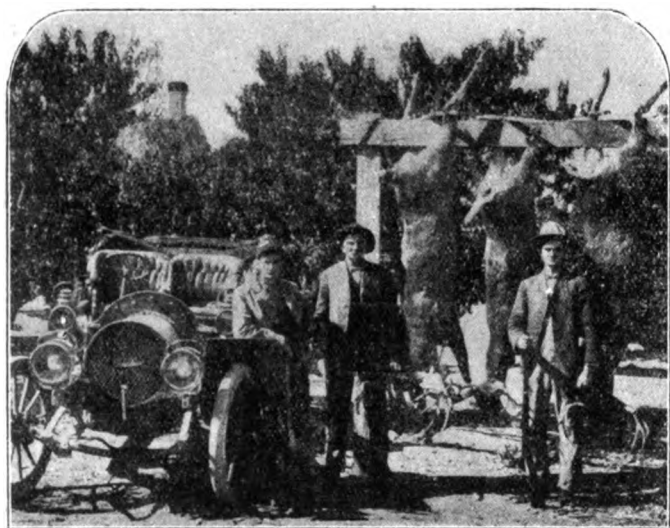
Les Termes Usités par l'Aerostation et l'Aviation.

Plusieurs de nos lecteurs, dit "l'Echo de Paris," nous écrivent pour que nous leur donnions la définition exacte des termes usités par l'aerostation et l'aviation. Répondons à leur désir. Aérostat est le terme générique employé pour les ballons de toutes sortes. Aéronef est le mot appliqué aux ballons dirigeables, selon M. Julliot, l'ingénieur de la "Patrie" et de la "République." Aéroplane, machine volante plus lourde que l'air. Les aéroplanes se divisent en monoplans (le Blériot), biplans ou cellulaires (le Farman), triplans, et multiplans. Hélicoptère, machine volante dans laquelle la surface portante est remplacée par des hélices sustentatrices devant maintenir l'appareil dans l'air. Ornithoptère, machine volante possédant des ailes battantes. Aéroneute, pilote d'un ballon sphérique ou d'un dirigeable. Aviateur, celui qui monte et dirige un aéroplane ou un hélicoptère.

EMERGENCY REPAIRS AND SOME WINTER MOTORING HINTS.

THE writer's notes that appear from time to time under the first part of the above heading are usually written with the object of putting wrong right, but having regard to the time of the year and the havoc that frost may play in the parts of a motor-car, it may not be out of place to pause for a moment and view things from the opposite standpoint, and adopt the principle that prevention is better than cure. In a recent issue of the *M.C.J.* mention was made of a road repair between Moscow and St. Petersburg. The object of calling to mind such a reference is that, though temperatures are experienced in the places named that a Fahrenheit thermometer would not condescend to register, one fears the winter grip less there than in Great Britain, where such variations of the quicksilver are unknown, the reason being that in countries like Russia, Canada, &c., time is taken by the forelock.

Water, which neither man nor beast can dispense with, and in a normal state is harmless, under great heat or excessive cold expands, and when subjected to either stress may become both troublesome and dangerous. As an hydraulic power its resources are far and away superior to any other known force; as steam its elasticity and strength is amply demonstrated daily before us.



Motor-Cars and Hunting.

The above illustration depicts a deer hunting party in Colorado, who have found the automobile an excellent adjunct to their sport.

and has revolutionised the commerce of the world. When frozen there is hardly a vessel that can be made by man which will withstand the enormous strains of its expansion. A good illustration of this form of energy is seen in the fissures made by frozen water in rocks, &c. It is in this phase that it will specially appeal to motorists.

Some little time ago a number of guns were sold by a Government to be broken up. Every known means to burst them within the range of paying possibilities were tried by the purchasers, but without avail; another lot was sold, and profiting by the experiences of those who had gone before, the buyer, being resourceful, thought he would try fresh ground; he had holes drilled and filled with water, then plugged up with screwed steel plugs and waited for the fall of the quicksilver; the frost did the rest. The desire here is to show what measures can best be taken to prevent cracked castings and burst pipes. The first thing to bear in mind is that the damage, when it takes place, is done before the thaw sets in. Older motorists know this quite well, but there are thousands of individuals who seem to have formed the erroneous idea that when they see a leaking pipe it is then the damage is taking place. When anticipating the subject of this article to a lady motorist and explaining the foregoing

to her, she replied, "All I know is that I never see any leakages in the bath room pipes until the thaw comes." Of course not, "ice" does not leak.

Taking the car first when at rest, the danger zone of any part, whether radiator, pump and connections, water jacket, pipes or castings is at the lowest point, where there should always be a drain tap; if there is one it should be opened when the engine is warm, run out all the water, and the walls will become dried with the heat. If there is no such means of draining off the water, disconnect the part, if possible, and empty out all the liquid. A tap should be added at the lowest point as soon as possible. Wrapping in blankets before the engine is cold is a wise precaution. A friend of the writer's had a quaint way of preventing any part of his car being frozen during the cold weather. The last thing at night he would go out to the motor house, run the engine until it was really hot throughout, and always once in the night go through the same operation, but this *modus operandi* would not appeal to many.

With an air-cooled engine there is little to fear from "Jack Frost." To pass on to when the car is running, it should be kept in mind that the function of the radiator is to cool. This may be carried to extremes; to prevent this, it is well to put the fan out of action in very cold weather.

Many anti-freezing mixtures are on the market, some good, others of a doubtful nature, but two simple, harmless, and not expensive additions are recommended. Glycerine is a most efficient agency when used with an equal amount of water, but it is more costly than methylated spirits. The latter is quite as effective, but gives off a slight odour; 20 per cent., or one-fifth to four-fifths of water is sufficient. It is a very old preventive, and used by chemists for similar purposes, even before the advent of the steam engine. The relative cost of these two may be taken as follows:—Glycerine, being heavy, is sold by weight, but calculated by measure is approximately 10½d. per pint. Methylated spirit is 6d. per pint, so that as less than half the quantity of the latter is required, and little more than half the price, it is about a quarter the cost; it is also much cleaner than glycerine, and gives quite as good results. It seems almost superfluous to add that a slow combustion stove in the motor house meets the case, but an open fire is most undesirable unless all petrol has first been removed, both from car and house.

Referring to repairs, a useful one was recently performed by a chauffeur on a magneto-fibre wheel. Some teeth had become stripped and no new wheel was to be obtained locally. As time pressed, a piece was taken out of a discarded wheel, shaped dovetail fashion and fitted into the place prepared for it. This makes a good, sound repair. A curious trouble arose with the writer. The car had been sent to a local repair shop in his absence, and on returning to use the vehicle it was found that it did not run with its usual freedom. On noticing that some of the pipes had been disconnected and fresh joints made, he thought the trouble was possibly at one of these. On taking down one of the pipes it was found that in making the joints new packing had been used and the hole in the centre of the same was only about half the size of the interior of the pipe. The result may easily be guessed. How simple a thing, and yet what trouble may thus be caused! There is no doubt but what this is a rather common error, and occurs more often than is generally known.

E. T. H.

Two petrol fire engines of the "Hatfield" type are now being completed at Greenwich for the London fire service. They will be capable of pumping 450 gallons per minute.

A PAPER will be read by Mr. R. F. S. Bircham on the "Use of Small Internal Combustion Engines for Marine Work," at the Institution of Automobile Engineers, on Wednesday next.

MESSRS. C. A. VANDERVELL AND CO., the well-known makers of accumulators, electric lamps, magnetos, coils, &c., of Warple Way, Acton Vale, London, W., have sent us an excellent perpetual calendar, which will serve as a reminder of their well-known productions.

THE SOCIAL WHIRL.

THE King, the Prince of Wales, and several members of his Majesty's house party at Sandringham recently motored to the Frankfort Wood and spent the day among the pheasants.

HIS EXCELLENCY THE EARL OF ABERDEEN has, like his predecessor, the Earl of Dudley, shown great interest in motoring matters. His encouragement has not been limited to opening the official headquarters of the Irish A.C., but he has also endeavoured to promote the welfare of the industrial side of the movement as well. A few days ago the Earl had a run in the "All Irish" landaulet belonging to Mr. Justice Ross. This was so successful that he decided to visit the works where the car was made, and accordingly he took advantage of being in Belfast recently to inspect the establishment of Messrs. Chambers Motors, Ltd. A long tour of the works was made by His Excellency in company with the Lord Mayor of Belfast, Sir Robert Anderson, and among the finished cars seen were vehicles for Lord O'Neill and Mr. C. G. Macartney, D.L., J.P.

MR. HARVEY DU CROS, sen., will shortly be taking a short holiday on the Riviera. Now that his son sits for Hastings he will be able to enjoy a recuperative rest without having to return at the call of the Parliamentary Whip.

I HEAR that Mr. A. Craig, a director of the Maudslay Motor Company, Ltd., Coventry, had some exciting motoring experiences during the Christmas holidays, he being snowed up for three days in Scotland.

ON Friday of last week, at the Villa Villa Restaurant—well-known to the motor trade of the West End of London—the principals of Messrs. Max Graddon and Lawson, Ltd., entertained their staff to a New Year's dinner. In addition to welcoming 1909 the occasion served to inaugurate the new partnership, and Mr. T. B. Lawson from the chair spoke most hopefully of the future. The management will remain as before, and with Mr. A. H. Storey as the works manager the company should develop a high reputation for carriage work. Mr. Storey has been responsible for the production of some of the Royal carriages. Mr. Lawson is the chairman of the concern, Mr. Max Graddon the managing director, and Mr. D. Paterson the secretary.

THE snowfall of last week seriously interfered with many house parties which had been arranged in country districts. Train communication broke down in many places and even motor-cars had a bad time. I hear of one motorist who overcame his difficulty in a way that should be remembered by others for service should the snow return. He was going to a ball ten miles from his home and over very bad hills. His motor-car was sent on a trial trip in the afternoon and failed at the first hill. They then tied ropes on the wheels, and in addition carried a hundredweight of cinders. Twice the car refused to pull, and each time a few cinders sprinkled in front of the wheels enabled the vehicle to proceed.

AT the annual dinner of the firm of Messrs. Gould Bros., of Exeter, last week, Captain Bazalgette proposed the toast of the firm, and also made a presentation to Mr. Ernest Gould, the managing director, from the staff. In his reply the latter referred to the increase in the motor business of the city and to the several successful non-stop runs carried out by the firm during the past year. A presentation was also made to Mr. Harrison, an important member of the staff.

LOLLIUS.

THE New Zealand four days' Motor Car Reliability Trial concluded on Monday. The course was one of 547 miles, over rough country, steep hills, and rivers. No fewer than thirty-six competitors took part in the event, and on the highest aggregate marks for reliability, hill-climbing, and petrol consumption Talbot cars were placed first, second, and third—a good beginning for the New Year.

HERE AND THERE.

A DELAHAYE motor fire engine has been built for the fire brigade of St. Etienne, France.

A NEW branch of the Arrow Motor Works is being opened by Messrs. C. A. White and Co. at 426, Hoe Street, Walthamstow.

AT 1, Nassau Street, Dublin, Mr. Barrett has ample facilities for charging accumulators, and also keeps a stock of all electrical accessories likely to be required by owners of motor-cars.

THE work on Petrol Motor Car Mechanism and Management, by Mr. W. Poynter Adams, recently noticed in these columns, has been added to the list of books supplied by Messrs. Cordingley and Co. through the post.

MR. W. F. PARKER is the manager of the Oxford Motor Cab Company, Ltd., 68, St. Giles', Oxford, which has motor-cabs and carriages for hire. The tariff which the company have issued is well calculated to secure public appreciation of this automobile service.

THERE is a very marked tendency on the part of village blacksmiths in America to take up the business of motor-car repairing. A Chicago correspondent reports that he finds also that the signs carried by these artisans have undergone a change, "Garage and horseshoeing," being one such sign that he encountered in the course of a recent tour.



The "Kempshall Girl," reproduced from an illustration just issued by the Kempshall Tyre Company of Europe, Ltd.

MESSRS. FRISWELL are using the latest and most up-to-date appliances for the washing of motor carriages entering their premises in Albany Street, London, N.W. In view of the arduous work and indifferent results obtained by the use of water just above freezing-point, they have installed a patent geyser, which gives a plentiful supply of hot water through the ordinary washing hose, for the use of the washers in their establishment.

MESSRS. DENNIS BROS., LTD., have sent us a photograph of one of two vans they have just delivered to the order of Messrs. J. and P. Coats, of Paisley. The vehicle, which is equipped with a 35-h.p. engine, is fitted with a body of novel construction, insofar as the lower half of the sides is made so that it can be dropped down while the top portion is like a revolving shutter. We may add that the vans were supplied through Messrs. Rennie and Prosser, the Glasgow agents for Messrs. Dennis.

IN a Board of Trade and Foreign Office report on the trade of Bangkok for 1907, it is stated that Siam is one of the principal markets for motor-cars in the East, the number now in use in the capital being about 300. The great majority of these cars are owned by Siamese, and employed for pleasure purposes. The import shows no sign of slackening, and as long as it is the fashion to drive a motor-car, so long will the demand continue. The roads are being, and have been in the last few years, much improved, the improvement being almost entirely due to the advent of motors.

FEBRUARY 1st is the latest date for tendering for the eight motor ambulances required by the Metropolitan Asylums Board.

THE Star Engineering Company, of Wolverhampton, have just delivered a new motor-van to the Co-operative Wholesale Society, of Manchester.

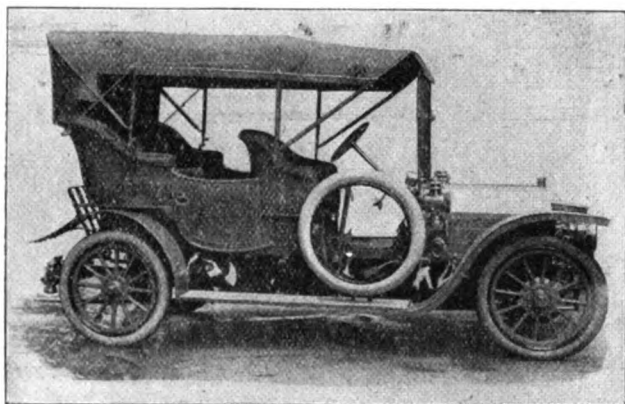
MR. F. C. LITCHFIELD, of the St. Giles Cycle and Motor Engineering Works at Norwich, has opened another depot at St. Margaret's Plain, in that city.

MESSRS. STATHAM AND CO. have depots for the storage of petrol, oils, tyres, &c., in the High Street, Kilkenny, and will be pleased to render assistance to motorists passing through the town.

THE County Chemical Company, Ltd., have removed to their new premises in Bradford Street, Birmingham—the land previously occupied by their factories having been taken by the G.W.R. for a new station.

THE Isotta-Fraschini car, which was entered for the 1908 Vanderbilt cup by Mr. C. V. Brokaw, and which Herbert Lytle drove into second position, has been disqualified on account of its being in excess of the maximum weight of 2,644 lbs. The second place consequently falls to the Mercedes driven by Lutgen.

WE illustrate herewith the smart 14-20-h.p. Siddeley car just delivered to Mr. Tomyns R. Brown by the Connaught Motor and Carriage Company, Ltd., Long Acre, W.C. This is the first vehicle of the 1909 model to be delivered; it has a 9 ft. 3 in. wheel-base, the chassis being fitted with a Connaught Roi des Belges body, with double extension Cape cart hood and screen. The car has



special wings, and is fitted with luggage grid, head lamps, and Blériot Scout Horn. The body has a very striking and handsome appearance, being painted in turquoise blue and upholstered to match, with waterproof covers for bad weather. A noteworthy feature in connection with the vehicle is that the doors open the reverse of the usual way, thus providing ample room for getting in and out of the car, a feature which ladies will greatly appreciate.

ANOTHER Light Agricultural Motor Competition is to be held at Winnipeg, Canada, from the 7th to the 17th July next. Classes will be provided for machines of (A) 20 brake h.p. and under, (B) 21 to 30 brake h.p., (C) over 30 brake h.p., (D) 75 brake h.p. and under. All entries must be sent on or before June 1st, 1909, to Mr. A. W. Bell, general manager, Industrial Exhibition, Winnipeg, the entry fee being £1 per motor. No restriction will be placed on the nature of the fuel used or class of engine. It is to be understood, however, that the fuel shall be such as can be readily procured in Canada. The tests will comprise ploughing, hauling, belt-driving and a brake test. In considering the merits of the competing motors, special importance will be paid to the following points:—1. Weight of motor. 2. Brake horse power developed. 3. Fuel and water consumption. 4. Distance that can be travelled without replenishing. 5. Turning capabilities. 6. Protection of working parts from mud and dust. 7. Accessibility of all parts. 8. Travelling speeds. 9. Ease of manipulation. 10. Clearance of working parts from ground. 11. Steadiness of running for belt power. 12. Selling price. 13. Design and construction of engine.

THE third Automobile, Motor Boat and Sportsmen's Exhibition of Canada will be held at Toronto from February 18th to 25th, with Mr. R. M. Jaffray as manager.

THE Chief Constable of Brighton wishes motorists to understand that leaving cars unattended in the public thoroughfares will not be permitted where obstruction is likely to be caused.

AT Peel Street, Accrington, Mr. William Heap has a well-equipped garage, where not only can petrol and spare parts be obtained, but all classes of repairs can be promptly carried out.

MESSRS. C. W. and O. LANCASTER, motor engineers, Settle, Yorkshire, have a well-equipped garage, with accommodation for about 100 cars. A large stock of accessories is kept on hand, and plant is available for the charging of accumulators, the vulcanizing of tyres, and for the carrying out of repairs of all kinds.

LIVERPOOL motorists, and also the American visitors who throng the "Adelphi" during the summer, will be glad to learn that they have now at hand a depot where everything in motor clothing may be obtained. We refer to the new establishment of Messrs. J. A. Turner and Co. In addition to being one of the agents of Messrs. Dunhill, Messrs. Turner also make any kind of motor clothing on the premises, and have on view an extensive stock of goods, and as they have been established for many years they need no introduction.

P.G.R. motor spirit is being introduced into this country in three grades, viz., light, of 700-710 sp. gr.; ordinary, 720-725 sp. gr.; and heavy, 750-760 sp. gr. Several depots have been established in the United Kingdom, and it can be obtained from most of the garages throughout the country. The headquarters of the Petroles de Grosnyi (Russie) Société Anonyme are 101, Leadenhall Street, London, E.C., and the quartette of leading claims for the P.G.R. spirit are lightness, power, purity and economy. Several well-known motorists who have given the spirit extended trial have expressed themselves as well satisfied with the results—both from the standpoint of cleanliness and also mileage per gallon.

AMONG the firms who are now making a speciality of catering for the wants of motorists in the way of motor lubricating oils and greases are Messrs. Butterworths, Ltd., of May Buildings, North John Street, Liverpool. Their productions are used in every clime, whilst the hundreds of testimonials received from automobilists are proof of the quality of the firm's oils. We understand that those motor-owners who have not yet tried the Butterworth oils will, on application, be sent a sufficiency for a real test. The firm has lately issued an elegant autocar log book, which contains a large amount of useful information, and should be in the hands—or pocket—of everyone who makes motoring a trade or a pastime.

THE Englishwoman's Year Book for 1909 comes to hand from Messrs. A. and C. Black, with several new features and the old ones brought well up to date. An article on motoring, by Miss N. G. Bacon, refers to the popularity of motoring and some matters of interest to ladies. She refers to a motor school where ladies are trained to adopt motoring as a profession and gives full particulars of membership of the Ladies A.C. One mistake occurs in the little article which will be apparent to our readers when we quote that "Miss Muriel Thomson was winner of the Ladies' Motor Match at Brooklands in 1908; her car was a 12-h.p. Austin Papplen." The book is of considerable value to all interested in the many activities of women nowadays.

To the order of Messrs. King and Co., 465, Union Street, Aberdeen, Messrs. J. T. Clark and Co., Ltd., Rose Street, Aberdeen, have built a new motor-cab which they have named the Empress. The body is mounted on a 14-h.p. two-cylinder Adams chassis and is of novel construction, designed to completely isolate the driver from the four passengers. To secure this both sides of the body proper are carried forward to the front edge of the driving seat. A central division is fitted on the seat, and the near side of the body in front is closed in so that a recess is formed. In this is placed a seat for one passenger. Two others are carried on the rear seat and the fourth on a folding seat behind the driver, with a back rest tipping towards the off-side door. The measurements have been carefully studied with a view to meeting the requirements of the police authorities.

Correspondence.

[Letters to the Editor should be addressed to the offices, 27-33, Charing Cross Road, London, W.C.]

INDIVIDUALITY OF DESIGN.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—We take this opportunity of thanking Mr. Herbert J. Chapman for the eulogistic remarks which he makes regarding certain original features of our car, and we feel that we ought not to pass over some of the questions he raises without reply. He appears to be under the impression that we have given up tiller steering; this is not the case. We have adopted wheel steering and embodied it in one of our standard designs to meet the requirements of clients who prefer this system. We still make tiller-steered cars for clients like your correspondent, who prefer the tiller and single-lever hand control.

In answer to Mr. Chapman's reference to wire wheels, we still believe in wire wheels, and now that a few other firms have followed our lead the public are gradually beginning to understand the advantages of the wire wheel; and it is a significant fact that at the present time practically all the cars we turn out are fitted with wire wheels. Needless

corner is such that a motorist coming round it would not be able to see any one in such a position until it would be too late.

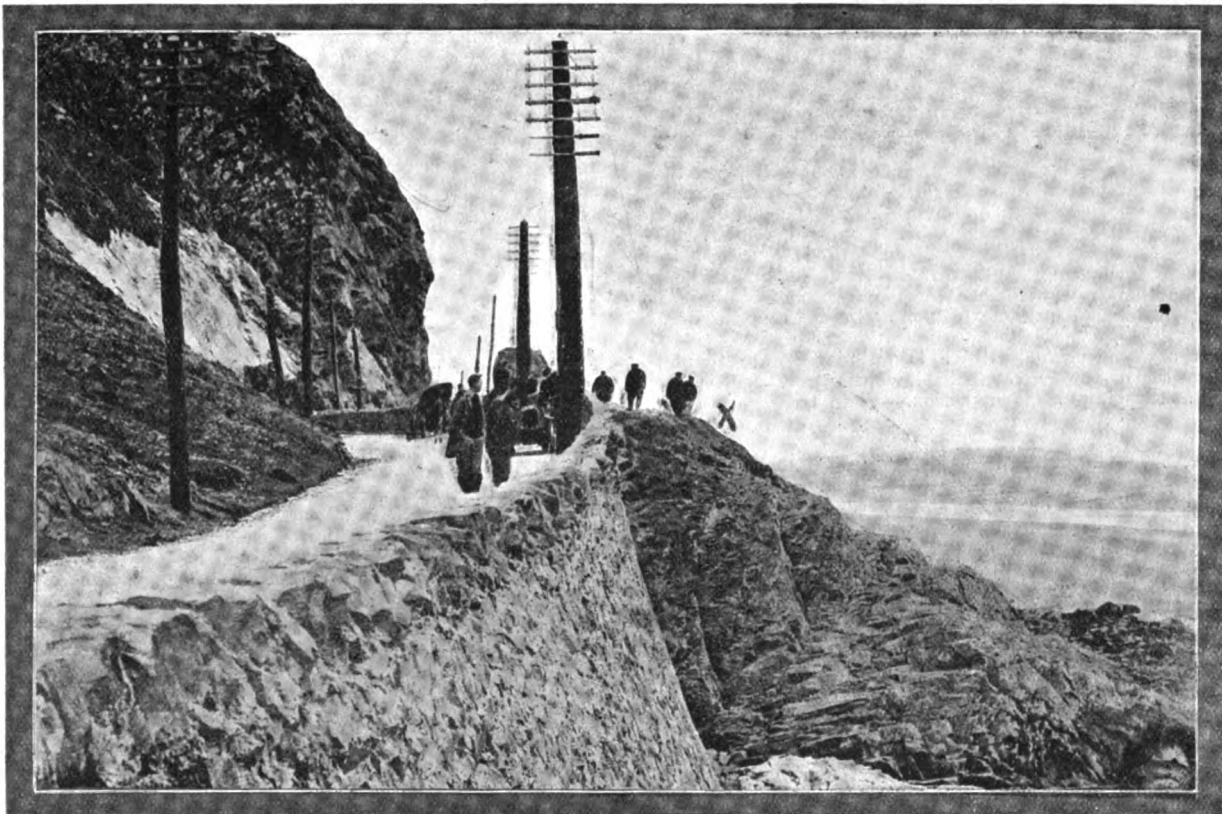
I submit that in all probability the motorist would then have to pay for this wretched fool's carelessness, either by a very heavy fine or a more or less long term of imprisonment. Although this is the only case of the kind which has come under my observation, I have heard of others of a similar nature. This is a serious matter, as the most careful driver may get into trouble through similar circumstances.—Yours truly,

ARTHUR J. RICHARDS.

DANGERS OF PETROL.

To THE EDITOR OF *The Motor-Car Journal*.

SIR.—A few days ago there appeared in several of the daily newspapers (and also in the *M.C.J.*) a letter from a gentleman who had noticed with some concern the growth of the sale of petrol for domestic



The Scene of the Motor-Car Accident near Conway. The cross marks the point where the lady is supposed to have fallen over the cliffs.

to say, we still supply cars with wood wheels to suit the demands of those who prefer them.

We can understand Mr. Chapman's fears that, having conceded to public opinion in one or two features of design, we may be gradually effacing the individuality of the Lanchester car, but we can assure Mr. Chapman that we have not the slightest intention of building cars of the ordinary type with bonnet in front. The car which we are now building has been our standard design for the past four or five years, and has apparently established itself in the public favour as a rival to the orthodox type which has come to stay, but as manufacturers we cannot afford to lose orders by neglecting the demands of a large section of the motoring public. Thus, in adapting the wheel steering and foot control to some of our cars as a supplementary design, our car is now able to enter a market that was hitherto closed to it.—Yours truly,

C. H. LANCHESTER.

A ROAD DANGER.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—I should like to bring before the notice of the readers of the *M.C.J.* a fact which came under my observation on the evening of Boxing Day. At about 9.30 p.m. I was out walking and I came upon a drunken man lying across the road at a dangerous corner. The nature of the

purposes, and who drew attention to the dangers which attend such use. The Public Control Committee of the London County Council, as the executive committee under the Petroleum Acts, has a very large experience on this subject, and, as chairman of that committee, I should like to add a few words of warning.

Petrol can be obtained in almost every business street in London, and the public appear to be insufficiently acquainted with the dangers that arise in its use. Whatever warning may be labelled on the vessel containing it, or whatever warning may have reached the mind of the person who is going to use it, seems in a large number of cases insufficient to ensure the observance of necessary precautions. The general public will probably never realise that a light many feet away may be a source of danger, on account of the property possessed by petrol or benzine of freely giving off inflammable vapour, and the slowness with which this vapour will diffuse into the atmosphere. In comparatively still atmospheres, such as that of a room, the heavy vapour will slowly travel distances of ten, twenty or thirty feet in a direction induced by a fall of the ground or gently moving air currents; and, if it reaches a light, will instantly flash back and ignite from the spirit from which it is evolved.

The conditions of domestic life will always expose women who use petroleum spirit to serious risk. In a house there is always the possibility of the presence of a light, and interruptions and incidents may occur at

any moment and cause a woman to forget the precautions she should take. Recently a woman, while cleaning some article of apparel, as she thought at a safe distance from a fire, was startled by the boiling over of a kettle, and, forgetting what she was engaged upon, went to remove the kettle from the fire. The instant she touched the kettle flame leaped to the spirit remaining on her hands and seriously burned her.

Another danger attending the use of petroleum spirit in the manner above referred to results from the careless and almost criminal habit of throwing petrol after use down the drain. A number of serious accidents have occurred in London sewers, and one can hardly imagine a more terrible situation than that of a sewerman, without any avenue of escape, suddenly surrounded by a sheet of flame caused by the ignition of petroleum vapour given off by spirit which has, in a moment of thoughtlessness, been cast down a sink or the pan of a lavatory.

Much advice has been tendered as to the precautions to be taken in using petrol in the home. It is only a shade less mischievous than teaching a child how it may safely play with fire. There is only one proper course. Words of caution are neglected, or never properly reach the intelligence of the user of the spirit, or are forgotten at the critical moment. Dry cleaning should be done only on the premises of a licensed dry cleaner, where skilled workpeople are employed, suitable apparatus provided, and all precautions taken against accident.—Yours truly,

WILLIAM HAYDON.

Chairman of the Public Control Committee, London County Council,
County Hall, Spring Gardens, S.W., January 2.

A SUGGESTION FOR SURREY MOTORISTS.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—May I trespass once more on your space to ask all motor-car owners in the county of Surrey to take out their licences in any county but Surrey? I think it disgraceful, considering the way in which we unfortunate motorists who live in Surrey, and therefore have to pass through the various parts of Surrey to get out of it, or visit our friends, are mulcted in fines for the most trivial offences by policemen who are taken off their proper duties simply because trapping is so profitable. The police of Surrey invite fast travelling and travelling to the common danger, by reason of never being seen upon the roads; they are all behind hedges, and it is their favourite sport, whilst to expect justice for motorists at such places as Kingston, Guildford, Epsom, Reigate, &c., is utterly absurd.

I do trust that some means will be taken to frustrate the fine-collecting propensities of the Surrey police, who entirely neglect their ordinary duties, as trapping means promotion.—Yours truly,

J. CROW.

STARTING ENGINES BY THE LEFT HAND.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—It has long been a mystery to me why motorists and motor drivers almost universally use the right hand for starting the motor. As petrol engines nowadays nearly all revolve like the hands of a watch—from right to left—there is always a possibility of injuring the hand or wrist should a back-fire occur when turning the starting handle by the right hand. And, again, the position which the body must assume when the right hand is used is awkward in the extreme, and being twisted around that more force may be exerted, the balance of the body is not at all secure.

Back-firing accidents may be averted by employing the left hand. In this case the motorist stands squarely in front of the car, the right hand having a firm grip on the radiator or dumb iron. The handle is grasped firmly, but loosely, with the fingers of the left hand curved around the handle. As the feet are placed widely apart, a good balance of the body is assured, and, if a back-fire should occur, the elbow is not cramped, as is the case in the right hand method, but the hand is thrown outward and upward, the loose grip permitting the fingers to fly open, and all risk of injury is done away with. More power may also be exerted, as the right hand on the radiator materially assists the other member to turn the motor over quickly and without undue effort.—Yours truly,

OLD HAND.

MOTORS AND ACCIDENTS.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—May I draw your attention to the report under the heading of "Motor-Car Accidents" in the daily papers of December 29th and 30th, from which it would appear that a man named William Tibbett was found by a police-constable lying on the roadside near Glington at 7 o'clock a.m. on December 28th? The man had received injuries to the spine and bowels. He stated that he was returning from Peterborough, and, when near Glington, was run down by a motor-car. The occupants of the car, he stated, pulled up, dragged him to the side of the road, and left him there. He lay on the road all night.

The Automobile Association caused exhaustive inquiries to be made in the locality, and our representative now reports as follows:—

"I have personally interviewed the doctor who has the case in hand. He thinks it is quite impossible for the man to have been knocked down by a car, as the injuries sustained are so very slight, being one or two cuts on the hand and a bruise on the buttock. He is certainly suffering from pneumonia, which was brought on by exposure. It was highly probable,

he thinks, that the man ran into an ordinary cycle. So far as I can ascertain the police are not taking any steps in the matter. I have obtained the opinion of another doctor and also a magistrate, and it is universally accepted that the man in some way fell into the ditch, as the night was intensely dark. The man himself attributes his accident to a car. He is, however, entirely alone in this statement, which is almost universally discredited locally."

At an inquest held at Altrincham on the 1st inst. concerning the death of a man named Blease, who had been run over by a motor-car, it was conclusively established that the unhappy victim was in a drunken sleep in the road. His widow is reported to have stated that her husband was addicted to drink, and apt, when under its influence, to fall down in the road and go to sleep. It is hardly necessary to add that the jury returned a verdict of "Accidental death," and exonerated the driver from all blame.—Yours truly,

STENSON COOKE.

Secretary, The Automobile Association.

THE POSITION OF HEADLIGHTS.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—Referring to Mr. Lawrence's letter in the last issue of the *M.C.J.*, the forks of lamp brackets should, according to some directions recently given in a French journal, be placed absolutely perpendicular to the frame of the car, so that the beam of light will be projected at right angles to the vertical plane. Many motorists think that the lamp should be inclined slightly forward, so as to light up the road immediately in front of the car. This is a mistaken idea, however, as quite enough light will fall on the road directly in front of the car to show up inequalities in the roadway, water courses, &c., and if the beam of light is thrown directly ahead in a horizontal direction, such road dangers as unlighted horse-drawn vehicles will be noticed sufficiently early to avoid collision. For the proper fitting of lamp brackets the car should be placed on a perfectly horizontal floor and the brackets adjusted until they are absolutely vertical and in line with each other.—Yours truly,

PARISIAN.

TO ENCOURAGE THE AVIATION MOVEMENT.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—So much talk has been going on in the Press lately on the subject of aviation, and the cause of it not being studied in this country as it ought to be, that I feel justified in sending you this letter, which, if you think worthy of such, I should like to see in your columns. Some papers give as a plausible cause of this country's rear place in the movement of aviation the lack of prizes offered to successful inventors; others to lack of men willing to risk their life and limbs for the sake of progress.

I wish to put forward the case which I and a few workfellows of mine consider as ours. I have studied aviation and watched its progress for the last six years. I made Professor Langley's aeroplane my starting point in model making, and I have made several working models which have satisfied my expectations, but I got thus far and no further—not because there are no prizes offered. All the prizes in the world would not advance me much, and I would gladly give time and the little I have learnt on the subject, and risk my life in attempting to fly, but I cannot give that which I have not got to the cause of flight, and that is the necessary capital to make a man-lifting aeroplane.

I am sure I am not the only one in this condition, and I think that some rich enthusiasts could sacrifice a little to help poor inventors willing to do their best for the movement.—Yours truly,

WILLING TO HELP.

REPLYING to P. J. and Co., the name and address of the makers of Oldsmobile cars is the Olds Motor Works, Lansing, Mich., U.S.A.

THE sketch bearing the legend "A new idea in Country House design" was the work of Mr. W. G. Aston, and first appeared in our late contemporary "Motoring Illustrated."

TOWN FOR REPAIRER.—"E. D." writes that he is desirous of starting in business as a motor-car repairer. He wants to know of a growing town that is not adequately supplied in that respect.

A CLIENT of the Jermyn Street Motor Hire and Repair Works, Ltd., on Thursday, December 31st, lost his 880 by 120 Stepney wheel and cover between West Hill, Sydenham, and Wells Street, London, S.W. The company will be pleased to hear from the finder.

REFERRING to the letter from Mr. Theodore Tinne on the Dust Problem in our issue of the 26th ult., "Headlight," in the "Planet," says:—"Mr. Tinne thinks that a course of experiments might indicate a definite relation that ought to exist between the total adhesive weight of a car and the power of the engine that is to drive it, suggesting 1 cwt. to 1 h.p. as a possible solution to the difficulty. I think that it would be difficult to lay down any hard and fast rule, for differences of road surfaces and slopes would make this well-nigh impossible, but I do think that the majority of drivers do not realise that there is always a maximum efficient speed which is constantly varying according to surface, slope, and relation of h.p. to the weight of the car. Acceleration of the engine when this speed is reached may increase the pace, but the increase is infinitesimal compared with the amount of power that goes to waste in the shape of 'slip,' with the result that the waste in petrol and wear of tyres is out of all proportion to the advantage gained, not to mention the dust which is kicked up in the process."

MOTORIZING ACCESSORIES.

Benetfink's Accessories.

We have received from Cheapside, London, E.C., a supplementary list of the latest motor accessories, clothing, &c., stocked by Messrs. Benetfink and Co., Ltd.—a useful addition to the recently-published catalogue entitled "Everything for the Motorist." This contains illustrated descriptions of wrenches, pliers, terminals, and other "little things that count for much," as well as of horns, lamps, non-skids, &c. A section of the list is devoted to motor clothing, stylish garments for ladies and gentlemen being illustrated in great variety.

Moseley Tyres.

A new list of Moseley tyres has been issued by Messrs. David Moseley and Sons, Ltd. This can be obtained by readers on application to the firm at the Chapelfield Works, Ardwick, Manchester. It gives particulars of the firm's non-skid detachable tyres, their plain beaded-edge tyre with square tread, which is guaranteed for 3,000 miles within six months; and their non-skid beaded-edge tyre. Space is also devoted to their tough grey motor tubes, which contain but a small proportion of mineral matter and can be patched many times without any evil consequences to the rubber. Particulars of the re-treading and repairing department of Messrs. David Moseley and Sons, Ltd., are also given in the list, as well as a description of the detachable tyre, which, having been thoroughly tested for four years, comes with the recommendation of experience. This is attached to a special rim which can be fitted to any wheel without charge. The wheel itself consists of a hollow metal hoop concaved at each side so that it can take the rings of the flanges. These are detached by means of a turnbuckle screw with a right and left hand thread. By means of a tommy-bar the bead can then be extended for the removal of the tyre. The turnbuckle and the space above are completely covered by a little metal clip, so that mud or other possible intrusions are excluded. It is claimed that Moseley's tyre can be detached, a new inner tube inserted, the tyre re-attached and inflated in from five to ten minutes by any novice.

Electrical Specialities.

From Messrs. C. A. Vandervell and Company, of Warple Way, Acton Vale, London, W., comes a useful catalogue (conveniently divided into six sections to facilitate the reference to their electrical productions for motorists), a copy of which they will be pleased to send to any reader on application. Their specialities include accumulators, ignition coils, electric driving and interior lighting lamps, magnetos, charging plants, switchboards, sparking plugs and other accessories calculated to add to the convenience of the motorist. We hope to refer to some of the leading specialities in an early issue; meanwhile we would mention that their department for the repairing of accumulators, coils, &c., is one of real convenience to the motorist.

The Gabriel Horn.

In our issue for the 26th ult. we made reference to the Gabriel Horn.

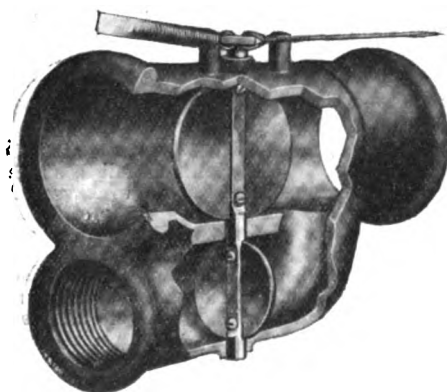


Fig. 1.

For 1909 this is being made with a new valve which is said to be a great improvement on that which has hitherto been fitted. It is claimed by Messrs. Brown Bros., of Great Eastern Street, London, E.C., who are placing the horn on the British market, that it cannot stick up under any conditions.

received the serious attention it deserved from those who own cars, and some views on the subject brought to our notice by the County Chemical Company, Ltd., of Bradford Street, Birmingham, are deserving of notice. The heavy stiff grease which has often been employed is liable to cut into tracks, leaving the gear wheel to run unlubricated, setting up friction and causing wear. Then it has also been observed that as the bearing in the box cannot be lubricated until sufficient heat is engendered to melt the gears the bearings have a very short life, a noisy gear-box

becoming inevitable. Of course the ideal system of lubrication is to have a film of oil adhering to each of the rubbing surfaces. Thus the friction of solids is prevented and a fluid friction only is set up. This result can now be obtained by the adoption of "Vasoleum"—a lubricant for gears and differentials brought out by the County Chemical Company, Ltd. While securing such a result "Vasoleum" is of sufficient consistency to prevent leakage either through the gear-box or axle sleeve. The use of this lubricant will ensure quiet running of the parts, prevent all undue wear, and generally facilitate the work of changing gears. Altogether "Vasoleum" is one of those standard specialities of the company that deserve a trial from the many motorists who have not yet secured their ideal lubrication.

Vasoleum.

The question of the lubrication of gear-boxes and back axles has scarcely

A Special Rim for Detachable Non-Skids.

The Shrewsbury and Challiner Tyre Company, Ltd., Manchester, have lately introduced the special rim illustrated in Fig. 2, to overcome the difficulty of detachable non-skid bands injuring the walls or beads of

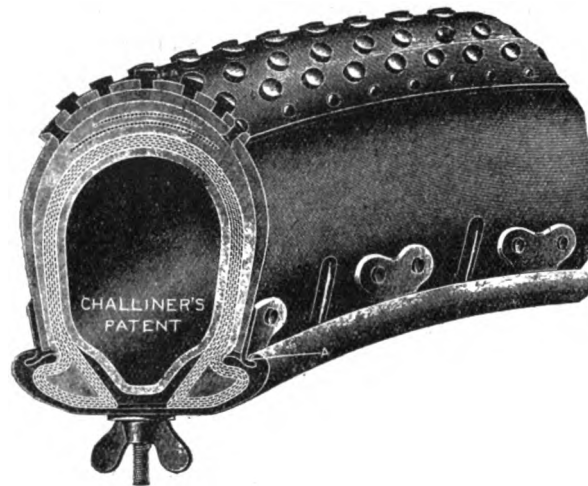


Fig. 2.

the tyres, by the chafing action of the metal hooks, this being prevented by employing a secondary clinch A to the rim. The ordinary clinch admits the bead of the tyre as usual, and the second carries the hooks of the non-skid, the chrome leather band of which envelopes the whole of the tyre, so that no metal portion is in contact with the actual cover. The firm find the arrangement is most economical in use, as the ordinary tyre can be used without a rubber tread, the price of which is about 25 per cent. cheaper than the round-faced tyre. Of course the band can be renewed from time to time on the same casing and can be retreaded at half the original cost.

Tools and Horns.

Mr. R. Broadhurst, of Smithford Street, Coventry, is introducing to motorists some extremely good types of accessories. Several specialities are referred to in a new list just issued which will be of service to owners of cars anxious to be acquainted with the latest devices for their efficient and economical use of their vehicles. A useful accessory is the "Autorette" ratchet and box-tube spanner. This is supplied in a neat, well-finished and durable leather case with a stiffened back, well capable of withstanding any rough usage to which it may be subject. The spanner has an extension piece for the six sizes of the box-spanner and tommy bar. Mention may also be made of another series of motor box tube spanners marketed by Mr. Broadhurst. This set consists of a dozen key spanners of the most useful sizes, an extension piece and a spanner. The key spanners take practically all nuts from $\frac{1}{2}$ in. to $1\frac{1}{2}$ in. across the flats, and the set comprises all the sizes commonly used in motor work. A point worth noticing is that the spanners can be used with handle alone, thus corresponding to bent box spanners or with the extension piece and handle. In the latter service it corresponds to the improved straight box spanners, as the handle is a much more satisfactory tool than the ordinary tommy. Motor tool kits, jacks, and similar tools are also handled by Mr. Broadhurst, whose specialities also include horns of various patterns and tones. Among the latter is a new oval Sirene and the "Aurora." The latter is of such a design that it can be fitted in a very small space in practically any position, whilst its deep sonorous note makes it a very effective road clearer. The list in which these goods are described is, as we have said, one of considerable interest and should find favour with our readers.

CLUBS AND ASSOCIATIONS.

MOTOR UNION.

THE partnership between the R.A.C. and the M.U. ceased on the 31st ult., and in a farewell word the latter declares that it stands in a much stronger position now than at any other period of its history.

Car owners and motor-cyclists who have not yet joined any automobile organisation were probably interested in the advertisement of the Motor Union in our last issue. The Union has a record of good work accomplished for the benefit of motorists in both its legislative and touring departments. Its achievements in appeals in the High Court and at Quarter Sessions have proved to the advantage of every motorist, and its constitution is such that the control of affairs is entirely in the hands of the duly elected representatives of the individual members (who pay one guinea per annum) and the representatives of affiliated clubs.

NOTTINGHAMSHIRE.

THE annual dinner of the Nottinghamshire A.C. is being held on Friday, the 8th inst., at the Victoria Station Hotel, Nottingham. H.S.H. Prince Francis of Teck will be present.

The club held a committee meeting on the 1st inst., when it was resolved that a medal be presented to Mr. M. Ross Browne, who has won more of the club's competitions during the season than any other member.

On the 21st inst. Mr. C. Y. Knight will lecture on his engine, and on the 28th inst. the annual meeting of the club will be held at the headquarters.

SCOTTISH.

As announced in our last issue, the Scottish A.C. has acquired a club and motor house in Blythswood Square, Glasgow. This is the fine open square in which the cars assembled for the start of the 1906 Scottish Reliability Trial, and the house is easy of access from West Campbell Street.

It is hoped to set apart accommodation for the use of lady members of the Club, and after the official entry into the premises at Whitsun they will be adapted to the purposes of the Club with all possible speed. New members are now being admitted for the financial year commencing February 1st next. Mr. R. J. Smith, 163, West George Street, Glasgow, is the secretary.

AUSTRALIAN CLUBS.

THE Automobile Club of Victoria held a hill-climbing tournament at Lilydale recently, a feature of the contest being the fast times put up by Mr. J. W. Moffat on his 25-h.p. Talbot.

A reliability trial organised by the Tasmanian A.C. took place on November 7th and 8th, the course selected being from Launceston to Hobart and return, a total distance of 243 miles. Seventeen cars took part in the run, the winners of the classes being Messrs. T. C. Archer (Cadillac), A. Hart (Darracq), and P. O. Fysh (Argyll).

A one gallon petrol consumption trial was announced for the 12th ult., with the following circular route:—From Kew or Camberwell, via Norwood Road to junction just outside Fern Tree Gully, and thence via Oakleigh and Malvern back to the starting point.

THE Liverpool A.C. and the Shropshire A.C. have decided to associate with the R.A.C.

THE Liverpool A.C. is giving up the club room in the Exchange Hotel, Liverpool, and committee meetings, &c., will in future be held in the secretary's office, 1 and 2, Ashton Chambers, Hackins Hey, Liverpool.

ROAD REPORTS.

RICKMANSWORTH.—Motor warning signs are to be erected at Mill End, Rickmansworth.

SUSSEX.—Application is to be made to the L.G.B. by the East Sussex County Council for the imposition of a ten miles an hour speed limit on motor-cars on a portion of the Tonbridge to Hastings main road in the parish of Salehurst. Objections, if any are to be made, must reach Whitehall by January 14th.

TEN MILE LIMIT APPLICATION.—Among the applications which have been lodged with the Local Government Board for the institution of ten mile speed limits are those of High Wycombe, Findon, Calford and Mayfield, Sussex.

HAMPSHIRE.—The Winchester and Romsey road at Ampfield Hill is under repair, as is also that between Kingsclere and Basingstoke at Pitt Hall.

FROM Messrs. Warwick Wright, Ltd., comes a copy of the latest catalogue of Metallurgique cars. This is arranged in a somewhat novel method, which enables the page referring to any particular model to be turned to instantly. For the 1909 season four types are being made, viz., 12-h.p., 18-h.p., 26-h.p., and 40-50-h.p., all fitted with four-cylinder engines. Full particulars are given of each of these cars, while many of the special details of the chassis are illustrated. References are also included to the Metallurgique motor-boat, and to the Glissoire shock absorber.

CASES AGAINST MOTORISTS.

"ONLY TWO."

According to a local report "only two motorists were summoned at Grantham on Saturday for exceeding the speed limit on the Great North road."

A TRAILER POINT.

At the Newport (Salop) Petty Sessions Pryce Henry Lloyd, of Queen Street, Wrexham, haulier, was charged by Sergeant Roberts that he, on the 30th ult., at Newport, being the owner of a trailer attached to a heavy motor-car, did not have the weight, &c., painted legibly thereon as required by the above orders. A further charge was also preferred for not carrying a person on the said trailer competent to effectually use the brake thereof, such brake not being so constructed to be able to be worked from the motor. Defendant was fined 10s. and costs (8s.) in each case, the licence being endorsed in respect of the latter charge.

THE SPECIFICATION OF POLICE TRAPS.

At Wimbledon, Mr. E. A. Lastsmith, of Drayton Gardens, Kensington, was summoned for driving a motor-car at a speed exceeding the twenty miles speed limit in Morden Road. Mr. Leechman, who defended, contended that the summons was irrelevant and wanting in specification. He quoted a decision given in the Scottish Court of Session in July last. In that case the defendant was first charged at Dumfries Sheriff Court with driving a motor-car over a quarter of a mile on the Ballock road at thirty-six miles an hour. The Sheriff repelled an objection to the relevancy of the complaints, but the Court of Session set aside the conviction. Lord Ardwell, who gave the leading decision, said the action was irrelevant and the pleadings wanting in specification, as they did not say the exact distance over which the speed limit was exceeded. It was not sufficient merely to say a quarter of a mile. The present case, Mr. Leechman said, was much stronger than the Scottish one, for the summons did not say where the offence was committed, except in Morden Road. He held that it must set out exactly the distance measured from point to point. The Bench adjourned the case for a fortnight in order to consider the point raised. A number of summonses for similar offences were also adjourned.

PASSING ON THE NEAR SIDE.

At the Brentford Court, Sydney Jebb, giving an address at the Army and Navy Club, Pall Mall, and also of Firbeck Hall, Yorkshire, was summoned for negligently driving a motor-car at Brentford, and on a second summons for failing to give audible and sufficient warning by sounding a bell or other instrument of the approach of the car.

Mr. Barker, who prosecuted for the Commissioner of Police, said that on the afternoon of November 21st a boy was alighting from a tramcar at the compulsory stop at Kew Bridge. A motor-car driven by the defendant came along between the tram and the kerb, struck the boy, passed over him, and inflicted serious injuries. The lad was now out of danger, and he (Mr. Barker) wished to state that the defendant had dealt generously with the lad, who was in a nursing home. He pointed out that a motorist approaching the near side of a stationary tram was bound to reduce speed to such a degree that there would be no danger to passengers alighting from the car, and he should also give notice of his approach.

Mr. Jebb said he put the brake on as soon as he saw the lad, and released it to prevent dragging the boy. His car was going at about ten miles an hour, and he could not say if he sounded his horn at that point, but he had frequently done so just previously. In his opinion, he was justified in passing a stationary tramcar on the near side, and he saw nothing of the boy until about five yards away. The lad appeared to be about to run to the kerb and then hesitated and went at a slower pace.

In giving the decision, Mr. Montgomery said that this was an illustration of the dangerous practice of motor-cars passing on the near side of a tramcar. The penalty would be £5 and £5 costs, and the second summons, for not giving notice of approach, would be dismissed.

ELECTRIC TAIL-LIGHT.

It was through no fault of Mr. T. Davies, Chief Constable at Portsmouth, says the "Sussex Daily News," he should have failed, at the week-end sitting of the Borough Court at Portsmouth, to have substantiated a prosecution against a prominent motor-car owner of Sussex for an alleged breach of the Parliamentary Act governing the carrying of rear lights on motor-cars. Two of Mr. Davies' policemen said they were certain that when the car of Mr. George Wilder, of Stansted Park, Sussex, passed them in the London Road, on November 10th no rear light was visible. The Sussex squire, however, had a novel and strong defence. Mr. Wilder asserted that his car was fitted with electricity, that the rear six-candle power light was just above the identification plate, that the whole of the lamps were supplied from the same accumulator, and that on reaching Stansted Park the rear lamp was found fully alight. The inference, therefore, was that after the policemen had seen the glare of the front lamp it had prevented them seeing the small rear light. The magistrates believing that the policemen might have been mistaken they dismissed the information.

A FINE INCREASED.

A singular course was adopted by the Shoreham magistrates on Monday in regard to a previous judgment in a summons against Albert Harris, chauffeur, of Manor House, Hove, for exceeding the speed limit. Originally the justices imposed a fine of £20 and ordered the licence to be suspended. Defendant's employer, a military officer, asked the Bench to impose the heavier penalty of £30 (which he was prepared to pay), in order

to avoid the suspension of defendant's licence. It was stated that Harris was a careful driver, and that he had exceeded the proper speed at the request of his employer, who was in a hurry to return to barracks. The fine was increased to £30.

BATCHES.

At Kingston four motorists were fined on the last day of 1908 for exceeding the ten-mile limit in Richmond Park. Others were also convicted for exceeding the legal limit on the Portsmouth road. Six motorists were also dealt with on the same day at Croydon—fines in every case.

EXCEEDING LEGAL LIMIT.

Mr. Constantine Doresa, one of the survivors of the disaster at Messina, was fined at Woolwich on Tuesday for driving a motor-car at the rate of twenty-seven miles an hour in Shooter's Hill Road, on December 22nd. Defendant appeared in person, and pleaded "Guilty." Two other convictions were proved against him, and he was fined £7 with 14s. costs.

COMPANY NEWS.

In the case of New Companies the file number is given at the end of the particulars.

THE Polack Tyre and Rubber Company has been registered with a capital of £40,000.

MESSRS. MAX GRADDON AND LAWSON, LTD., has been registered as a limited liability company with a capital of £2,000, and offices at Mildmay Avenue, Newington Green Road, N.

ROM TYRE AND RUBBER COMPANY.—£5,000 (4,000 £1 preference shares and 4,000 5s. ordinary). As title. 32, Rosebery Avenue, London, E.C. (100,642.)

VINET RIM SYNDICATE.—£10,000 (£1). Dealers in motor accessories, &c., sole agents for the United Kingdom and its colonies and dependencies for the Vinet rim, &c. Agreement with M. Kapferer. (100,577.)

LONDON ROAD-CAR COMPANY.—In a circular to the debenture stockholders, the secretary of the company states that he is forwarding warrants for interest on the debenture stock. Payment is made at the rate of 5 per cent. per annum in order to comply with the provisions of the contract for the sale of the company's undertaking to the London General Omnibus Company, which provides for the exchange of the present 4 per cent. debenture stock for 5 per cent. B debentures of the latter company. The amalgamation of the undertaking with that of the London General Omnibus Company has proceeded since the resolution of July 24th last, and the business is approaching completion.

BEAUFORT MOTOR.—For the year ended June 30th, 1908, the directors have been chiefly concerned in settling the liabilities of the company and realising stock on hand to the best possible advantage. The directors have succeeded in arranging matters satisfactorily, and have agreed to transfer the goodwill of the company to the London and Paris Exchange Motor Agency, Ltd., for £25,000, being half the nominal capital in that company. The directors have agreed to forego their fees in respect of the past year.

RESIDE AND CO.—£3,000 (£1). Agreement with J. Reside and W. Barraclough, to acquire the business carried on by Reside and Co., and to carry on at Brighouse and elsewhere the business of electrical, mechanical, and motor engineers, &c. Perseverance Works, Huddersfield Road, Brighouse. (100,812.)

HUMBER, LTD.—The annual meeting of Humber, Ltd., was being held at Coventry last week as we went to press, Mr. Edward Powell, chairman, presiding. The chairman said in the early part of this year the directors had reason to anticipate a trade which would have resulted in a good balance-sheet, but when trade became depressed the directors thought it was not good policy to insist upon contracts which had been placed being carried out. Cars had been sold at large reductions. The motor business was now double the value of the cycle business, and that huge motor business had been grafted on to the cycle section with but little increase of capital. In 1900 their sales amounted to £223,000, while seven years later the sales amounted to the huge sum of £1,080,000. For the past year sales totalled £682,000. It was said that the Humber trade had gone, but from August last to December 25th, which was the dead season, sales had totalled to £105,000. With regard to the reconstruction scheme, the chief criticism seemed to be directed against the preference shareholders being asked to subscribe more than the ordinary shareholders. He pointed out that preference shares would be entitled to a cumulative preferential dividend of 8 per cent. He moved the adoption of the report. Mr. Davy seconded the motion. Lord Russell thought that due time had not been given to the shareholders to study the reconstruction scheme. The shareholders had to face the situation that last year they received 20 per cent. dividend while this year they had to listen to suggested liquidation. He, therefore, moved that the meeting stand adjourned with a view to an independent opinion being obtained upon the affairs of the company and the proposed scheme from a committee. Mr. Basden seconded, and suggested that an adjournment should take place before speeches of criticism were made. The resolution of adjournment to January 31st was carried unanimously and a committee was appointed, this consisting of Earl Russell, Mr. D. F. Basden, Major Ashworth (Nottingham), Mr. Frederick Goddard, Mr. G. E. Haworth (Manchester), Mr. R. Fane De Salis (London), and Mr. Berry (Leeds).

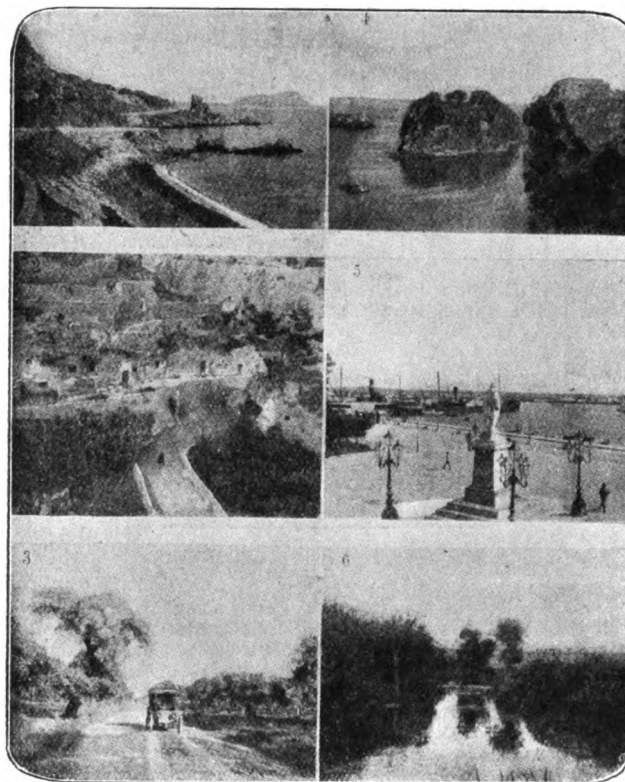
FIAT MOTORS, LTD.—At the meeting of Fiat Motors, Ltd., held on the 31st ult., the report of the directors for the year ending September 30th was submitted. This recorded that the balance-sheet showed a net loss of £7,677, almost entirely accounted for by extraordinary circumstances.

The new works and stores at Wembley are now completely organised and for the last few months have shown a substantial profit, which should be increased in the future.

MAJOR SPILSBURY has presided at an extraordinary general meeting of the Mercedes Company, at No. 1, Broad Street Place, London, at which a resolution was passed authorising the alteration of the capital of the company, consisting of £350,000 ordinary shares of £1 each. The following were the terms of the resolution:—"That the capital of the company be divided into £250,000 ordinary shares of £1 each and into £100,000 6 per cent. preference shares of £1 each."

MOTORING IN NEW ZEALAND.

THE usefulness of the motor-car was again shown during the Ministerial party's tour through Otago Central. A 12-14-h.p. "Stuart" car awaited the Prime Minister at Omaku, and took him and his party to the towns off the railway line, while the Minister of Lands travelled along the line and received the deputations there. The car left Omaku at 10.35 a.m., running over the Manuherika Bridge to Ophir. Leaving Ophir at 1.25, Cambrians Creek was crossed within half an hour, and the Dunstan Creek a little later. Nearing St. Bathans, however, a short halt was made to inspect the "flushing channel," a fast flowing stream about two feet



Some Views in Sicily, where the terrible earthquake occurred last week.

- 1.—Near Termini. 2.—The entrance to Spaccaforno. 3.—Near Castelvetrano.
- 4.—A view near Giardini. 5.—The port of Trapani. 6.—A country scene near Lentini.

[Rivista Mensile del T.C.I.]

deep. There was no time to wait, however, and the Stuart made a plunge in and got safely up the other side. A ford like this, states the "New Zealand Motor and Cycle Journal," would have caused no end of fun in the New Zealand Reliability trial, as the Mayfield watercourse which "hung up" several cars in this event was absolutely nothing to it. A right hearty welcome was accorded the party at St. Bathans by the residents of this typical mining town, which was decorated with flags, &c., and ringing with cheers for the Prime Minister. A stop was afterwards made at Rough Ridge, and the night spent at Naseby. Leaving this town at 10.45 a.m. next day, an easy run on first-class roads saw the Prime Minister receiving the Waipiata deputations at 11.40, and then the car was railed back to Dunedin. During the whole run a distance of some eighty odd miles was covered in about four hours travelling time, with a short stop to remove an offending drop of water in the carburettor, this being the result of the bath in the St. Bathans flushing channel. Without the car several of the out-of-the-way towns would have had to be cut out of the programme. We might add that the car in question is a Star, built by the Star Engineering Company, of Wolverhampton. Owing, however, to another firm having registered the word "Star" before the Star Engineering Company placed its vehicle on the New Zealand market, their machines are known there as the "Stuart."

FORTHCOMING EVENTS.

JANUARY, 1909.

- 12th (Tu.).—Extraordinary General Meeting of the Automobile Association.
 14th (Th.).—Annual Dinner of clubs associated with the R.A.C. at the Hotel Cecil, London.
 16th (S.).—Last day for receiving Short Stories for the *M.C.J.* Competition—see page 967.
 16th-25th.—Brussels Motor Show.
 21st (Th.).—Annual General Meeting of the Southern Motor Club.
 22nd-30th.—Scottish Motor Exhibition at the Waverley Market, Edinburgh.
 23rd (S.).—Annual Dinner of the Coventry Motor Club at the Craven Arms Hotel, Coventry.
 Annual Dinner of the Lancashire A.C. at the Park Hotel, Preston.
 26th (T.).—Scottish Motor Trade Association Dinner at Edinburgh.
 30th (S.).—Annual Dinner of the Auto-Cycle Club.

FEBRUARY.

- 2nd (T.).—Annual Dinner of the Scottish A.C. at Glasgow. H.S.H. Prince Francis of Teck will be among the guests.
 4th (Th.).—Annual Dinner of the Southern Motor Club.
 19th-27th.—Manchester Motor Show at Belle Vue.
 17th (W.).—Paper on Lubrication by Mr. J. W. G. Brooker at the R.A.C.
 24th (W.).—Annual General Meeting of the British Motor Boat Club.

MARCH.

- 1st (M.).—The Road Trials in connection with the Army Council Competition for light tractors commence.
 Motor-Car Show at Barcelona.
 20th-27th.—Cordingley's 14th Annual Motor-Car Exhibition and Market, Agricultural Hall, London.

MAY.

- 14th (F.).—British Motor Boat Club meeting at Erith.
 24th-29th.—Irish Reliability Trials—provisional date.

JUNE.

- 14th (M.).—Commencement of the Scottish Reliability Trial.

[LIGHTING-UP TIME—LONDON.]

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|--------------|-----|-----------|-----|-----------|-----|-----------|
| Jan. 9th—5.8 | ... | 11th—5.12 | ... | 13th—5.13 | ... | 15th—5.16 |
| „ 10th—5.9 | ... | 12th—5.13 | ... | 14th—5.15 | ... | 16th—5.18 |

AUTOMOBILE ACCIDENTS.

A SAD accident in the district of Penmaenmawr on Saturday night is reported. Two ladies, daughters of Mrs. Charlesworth, of Boderw, St. Asaph, were returning to St. Asaph from the direction of Bangor. The younger Miss Charlesworth was driving, and the chauffeur sat beside her, whilst her sister sat behind. The part of the main road along the coast where the car came to grief is about fifty yards on the Conway side of Penmaenbach point. There is a jagged piece of rock projecting upwards a considerable height between the road and the precipice, and known locally as "The Devil's Thumb." The road dips downwards on the Conway side of this rock, but not at all steeply. Miss Charlesworth appears to have lost control of the car, which swerved suddenly to the left, dashed towards a narrow opening in the boundary wall, knocked part of the wall down, jumped through the gap, and came to rest within about eighteen inches of the edge of the cliff. The younger Miss Charlesworth was thrown from her position at the wheel, and over the edge of the cliff. No doubt in falling down the cliff she would be stunned and much injured, but, in any case, her body rolled or dropped a distance of sixty feet into the sea, the tide being at the flood at the time, and was carried away, her hat only being afterwards found. The elder Miss Charlesworth was not thrown out of the car, and only sustained a severe shock. The chauffeur was thrown from his seat and fell on to the rock. At present the circumstances appear difficult to understand.

In Dumbarton Road, Glasgow, on Monday evening, a motor-van became wedged between two electric tramcars travelling in opposite directions. The motor-car was smashed, and the driver sustained injuries necessitating his removal to the infirmary. Both the cars were badly damaged, and one, derailed, crashed through a shop window.

THE British Barignand and Marre Engine Company, Ltd., 10, Poland Street, Oxford Street, London, W., have just issued their new catalogue of the "B. and M." motors. The list is well got up both from a typographical point of view and in the clearness with which the various salient features of each item of the components are shown. It contains much of an informative and interesting nature, and includes an illustration of the new type "F" four-cylinder "B. and M." engine (80 by 100 mm.), which has been specially constructed for van and cab work. The firm will send a copy of the catalogue to any of our readers mentioning the *M.C.J.*

"POLICE CONTROLS."

THE police "control" in the Coombe Road, New Malden, has been actively at work during the last few days, and not only have the police been timing motorists, but the production of licences has been demanded in many cases.

At Saltwood, near Hythe, a police trap has been established. ACCORDING to a local paper "the wintry weather has had an adverse effect upon the Kesteven police traps, for only two drivers were hauled before the Spittlegate (Grantham) Bench on Saturday last."

BUSINESS NEWS.

MESSRS. JOHN HUTTON AND SON, of Dublin, are the agents in Ireland for the White steam car.

A NEW departure in the matter of guarantee has occurred to Mr. Chas. Friswell, and as from the 1st inst. the "Standard" six-cylinder car, manufactured at Coventry, will be guaranteed as follows:—"Friswell (1906) Limited, hereby guarantee the "Standard" Motor-car No.-- this day delivered, and further agree to execute gratuitously all necessary repairs (tyres excepted) not arising from, or due to neglect, or accident, for a period of twelve months from this date." In sending us this information Messrs. Friswell remark that "the difference between this guarantee and the ordinary one is this: The usual custom of the trade is to give a twelve months' guarantee to replace parts which break by reason of flaw or fault in workmanship; these parts must, however, be first returned to the works for examination, and if found faulty are replaced free of charge. The guarantee, however, does not include the fitting of these parts, and therefore, when the bill for the repairs is rendered the value of the parts replaced very often is a mere shadow, as compared with the bulk of the bill. The meaning of our guarantee, however, is that, no matter what happens, we guarantee to keep the machine in thorough repair, provided that it has ordinary care."

As was briefly mentioned in our last issue, Mr. Tom Williams, who until recently was responsible for the management of the commercial side of Vauxhall Motors, Ltd., is putting a car on the market to be known as the "Williams." Two types of this machine will be available, viz., a 16-h.p. and a 20-h.p. model, fitted with engines comprising four cylinders cast *en bloc*, of 80 mm. and 90 mm. bore respectively, magneto ignition and White and Poppe carburettor. The vehicles are being manufactured by Vauxhall Motors, Ltd., whose successes during the past year in the 2,000 miles trial and hill-climbing events are a guarantee that the new car will be a high grade machine. Mr. Williams intends to make a special feature of taking second-hand cars of any make in part exchange, and he also has an interesting scheme in hand that will appeal to agents. The home of the Williams car will for the present be at the depot of Swan, Ltd., 212, 214, 216, and 228, Pentonville Road, King's Cross, N.

CAPTAIN THEO MASUI asks us to state that only those chassis of the Gregoire-Gordon cars which are supplied through him, and bearing his special name plate and number, carry his full guarantee, and are built especially for the English market according to his specification, and will be tuned up under his supervision. He cannot accept any liability regarding Gregoire chassis which are supplied through other sources, neither is he prepared to supply spare parts for same.

NEW works have been opened for the production of the Lee-Trigwell detachable skidless band, which is being marketed by the Automobile Contract Company, Ltd., 51, Conduit Street, W.

TO CORRESPONDENTS.

All communications intended for insertion in this Journal or relating to Editorial matters should be addressed to THE EDITORIAL DEPARTMENT, MOTOR-CAR JOURNAL, 27-33, Charing Cross Road, London, W.C., and must be written on one side of the paper only. Letters must in all cases be accompanied by the name and address of the writer, as no notice will be taken of anonymous communications.

To insure insertion communications and contributions must be in the Editor's hands by Tuesday forenoon of the week in which the same are intended to appear. Disappointment may be caused by non-compliance with this rule, and to avoid this earlier receipt, if possible, is necessary.

Photographers, both professional and amateur, are invited to send photographs of current events or of motoring scenes and incidents. The fee, if any, required for reproduction should be stated in each case, otherwise no liability will be accepted.

The Editors cannot undertake to return MSS. or drawings, although every effort will be made to do so in the case of rejected communications. Where such are regarded as of value, correspondents are requested to retain copies.

The Editors do not hold themselves responsible for the opinions expressed by their correspondents, or for statements and facts which do not appear in the editorial columns.

The Editors and Publishers beg also to state that they will accept no responsibility for unsolicited contributions, even if used, unless payment for same is directly specified in forwarding, and the terms arranged before publication.

THE Motor-Car Journal.

VOL. X.]

LONDON, SATURDAY, JANUARY 16, 1909.

[No. 515.]

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PRIZE COMPETITION.

AS recently announced, we are offering a prize of two guineas for the best original short story of motoring interest suitable for publication in the *M.C.J.* The story should be between 1,000 and 1,200 words in length, and the main incident should, of course, centre about the automobile.

The latest date for submitting the MSS. will be the first post to-day, January 16th, 1909, and the award will be notified as soon as possible after that date, the Editor's decision being final.

With reference to the stories which do not win the prize, the right is reserved to publish any which we may deem suitable, making payment at our usual rate of remuneration.

All MSS. should be forwarded addressed to the Editor, *M.C.J.*, 27-33, Charing Cross Road, London, W.C., the envelopes being marked "Short Story" on the top left-hand corner.

COMMENTS.



LAST week we commented upon the Brentford case, in which the magistrate fined a motorist for not passing a tramcar on the off side and suggested that the particular circumstances of the moment should be taken into consideration in such cases. This seemed reasonable, especially as the Commissioner of the Metropolitan Police had declared there was no definite rule or law on the subject. On this point an important instance has occurred at Bradford. Two tramcars were standing alongside, leaving ample space to pass on either side, but not enough for a vehicle to go between them. The driver of a motor-car belonging to Mr. J. Wade, a member of the Bradford A.C., passed the tramcar, which had been travelling in front of him but was temporarily stopped to discharge passengers, on its left or near side. This was contrary to Article 4 of the Motor Cars (Use and Construction) Order, 1904, which reads:—"Every person driving or in charge of a motor-car when used on any highway shall comply with the regulations hereinafter set forth—namely, he shall when meeting any carriage, horse, or cattle, keep the motor-car on the left or near side of the road, and when passing any carriage, horse, or cattle proceeding in the same direction, keep the motor-car on the right or off side of the same." For not acting according to the regulation the driver, Burton, was summoned, and the Bradford magistrate, being of opinion that a tramcar was a carriage within the meaning of the Order, convicted the defendant. The Bradford A.C. took the matter up, and their solicitors having got the stipendiary to state a case secured the matter being taken to the Court of Appeal.

Tramcars v. Motor-cars.

THE case was heard on Tuesday before the Lord Chief Justice, Mr. Justice Bigham and Mr. Justice Walton, and, on a strict construction of the case, they dismissed the appeal. The Lord Chief Justice pointed out that in framing the regulations it had been overlooked that on certain roads there were vehicles that ran on fixed rails and were incapable of lateral deviation. Obviously in many cases the regulation compelling motor-cars to pass on the off side could not possibly be carried out; for example, in the case of a motor-car overtaking a tramcar pro-

ceeding from Westminster Bridge to Blackfriars along the Thames Embankment. It was obvious that though the obligation might in some cases be desirable, as when passengers were alighting from a tramcar, a hard-and-fast application of the Order would lead to danger and difficulty. At the same time it was impossible to say that a tramcar was not a carriage. He would gladly have held that tramcars were not carriages for this purpose had he been able to, and in his judgment the sooner the regulation now in question was modified the better it would be. The other members of the Court delivered judgment to the same effect. We understand that an attempt will now be made to secure an amendment of the Local Government Board regulations—a matter that rests with Mr. John Burns, whose practical acquaintance with traffic questions should lead him to fall in line with the view of the Lord Chief Justice without much delay.

Motor-car Imports.

THE final month of 1908 fully maintained the reputation for quietness which last year obtained as regards the importation of foreign-built motor-cars and parts into this country, the total of cars, chassis and parts only amounting to £216,680 as compared with £224,862 in December, 1907. Taking the whole of the past twelve months, however, the shrinkage in the imports is probably not so great as many have, in view of the quietness of trade generally, expected. The arrivals of complete cars during the year numbered 3,830, of a value of £1,389,552; 3,370 chassis estimated at £1,063,077 were also received, to which have to be added motor-car parts to the extent of £1,659,832. It is not possible to give an accurate comparison of these three items with 1907, as the basis on which the return is made was not on the same lines. The value of the aggregate imports of cars, chassis and parts, however, only reached a total of £4,112,461, as against £4,552,786 in 1907 and £4,371,660 in 1906.

Exports of British Motor-cars.

TURNING now to the British export trade in motor-cars during 1908, the returns available show that this branch has also been affected by the general depression in trade, the value of the aggregate shipments during the last twelve months only having amounted to £1,262,803 as contrasted with £1,324,958 in the preceding twelve months. Altogether 2,220 complete cars were sent out of this country during last year, of an estimated value of £803,579. The number of chassis exported was 225 (£75,984), while parts were responsible for a further £383,240.

A Question of the Early Future.

SEVERAL interesting questions will arise as the airship goes into the air. The Congress that has been sitting in London this week has been mainly concerned with the sporting side of aeronautical advance. But there are legal issues involved, as Mr. Roger Wallace has pointed out, and these must be settled in a broad manner so as not to hamper progress or discourage experiment. Major Baden-Powell, whose military fears have been somewhat discounted by the views of other officers, draws attention to an initial point upon which agreement should be found in this country. One of the matters to decide upon, he suggests,

is as to who is to be considered the responsible head in such affairs. Are these questions for the Home Office, or is the Board of Trade to have control? The Foreign Office and the Defence Committee will also want to have their say. Then how are such difficult issues to be decided, when we have no experts with any experience of aerial navigation (beyond a few trials in very primitive apparatus)? The council of the Aeronautical Society of Great Britain is now considering the various points of importance, and may be able to lay valuable suggestions before such a body as is finally appointed to control those going up in the air in ships. Probably the Aero Club, too, and other bodies may be able to offer good advice. But such institutions cannot make the laws! Who, then, shall legislate for the aerial State?

The President-elect of the U.S.A.

♦ ♦ ♦
 MR. WILLIAM H. TAFT, the President elect of the United States of America, is following in the Roosevelt line so far as the automobile is concerned. Some time ago we reproduced a photograph of the retiring President on his White steam car, taken at his summer residence at Oyster Bay. Now Mr. Taft has



chosen a car of similar make for his personal use during his presidency. By the kindness of Mr. Frederic Coleman we are able to reproduce a photograph taken during the Christmas holidays at Augusta, which is the first picture ever taken of the whole Taft family since his election. The fact that Mr. Taft has been travelling on official business in different parts of the world while the children have been at school has made such meetings very rare indeed. Mrs. Taft is seated next the President-elect on the rear seat, while the children are seen in the revolving seats, and the youngest child is sitting next to the driver, H. N. Searles, who has been in charge of President Roosevelt's White cars for two years.

Roadway Dangers.

♦ ♦ ♦
 THE dangers of the tramway and electric light standards placed in the centre of the roads have often been referred to in these columns. Point is given to the risks run by an accident which occurred the other day to the Hon. Lionel Walrond, M.P. He and Mrs. Walrond had been to the Devon County ball at Exeter, and the former was about to return to Bradford, Mrs. Walrond staying in Exeter. Accompanied by Mr.

H. A. Troyte, he started from the city, a chauffeur driving the car. A skid caused the vehicle to collide with the tram standard in the middle of the road, with the result that the M.P. and the driver were badly cut about the face and hands by being pitched forward into the wind screen. A local report says that many people are not surprised at the accident happening, and have wondered that many others have not previously occurred. As a matter of fact, only a few days before a car collided with the identical post, but not in such a manner as to seriously injure either the car or the occupants. There seems no doubt that the driver thought he had a perfectly clear road, and was keeping at a respectable distance from the fountain at the top of Sidwell Street, and the electric light standard close to it, on which two small lamps were alight.

On the Thames Embankment.

♦ ♦ ♦
 THE compromise which was effected when a grudging permission was given by one branch of the Legislature to the L.C.C. to run its trams along the Thames Embankment has produced a state of affairs which is not creditable to those responsible for the traffic arrangements of London. The electric cars now run close to the kerb on the side nearer the river, and the result is seen in the dangers to pedestrians that frequently occur. In order to mitigate these somewhat, there have been placed at six points along the Embankment wooden platforms in the roadway alongside the tramway lines. The object is to enable passengers and also pedestrians to take refuge from the press of traffic. These refuges are the outcome of a recommendation made to the Council by the police authorities, and three more platforms are to be added to those already erected. Although these devices have the appearance of being of a temporary character, there is little doubt that they will be replaced before long by permanent structures.

A Motor Marine Trip.

♦ ♦ ♦
 MOTORISTS having had many enjoyable excursions together on land, the question of organising a cruise by motor-boat has two or three times been raised. Nothing, however, has been done in the matter until at length the Motor Yacht Club contemplates the organisation of a cruise along the French canals, to take place in May or June. In order that this be successful it is necessary that at least ten motor-boat owners should agree to take part, and the secretary is now awaiting acceptances from that number for a ten days' cruise. The boats that are not large enough to cross under their own power will be carried over to Havre by steamer. The owners of the large boats will of course save their hotel bills by living on board their own vessels. Altogether the idea is one that is extremely feasible and should provide considerable pleasure should it become a realised fact.

Roadside Conveniences.

♦ ♦ ♦
 THE roadside telephone call-box may, as motoring increases, become a useful addition to the landscape. But the stretches of roads are so long that accidents may happen at points so distant from these instruments that they may be really useless. At the same time there are many places where their utility would be unquestioned—provided, of course, that their location was generally known to travellers by road. In this connection, therefore, mention may be made of the enterprise of Messrs. Mens and Co., of Boscombe, Bournemouth, who have set up a call box near Lyndhurst, on the London-Bournemouth road. This will be available to all motorists requiring assistance, whether by night or day, and suggests a new activity for those organisations which are concerned with the maintenance of the road for motorists. Already the various agents who have been appointed at villages and out of the way places have proved of service to motorists and steadily there is growing up an organisation—by associative effort and by private enterprise—which will considerably minimise any sense of insecurity that may have

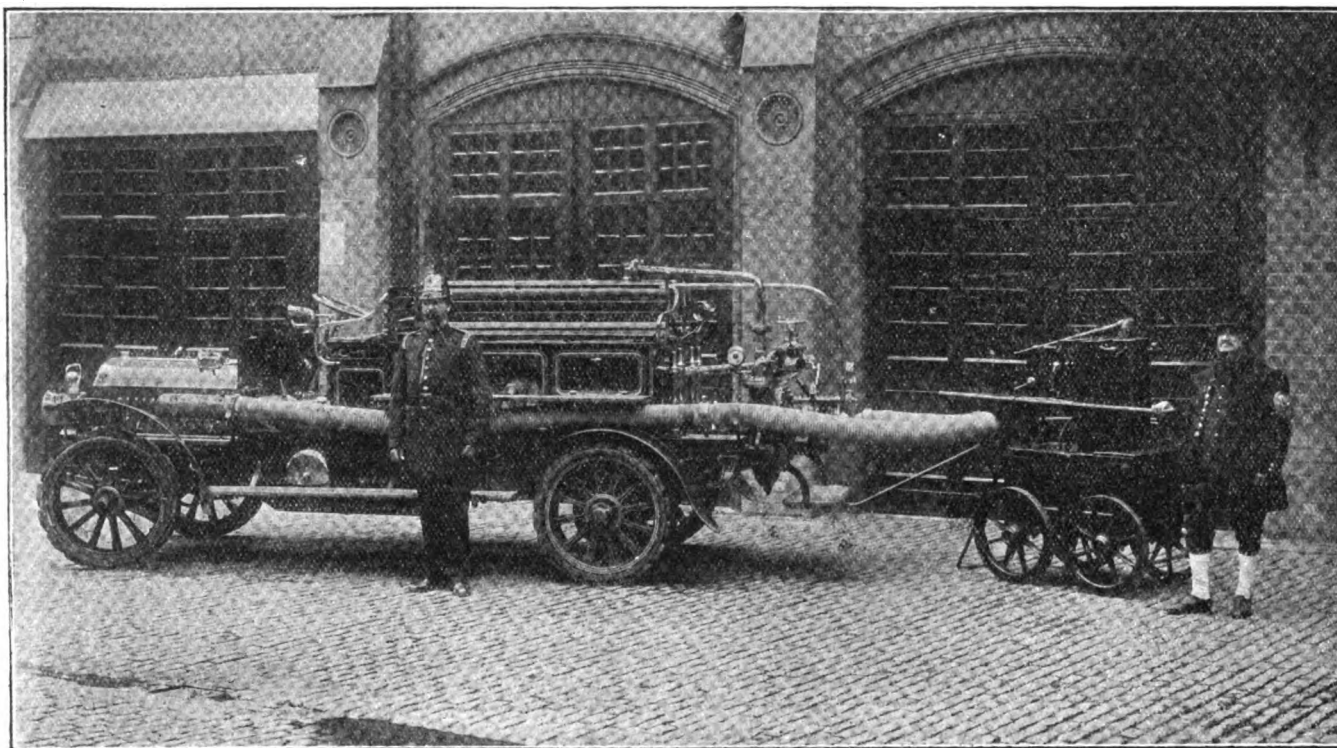
been felt in the past; all this is to the advantage of the motor movement, assuring those who take up the car, whether for pastime or business, that help can be readily obtained in any untoward circumstances. The next move will be to persuade local authorities to give less encouragement to the police traps that rob many country places of prospective trade and popularity.

An Inconvenient Happening.

A gentleman residing at Herne Hill, and having City offices in Chancery Lane, invited some friends to dine at the Criterion Restaurant, London, whither he drove with two of them in a hired motor-car. Two other guests went in their own car, the drivers being instructed to return at eleven o'clock. At that hour the host came to the door and ordered his car to be brought up.

Police and Motorists.

At the annual dinner of the Yorkshire Automobile Club, at which Prince Francis of Teck represented the Royal A.C., an important speech was made by Major Atcherley, the Chief Constable of the West Riding. Unlike some of the police authorities nearer London, he is quite ready and anxious to co-operate with motorists in order to bring about a good feeling as well as a just administration of the law. As a first step he suggested something in the nature of a reconnaissance of the county in order to select the particular places where danger signals might usefully be located. In making such a proposal the Chief Constable was able to point to the county of Shropshire, where something of the kind has already been done. We would suggest that here is a piece of work which the provincial clubs generally might take up in conjunction with the Chief Constables. The indication of danger zones, where motorists should be more than ordinarily careful, is work that ought to be more generally encouraged by the authorities. Another good point made by Major Atcherley was to the effect that policemen were not taken



"Ancient and Modern."—A Dennis Turbine Fire Engine and First-Aid Machine alongside one of the oldest of Fire Engines, viz., a small manual pump, dated before 1700.

The photograph from which the above illustration is reproduced was taken at the Birmingham Central Fire Station by the courtesy of Chief Officer Tozer. The fireman in charge of the ancient "Fire Squirrel" is dressed in the uniform of the Hand-in-Hand Insurance Company of 1696.

Then he went inside to fetch the guests who were dining with him, and, returning to the entrance again, was amazed—rain was falling heavily—to see his car disappearing at a smart pace. Subsequently he ascertained that two gentlemen and a lady had come out of the restaurant while he was fetching his friends, jumped into his car, and ordered the chauffeur to drive to Liverpool Street station. The chauffeur did not particularly notice who had got in, and obeyed the instructions. On arrival at Liverpool Street one of the gentlemen inquired, "How much?" "Oh, Mr. — will attend to that," said the driver, who seems to have thought his employer was the other gentleman who had walked off to the booking-office. "Am I to go to Herne Hill," the chauffeur next inquired, and receiving the reply, "No, go home, my man," he went home. It is suggested that the persons who journeyed to Liverpool Street mistook the car, although an expensive one and handsomely appointed, for the useful taxicab. The incident, small in itself, is suggestive of the need of care being exercised by the man on the outside seat as well as the persons who enter within.

into the hunting field, and that something of the spirit which animated those who followed the Master of Hounds should be inculcated into those who form the motoring community. This will only be the case when the police act with impartiality.

FROM Messrs. J. Willing, jun., Ltd., comes Willing's Press Guide and Directory for 1909, a concise and comprehensive index to the press of the United Kingdom. The classification appears to be brought well up to date and the work easily maintains its reputation.

SOME interest has recently been aroused in motoring circles in connection with a report that the British representatives of the holders of the patents relating to the Mercedes cars, particularly as regards the "gate change," were about to make a demand for a royalty on all chassis fitted with the same. It was rumoured that notices to this effect were to be sent out on Monday, but they had not been issued, so far as we could learn, at the time of going to press.

THE NOTTS A.C. DINNER.

I ALWAYS look forward with pleasure to the annual dinner of the Notts Automobile Club, and hied me down to the City of Lace on Friday, last week, partly by road and partly by the Great Central Railway, whose station adjoins the hotel in which the banquet was held. Although fine it was a bitterly cold day, but this did not prevent many of the visitors coming on their cars. Among the first I met was Mr. Percy Richardson, of the Sheffield-Simplex Company, who had run over from Sheffield on one of the new gear-box-less cars, and who, like many others, was not loth to seek shelter near the warm fire.

NEEDLESS to say, the dinner was a brilliant success. A pleasant feature of the annual event has always been the presence of ladies, and, except that the toast list is perhaps already a trifle long, I should be inclined to think that Mr. Booth Granger, the hon. sec., owes them an apology for not including a toast to "the ladies" in the programme.

MR. FREDERIC COLEMAN, of White steam car fame, was in good form. "So full was he of 'yarns' he quite overlooked, in

I MISSED the presence of Mr. H. Bircumshaw, a popular member of the club, who was unfortunately not well enough to attend. Mr. Chas. E. Welles-Lucas, the hon. solicitor, was, however, as usual, the "life" of the little party which assembled in the smokers room after the dinner. During the last few years Mr. Lucas has been called upon to defend a large number of motorists in different parts of the country, and the stories he can tell of his "tussles" with the police are well worth hearing. By the way, Mr. Lucas gave me a very simple formula for quickly ascertaining the speed in miles per hour when a policeman swears you have covered so many yards in so many seconds. All that one has to do is to divide the yards by the seconds and multiply the result by two. A little calculation will show that the result, although not quite accurate, gives a very close approximation. By its means Mr. Lucas has on more than one occasion been able to show the magistrates how little reliance they could place on the policeman's evidence owing to the impossible speed he had sworn to—150 miles an hour in one case! I give the formula, as one never knows when it may come in useful.

ALTOGETHER the evening was a most enjoyable one. The success of the gathering was in no small measure due to the efforts



A Sheffield-Simplex Gear-box-less Car ascending Perloek Hill.

this speech, that the main object of it was to propose the toast of the R.A.C., an omission which, on it being jocularly pointed out by Mr. Julian Orde, was enthusiastically given. If you meet Coleman at any time, ask him to tell you the story of "The Accident, the Coincidence, and the Habit."

ONE of the chief features of the evening was the presentation to Mr. Chas. Hardy, the esteemed president of the club, who has been forced to resign the position he has so long held owing to his removal from the district. The presentation took the form of a beautifully chased Chinese silver vase over a hundred years old. I believe that Mr. Hardy intends to settle in the South, so that what will be the Notts A.C.'s loss will be a gain to the R.A.C. Lieut.-Col. Birkin is to be Mr. Hardy's successor at Nottingham.

IN Mr. P. S. Clay Nottingham has not only a capable chief constable, but an excellent after-dinner speaker, and his "turn" is always looked forward to with interest. Nor were we disappointed. Among many of his witty remarks one of the best was the reference to "the little list," which, like Gilbert and Sullivan, he keeps of motorists, and to which he intends to add the name of H.S.H. Prince Francis of Teck!

of the indefatigable hon. sec., Mr. Booth Granger. It is not generally known that this gentleman is an excellent amateur photographer, as may be judged from the fact that he carried off the first prize in the Photographic Competition organised by the Club last year.

ARCANUM.

AT Bawdlands, Clitheroe, Messrs. Slinger and Sons have a well-equipped garage where all classes of cars can be repaired. Body painting and trimming work is also undertaken and a large stock of accessories kept on hand.

THE prevalence of foot and mouth disease among animals has recently led to the enactment of a somewhat unusual prohibitive measure by the Canadian authorities. At the beginning of this month motor-wagons were refused permission to cross the ferry from Detroit to Windsor, Ont., it being charged that, as they have been doing a large business in the transportation of hides and other animal products, their service was a distinct menace to Canadian animal health. Motor vehicles of other kinds than those used for commercial purposes are only permitted to cross from Detroit to Canada after they have been thoroughly cleansed of mud and dirt. It is expected, however, that the quarantine measure will only be in force for a short time.

The Great Lakes of Connaught.

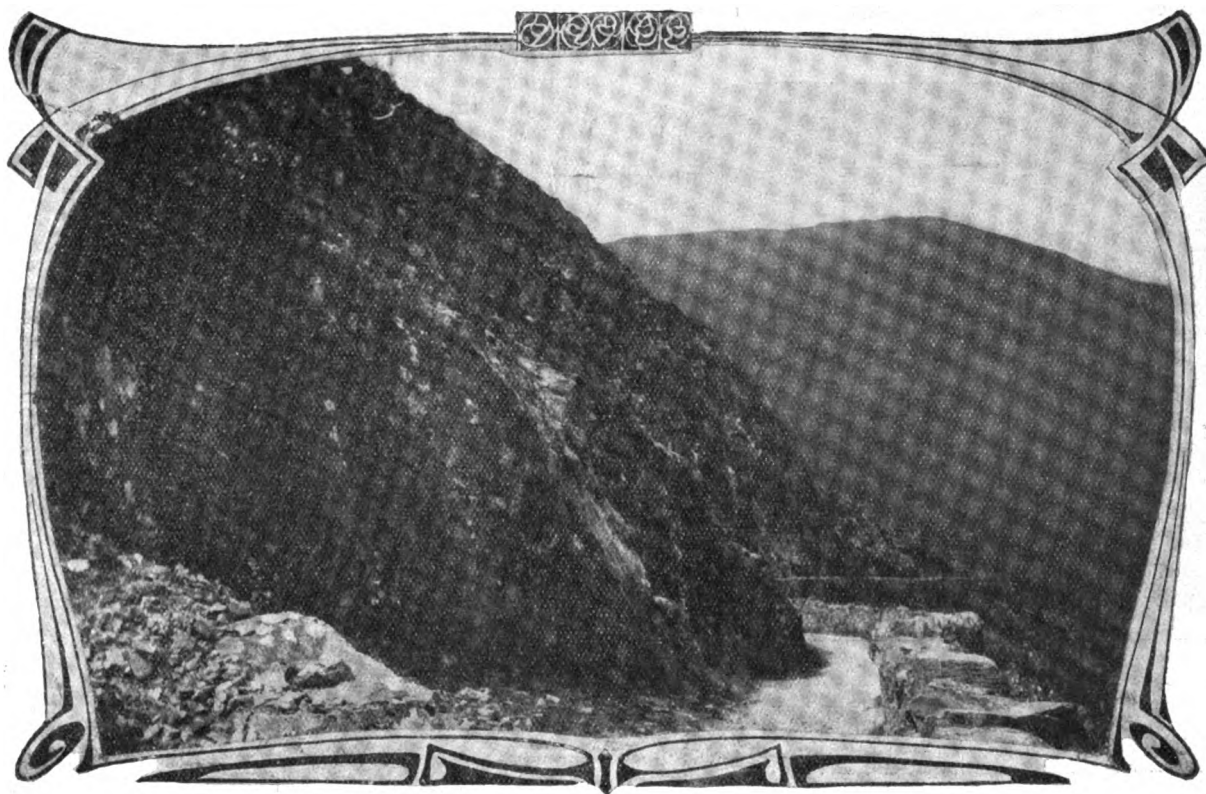
BY J. LL. WARDEN PAGE.

(Concluded from page 972.)

IRISH towns are seldom interesting, and there is little to see in Castlebar. Indeed, we only pass through it because it is *en route* for Lough Conn, the third of the great lakes of Connaught. To reach it we will take the road through Turlough, where there is a fine specimen of a round tower presiding over the ruins of another abbey, and thence, after winding over a moorland country, come in due course to Lough Cullin and the hamlet of Pontoon, if so it may be called, for it consists but of an inn, a cottage, and a police barrack, now unoccupied. "Why doesn't the Government let it instead of leaving it to fall into ruins?" I asked of a "bhoy." "Faith, they nivver know whin they mayn't want that same," he replied, with a grin.

Pontoon is delightful. The homely little inn stands on the very edge of the lake, with a rocky but well-timbered ridge at its

pleasant scenery of wood and water. It seems a prosperous little town enough and has a great name among fishermen, for the Moy is one of the best salmon rivers in Ireland. Over the long bridge and up the steep street our road passes westward to Crossmolina; and if Molina was a motorist I do not wonder that she was *cross*, for a horrid road it is and bumpy. However, in eight miles we have done with it, and, turning sharp to the left in the village street, head southward towards Nephin, which now rises magnificently right ahead. This is a give-and-take road with occasional stony patches; and it is lonely, but the scenery is fine. Mountain and moor spread out on either hand; occasionally there are glimpses of Lough Conn, now away to the left. Ere long we reach Coolnabinnia Police Barracks, and find a better road leading down the valley to Crumpaun



The Road on the Side of Sheffra Mountain, near Leenane, co. Mayo.

back, and a lovely little pass, through which another road, with which we have nothing to do at present, leads to Newport and the coast. It is a great resort of fishermen, who come after the pike for which Lough Cullin is so famous, and of which ferocious and gigantic specimens in glass cases decorate the walls of the dining-room. Those not bent on fishing might do worse than climb the ridge aforesaid, which commands a view of the whole of Lough Conn, from Ballina spire at the northern end to the single arch bridge close to Pontoon which spans the little channel between Lough Cullin and Lough Conn. And away to the westward, seemingly close by, though really some miles away, heaves up great Nephin, next to Mweelrea in Connemara.

From Pontoon to Ballina is but twelve miles, and the road for some distance runs close to the lake. It is a pretty good road on the whole, though there are some sharp little "pinches." Ballina lies a little beyond the north end of the lake on the tidal river Moy, in the neighbourhood of some

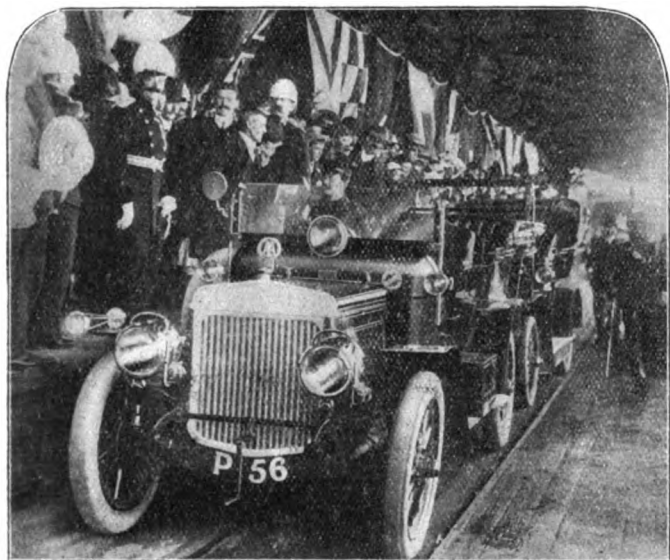
Bridge, at the head of Lough Belton, a small but pretty sheet of water. Hence an undulating road drops gradually to Newport, a village-town on a wooded estuary of Clew Bay. At Newport we strike the road to Westport, which is reached over quite a good surface. From Ballina by the way we have come it is nearly forty miles.

Westport is one of the most beautifully situated towns in Ireland. It lies in a wooded basin hard by Clew Bay, the blue waters of which are studded with innumerable islands. Over all soars the great cone of Croagh Patrick. But commercially Westport induces melancholy. It is another town over which Ichabod might be written. It tried for the Atlantic trade; built warehouses and mills, erected a mile or two of wharves. Alas! the Atlantic trade did not come.

We see more of these empty mills as continuing our journey southward, we take the winding uphill road that climbs over a shoulder of Croagh Patrick. They are depressing objects, and

we are glad to leave them behind for the moors and see once more the Connemara mountains cutting the skyline. This road to Leenane is liberal in the matter of hills. There is a hill of one in ten out of Westport, and another with a nasty twist in it abreast of Croagh Patrick; but, once away at the back of the mountain, all is plain sailing. The road runs down the wild Erriff Valley, the scenery, especially at Erriff Bridge, being very fine. The dark mountains to the left are the same that we saw from the other side of Lough Mask, which is now only seven miles away as the crow flies, though the crow would have to fly pretty high to clear Maamtrasna, Benwee, or Devil's Mother. The Devil, by the way, is much in evidence in Irish place names. We know of a Devil's Punchbowl, a Devil's Glen, a Devil's Ladder, and divers other places or objects with which Satan appears to have been connected. "The Devil seems to own a good bit of Ireland," remarked an English tourist. "Yes, yer honour, but shure he's an absentee landlord," was the reply. And that tourist will think twice before "taking on" another child of Erin!

A little beyond Devil's Mother comes Leenane, at the head of that long arm of the sea known as Killary Harbour. It is shut in by dark mountains, and the surroundings generally are, I suppose, the finest in Connaught. But what strikes us most is the presence of a finger-post—the first we have seen! The



The Right Hon. Earl of Dudley, P.C., G.C.M.G., G.C.V.O., landing at Fremantle to take up the duties of Governor-General of Australia. The car which he is about to enter is a Daimler, which was placed at his disposal by Mr. Richard Strellitz, of the well-known shipping firm of that name, and was used for a trip extending over fourteen miles, after which His Excellency expressed himself as highly satisfied with the vehicle.

characters are in Gaelic, and therefore absolutely useless to the Sassenach, and indeed to most Celts. But what of that? It is a finger-post undeniably, and finger-posts in the West of Ireland are about as plentiful as pineapples at the North Pole. Long life to it!

We ascend the hill behind Leenane and find ourselves at the mouth of the valley that runs right down to Maam and Lough Corrib. For we are approaching Lough Corrib again, and at Maam Bridge meet the road coming down the pass along which we travelled a day or two ago. For this has been a "circular tour." This road through the Maam valley runs at the very feet of the Maamturk range, a bold, rocky rampart. There is an inn of sorts at Maam Bridge, but most motorists will prefer the hotel at Recess, which lies up the pass and round the corner, on the road from Galway to Clifden. This is about the best hotel in the country, and Recess quite a charming spot at which to be benighted. Here, amid lovely surroundings of mountain, lake and woodland, we will make our last halt ere tackling the thirty-five miles of highway that lie between Recess and Galway.

ON THE CARE OF A CAR.

MOTORISTS too seldom take a systematic record of the expenses in connection with their automobiles. And yet it pays to take great care of the car, for whatever is lost or broken will be found in the bill.

My golden rule is to keep a book, which I call the Car Book, showing the following:—

- 1st.—When batteries were charged last.
- 2nd.—When tyres were renewed or re-treaded.
- 3rd.—When valves were ground.
- 4th.—When dirty oil was run out of crank chamber.
- 5th.—When gear-box was examined and oil added to make up for what has wasted or leaked out.
- 6th.—Number of miles run each trip.

These may seem small matters, and many, I daresay, do not or will not trouble to take note of these things; but it is the little things that count in the end, and if the motorist does not keep a note of when these things want doing, there will soon be trouble.

I carry this system further, as I note in my car book where the spare parts, various tools, &c., are kept, so that I have not to turn the car upside down to find something that is wanted in an emergency. Beginners I would recommend to do as I did—that is, to make out a list of what they must do before they start their engine to go out for a run, and fasten this list just inside the lid of their tool-box, so that they can see it when they go to get their oil can to oil up. Novices will find this list worth a Jew's eye to them, as it will keep them from forgetting something that might cause their engine to overheat and spoil it. And it is astonishing what a much greater confidence a beginner has when he knows everything is in order.

Now with regard to the upkeep and cost of running a motor-car it should be noted that these will vary:—

- 1.—The greater the number of cylinders, the greater will be the amount of petrol and oil consumed, though with extra cylinders a steadier running and quicker going is obtained. My car is two-cylinder, and consumes one gallon of petrol to eighteen miles.
- 2.—The heavier the car the more petrol there will be used, and the greater the wear on tyres. But heavy cars are generally stronger than light cars, and, therefore, last longer.
- 3.—The car with high engine power and high speed is more destructive on tyres, and will also cost more in repairs, petrol, and oil.

It is clear that if speed is wanted it must be paid for like all other "luxuries." But if expenses are to be kept down, and we are content with a moderate speed, we can go in for a good make of a one or two cylinder car. There are many of these on the market, and I think that the small well-made car will be the car that will stay longest. But a cheap car is dear at any price, for what is saved in first cost is spent later in repairs.

From experience, I find that a general repair should be made once in two years; also that a set of tyres should last two years. So, on these lines, I have in yearly upkeep and actual running cost only debited half of the cost of repairs and half the cost of tyres. On these lines, my costs work out at 4½d. per mile, not including capital charges, nor for cleaning and looking after, as I do this myself. I would say to those about to invest—Don't let these figures frighten you; for much of my travelling is done in climbing up the mountain roads in the Isle of Man, where I have to keep on the low gear a good deal. Much better results could be got on good and fairly give-and-take roads.

G. GILLMORE, Hon. Treasurer of the Manx A.C.

THE transport of mails from the steamer at Bombay to the General Post Office and railway station is usually done by bullock carts, but for the Christmas service a Renard road train was employed and the mail, consisting of over 1,200 large boxes, and letters and parcels weighing 90 tons, was conveyed in remarkably quick time so, that all the up-country trains left to time, almost an unique experience at that season of the year.

GOSSIP FROM PARIS.

An Aero Fete for the Benefit of the Earthquake Sufferers.

The Aviation and Steerable Balloon Fete which it is proposed to organise at Longchamps, Paris, in favour of the victims of the earthquake in South Italy and Sicily is a captivating idea, but unfortunately its success must depend on the condition of the atmosphere, which is fickle. M. Georges Prade, of "Les Sports," the author of the project, which is placed under the patronage of the Paris Press Syndicate, is an enthusiastic supporter of the aviators, who, he is sure, will go to Longchamps to show their machines in flight with as great eagerness as they exhibited them in the Salon. He is certainly not mistaken in counting on them to aid to the best of their ability in obtaining as large a sum of money as possible to assist the very many thousands of survivors of the cataclysm which laid waste a vast region and destroyed so many towns and villages. But there are serious objections at least to the date of January 24th suggested for the fête. It would be scarcely possible to make the necessary preparations in so short a delay. Moreover, I have heard several aviators express regret that the idea was started, because they fear it will either be found impracticable, or that it will result in a poor show in so far as the aeroplanes are concerned. It is possible the steerable balloons may come from their sheds outside Paris and circle over the heads of the public assembled at Longchamps, on condition, however, that the wind is not blowing a gale. But the aeroplanes cannot yet perform a similar feat. If they are to fly at Longchamps they must in the first place be brought there and then be protected in sheds or great tents before and after the performance expected of them. The construction of the necessary sheds would be costly, and it would occupy a considerable time to put up the tents. Then, again, how many aeroplanes are there in France which have already flown and can be relied upon to repeat the feat at a given moment, even if the weather is calm? And it so happens that it seems likely the two most celebrated aviators will, notwithstanding their good-will, find it impossible to participate in the projected fête. Wilbur Wright's machine is at Pau and Henry Farman's is sold. Their absence would be regrettable, but if only the other aviators succeeded in showing off the qualities of their flying machines the public would be satisfied. Were it possible for Wilbur Wright to bring his machine from Pau, he alone would astound a million or more spectators, who would not much care what the other flying men might achieve or only attempt.

The Farman Aeroplane Sold.

Henry Farman has sold his aeroplane! It will be interesting to see whether its present owner will achieve as great feats with it as the English aviator did. Be that as it may, Henry Farman has undertaken to teach a man to fly with it, and declares his machine is so easily managed that it will not take him more than two or three days at most. Why did he part with the aeroplane with which he earned such world-wide renown? I put that question to him, and his explanations were to the point. He said that since he established his aeroplane shed on the Chalons camp he had used the machine for all sorts of experiments. He had transformed it successively in numerous ways, sometimes into a triplane, at other times into a biplane with reduced length of wings, &c. He had tried it with motors of various horse-power and with and without *ailerons*—that is to say, surfaces destined to produce the same effect as Wright's system of twisting the wings. In fact, he considered he had learned all that could be learned with the aeroplane, which he had from the first regarded as nothing but an experimental machine. He therefore accepted one of the numerous offers he had received to buy it. Even before disposing of it he had commenced the construction of a second aeroplane shed at Bouy (Chalons) because he was determined to set to work at once building two new machines. Both of them will be biplanes, but very different from his original aeroplane. That machine in its smallest biplane form had 32 square metres bearing surface, which was increased to 64 square metres by the addition of the third plane. The speed attained varied between 40 and

80 kilometres an hour according to the larger or smaller bearing surface, the larger or smaller horse-power of the motor employed, and the larger or smaller propellers. The two new biplanes, one of which will be completed about the end of February or in the first fortnight of March at the latest, will contain many improvements and be driven by motors of 56-h.p. and 40-h.p. respectively. It is almost certain both of the machines will be provided with skis, similar to those employed for the Wright Brothers' aeroplane, to enable them to alight without accident on very rough and broken ground. No catapult will, however, be required to start Farman's new aeroplanes.

A Warning to Tourists in France.

An English motorist who this time came by train to spend the New Year week in Paris, and who is contemplating a tour through France in the early spring, asked me whether it was really true the system of drawing up *procès verbaux au vol* for excess of speed had been abolished. I was, unfortunately, unable to reassure him completely, because, though M. Lepine, the amiable Paris Prefect of Police, has strictly prohibited the practice in the department of the Seine, there are numerous other departments in which the municipalities have not followed his example. I should be sorry to think the mayors of those country towns wilfully set traps with the object of filling the coffers of the township with the often undeserved fines imposed on unwary motorists. But it



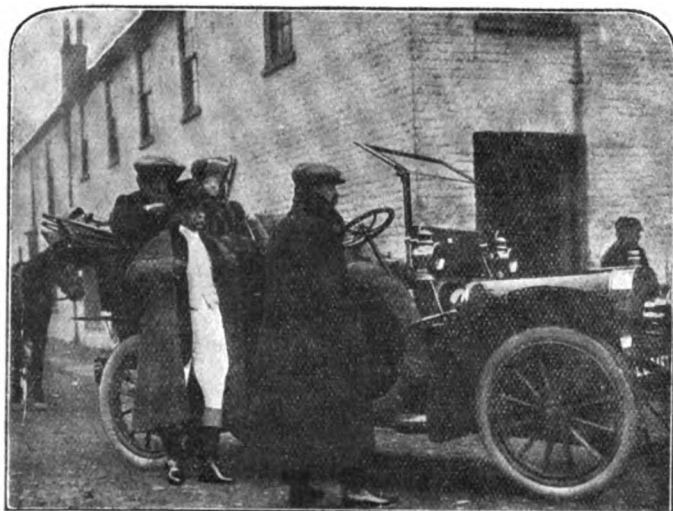
Wilbur Wright, the Flying King of 1908.
L'Industrie Velocipedique et Automobile.

has been demonstrated over and over again that at certain moments the gendarmes are, so to say, mobilised especially to take the numbers of the motor-cars as they pass. The official wearing the cocked hat, often concealed behind a tree, does not, as a rule, trouble to stop the vehicle, though he could do so by simply raising his hand, but contents himself with simply making a note indicating his estimation of the speed. Sometimes, but not always, he is assisted in the calculation by another gendarme posted on the road at a distance varying between a quarter of a mile and one mile. In either case it is much the same thing. The calculation is invariably against the motorist, though generally wrong. The unfortunate tourist, the victim of—well, I will call it "the unintentional error," is not given the possibility to prove the gendarme's mistake, because he is allowed to go on his way unconscious that the *procès verbal au vol* has been drawn up. It is not till some time later, when he may have even forgotten he ever passed that way, he learns he did so on a certain day and at a certain hour at a speed "endangering the safety" of the other users of the highway. The arbitrary decisions of the mayors limiting the speed of motor-cars in their respective communes, and the unfair practice of prosecuting people for alleged offences they are not even warned they have committed, make the tourists in France, whether they be Frenchmen or foreigners, pray for the prompt adoption of M. Barthou's promised reform of the legislation on highway traffic, which will, it is anticipated, unify the rules and regulations throughout the whole of the country and prohibit everywhere the *procès verbal au vol*. MARNEY.

THE SOCIAL WHIRL.

H.S.H. PRINCE FRANCIS OF TECK is proving a most devoted chairman of the R.A.C., and a worthy successor to the enthusiasts who have preceded him in that office. Last week he attended the dinners of two provincial clubs; he will similarly honour our friends across the Border at the annual gathering of the S.A.C. His engagements for the summer are already becoming numerous and the *bonhomie* of the Prince will make him a welcome guest at the provincial meets of the Club. At the Yorkshire Club's dinner he had a great reception, being welcomed with musical honours, which were almost renewed when he promptly accepted the hint previously conveyed by Mr. A. E. Masser that His Serene Highness would find much enjoyment at the club's annual gathering at Saltburn. Mr. Robert Armitage, M.P., was among the members of the Yorkshire A.C. who attended, while the Somerset A.C. and the Barnsley A.C. were also represented.

SOME idea of the increased reliability of motor-cars was conveyed to the minds of motorists who attended the Yorkshire Club's dinner by the reference to his own motoring career by Major Atcherley, the Chief Constable. He said he had been a motorist six or seven years, and "I was practically under my car for the first two years and in it at times for five years."



Motoring to the Hunt.—A scene at the Meet of the Southwold Hunt at Spilsby.

I LEARN that the committee of the Irish A.C. have decided to offer the post of vice-president of the club, rendered vacant by the death of the Earl of Drogheda, to Lord Northcliffe.

SHERRINGTON MANOR is a magnificent mansion at Selmeston, a pretty little village about ten miles from Eastbourne and seven from Lewes, where resides Mr. Cecil Chandless. Mr. Chandless is a motorist and his garage is not many feet away from the house. On Saturday evening his chauffeur was overhauling his 30-h.p. *Metallurgique*, being at work in the pit with a portable electric light. Without any warning the globe suddenly broke and the floating petrol vapour was ignited. Instantly the car was enveloped in flames. The chauffeur's cries attracted the attention of an electrical engineer, who was near by, and with commendable promptitude he liberated the unfortunate chauffeur. His action and presence of mind undoubtedly saved Westlake's life. The roof had already caught fire, but it was quickly extinguished by means of buckets of water. Two other vehicles were got out before much damage was done, but the *Metallurgique* was destroyed.

MR. A. HUNTLEY WALKER, whose garage at Hayes was destroyed by fire last week, has received an anonymous postcard,

bearing the London postmark, and couched as follows:—"Glad no one was hurt, but not less glad that there are fourteen less infernal machines—wish it was 14,000. Motors and most motorists are a curse to the country." What of anonymous correspondents?

It is hoped that the pleasure the motor-car is affording the Chancellor of the Exchequer during his holiday on the Riviera will increase his enthusiasm for the automobile. At Cannes he is motoring daily to the golf links, some six miles away from the Riviera Palace Hotel, where he and his family are staying. He has also been motoring along the good roads of the district and generally proving that the motor-car is one of the greatest economisers of time that has lately been introduced. Surely, after such an experience, Mr. Lloyd George will be chary of any temptation to harass its progress by increased taxation.

ON the last Tuesday in 1908, when the snow fell so heavily, only three cars were reported to the A.A. as having gone through from London to Brighton; on the following day seven were reported, as compared with the usual number of about a hundred a day.

AMONG Lincolnshire motorists none are better known than Sir Hickman Bacon, Bart., the premier baronet of the country, whose interest in motoring has been of more than an academic order. He is practically acquainted with the interior of some of the largest motor works in the Midlands, and he generally spends his vacations on the car. After several weeks in Ireland during last autumn he came to the conclusion that the roads there were very good; certainly an improvement on many that were traversed at the time of the Gordon Bennett Race. He was particularly struck by the scenery of the valley of the river Slaney, and is one of the British motorists who have been faithful to the Emerald Isle so far as the holiday season is concerned.

MISS CHARLESWORTH has provided the papers with an exciting sensation at a time when the Parliamentary recess has left them with columns to fill. The young lady seems to have been an enthusiastic motorist, *au fait* with many types of cars and also conversant with the firms that supply accessories and clothing. Thus the "Daily Graphic" gravely reproduced a photo of her motor hat with the name of Dunhill upon the lining, and another paper declared how she motored in the snow from Perth to Wigan, "using a stock of petrol obtained with a part of the proceeds of a diamond brooch pledged with a pawnbroker." She obtained her chauffeur from the Daimler Company, and the family solicitors also render similar service to the Automobile Association. Altogether the mystery provides opportunity for a real motoring novel, and one wonders whether Mr. and Mrs. C. N. Williamson or Mr. Gerald Biss will be first in the press with the same.

THE Hon. W. W. Vivian, of Bangor, had an almost providential escape from serious injury the other night. Motoring from Ogwen Lake towards Bangor he suddenly, just on the Bangor side of Ogwen Lake, crashed into some unseen but powerful obstacle. On stopping the car, it was found that two or three huge boulders had fallen from the mountain side, and it was with these Mr. Vivian's car had collided in the dark. Though the car was somewhat damaged no one was hurt.

AMONG those who accepted invitations for the first annual dinner of the R.A.C. and its associated clubs on Thursday was the Earl of Kimberley—a keen motorist and the son of the late Earl, who led a political party in the Lords for so many years. The first occasion I met the present holder of the title was a few Easters ago, when he was motoring in the west, making the County Down Hotel, at Clifton, his headquarters. Few more favourable centres for really interesting automobile excursions could be found. There are trips to be enjoyed to Cheddar, Weston-super-Mare, and, a little further afield, the glorious valley of the Wye. The Earl of Kimberley's home is in Norfolk, where he takes an interest in matters of local government and stands up for the rights of motorists upon occasion.

LOLLIUS.

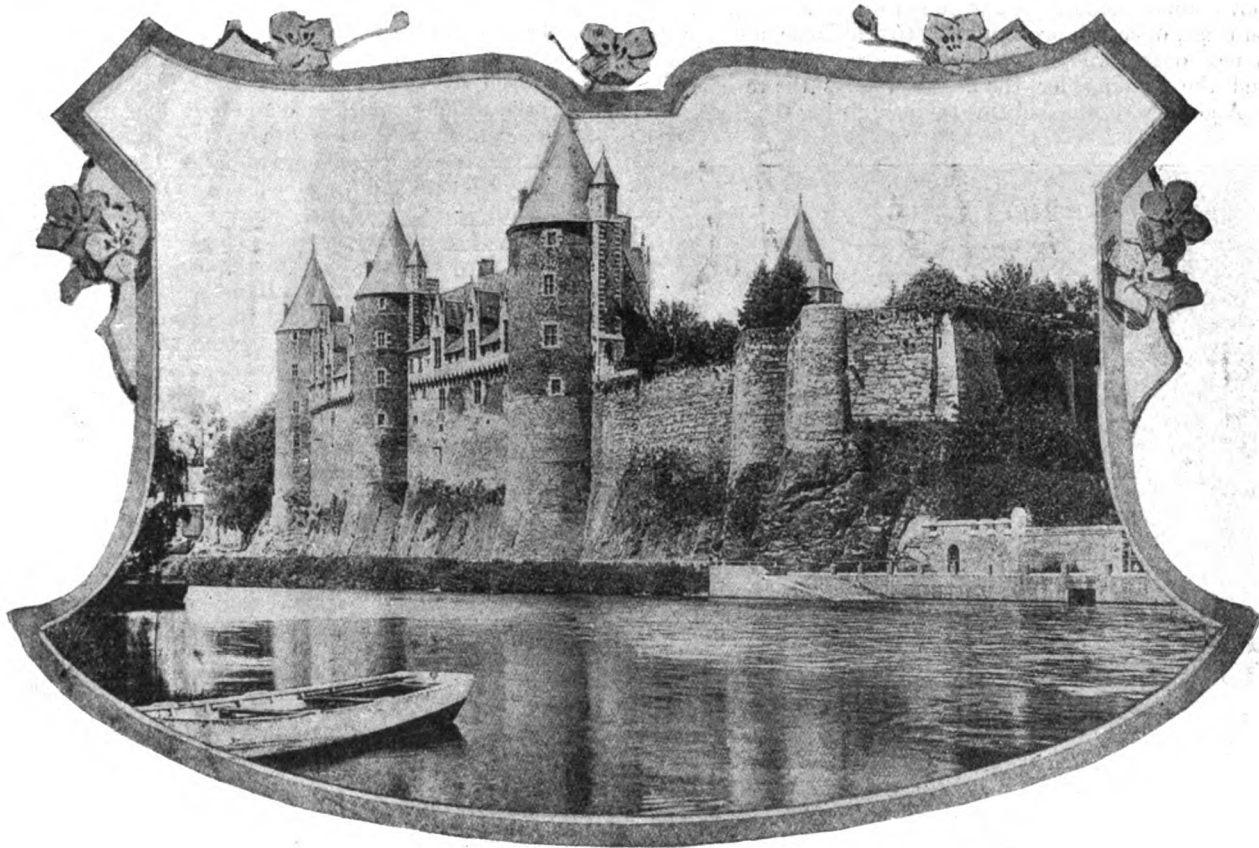
SOME ROADSIDE DILEMMAS, THEIR CAUSE AND SOLUTION.

THE easiest, but rather humiliating, solution to a *panne en route* is to carry a long rope, and when trouble comes to search for either a passing kind-hearted fellow-motorist or to hunt for a horse, but either method of obtaining a tow usually goes against the grain, "Most of us have been through it," and then

"We felt to madness, but the full heart gave
No utterance to the ineffable within;
Words were too weak; they were unknown; but still
The feeling was most poignant."

But these little tribulations have their advantages; they teach one to know one's griefs, and "pride" comes in, and does more, it often suggests a way out, without having recourse to the rope. In looking over my diary of more than ten years' motoring at home and abroad with a view to narrating a few of my friends' and my

was in sight, so we took off the now V-shaped rod; it was a tube, and by fixing it in the fence we managed to return it once more to approximately its correct shape. The rod was then replaced, the chain put in position, and letting the clutch in this time with care we once more took to the road. Alas! straightening steel tubes cold is not much good; before we had proceeded another quarter of a mile it resumed its former misshape, and again the chain was flung. It was late, as I have already remarked, and we had had no tea and desired to reach London for dinner. It was clear the tube would not hold as it was, and then an idea struck us. We cut the tube in the centre with a file, after bending it once more straight; we then cut with our pocket-knife a bit of wood out of the fence, the length of the tube, this we made more or less round, and forced into each end of the tube, so that we had a tube of the right length with an inner lining of wood. We then drilled a few holes through the tube and wood with a hand drill that we luckily had with us, and through these we put a few bolts and fixed them with nuts, and in addition we wound the whole



Touring in Brittany.—The Chateau de Josselin.

own misfortunes, the dialogue between Gobind, the eighty-year-old one-eyed Indian, and Rudyard Kipling, mentioned in the latter's "Life's Handicap," comes to my mind. Like him, I write "of all matters that lie within my understanding, and of many that do not," but chiefly of the things that my friends and I have seen and experienced together. May my readers' knowledge piece out my imperfections, and if my plain tale appeal to similar casualties to theirs, the piecing out process may on some future occasion prevent time being lost.

It was on that popular Brighton road; we were on an excellent little car, one of the old 6-h.p. single-cylinder Wolseleys, and had stopped on Bolney Hill to gather some tempting primroses. On starting—it was on an incline—I must have let the clutch in rather sharply; there was a growl of anger from the car, and we started, not forward, but backwards. The brake soon stopped that, and then the chain was seen to be trailing in the dust. A torque (distance) rod had not relished the fierce clutch and had bent, and so the back axle was no longer at the right distance from the gear-box and the chain came off. It was late, no one

tube from end to end round with string. This held, and we reached home without further trouble. The moral seems to be, to let in the clutch with care; if it is fierce, spin it in the lathe, and afterwards castor oil it; also carry some spare bits of tube, a blow lamp, some solder, and a hack saw. The latter would have cut the tube better than a file, and a piece of tube sweated in might have made a better job than did the piece of stolen wood.

On another occasion, while in Somerset, on a two-cylinder vertical-engine car, an inlet valve spring broke. The fault was soon located and a new one put in. Still the car was weak; compression was good, but the car would hardly climb even a little hill. The cause, after a time, was found to be that the new inlet valve spring, though the same length as the other, was stiffer, so that the valve did not open as quickly as the other and its cylinder did not get a sufficient charge. Cutting off one turn of the spring effected a cure. It also taught me for the future to know what weight should lift the valve, and to see that this test was applied before a new spring valve was put in. On most cars $1\frac{1}{2}$ lb. to 2 lb., when put on the top of the stem, should

lift the mushroom off its seat, but this, of course, varies with the compression. With new rings inlet valve springs must be weaker.

Speaking of valve bother reminds me that—I suppose most men know it now, I did not in my early days—there should always be room to slip a piece of thin paper between the exhaust valve stem and its tappet. When valves are repeatedly ground in they sit a wee bit lower, and so, when they get hot with running, may be kept from closing by being held up by their tappet. The treatment is—if there is an adjustment—adjust the tappet so that there is room for the piece of paper between the two, or file one of them, so that there is. On cars with laminated exhaust valve springs it is as well, in cases of loss of power, to see that one of the spring leaves is not broken. I found this to be the source of worry on a Wolseley once, but I had looked at many other possible causes before I chanced on this, the real one. Valves, too, may be held up through the valve or tappet guide being worn or gummed with burnt oil. These guides do not, I fear, get the cleaning they deserve; the stems, too, like an occasional rub over with graphite; doing this may obviate a roadside stop, and the worry of a diagnosis.

Piston rings, of course, are as a rule fitted at home, and generally when new ones have been put on the piston the compression is poor, and the running for the first few days the reverse of pleasant. A good way to avoid this is, after fitting the rings, to



The Hon. Lionel Walrend's 28-36-Daimler Car after the accident last week. From a snapshot in Messrs. Gould Bros. Garage, at Exeter.

take the valves out, and by means of a leather belt run the flywheel off some engine shafting, and to do this, if possible, for a day, of course keeping the piston and rings well lubricated all the time with "thin" oil. This beds them in and makes the first trip on the new rings much more pleasant. In most neighbourhoods there are some works where, for a trifle, permission to do this can be obtained.

Probably the chief cause of roadside stops, after ignition torts, are the result of a fierce clutch. Leather-faced clutches still seem popular, and really answer well providing they receive an occasional dose of castor oil, or, what is better, Collan oil. If the clutch is still fierce, and there is time to take it down, it is a good plan to file three recesses on the male part under the leather, and to slip in three bits of watch spring. These cause a slight bulging and thus a gradual engagement. I remember once being hung up in Norfolk by a sheared-off crown wheel, which was solely due to a fierce clutch. The three hours we spent on the road taking down the gear-box and rebolting the large bevel to the differential sleeve impressed me greatly with the need of a gentle clutch. Still, it was done on the road, with six odd quarter-inch bolts which had to be held in a shifting spanner while their heads were filed so that they could sit in the differential sleeve flange. The conclusion was that we wished we had had a vice fixed to the step of the car.

Ignition torts should not cause a road stop, but what should be is not always the case. If the electric leads are well insulated and supported, the accumulators kept charged, and the coil

trembler or make-and-break platinum points are kept clean and adjusted, there should not be much trouble. Still, wires do break, and it is as well to carry spare cable and some insulation tape. The latter is also of use if a rubber water joint "plays up."

Steering gear bother once made me rather warm. We were near Royston, in fact descending that hill, when we noticed the car wobbled. Examination showed a break in the rod joining the two front wheels, which was temporarily spliced by slipping in a small box spanner drilling holes in the tube, where the tommy holes were in the spanner, and so with bolts making the tube once more solid. What was more unpleasant was, once, while up north, the ball end of the steering rod slipped out of its socket. Nothing occurred, but it might have. The nerve shock resulted in our now using leather covers for these joints, and, in addition, we always inspect and oil them before going out.

I suppose everyone has been held up at some time by a choked jet in the carburettor. We thought we would obviate all this in our latest motor and had a petrol filter fitted; it answered splendidly until the gauze strainer became choked late one night when on the way home from Bexhill. Taking the gauze out by lamp-light made us rather sorry that we were not insured against fire. The lesson was, carry an electric torchlight, also to occasionally clean the strainer, which is more easily done in the garage than on a muddy road. A spare full can of petrol has its merits; we learnt that lesson by walking two miles for some, and it was driven home by the rain and the absence of an umbrella!

Most, in fact all the cars we have had or been in, have been able to make us understand when they were hungry for lubricant, and, as luck would have it, either their smell or knocks have always saved us from the disgrace of a halt due to want of oil. Still, it is a good thing to keep the glasses of the drip lubricators clean, so that a glance can show whether the oil gets into the pipe that leads, as the case may be, to either bearing or crank. We also have discovered why exhaust pressure lubricators are being supplanted by the pump variety. To get the pressure pipe off the exhaust and clean it may burn fingers as well as cause unparliamentary language. We once had a hot engine that "yelled" for oil, and we satisfied its cravings by pouring oil down the air vent into the crank case. It was impossible to clear the pressure pipe with the tyre pump, it had to be done with heat and a blowpipe at home, and then there was trouble.

Once in France we met a man stranded as a result of a choked exhaust box, but he had found the cause and was cleaning it when we stopped to offer, in bad French, our aid. We saw that box undone! It did remind me of my boyhood and the conjuror we used so to admire; he honestly took out as many odds and ends as the conjuror did from a top hat.

Our pride once made us drive four miles on that little 6-h.p. Wolseley with a cracked crank shaft; the brasses held it together; it was broken in the pin. It would have been cheaper to have hired a horse, for it spoilt the brasses. Still, with loud knocking noises we reached home.

A broken spring, of course, need cause but little delay, now that proper first aid splints with clamps are sold, but a similar arrangement can be improvised out of two tyre levers and a couple of clamps. The ones that carried us home from near Canterbury once were the property of a cook, who used them to keep his mincing meat machine on the kitchen table; and that reminds me, if I were writing some "Golden Rules" to stick up in a garage, the first one would be lubricate between the spring plates once a month and the shackle pins every week, also see that the nuts of the spring clips are tight; the working loose of these is a common cause of a broken spring.

C. T. W. H.

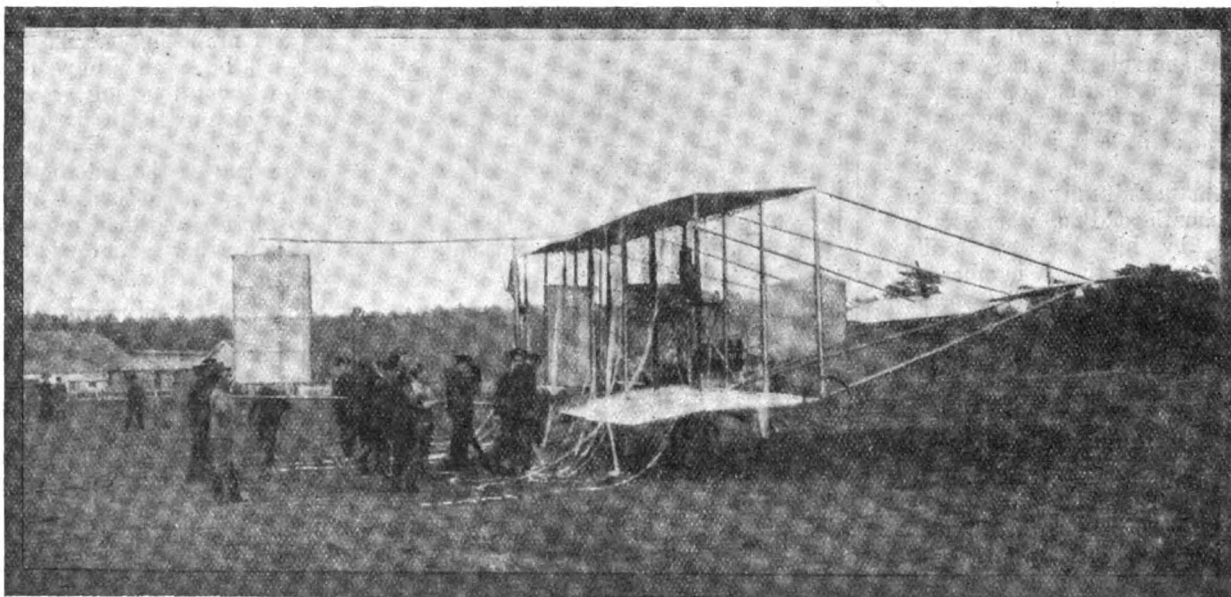
WHEN it becomes necessary to descend a very steep hill, it is best at the top of the hill to engage the second or first speed, even though the brakes are supposed to be sufficiently strong to hold the car on any gradient. With the low gear in mesh, if the brakes do not hold, by simply letting in the clutch the engine will be found sufficient, if not to stop the car entirely, at least to retard its motion to a safe limit.

THE NEW BRITISH ARMY AEROPLANE.

ON Saturday the new British Army aeroplane made a flight of about twenty yards at a height of about 10 ft. from the ground. Two days previously the machine had been taken from the Balloon Factory at Farnborough to the adjacent golf links for a test along the ground. It is 40 ft. in length, 3½ ft. wide, with a space of about 7 ft. between the upper and lower planes, the latter being concave and sloping from front to rear. In the centre of the aeroplane are the 50-h.p. engines with the propellers almost flush with the front of the planes. A difference compared with the Army aeroplane that came to grief at Aldershot some months ago is seen in the removal of the radiators to the rear of the steersman's seat. Running out behind these is a 10 ft. frame carrying a square of canvas, another being fixed in front of the engines. The three lifting planes suggest, however, the most notable innovation. These are operated independently of each other. The central one is 20 ft. long, those on either side being about 5 ft. in length. They project fully 12 ft. in front of and midway between the superposed planes, being fixed on a bamboo framework which allows them to be depressed or elevated at an angle to the aeroplane itself. The

THE WARFARE OF THE FUTURE.

IN the course of a recent address before the American Chemical Society on the subject of "The Warfare of the Future," Mr. Hudson Maxim remarked that, "Now that the flying machine has become an actuality, and as all that now remains to be done is to perfect already existing means and apparatus in order to complete the conquest of the air, it is well to forecast some of the adjustments that will be necessary to meet the changed conditions when we shall have our aerial navies of commerce and of war. That the flying machine will find very wide application in future warfare there can be no doubt. Furthermore, it will be the demand for the flying machine as an engine of war that will give to the industry its greatest stimulus. Some terrible things have been predicted for the flying machine as a war engine. Many a sanguine inventor has claimed that with the advent of his flying machine battleships, coast fortifications, and cities could be utterly destroyed by dropping dynamite from the air. It is comforting to know that no very great loss of life or property would result from dynamite dropped from flying machines, for the reason that dynamite requires confinement to work very wide destruction. The flying machine will have very great use in war as a



The New British Army Aeroplane.

machine is supported on a light chassis mounted on four bicycle wheels. On the Thursday Mr. S. F. Cody occupied the seat and demonstrated the easy response to the steering gear. Two days later, as we have said, it rose from the ground to the satisfaction of Mr. Cody and the officers in charge. The experiment of placing the radiators so far behind the operator's seat, however, disturbed the balance, and when these have been moved nearer the centre a further trial will be undertaken.

At Tuesday's Congress the representation of national organisations on the Federation was discussed, and it was decided to allot votes to each country in three sections—spherical balloons, dirigible balloons, and aeroplanes. With regard to the first-named the existing system will remain, the votes accorded on dirigible balloons will be commensurate with the net tonnage lifted by the vessels of each country that have during the year travelled not less than fifty kilometres in a circle. With regard to aeroplanes, the basis of representation will be on the number of effective machines that have covered during a year one kilometre in a straight line. A maximum of twelve votes for each section was decided upon. It was agreed to found a prize fund of nearly £50,000 for dirigible balloon and aeroplane competitions. The next conference will be held in October.

scouting craft for the purpose of locating an enemy and inspecting his position; but the enemy will have his aerial pickets out too, and there will be many a tilt in the air between the warring craft. Then it will be that speed will count for much, and there will be intense rivalry between the nations in the production of flying machines that will fly fast and fly high, for those able to fly the highest will have a tremendous advantage over their enemies. It will be the high flyers that will win. In the not distant future we shall have our automobiles of the air, and in the wars of the future we shall have our aerial battleships, our cruisers, our torpedo-boats, and torpedo-boat destroyers. Although the value of the flying machine in future wars will be mainly as a scouting craft, still its value and importance for that service alone is hard to over-estimate, for the flying machine vedettes will be at once the eyes and ears of the armies of the future; and they will have their use in naval warfare too, for there will be the aerial torpedo scout on the lookout for torpedoes and torpedo-boats, which will signal the approach of danger.

A SPANISH aeronaut, Senor Luiz de Palacio, has designed a new two-seated aeroplane fitted with a 50-h.p. engine, with which he intends to shortly carry out some trials in the neighbourhood of Paris.

AERONAUTICAL NOTES.

THE Asociacion de Locomocion Aerea is the name of a new society which has been formed at Barcelona.

SOME trials are shortly to be made at Jemappe-sur-Sambre, Belgium, with a new aeroplane designed by M. J. Lepouse.

IT is announced from Berlin that Herr Hans Jorch, of Mayence, has succeeded in flying a distance of 20 yards with an aeroplane built to carry two persons and a large supply of petrol.

IT is reported that the Frankfort firm of August Euler has acquired the sole right of manufacturing in Germany aeroplanes on models at present owned, or in future possessed, by Messrs. Voisin Frères, of Billancourt, near Paris.

M. RENE GASNIER, of Angers, France, is rebuilding the aeroplane which met with an accident last summer. The reconstructed machine will be of the biplane type, and when finished will weigh about 10 cwt.; it is being fitted with a 50-h.p. Antoinette engine.

IT is proposed that the Eiffel Tower in Paris shall be used for the purpose of testing the stability of models of aeroplanes, by allowing inventors to use the top platform of the tower as a place from which they can allow their models to glide or otherwise fall to earth.

THE Aero Club of Belgium, which is contemplating publishing a map showing places where flying machines can safely land, has written to the mayors of all the towns and villages in the country asking them to point out any open spaces in their areas suitable for such purpose and having an area of at least 2,600 feet by 1,300 feet.

MR. WILBUR WRIGHT will remain for about a month at Pau, where he is being joined by his brother, Orville Wright. After instructing a number of pupils there he will return to America, in order to complete the official trials of the Wright machine which were cut short by the accident last year.

THE French Society for the encouragement of aviation announces that Mr. Wilbur Wright has agreed to give at an early date a series of demonstrations in flight at the new aerodrome at Juvisy, and that the proceeds of the exhibition will be handed over to the fund for the earthquake sufferers in Italy and Sicily.

THE date for closing entries for this year's Gordon Bennett race has been postponed from February 1st to March 15th. The rules of this contest are to be altered as the progress in flying machines may dictate, and on Tuesday the Federation decided that "(1) Heavier than air machines must accomplish a fixed circuit, having a perimeter of from five to ten kilometres, a total distance of not less than 20 kilometres; (2) machines may touch the ground, or land during the circuit, without being thereby disqualified." A large number of entries is expected.

THE Conference of the Fédération Aéronautique Internationale was begun at the Ritz Hotel, Piccadilly, London, on Monday, when thirty-six delegates attended, representing the United Kingdom, France, Germany, Belgium, Spain, and America. Owing to the ill-health of Prince Roland Bonaparte, Mr. Roger Wallace, K.C., was elected as president and occupied the chair on Tuesday and Wednesday. M. Besançon, the general secretary of the Federation, was similarly absent and his duties devolved upon Mr. H. E. Perrin. Practically the whole of the first day's sitting was devoted to England's appeal against the award in the last Gordon Bennett race. During the discussion Comte de la Vaulx acted as chairman, and at the close the following statement was issued, "That the International Conference, meeting to decide the winner of the Gordon Bennett Balloon Race, declares: That having taken note of the official award of the German Club whereby

Colonel Schaeck, exclusively on a point of law, was declared the winner, that having considered the various proposals submitted to the meeting, some of which suggested that the first place should be awarded to Mr. John Dunville (the British representative), and that Colonel Schaeck should be disqualified, regrets That the obligatory interpretation of its rules prevents the Conference from giving retro-active effect to the decision of May 27, 1908; and also regrets that having before him the propositions put forward in a perfect spirit of sport by the Aero Club of the United Kingdom, Colonel Schaeck should have expressed willingness that the first prize should be awarded to the club that protested against him, provided that he himself were awarded a place in the race, and to accept the division with Mr. Dunville of 12,500 fr. This attitude is deplored by the Conference, which, nevertheless, accepts the classification of the German Club."

ALREADY nine entries have been received for the aeroplane competition which is to be held at Monaco from the 24th inst. to March 24th; they comprise three Antoinette monoplanes, entered respectively by Lieut. Bourgeat, M. René Demanest, and the Antoinette Company; three Voisin biplanes—two by M. Delagrangé and one by Baron de Caters. A Breguet-Richet gyroplane and a Breguet biplane by M. L. Breguet, and a Vuitton-Hubert helicopter by M. G. Vuitton. The regulations for the competition show that prizes of the value of £4,000 are being offered. The competitors will be required to pass over, in flight and without touching ground, the line of jetties closing the harbour of Monaco, to cross over the sea, round the red and white flag of the International Sporting Club of Monaco planted at the point of Cap Martin, and then return by the same course, passing again over the jetties. The length of the course is about six miles. The aeroplanes must be provided with some means of keeping them afloat. Competitors can make as many attempts as they wish between 10 a.m. and 5 p.m., but must advise the committee before 9 o'clock in the morning. The main principle of the competition is that the prizes will be awarded on the aggregate time for three flights of the course, the fastest taking the first prize, which is of £3,000, the next best securing the second prize of £600, and the next the third of £400.

ON Monday Mr. Orville Wright arrived at Plymouth on his way to join his brother in France. He hopes to be back in the United States in the spring, to carry out their contract with the Government, the conditions of which must be fulfilled before June 28th. They have to make one flight of an hour, as well as another full-speed test. If they attain forty miles per hour they get 25,000 dols., whilst if they can fly forty-four miles they will secure 35,000 dols. Asked as to whether the ultimate conquest of the air by man was at hand, Mr. Wright said the future lay with aeroplanes, by reason of the fact that they were of smaller size, and were more easily controlled than the dirigible machines, although the latter would have their distinct uses. "I do not," he added, "agree with the opinions of some that the aeroplane will soon come into use as a commercial vehicle. Other modes of transport are so much cheaper that on a purely commercial basis the aeroplane would have no show. There can be no doubt whatever that in a few years heavier-than-air craft will become common both in Europe and America."

AN aero section has been added to the Belgian automobile exhibition, which opens in Brussels to-day (Saturday). In addition to a large number of models, the exhibits will comprise Baron de Caters' triplane with Vivinus engine, Baron Pierre de Crawhez's monoplane, an orthoptère by M. Adhemar de la Hault, and an aeroplane with Pipe engine belonging to M. Fleming.



Monsieur A. Clement and his Atrahip.
[From a caricature sketch in the "Agenda du Chauffeur," published by Madame Lockert.]

THE GOBRON AERONAUTICAL MOTOR.

FOLLOWING up the descriptions we have lately published of the Gnome, Pipe, Farcot and other light petrol motors exhibited at the recent Salon in Paris, and which have been specially designed for use on aeroplanes, we are now able to illustrate the extremely novel engine introduced for a similar purpose by the Société Gobron-Brillié, of Boulogne-sur-Seine, France. The cylinders, which are of the usual Gobron construction, form pairs, and each pair is arranged at 90 degrees from its neighbour, the group being thus in the shape of an X. As is well known, the explosion takes place between two pistons in each cylinder, which, by the expanding gases, are forced away from each other. All the connecting rods of the lower pistons in one plane are connected to a single crank pin. The outer pistons of each pair of cylinders are connected by rigid rods with cross-heads E, in the two extremities of which are supported by a sort of universal joint the long connecting rods B², four of which work on the same throw of the crank shaft, which is enclosed in the central case.

Another novel feature of the engine is seen in the fact that the usual cam shaft and gearing for operating the valve gear has been dispensed with, its place, so far as the exhaust valves are concerned, being taken by an eccentric cam C centrally located on the crank shaft and actuating the valves through lever *l* and rocking beams *a*. The eccentric is provided with a double groove connected together at one point and in which runs a sort of shuttle. As the cam revolves the shuttle passes from one groove to the other and so operates the levers of one or other of the exhaust valves of the adjacent pair of cylinders at the desired moment. As for the inlet valves, these are of the automatic or suction type, the mixture being supplied from a single carburettor so located that the gas has to travel at equal distance to each of the cylinders. Two magnetos are employed for ignition purposes, each machine

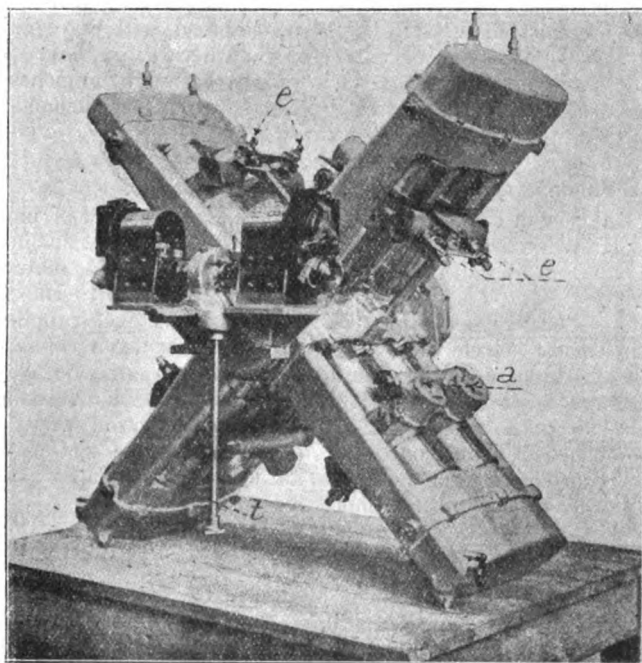


Fig. 1.—General View of the Gobron Eight-Cylinder (16-piston) Aeronautical Engine.

supplying current to four cylinders, so that in case of accident to one set the motor would still operate. In fact, the engine really comprises two twin-motors, since the idea has been carried out of making the four cylinders in one plane independent of the other, so that in case of a breakdown of one set the motor could work on at a sufficient speed to allow the aeroplane to safely descend. The magnetos, which are driven by skew gearing off the end of the crankshaft, are mounted on small platforms attached to one side of the central crank case.

The cylinders are provided with copper water jackets, the circulation being maintained by a pump driven off the crankshaft through the vertical shaft *l*, seen in Fig. 1, for which, as also for the sectional views, we are indebted to "La France Automobile." The lubrication is maintained by means of a small gear-pump which draws the oil from the lower part of the cylinders and forces it back to the upper portion of the same. The cylinder

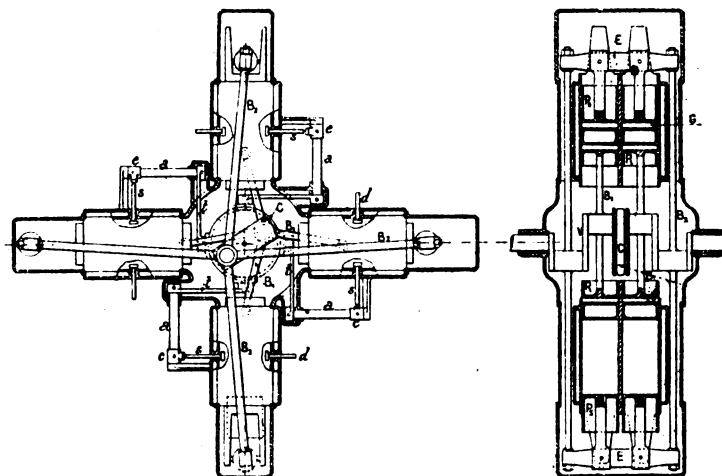


Fig. 2.—Sectional Elevations of Gobron Eight-Cylinder (sixteen piston) Aeronautical Engine.

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|---------------------------------------|---------------------------------|
| B1.—Connecting rods of lower pistons. | Pa.—Upper pistons. |
| B2.—Connecting rods of upper pistons. | V.—Crank shaft. |
| C.—Double grooved cam. | a.—Ends of exhaust valve shaft. |
| E.—Cross heads of upper pistons. | s.—Exhaust valves. |
| G.—Combustion chamber. | d.—Inlet valves. |
| Pl.—Lower pistons. | |

bore is 90 mm. and the stroke of the two pistons 160 mm., the engine developing 60-h.p. at a speed of 1,200 revs. per min. and 80-h.p. at 1,600 revs. The weight of the motor is given as 330 lbs., equal to, taking the maximum power developed, about 4½ lb. per h.p.

MOTORING IN ALGERIA AND TUNIS

CAPTAIN JAMES ARCHIBALD, of Washington, U.S.A., has recently returned from a two months' motor tour through Algeria and Tunis. He was much impressed with what he saw, and predicted that these two countries will become a favourite touring ground. He considers the roads the best in the world, superior even to the national roads of France. Captain Archibald went from Tunis to Le Kef, Bone, and to a point 100 miles beyond Biskra, then back to Constantine and Algiers. "It was by invitation of Comte Roger Martimprey, whose grandfather was at one time Governor of Algeria, that I made the trip," states Captain Archibald. "As an example of what the French have done, they have connected the sea coast towns of Bougie and Djidjelli by a road cut right out of the side of the cliffs. And it should be noted that the total number of inhabitants of these two towns is less than 40,000. This means that the Algerian authorities are building for the future. There are mines, farming lands, and residential properties to be developed along the coast that will make it a rival to the Riviera. There are thousands of miles of roads in Algeria and Tunis, marked every ten miles with a stone and at every cross-road with a guide-post right out into the desert. And all these roads are magnificently built, straight and smooth as a billiard table. Not only are the main cities connected by broad highways, wonderfully graded and drained, with tunnels when necessary, and covered ways through the mountains that would do credit to the best railroad systems in America, but even the remote mountains are networks of skilfully-surveyed bridle-paths, connecting the main roads for mules, donkeys, or camels."

MESSRS. PEARSON AND COX, of Shortlands, Bromley, Kent, sole agents for the Maxwell (American) car, several of which they have disposed of, are building a new and novel type of steam car with triple cylinders.

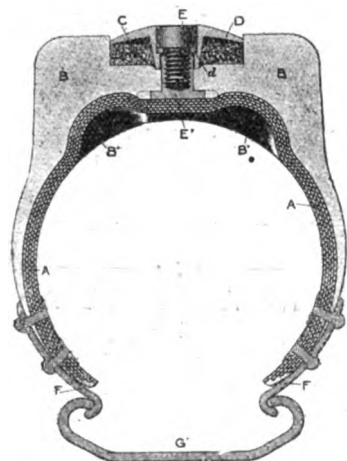
CONTINENTAL NOTES.

A New Motor-car Regulation in France.

A new regulation with regard to motors came into force in France on January 1st. It is apparently framed to secure the abolition of swinging number-plates, and specifies the size of lettering to be used on the plates and the method by which the rear plate is to be illuminated at night.

A Novel Tyre.

A decidedly novel solution of the tyre protector problem was shown at the recent Paris Salon by M. Tedesco, of 6, Rue du General Appert, Paris. It is known as the Talasso "route artificielle" or artificial road. The inventor argues that it is the road which does all the damage to the pneumatic tyre, and it is therefore to the road that we must look for protecting the same. He has therefore taken a number of paving blocks, placed them around his tyre and drawn them together by a tread. Consequently the delicate tyre no longer comes in contact with the road. The accompanying illustration shows the manner in which the interesting solution of the problem has been carried out. The "paving stones" referred to consist of rubber blocks B, whose profile resembles a horseshoe. The two ends are provided with steel hooks F, which engage with the clinches of the rim G. Within the mass of the rubber are incorporated layers of strong fabric A, which insure its rigidity. Twelve to sixteen of these blocks are arranged around the tyre and are connected together



by a chrome leather tread C, provided with steel studs E, and bolted to the centre of each block. The tyre itself is completely protected by this supple and strong protector. There are only two objections to this interesting invention, viz., its great weight and the fact that it does not prevent moisture reaching the rim.

La Coupe des Voiturettes.

The "Auto," of Paris, has already received numerous proposals of circuits for its Coupe des Voiturettes race, which is to be held in June next. One of them is close to Beauvais, in the department of the Oise, and another starts from Forges-les-Eaux (Seine Inférieure). According to the authors of these proposals both the circuits offer every possible advantage for the competition; that of Beauvais measures about 34 kilometres and is at a distance of 70 kilometres from Paris. The Forges-les-Eaux circuit, which forms a triangle with Forges as its apex, measures 35 kilometres; it is situated at about 115 kilometres from Paris and has the advantage of being fairly close to Rouen and Dieppe. Among the various other circuits suggested one starting from Amiens and passing by Querriers and Saint Gratien is rather captivating; it is composed of excellent broad roads and measures exactly 25 kilometres. In its whole course it does not pass through any agglomeration of houses, as even the village of Querriers is not traversed and there is not a single level crossing. Though the choice of the circuit will not be made immediately, six light cars—three Ravels and three Sizaire-Naudins—have already been entered for the race.

An "Elastic" Wheel Competition.

The "Auto" of Paris is organising a competition of spring and "elastic" wheels, as substitutes for pneumatic tyres. The event will be held from April 7th to the 17th next; the competing devices are to be fitted to motor vehicles, the latter being divided into five classes according to horse-power and total weight in running order. The minimum fixed is: Class A, 750 kilos.; B, 1,000 kilos.; C, 1,250 kilos.; D, 1,500 kilos.; E, 1,750 kilos. The test will consist of eight daily runs, during which time the cars will journey from Paris to Nice and back.

Public Services in France.

In the French Chamber of Deputies recently, M. Janet pointed out the advantages of an increased number of automobile services, and the suggestion was made that the Government should pay a bonus to even small enterprises of this kind. This would lead to the substitution of motor-buses for many horse-drawn mail coaches, which would greatly increase the speed and comfort of these services, and at the same time help the automobile industry.

The Improvement of the Roads.

Mr. Walin, the Chief Engineer of Roads and Bridges, of Brussels, considers that the line of the road of the future will be so laid out that the radii of the curves shall be the greatest possible. The radius of 328 ft. will be considered a minimum for important roads in the open country. In passing through towns and villages as well as in very mountainous countries, this minimum may be reduced in exceptional cases. In the future roads will have to be so laid as to avoid railway level crossings and drawbridges swinging on a vertical axis. It will have to be so laid out as to open up branch roads largely at the points where they join the main road. When the conditions are such as to deceive automobilists as to the direction they have to take, the causes of error should be masked by trees or by special constructions completed, when necessary, by very legible signs. As far as possible, the roads must be adapted for high speeds, broad, with easy grades and plenty of trees, and constructed with a view to a heavy and rapid traffic, but completed, if needs be, with branches to unimportant industrial centres, so as to satisfy the demands of local traffic.

Miscellaneous Items.

In view of the recent increase in the Kaiser's fleet of motor-cars, His Majesty has decided to reduce the number of his horses and carriages by half during the coming spring.—A motor-car exhibition is to be held in Antwerp from May 8th to the 23rd next.—The Pipe Company, of Brussels, has just supplied a 28-h.p. motor vehicle with expanding ladder for use in connection with the upkeep of the overhead conductors of the electric tramways in the Belgian capital.—The French Automobile Club has given a sum of £120 to the subscription which has been opened in France on behalf of the earthquake victims.—It is reported that the municipal authorities of Budapest are in the market for a number of motor-wagons.

Aviation et Chapellerie.

Les chapeliers d'Issy-les-Moulineaux surent profiter du mouvement créé dans leur commune par les expériences des aviateurs. Ils mirent en vente des casquettes de modèles différents baptisés; "la Farman," "Delagrange," "Malécot," &c. Les dits modèles, copiés sur le genre de coiffures portées habituellement par leurs parrains, furent marquées à l'intérieur de belles lettres dorées du nom de l'aviateur. Ces casquettes surent des fortunes diverses: la Malécot, par exemple, fut moins vendue que la Delagrange. Celle qui fit fureur, c'est la Farman. Vendue d'abord 1 fr. 45, elle fut tarifée deux jours après 2 fr. 45.

At Cecil Street, Carlisle, there is accommodation for about thirty cars at Fendley's Motor and Engineering Works. Plant is also available for carrying out repairs of all kinds, and a large stock of accessories is kept on hand.

SOME USEFUL NOTES.

It is very necessary to protect the joints of the steering gear, and for this purpose many cars are provided with leather-covered joints. This is a very desirable provision, and one which should be made by all who use their cars irrespective of weather. The joints should be thoroughly washed with a painter's brush and paraffin, and then given a good supply of motor grease, the whole being enclosed in a flexible leather casing, which can be sewn around the joints by any harness-maker or shoemaker.

When travelling over rough roads the driver should sit in such a position that the feet will not be shaken off the pedals. Otherwise, when the clutch is disengaged, as it should always be for a rough spot, and the car allowed to "coast," the feet may be jarred off the pedals, allowing the clutch to slam in, and causing great strain on the gears and transmission mechanism.

If a valve or the porcelain in a sparking plug breaks—fortunately both occurrences are now very rare—care should be taken to

HERE AND THERE.

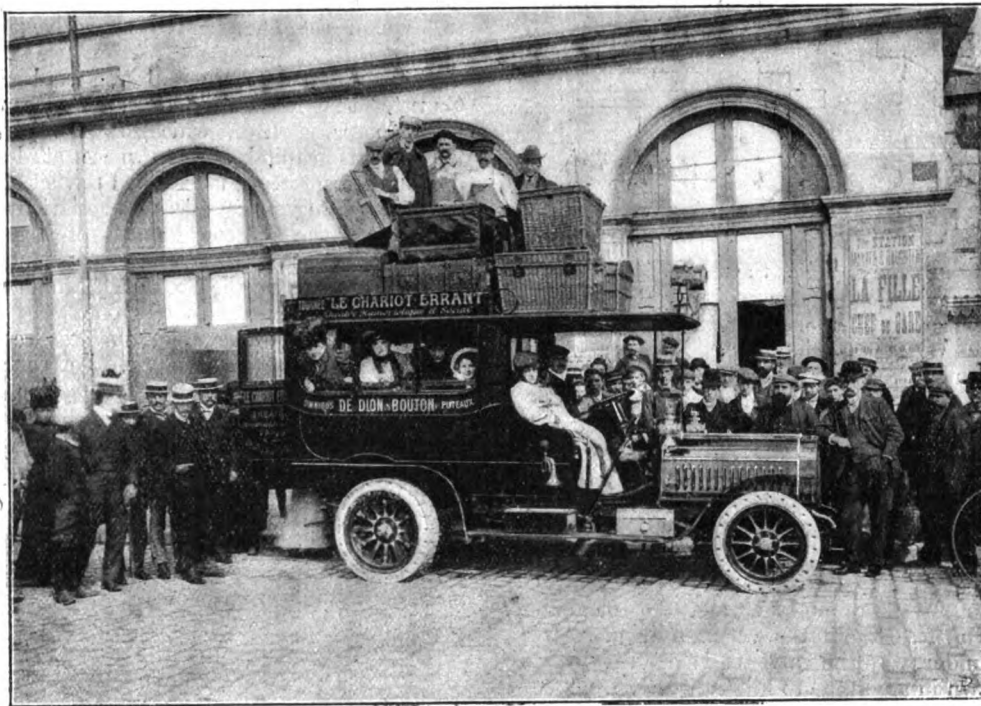
MESSRS. BURNHAMS, metal sign makers, &c., have opened a garage and motor works at St. Paul's Works, Deptford.

DURING 1909 two new stations were opened by the London Fire Brigade, one at Holloway and the other at Tooting, the plant of the latter consisting entirely of motor appliances.

FIFTY Argyll taxicabs are now run in New York by the Universal Taximeter Cab Company. The chassis were imported from Scotland, and the bodies were built in Boston from original designs by the Universal Company.

MR. A. F. SHAKESPEAR, of Bromley, an old-established motor engineer and repairer, is shortly taking over new and large works at Whitstable-on-Sea, Kent, which are being specially equipped for motor-boat repairs and building.

A MEETING of motor-car manufacturers and importers was held at the Hotel Cecil on Tuesday to discuss the question of certain foreign patents in their relation to motor-cars. Various resolutions were adopted and the gathering terminated with a vote of thanks to the chairman. The proceedings were private.



A French Travelling Theatrical Party now makes its journeys from town to town by the special De Dion Motor-Bus depicted in the illustration. Not only does it carry the Actors and Actresses, but, as will be seen, the roof is specially arranged to convey the properties.

ascertain whether any of the pieces have got into the cylinder. If so, they should be removed before attempting to run the motor, as it does not take a piece of steel or a few chips of hard porcelain a very long time to so cut a cylinder that it must be renewed. As a rule, cylinder walls are not of sufficient thickness to permit re-boring if it is necessary to take off more than the merest suspicion of a cut, and a few chips caught by the piston can make fairly deep grooves the entire length of the stroke.

To prevent any emery or other abrasive material from falling into the cylinder while grinding in the valves it is a good plan to tie a length of strong string to a small piece of waste and force the latter into the cylinder. If any of the mixture should happen to fall off the valve, the waste catches it, and when the grinding operation is completed it may be drawn out with the waste by means of the string.

In the case of a nail puncture in an outer cover, the hole made by the nail should be covered by sticking a bit of prepared canvas to the inside of the casing to prevent grit and water from working in between the inner tube and the cover.

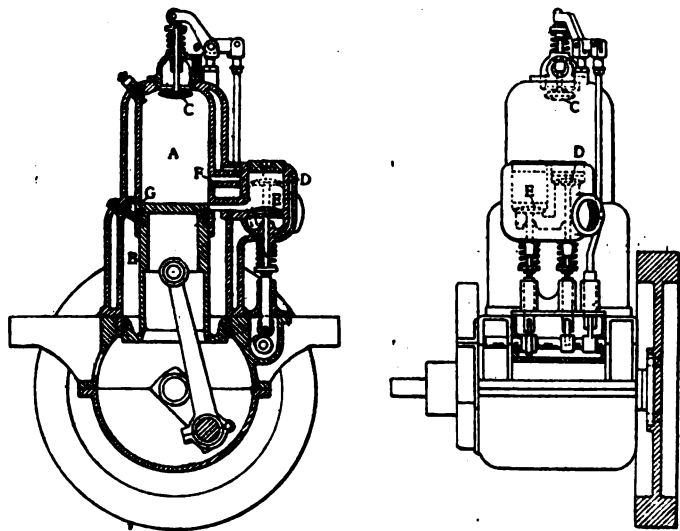
THE Hon. Charles S. Francis, the American Ambassador to Austria-Hungary, has lately ordered a special electrical motor landaulet, which is to be exclusively used for making calls at the palace of the Emperor Francis Joseph. With its dignified appointments and two men on the box the vehicle will no doubt attract attention in the streets of Vienna.

A NEW tyre, in the construction of which solid rubber enters, is now being tried on a 50-h.p. six-cylinder Thames car. This is known as the Blaisdell, and the rubber is claimed to be prepared in such a way as to secure the utmost resilience while being able to withstand punctures and other terrors of the road. We hope to record our own impressions of the running of a vehicle fitted with these tyres at an early date.

MESSRS. VAN RADEN AND CO., LTD., of Coventry, forward their general price list for 1909, in which are set forth particulars of their patent spun glass and woven glass accumulators, to which we recently referred in these columns. The illustrations also include hand lamps, roof lights and reading lamps for the interior lighting of the car, the Van Raden induction coils, low tension contact makers, sparking plugs and other electric devices with which the name of the firm has been long associated.

MR. D. T. ALLEN has opened a large new garage at Bromley, Kent, adjoining the south station on the London road. There are two main road entrances and accommodation for over a dozen cars.

WE illustrate herewith a new two-cycle motor which has recently been put on the market by the Wisconsin Machinery and Manufacturing Company, of Milwaukee, U.S.A. As will be seen, it is of the differential piston type; there are three valves to each cylinder, all of them of the common poppet type, operated from a cam shaft, as in an ordinary four-cycle motor. The cam



shaft, however, turns at the same speed as the crank shaft. The novel feature of the engine is that it does not pre-compress its charge in the crank case or any other chamber, the charge being drawn directly into the working cylinder. A is the working cylinder and B is the annular chamber. Supposing the piston to be at the top of its stroke and the charge contained in A to be exploded, driving the piston down; when the latter gets well toward the bottom of its stroke the port F is uncovered and a large part of the burning gas passes out through the exhaust valve D, which has been opened at the proper time by its cam. Meanwhile the downward movement of the piston has created a vacuum in the closed chamber B, which increases as the piston continues to move down. When the piston is near the bottom of its stroke it uncovers a series of ports G and the remaining burnt gases rush through these to fill the vacuum in B. After this movement is well under way the valve C is opened by its cam and mixture is drawn in around C to fill A directly from the carburettor. When the piston reaches its lower dead centre the valve C closes; so as soon as the piston has moved up far enough to close the ports G it begins to compress the mixture in A. The valve E then opens and remains so for the entire up stroke, so that the burned gases are completely exhausted from the chamber B.

It is reported that arrangements have been made between the Hart-Kraft Motor Company, of York, Pa., U.S.A., and the Post Motor Company, of New York, whereby the latter establishment will undertake to put no less than 1,100 petrol lorries, made by the former, in service within a radius of fifty miles from the American metropolis. The maintenance of these machines will be undertaken by the Post company, which will lease them on yearly contracts to establishments which have need for their services.

WHITAKER'S ALMANACK for 1909 preserves the features which have given it an authoritative position among this class of book for more than forty years. The index now extends to over 6,000 references, and the section relating to the British Empire has been considerably extended, while new articles deal with the Navigation of the Air, the new Patent Law and similar matters. The progress of the motor industry in the British Isles is also briefly set forth. As a work of reference, despite the publication of several other annual works, Whitaker's Almanack increases in favour.

A DEBTOR at the Hertford Bankruptcy Court, who had been carrying on business as a horsebreaker, attributed his insolvency to the increasing use of motor-cars, with the consequent bad trade and loss of business.

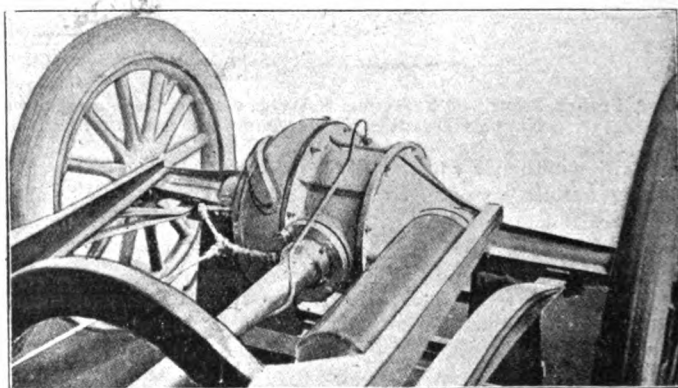
A NEW organisation known as the Women's Motoring Club of New York held a two-days' run from New York to Philadelphia and back on the 11th and 12th inst. The motto of this club is "By women; for women," and the run was for cars driven by women, and only women passengers were carried.

MESSRS. WADHAM BROS., of Waterlooville, near Portsmouth, automobile engineers, have opened their new garage and works, covering a space of some 4,000 square feet. It is situated less than fifty yards from the main London road. The establishment is lit throughout by electricity, and every facility and accommodation will be afforded automobilists touring in and about the district.

THE Junior and O.T.A.V. Cars Company, Ltd., of Long Acre, London, W.C., have taken up the agency in the following districts, South Essex, Kent, Surrey, Sussex, Hertfordshire, Bucks, and Middlesex, for the Bentall cars, manufactured by Messrs. E. H. Bentall and Co., of Heybridge, Malden, Essex. The London manager of the Junior Company, Mr. E. E. Leverett, will be pleased to explain the points of the new vehicles to any interested inquirer.

WE learn from the "British and South African Export Gazette" that Mr. Cecil Dawes, engineer to the Transvaal Taxi-Cab Company, Ltd., which, by the way, proposes shortly to increase its capital and to place at least 100 cabs on the Johannesburg streets, is expected to visit England at an early date, his object being to complete negotiations for the purchase and shipment of the first consignment of cabs. With Capetown and Durban also interested in the "taxi," and other Colonial centres likely to become so, the South African market for these vehicles is destined to prove an important one.

FROM the Daimler Motoren Gesellschaft, of Unterturkheim, Germany, we have received a copy of the 1909 catalogue of Mercedes cars. This gives full particulars of the various models—15-20-h.p., 35-h.p., 45-h.p., 55-h.p., 65-h.p., four-cylinder vehicles, and the 65-h.p. and 75-h.p. six-cylinder cars. The two smaller types have cardan shaft transmission while the others have side chain drive. The list is well illustrated, views being given of each of the chassis as well as of the engines and other parts of the mechanism. The final portion of the catalogue is devoted to full-page pictures of the different types of bodies which may be adapted to these well-known machines.



View of Rear Axle of D.S.R. Car. (See page 973 last issue.)

THE French Minister of Public Works has issued a notice to the effect that the painting of the identification number on the radiators of motor-cars does not fulfil the requirements of the law in France and that the numbers must be shown on a proper plate.

THE Allen-Liversidge front-wheel brake has been entered for a trial by the R.A.C. of its anti-skidding properties, and of its general efficacy. Provisional arrangements have been made for the test to take place in the first week of February.

Correspondence.

[Letters to the Editor should be addressed to the offices, 27-33, Charing Cross Road, London, W.C.]

UNUSUAL MAKE-SHIFT REPAIRS.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—An account of how I made the vulcanite pipe stem of a tobacco pipe answer as a temporary carburettor jet may interest some of your readers, as I think this is one of the most curious make-shift repairs. It happened this way. The car—a single-cylinder—started misfiring, and when popping in the carburettor commenced I decided it was time to have a look round. Dismounting the carburettor, I found the jet choked, and in removing this with a spanner it unluckily broke in two in the jet chamber. I had not another jet with me and as the carburettor was of an old type things looked awkward. Pulling out my pipe, I was about to light up, when the thought occurred to me that the round vulcanite pipe-stem might answer as a substitute for the jet. As luck had it it was a good fit, and I found that I could screw it into the carburettor. The jet was a shade longer than the other, but with fell air I was able to start up the engine, and I got home without further trouble.

The question was recently asked me as to why an engine that has been running comparatively quietly will become noisy. Of course, there are several reasons for this. A knock may set in through pre-ignition, insufficient lubrication, &c. Another cause is a loose holding-down bolt to the cylinder, when it follows that at each explosion there is a tendency for the cylinder to be forced up off its seating. Hence a metallic kind of clink, which is not easy to locate, but simple to remedy.

and each cylinder firing right and compression on each good. The trouble, however, was due to a simple matter, yet sufficient to upset the engine running. After starting it up, I saw a tiny puff of smoke blowing from two of the plugs, and I saw that the copper washers had been left out. When these were fitted, the engine showed its proper power.

It is well to look at the tap now and again of chemical fire extinguishers, as I had one with the tap quite seized up, and it was impossible to turn it even with the hammer. This was no doubt due to some of the liquid getting round the joint, but had it been suddenly wanted, and had I not noticed the defect, serious damage might have been done.—Yours truly,

S. I.

CARS AS BATTERING-RAMS.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—The daily papers have been speculating on the possibility of the car which was involved in the so-called "Cliff Mystery" having caused the damage to the wall, seeing that the car itself was not very badly knocked about. There does not appear to be anything very remarkable in the car having knocked down the wall without being itself disabled. Anyone who has had a certain amount of driving experience has probably met with far stranger and more unaccountable incidents than this.



Motoring in High Altitudes.—A car at the Lick Observatory, on the summit of Mount Hamilton, California, 4,400 feet above sea level.

The following, which came under my notice lately, shows that a very simple matter will cause a knock:—The owner of the car thought that something was wrong, as there was a continual knocking. I noticed this, and at first put it down to back-lash in the universal joints or something loose in the bevel drive, but these were found all right. The cause was very simple, as I found partly by accident, for the inspection lid on the crank case was loose. It took two minutes to tighten up the wing nuts and cure the trouble.

The following tip about metallic disc clutches may be useful:—If the car has been standing idle for a little time there is sometimes a difficulty in starting. The pressure of the springs after a long stand presses the plates together so tightly that they do not disengage easily on the depression of the clutch pedal, so that it is a job to get the gear in. A mixture of paraffin and thin oil will free the clutch, and if slipping sets in this may be overcome by adding some thick oil as required.

There is no part of a car where first-class material and design are of so vital importance as in the steering gear. I was once mixed up in an ugly smash through the steering gear suddenly going, and since then I have always been careful to see that these parts are adjusted. Of course, a certain amount of wear is bound to set in, even with the best attention.

When it is raining and the roads are heavy, in changing tyre cover or tube on the road it is difficult to avoid mud and grit getting into the cover. Of course a rag comes in useful for wiping the mud off the tyre and the rim, but I have found an ordinary scrubbing brush is a great deal better, and one with very stiff bristles does best. The same brush is often useful for a cleaning up on any part which cannot be scratched.

I was testing a new car lately, and it did not seem to pull as it ought, and after having to drop into second gear for a bit of a hill, I thought it time to have a look round. Before starting everything seemed all right,

I was once driving in Gloucestershire a small car, fitted with plain tyres, which began to slide bodily downhill, on an atrociously greasy road, with the back wheels locked. As it started this glissade at the top of the hill, which was about half a mile long and had a sharp turn at the bottom, I was not left with many alternatives. If the brakes were kept on the car would slide down, and if they were taken off it would run down faster, so I steered for the gutter at the side of the road and still applied the brakes. The end of this was that the car started to go sideways, eventually ran across the grass along the side of the road and charged a wall. About two yards of the wall were demolished and the car then receded from its onslaught and ran backwards to the bottom of the hill, where it slowed up and stopped, as the road was dry and the tyres could get a grip.

But, in spite of the wall being knocked down, the only marks on the car were at the front of one dumb-iron, where the paint was gone, and a similar scratch on the front of the corresponding mudguard; the dumb-iron was not bent nor even was the mudguard, while both headlights were unharmed. How these things were possible is still a mystery, but, after the experience, I can quite believe in a car knocking down a wall and being only slightly damaged itself.—Yours truly,

GLOUCESTER.

V388

AN ENGINE QUERY.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—I have a twin-cylinder car with automatic inlet valves, which runs beautifully except for a loud sucking noise, which I am told is the result of engine having suction valves. The carburettor has an automatic air valve, and the main air intake is a pipe about an inch diameter, running round to exhaust pipe, where it opens out tundish fashion. Is it possible to do anything to do away with this noise without affecting the power, &c., of

the engine? The last two-cylinder car I had also had automatic valves, but this noise was not noticeable; this car had inlet and exhaust valves on one side, and the main air intake was close to the exhaust, and had a bell-shaped mouth with fine mesh netting cover. The new car has valves on opposite sides, and has a long way to fetch the air.—Yours truly,
W. T. J.

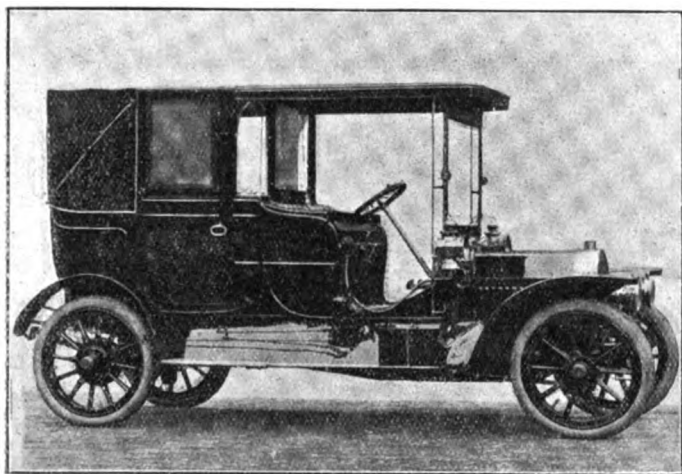
[The noise can be remedied by fitting a miniature silencer on the end of the air pipe. It consists simply of an enlarged chamber with one end perforated with sufficient small holes to more than equal the area of the air pipe, or a larger air pipe might in this instance effect a remedy. We do not think the automatic inlet valve has anything to do with the noise.]

USING THE ENGINE AS A BRAKE.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—I notice your correspondent "Mazagran's" remark in a recent issue of your Journal, that certain firms have designed their engines so as to use them as a brake, &c., when running down hill, and that by entirely closing the throttle a charge of fresh air is drawn into the cylinders at each suction stroke, thus thoroughly scavenging them. Might I remind him of the lubricating oil that has worked up with the pistons since the spark was switched off, and the effect of same when you switch on again?—Yours truly,

GOLLIWOG.



The Star 16-h.p. Double Landulet recently supplied by the Star Engineering Company to the order of Mr. Rafael Gordon, of Madrid.

ACETYLENE LAMPS IN FOGGY WEATHER.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—When out driving at night during the recent foggy weather I have found that my acetylene lamps, although of great power, were of very little use in lighting up the road: indeed, I found them rather a nuisance than otherwise. I shall be glad to know if this is the experience of other motorists, and also whether there is any means of making these lamps of service in periods of fog.—Yours truly,

SUSSEX.

"E. D.'s" inquiry *re* suitable places for starting in the motor-car repairing business has brought several replies, which have been forwarded to our correspondent.

"POLICE CONTROLS."

THE measured furlong at Barnes has been in frequent operation during the past week.

MOTORISTS driving on the Epsom road should beware of the trap in the London Road, Morden.

THE controls in Long Bennington, and between the parishes of Great Ponton and Colsterworth (Lincolnshire), are generally policed at the weekend.

THE exclusive agency in this country for the well-known Leon Bollee cars has been placed in the hands of the Connaught Motor and Carriage Company, Ltd., of Long Acre, W.C. Some time ago this important agency was carried by the Victoria Carriage Works, and as the late managing director of the latter now occupies a similar position in relation to the Connaught Company, the agency is thus transferred practically to its original quarters. Recent purchasers of Leon Bollee cars through the Connaught Company include Lord Listowel and Lord Ashburton.

ROAD REPORTS.

SPEED LIMIT.—The Beckenham Council has decided to apply for an order for a ten-mile speed limit for motor-cars in certain parts of the district.

SCOTLAND.—The Cupar District Committee have applied for an order from the Secretary for Scotland to restrict the speed of motor-cars to ten miles an hour at twenty-one points within the area of their jurisdiction.

CARRICKFERGUS.—An inquiry was held at Carrickfergus on the 7th inst. on the requisition of the Carrickfergus County Council, that a speed limit of ten miles should be imposed in the town and to a distance of three miles outside. Counsel attended on behalf of the Irish A.C. to oppose the application and members of the Club residing in the district were present and gave evidence. A police sergeant who was witness for the County Council, when cross-examined stated that if warning posts such as were erected by the Club cautioning motorists to drive slowly through the town were erected at each entrance they would have the desired effect.

ARGYLLSHIRE.—The County Council of Argyllshire has agreed to improve the bend on the Rest and Be Thankful Hill, made famous by its inclusion in the route of the Scottish Reliability Trials. In consideration of this service a Scottish correspondent suggests that motorists should remember the county when registering their new vehicles.

REIGATE.—Mr. Fred T. Clayton, the Reigate Surveyor, reports that the London and Brighton main road is under repair from the level crossing at Reigate Station, through the tunnel, to the Market Place. He suggests, as an alternative route, that motorists should take the London road right at the junction with Tunnel Road, about 300 yards south of the level crossing, and then take the turning to the left at the corner, by the Red Cross Posting House.

WALTON-ON-THAMES and **Woking** are to have their ten mile speed limits as soon as the prescribed warning signs are ready for erection along the lengths of road dealt with.

THE SONG OF THE AUTO.

BY DR. J. M. HARPER.

Up with you then, as a token of mettle,
Hey, ho, my lady! ..
Into the tonneau the rest of you settle,
Hey, ho, my lady!
With care wind around you your wrappings and fall,
As springs the long bonnet away from the wall.
The horn sounds hurrah as the piston makes test,
The balm of the morning with cheer fills the breast,
The soul finds delight in the motion that's rest,
All in our outing, my lady!
Speed then, since steer we must;
Into the highway, out of the dust,
Fleet as the wind, fleetest, fast,
Into a present just out of a past.
Away through the suburbs, where lanes seek escaping,
Hey, ho, my lady!
Away where the landscapes find sunshine and shaping,
Hey, ho, my lady!
The fields green and gold kiss the hedgegrows near by,
Befringed by the woodlands that coy with the sky.
The horn flouts alarm as if 'twere a jest.
It's echoes make laughter from hill slope to crest:
Hurrah for the bliss of the motion that's rest,
All in our outing, my lady!
The rubbers are nerved with full faith in their humming,
Hey, ho, my lady!
The gearing gives answer that more speed is coming,
Hey, ho, my lady!
Dangers ahead, in defiance of harm,
Declare for retreat, as the horn sounds alarm,
The breeze in it passion the tonneau is pressed,
A waltz, 'tis for all, where speed is the zest,
With mirth unrestrained by the motion that's rest,
Hey, ho, my lady;
Be prudent, you say: What! with joy still awaking?
Hey, ho, my lady!
Ah, ha, press the lever, such joy ne'er forsaking,
Hey, ho, my lady!
Onward, and on, with the blood all a-leap,
What reck's though the wind feels a rage in its sweep;
Yea, onward, and on, till the sun's in the west,
Till motion be spent with the honk making jest,
As halting-place finds for that motion its rest,
All in our outing, my lady!

—The Canadian Motor.

THE Maudslay Motor Company informs us that Messrs. Walker and Co., of Colombo, have been appointed sole agents for the Maudslay cars in Ceylon.

CLUBS AND ASSOCIATIONS.

ROYAL.

INVITATIONS to the first annual dinner of the R.A.C. and its associated clubs, over which Prince Francis of Teck presided, on Thursday, had been accepted by H.S.H. Prince Alexander of Teck, Sir E. R. Henry, Chief Commissioner of the Metropolitan Police, and Mr. E. H. Evan-Lombe, the High Sheriff of Norfolk.

The reduction of the driving examination fee of 5s. has increased the number of candidates. On Saturday an examination of soldiers desirous of taking up motor-car driving was held at Aldershot, and other tests are being arranged for Birmingham, Exeter, Plymouth, Portsmouth, &c.

AUTOMOBILE ASSOCIATION.

As was recently announced in our columns, the Automobile Association has a stand at the New York Motor Show which opens at Madison Square Gardens on the 16th inst. Cordial relations have been established during the past season with the American A.A. and kindred societies, and American tourists who may be visiting Great Britain with their motor-cars will benefit by the rule passed on Tuesday (January 12th) at a special general meeting of the A.A., whereby members of the Irish Club and foreign motoring organisations, permanently resident in their respective countries, are now admitted to membership at the special subscription of £1 ls. per annum—the ordinary subscription to the association being £2 2s. Full particulars of this concession may be had on application to the secretary, at Princes Buildings, Coventry Street, London, W.

NOTTINGHAM.

As usual, the annual dinner of the Nottinghamshire Automobile Club, which was held at the Victoria Station Hotel, Nottingham, on Friday last week, proved a most enjoyable and interesting function. Mr. Charles Hardy, the president of the club, was in the chair, and was supported by H.S.H. Prince Francis of Teck, the chairman of the R.A.C., and Councillor J. T. Spalding, the Deputy Mayor of Nottingham. About 150 ladies and gentlemen attended the function, among those present being the Sheriff of Nottingham (Mr. E. Meller), Lord Herbert Scott, Mr. R. B. Bagnall-Wild, J.P., Mr. A. Richardson, M.P., Colonel Bosworth, and Messrs. A. Barlow, E. M. C. Instone, Julian Orde, Stenson Cook, A. McAlpin, Godfrey Lowe, C. E. W. Lucas, P. Richardson, C. R. Garrard, R. A. Young, Frederic Coleman, A. Mobbs, A. Tozer, M. Ross-Browne, and R. Cripps.

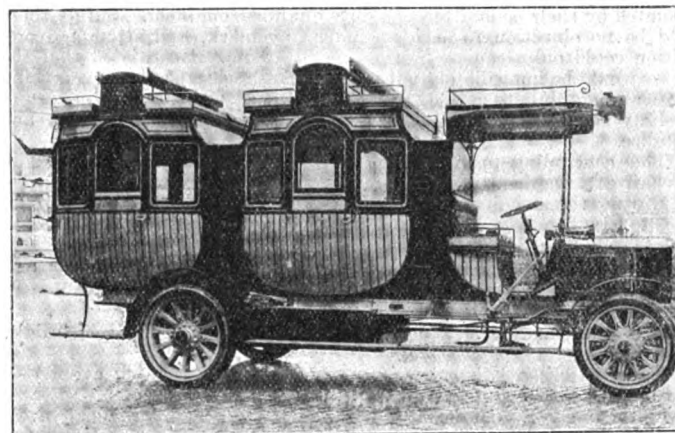
Following the loyal toasts, Councillor A. R. Atkey proposed "The City and County Authorities" in a humorous speech. Having referred to the humour of the attitude shown towards him by certain of the city fathers in the City Council, and the value of the grace of humour, he remarked that as motorists depended so largely upon the governors of the city and district, it was most essential the relations between them should be of a friendly character, and it had been part of the club's policy since its inception that—whatever else they did—they never failed, with unfailing instinct, to invite the representatives of those authorities to their annual dinner. Whatever their faults, the desires of the members of the club were the best, namely, both privately and as an organisation, to conduct their pastime in a way that should be creditable to the city. He hoped the day would be far distant when they would not feel perfectly safe, contented, and happy in extending their annual invitation to the authorities to join them on that occasion.

Councillor J. T. Spalding, responding on behalf of the borough, apologised for the absence of Major Ashworth, the Mayor, explaining that he had suddenly been called away to London on business. As far as the city authorities were concerned, they had had no occasion to complain of any breach of privilege by motorists. During the twelve years he had been on the Bench he had only had about two cases brought before him. Mr. E. Meller, the sheriff, also responded, joining with Councillor Spalding in expressing his satisfaction at the fact that motorists invariably drove through the city with very great care and discretion. Mr. R. B. Bagnall-Wild could not understand why he had been called upon to speak for the County, unless it was as "a bloated beak." He assured the club the only thing the county bench had done as a rule was to look after the safety of the people. At the same time, he felt that no one had done so much good for motorists in that direction as the club itself. While not feeling able to-day to claim that Notts had got the best roads in the kingdom, there was a promise of something better in the future. Personally, he was not of the opinion that motorists did as much damage as some attributed to them. He felt they did more damage to their tyres than to the roads, and that in a few years' time those who travelled too quickly would cease to do so because of that damage. He scarcely thought the Nottinghamshire County Council were putting quite the right material on its roads, but the matter would be looked into carefully, and in a few years they would, he hoped, have roads of which they might be proud.

In proposing the toast of "The Notts Automobile Club" H.S.H. Prince Francis of Teck regretted the absence of his friend, the Hon. Arthur Stanley, M.P., who, according to original intentions, was to have given the toast. He could not forget he was talking to friends, and loyal friends, of the club of which he was chairman. The committee of the R.A.C. would never forget with what extreme loyalty and wholeheartedness the whole of the Notts Club elected to join the parent club in London. The Notts club were in the magnificent position of having their own track upon which to run their own speed trials. It was indeed

a piece of exceedingly good luck that the Duke of Portland was in that county, and he was glad to think that the duke had given them the road and that they were enabled to perform their trials in a manner so efficient. Again, they had another great advantage in having the support of the law. He (the Prince) had said the previous night at Leeds, and he said it to them now, that the policy of the Royal Automobile Club was this: "Do not let us go against the law, but go with the law." So long as they went with the law they were acting to the advantage of the automobile world in Great Britain and Ireland. After referring with regret to the retirement of Mr. Charles Hardy, the president, the Prince continued that he was extremely pleased to be present in his capacity of chairman of the R.A.C., and he personally thanked Mr. Hardy for the very great work he had done in the county on behalf of automobilism, and it was very possible that he might do the same work for the club in the county to which he was going.

At this point an interesting departure was made from the programme, for before Mr. Hardy responded to the toast Mr. A. Barlow rose to make a presentation on behalf of the club members to their retiring president. Mr. Barlow remarked that, along with the joyous nature of the dinner, there was an undercurrent of sadness throughout the assembly, and that undercurrent was easily understood, because they had arrived at the parting of the ways, for they were going to say goodbye to their president, who, through force of circumstances, was leaving Nottingham. He could assure them that no man in the country was a more hardworking and energetic president than Mr. Hardy. He had practically attended every meeting of the committee, and that night they were to show some tangible form of their respect for him. Mr. Barlow, on behalf of the committee and members of the Notts Club, then presented Mr. Hardy with a handsome silver vase, a piece of Chinese workmanship over 100 years old.



The Novel Motor Coach recently designed and built by Messrs. John Norman, Ltd., Cardiff, to the order of an Antwerp Gentleman. To enable the car, the chassis of which is a 40-h.p. Darracq-Serpellet steamer, to be sent anywhere by rail the top boxes are removable and the backrests fold down. The inside of the body is fitted with folding polished card tables, &c., and is upholstered in leather. The inside of the roof is of bird's eye maple.

Mr. Hardy spoke feelingly in acknowledgment of the gift. He thanked the Prince, on behalf of the Notts club, for having honoured them with his presence, and for the words he had used in proposing the toast of the club. As to himself, it had always been a great pleasure to do what he could for the club, loyally supported as he had been by the committee and the members. Mr. Hardy specially referred to the way in which Mr. Booth Granger, the hon. sec., had helped to make the president's task as light as possible. It was a great consolation to know that Colonel Birkin, a man well known throughout the county, had accepted the presidency. No man was more fitted for the post, and they would give him their loyal support. Touching upon past history, the speaker remarked that not only was the Notts Club the first to become affiliated to the Automobile Club of Great Britain, but it was the first to rally round the old flag when the parting of the ways came. Although he was leaving the district, he would continue to take just as much interest in the club as before, and he hoped to remain a member as long as he had anything to do with a motor-car. Their presentation would always remind him of the happy days he had spent with the club.

The toast of "The Royal Automobile Club" was proposed by Mr. Frederic Coleman in a speech full of amusing stories; he congratulated the R.A.C. upon the affiliation of the Notts Club—a good example which was being followed by others, not quite so brave, loyal, and true, but, nevertheless, coming in to get the benefits offered, with the knowledge and full understanding that they were affiliating with a club that "did things." In responding, Mr. J. W. Orde said the road question was one which was going to occupy their attention very seriously for many years to come. The position had been reached when, with the ever-increasing demand on the roads, the latter had got to be improved in order to carry

a traffic which ran not only for pleasure, but for business, and it behoved County Councils and surveyors to study the question to make the roads suitable for motor traffic, and dustless as far as possible. Mr. O de also mentioned that the R.A.C. had before it a scheme of insurance.

Mr. Booth Granger, the hon. secretary, proposed the toast of "The Visitors." To this Mr. A. Richardson, M.P., responded, and mentioned that he had purchased a motor-car principally for business purposes. In his view the success of the motor industry in the future chiefly lay in the fact that it would be largely used in industrial and commercial concerns. He joined in the regret at Mr. Hardy's departure. P.S. Clay, Chief Constable, also replied, stating that motorists had not given him a great amount of trouble.

A further response was that by Col. Bosworth, the chairman of the Automobile Association. The Colonel remarked that he often thought that one of the greatest purposes achieved by meetings of that kind was the strengthening of that solidarity which is at present most necessary for everyone interested in the great motor movement. Anything that made for this good fellowship and comradeship could not be other than useful; on the other hand, any individual or group of individuals which did anything to create disunion or to disturb what he might call the general cohesion of motorists was doing an ill turn to the movement. There had been recently placed in his hands a copy of a letter issued by the automobile institution in the North to officially appointed repairers, and this document distinctly bound the holder of such an appointment not to exhibit on or about his premises any plaque or placard relating to an appointment by another automobile institution. This sort of "you-shan't-play-in-my-garden" action was calculated to create much irritation and to give grave cause of offence. He thought that every reasonable man would agree that were it possible to enforce such a condition, which fortunately it was not, a great hardship would be inflicted upon other societies—as, for instance, that of which he had the honour to be chairman—the Automobile Association. Even they were God's creatures and required competent repairers, and needed an outward and visible sign by which their members could recognise the premises of the man selected and appointed by their committee as a duly qualified engineer. Surely there could be no objection to such an indicating mark, and attempted prohibition could only lead to friction and disunion. He trusted that the matter would be immediately put right, because motorists had everything to lose and nothing to gain by squabbling amongst themselves instead of standing shoulder to shoulder to resist the forces of ignorance and prejudice.

The concluding toast was that of "The Secretary," submitted by the chairman, and heartily drunk by the members.

During the evening the president presented the cups, medals, and prizes to members who had been successful in last year's competition as follows:—

Photographic Competition.—1, Booth Granger; 2, A. R. Atkey.

Wilson Cup.—1 (Wilson cup and gold medal), M. Ross-Browne; 2 (silver medal), Dr. Tressider.

One Mile Handicap.—1 (gold medal), Dr. Tressider; 2 (silver medal), G. A. Bird.

Fastest Flying Kilometre for any type of car (scratch event).—1 (gold medal), F. Newton; 2 (silver medal), E. M. C. Instone.

Foster Cup.—1 (gold medal), M. Ross-Browne; 2 (silver medal), J. E. Stanning.

Special medal for the best performance of a member who has not driven a car more than twelve months.—T. Cuthbert.

Special medal given by the R.A.C. to the Notts Club for best performance of the year.—M. Ross-Browne.

A collection was made during the evening towards the Nottingham "Guardian's" Shilling Fund on behalf of the earthquake sufferers in Sicily, a sum of £8 6s. being realised.

YORKSHIRE.

THE annual dinner of the Yorkshire A.C. was held at the Hotel Metropole, Leeds, on Thursday of last week, when Mr. E. H. Hepper, chairman of the club, presided in the absence of the president, Earl Fitzwilliam. Among those present were Prince Francis of Teck, chairman of the R.A.C., Mr. Robert Armitage, M.P., Major Atcherly (Chief Constable of the West Riding), Messrs. E. Gordon Learoyd (hon. sec. Huddersfield A.C.), A. Armitage (hon. sec. Somerset A.C.), R. J. Wells (hon. sec. Barnsley), C. P. Wilson (hon. sec. Yorkshire A.C.), J. W. Orde (sec. Royal A.C.), A. E. Masser, H. R. Kirk, Warwick J. Wright, and R. Winn.

After the loyal toasts had been honoured that of "The Yorkshire A.C. and its affiliated branches" was submitted by Mr. J. W. Orde, who regarded the association as one of the most important outside of London, and pointed to the unique position it held in having the fine stretch of protected sands at Saltburn whereon to hold race meetings. He referred in detail to the figures recently published showing the number of motor-cars in the country. Throughout Great Britain and Ireland 74,000 cars were registered in 1905, whereas at the present time there were 154,391. In 1903 there were 429,000 horse-drawn vehicles in the country, but at the present time there were 402,000, which showed that the horse was slowly but surely disappearing in favour of the mechanically-propelled vehicle. Taking a grand total of all horse-drawn vehicles, the figure of 550,400 in 1903 had now decreased to 520,000. Motorists must use the highway with proper discretion. At present there was no uniform system for erecting danger signals. The first principle was that danger signals should all be in the by-roads, for it was the duty of a person emerging from such a road to watch the main road traffic, which undoubtedly should have the right of

way. Again, they should be erected in an absolutely uniform way, or, in other words, near the point of danger.

The Chairman responded, and referred to the postal vote of the club by which they had decided to join the R.A.C., and mentioned that the club supplied danger signals to district councils applying for them. With regard to the fact that no permits would in future be granted for road races, Mr. Hepper said he trusted that it did not mean that speed trials on hills were to be prevented, and that the Yorkshire Club would get a permit for the trials at Pateley Bridge, where in the last two years they had had some excellent climbs. Response was also made by Mr. Gordon Learoyd, who said in Huddersfield they had taken up the question of inconsiderate driving and had threatened those motorists who did not behave themselves on the road with legal proceedings.

Mr. A. E. Masser proposed "The Royal A.C.," and an enthusiastic welcome was accorded.

Prince Francis of Teck, who responded. His Serene Highness referred to the history of the club, and said that within two years they would have one of the most beautiful clubs in the world. The Yorkshire A.C. had joined the R.A.C. because they were Yorkshiremen and because they were sportsmen, and all Yorkshiremen stood shoulder to shoulder in every attack, in every battle. He was glad and proud to think that they had come to the Alma Mater of automobilism. The committee, of which he was chairman, considered that there was only one possible way by which the real interests of the automobile world could be served, and that was by one united body, so that when the day of battle came they might stand together united to carry forward the interests of the automobile world, and to try and withstand in every possible way the great animosities that they had had to contend with. Referring to recent events, His Highness said that automobilists had to regain their reputation, and that could only be regained by very tactful and very careful consideration. There has been some chaff about the writings in the Press. He did think that when certain motorists wrote to the Press they might write with accuracy, and not always advance engines of their own type. His Highness mentioned that of the clubs associated with the R.A.C. thirty-seven were loyal, with a membership of 6,927; there were thirty-six auto-cycle clubs, with 2,253 members; the R.A.C. members numbered 4,507, and there were a thousand individual associates, making a total of 14,687 members of the automobile world in Great Britain and Ireland who were unitedly standing together. Fifteen clubs, with a membership of 1,277, had not yet decided to affiliate. The R.A.C., he added, might claim that it had the goodwill of the automobile world.

THE CONDITION OF THE ROADS.

With regard to trade trials and hill trials, he was certain his committee would support all the trials of the trade manufacturers and the hill trials, year in and year out. What the Government took exception to were speed trials on His Majesty's highway. Somebody had suggested that motor-cars were unsuitable for the road. "I might suggest," said His Highness, "that the roads are unsuitable for the motor." In conclusion, he said: "Whatever we automobilists do, let us all stand together, not against the law, but with the law, and therefore help the law and further our own interests."

Mr. H. T. Wells, of Barnsley, proposed "The City, Town, and County Authorities," and in response, Major Atcherly, the Chief Constable, mentioned one or two points on which the authorities and motorists might co-operate. He suggested something in the nature of a reconnaissance of the country for the placing of danger signals at those places where they would be most useful to automobilists. He understood that there was a complaint that very often these signs were erected in some parts of the county unnecessarily, while in other parts they were not seen at all. When he was in Shropshire there was started an automobile club, by means of which useful work was done in the reconnaissance of the county, and the police had thereby some indication of the places that required most supervision. If the Automobile Club of Yorkshire would co-operate in that direction, it would possibly be for the good of the public. It would be for the good of all if there were a controlling body, something in the nature of the Jockey Club, which would have a greater effect than the law itself. They did not take a policeman into the hunting field. The Master of Hounds had a tremendous hold over the hunt, and this was secured by means of discipline.

Dr. Sydney Rumball proposed the health of the visitors, to which Mr. A. Armitage responded. Speeches were brought to a conclusion by Mr. J. S. R. Phillips, the editor of the "Yorkshire Post," who, in proposing the health of the chairman, suggested that the R.A.C. might form a company that would insure the general public against collisions with motor-cars.

YORKSHIRE CHAUFFEURS' ASSOCIATION.

At the inaugural meeting of the Yorkshire Chauffeurs' Association, last week, Mr. L. Smith presided over a large attendance. The Association, while not concerning itself with matters of wages, will endeavour to assist members in getting good situations and in protecting their welfare generally. Mr. Ellett, 44, Meadow Lane, Leeds, is the secretary and Mr. Norman Hurst, of the St. John's Garage, Wade Lane, Leeds, is giving free advice to members of the association.

CYCLE AND MOTOR TRADES BENEVOLENT FUND.

At the first meeting of the newly elected Executive Committee held this year Mr. Albert Brown presided, and a balance in the bank of £1,427 was reported by the hon. treasurer; 122 subscribers, thirteen members, and two life members were also elected.

On the day following the meeting of the Executive Committee a meeting for the purpose of forming a Coventry centre was held at the King's Head Hotel, Coventry, Mr. C. V. Pugh presiding. Mr. A. J. Wilson addressed the meeting, and the proposition for the formation of the Coventry centre was moved by the Chairman, seconded by Mr. R. L. Jefferson, and carried unanimously. The latter gentleman was elected hon. secretary, with the following committee:—Messrs. S. Smith (Rudge-Whitworth), J. Calcott (Calcott Bros.), A. E. Dover (Dover Ltd.), C. D. Pole (Singer Ltd.), Auerhan (Triumph Company), Gibbons (Swift), J. G. Morgan (Coventry Chain Company), H. Smith (Rover Company), John Griffiths (Middlesmore Ltd.) Jenks (Centaur Company), A. Bednell (Raglan), W. Jones (local agents), Grinyer (Alfred Herbert, Ltd.), A. Allum (Dunlop Tyre Company), and representatives to be elected by the Daimler, Humber, and Premier Companies.

AUTO CYCLE UNION.

A SIX days trial, probably with Shrewsbury as a centre, will be held by the Auto Cycle Union in July next. The matter will be finally decided by the committee at their next meeting.

The first quarterly trial of 1909 will be held on Wednesday next over the usual route from Uxbridge to Banbury and back, via Bicester, Aylesbury, Tring, Chesham and Amersham.

SCOTTISH.

THE club have made an arrangement with the Society of Automobile Mechanic Drivers of the United Kingdom, which has lately established a branch in Scotland, for the furnishing to the Club of weekly lists of members of that body out of employment, and any names on that list will be available on application to the Club secretary.

IRISH.

THE annual general meeting of the Irish A.C., will be held on Thursday, the 25th prox. Arrangements have been made for the election of the club's caution posts at several dangerous corners and cross roads in county Kildare.

MR. R. S. ROBERTSON, Meadow House, Godalming, has been appointed secretary of the West Surrey A.C.

AT the last council meeting of the Institute of British Carriage Manufacturers Mr. T. E. Worger was elected an honorary life member of the Institute, and a letter from the French carriage builders accepting the invitation to visit London this year was reported.

CASES AGAINST MOTORISTS.

FIFTEEN CONVICTIONS.

At Edgware, on the 6th inst., Thomas Sopwith, of 83, Cadogan Gardens, Chelsea, appeared to an adjourned summons for exceeding the speed limit with a motor-car, and also for failing to produce his licence for the inspection of the police on October 11th. The case had been adjourned for proof that Royalty were immune from the ordinary law, it being stated that the Sultan of Zanzibar was on the car when the alleged offence was committed. Mr. Staplee Firth argued that a firm of motor car agents, in which defendant was a partner, took the Sultan of Zanzibar for a trip to show him the merits of a particular car. Defendant acted under the directions of the Sultan, and being his agent was not subject to the jurisdiction of the courts. Sir W. S. Gilbert (the chairman) said the arguments advanced applied to a case in which a monarch was personally summoned or against whom an action had been instituted. If the Sultan or his servant had driven the car the defence would have been valid. The evidence before the court was that the defendant took the Sultan for a drive, with a view to showing him what the car could do, and for the purpose of inducing him to purchase one of a similar description. The Bench considered the case proved, and the defendant was solely responsible for the car. Sub-Divisional Inspector Hyam then proved fourteen previous convictions against defendant for offences under the Motor-Car Act. The chairman said the Bench would damp defendant's enthusiasm by a fine of £25 and costs, and six months' suspension of his licence on the first summons, and £5 and costs for failing to produce his licence. Mr. Firth asked for a stay of execution for a fortnight to enable him to appeal, which was granted.

REBUKE AND COMMENDATION.

A batch of motorists were prosecuted at the Wimbledon Petty Sessions the other day, and during the hearing of one case the Chairman (Mr. C. Tyrrell-Giles, K.C.), found it necessary to administer a severe rebuke to a constable for his interference. When P.C. Welsh was giving evidence against Mr. F. W. Cracknell, to show that defendant was driving a motor-car at a speed of fully twenty-six miles an hour along Parkside on December 13th last, he was asked why he had not stopped another car which went over the measured furlong at a speed of thirty miles an hour, according to defendant. P.C. Plimmer thereupon stepped forward and commenced to answer the question, but he was sharply pulled up by the chairman, who said, "You are not being asked. When you give evidence, give it, and don't give it until you are called upon. Remember that in future, or else I will make it worth your while."

Dr. Claude Woakes, 52, Harley Street, Cavendish Square, was summoned, at the South-Western (London) Police Court, for driving his

motor-car at an excessive rate of speed in Kingston Road, Putney. P.C. Welton timed the defendant over a measured furlong, and judged the speed at over thirty-three miles an hour. The defendant, said the constable, became excited when stopped, characterising the allegation as a — lie, and saying he would fight the matter if it cost him £50. Giving evidence on his own behalf, the defendant admitted travelling quickly, as he was anxious to get to his mother, who was ill. Mr. De Grey said in that case he would allow the summons to be withdrawn. Though the excuse was no defence for breaking the law, yet when a doctor was on his way to see a patient the circumstances justified him in saying he would not convict. The defendant desired to add that the behaviour of the constable was most tolerant and excellent. Mr. De Grey: I am very glad to hear you say that; it is not the first time the same thing has been said.

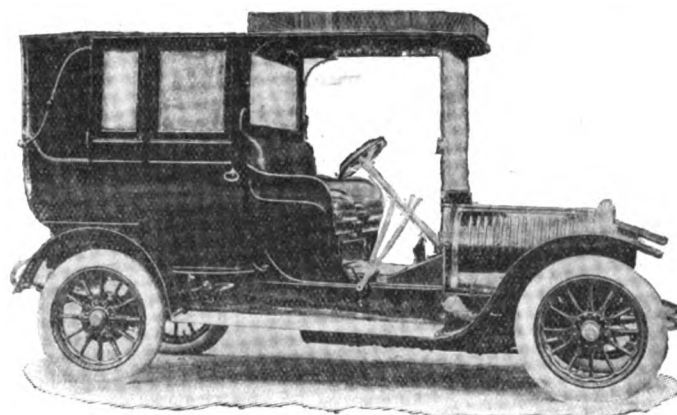
BATCHES.

A batch of motorists were prosecuted at the Wimbledon Petty Sessions on the 6th inst., fines of £2 and costs being imposed in four cases. On the same day, at the South Western (London) Police Court, three motorists were fined £10 each for driving beyond the legal speed on the Brighton road, and a lady 40s. and costs for driving without a licence. At Kingston three drivers were mulcted in penalties of £2 and costs.

Eleven motorists were fined sums ranging from £2 to £10 at Kingston on the 8th inst., the latter being inflicted on a defendant against whom six previous convictions had been recorded.

"GUILTY" OR "NOT GUILTY."

At the Quarter Sessions for East Sussex, held at Lewes last week, the appeal case, Warren v. Brooman, was heard before Sir William Grantham and other magistrates. Lord Robert Cecil, K.C., M.P., and Mr. Huntley Jenkins (instructed by Messrs. J. C. Buckwell and Co.) appeared for the appellant, and Mr. Humphrys and Mr. Rowand Harker were for the respondent. Mr. Humphrys explained that the appeal was from a conviction by the Haywards Heath Bench on December 14th on a summons



The 30-40 h.p. Hotchkiss Car with Three-quarter Landaulet by Hamshaw, of Leicester, recently supplied by the London and Parisian Motor Company, Ltd., to Katherine, Duchess of Westminster.

taken out by Superintendent Brooman against Mr. Percy Rhind Warren, of Banyale, Withdean, for driving a motor-car at a speed exceeding the limit. The appellant pleaded guilty, and on his plea no evidence was called. There were two previous convictions against him, and he was fined £30 and £1 2s. 10d. costs, his licence was suspended, and he was disqualified from holding another licence for two years. Counsel took the objection that no appeal could lie because defendant had pleaded guilty. Lord Robert Cecil replied that the mere fact that the Court below stated he pleaded guilty was not sufficient. This was a rehearing, and the Court had to see what really occurred, and to be very careful before accepting a plea of guilty. After hearing the appellant the magistrates dismissed the case with costs.

WRONGFUL APPLICATION FOR LICENCE.

John Hayes, of Clapham Road, was summoned before Mr. Curtis Bennett at Bow Street (London) Police Court for unlawfully applying to the L.C.C. for a licence to drive a motor-car, he then being a person whose licence to drive had been suspended until February 23rd, the expiration of the period for which it was granted. Mr. E. S. D. Carter, who supported the summons on behalf of the L.C.C., said that on October 19th last the defendant applied for a duplicate licence to drive. In answer to the question as to whether he was disqualified from holding a licence he mentioned an old conviction at Uckfield, and said nothing about his licence having been suspended at Lewes until the expiration of the period for which it was granted—February 23rd, 1909. He had since been fined for failing to produce his licence for endorsement. He was ordered to pay a fine of £10 and £4 4s. costs.

TWO DISMISSALS AND A FINE.

At Beaumaris recently the police summoned Mr. Macbeth, of Llanid Hall, Anglesey, for driving a motor-car to the danger of the public. He duly appeared, but it was found that he was not the person driving the vehicle on the date of the alleged offence, and the summons

was dismissed. It appeared, however, that it was his car which was in question, and also that the licence produced by the driver was Mr. Macbeth's; the fact being that he had lent his car to a friend, Mr. Buchanan, and had at the same time lent him an overcoat, in a pocket of which was the licence. Summonses were thereupon issued against Mr. Buchanan (a) for driving to the danger of the public, and (b) for not producing his licence. Two magistrates vacated their seats on the Bench to give evidence as to the alleged dangerous speed, and after retiring the magistrates fined Mr. Buchanan £2 and costs for driving to the public danger. The charge against him for failing to produce his licence was satisfied by the defendant paying the costs. For lending his licence, the case against Mr. Macbeth was dismissed, he explaining that in lending his friend his motor car and coat the licence happened to be in the pocket of the latter, and nothing being said about it there was obviously no intention to deceive.

AN APPEAL ALLOWED.

At the Surrey Quarter Sessions, before Mr. G. Cave, K.C., an appeal was heard in which Mr. William Hellyar, solicitor, sought to have a conviction by the justices of the Godstone Division, for driving a motor-car to the danger of the public, quashed. Mr. Clarke Hall was for the appellant; and Mr. Cecil Whiteley supported the conviction for the Commissioner of Police. The evidence of P.S. Kennison, who was on mounted patrol duty in the Warlingham Road on October 31st, and of Mr. and Mrs. Davis, of Fox Warren, Warlingham, was to the effect that Mr. Hellyar drove round two bends and over cross-roads at a dangerous speed in the circumstances. The police officer estimated the speed at twenty-three miles an hour, and Mr. Davis at twenty. It was stated that when called upon to stop he refused to do so, and the justices fined him £6 with costs for dangerous driving, and £4 with costs for failing to stop. It was elicited in cross-examination that the fences near the cross-roads were low, so that Mr. Hellyar could see traffic approaching the junction of the roads for a distance of forty to sixty yards, and it was contended on his behalf that the 10-h.p. car he was driving could be pulled up within twenty yards easily. He himself estimated the speed at fifteen to seventeen miles an hour. Mr. Cave said that the only point was that if the car was travelling at more than twenty miles an hour an offence had been committed. In this case the Court was of opinion that the appellant was not driving at a speed dangerous to the public, and the conviction by the justices would be quashed. An application for costs was refused. There was no appeal against the conviction for refusing to stop, but it was stated on behalf of Mr. Hellyar that he neither saw nor heard the police-sergeant signal or shout to him to stop.

COMPANY NEWS.

In the case of New Companies the file number is given at the end of the particulars.

WITH a capital of £10,000 and offices at 4, Union Court, London, E.C., the Motor and Industrial Engineering Company, Ltd., has just been registered.

COVENTRY CHAIN (1907).—The second annual report places the profit for the year, after providing for depreciations, bad and doubtful debts, and all charges, at £5,265. Deducting £625 bonuses to employees and adding last year's balance there is £5,035, which is dealt with as follows: Directors' fees, £400; dividend of 5 per cent., free of income tax, £2,353; transfer to general reserve fund, £2,000; the balance of £282 being carried forward to next year's account.

BERRY'S MOTOR NON-SKID.—£10,000. To acquire from J. C. Berry, of 56, Holme Road, Bridgford, Notts, the benefit of existing inventions for improved anti-skid devices for motor road vehicles. Private. 65, Shaftesbury Avenue, W.C. (100,782.)

MERCEDES CAB COMPANY.—£100 (£1). To carry on (by arrangement with the Mercedes Daimler Motor Company, Limited, and (or) the Mercedes Company, Limited) the business of cab proprietors, &c.

PUBLIC SERVICES.

AT Liverpool a motor-cab driver has been summoned under a bye-law made in 1867 for that he, as the driver of a hackney carriage, had not lowered the flag indicating that his vehicle was for hire. The magistrate fined the defendant 1s. and warned others that higher penalties might be inflicted in future cases.

At the annual dinner of the Sheffield Taxi-cab Drivers, held at the Thatched House, Sheffield, a few evenings ago, Mr. Ratcliff, the technical manager of the Provincial Motor Cab Company, Ltd., urged the guests to drive carefully through the streets of the city. He wanted the drivers to minimise dead mileage, and referred to the offer by the company of a monthly prize being given to the man whose daily receipts per mile for the month were the highest. This did not necessarily mean that the man who earned the most money could have the highest receipts per mile, but when it did follow the company would give another guinea.

FROM the 1st prox. the taximeters of motor-cabs in London will be connected with the front wheels instead of with the back ones. This order has just been made by the Scotland Yard authorities, and has been issued to all the motor-cab companies, probably as a result of the recent criticisms which have appeared in the Press with regard to the vagaries of taximeter indications.

In addition to the new order relative to taximeters a regulation has been made requiring the affixing of a special lamp to show clearly the dial of the meter at night.

FORTHCOMING EVENTS.

JANUARY.

- 16th (S.).—Last day for receiving Short Stories for the *M.C.J.* Competition—see page 985.
- 16th-25th.—Brussels Motor Show.
- 20th (W.).—L.G.B. inquiry into application of Hertfordshire County Council for a ten m.p.h. speed limit on certain roads in St. Albans.
- 21st (Th.).—Annual General Meeting of the Southern Motor Club.
- 22nd (F.).—Annual General Meeting of the Institute of British Carriage Manufacturers at the Portman Rooms, London, W.
- 22nd-30th.—Scottish Motor Exhibition at the Waverley Market, Edinburgh.
- 23rd (S.).—Annual Dinner of the Coventry Motor Club at the Craven Arms Hotel, Coventry.
- Annual Dinner of the Lancashire A.C. at the Park Hotel, Preston.
- 26th (T.).—Scottish Motor Trade Association Dinner at Edinburgh.
- 30th (S.).—Annual Dinner of the Auto-Cycle Club.

FEBRUARY.

- 2nd (T.).—Annual Dinner of the Scottish A.C. at Glasgow. H.S.H. Prince Francis of Teck will be among the guests of the club.
- 4th (Th.).—Annual Dinner of the Southern Motor Club.
- 19th-27th.—Manchester Motor Show at Belle Vue.
- 17th (W.).—Paper on Lubrication by Mr. J. W. G. Brooker at the R.A.C.
- 24th (W.).—Annual General Meeting of the British Motor Boat Club.

MARCH.

- 1st (M.).—The Road Trials in connection with the Army Council Competition for light tractors commence.
- Motor-Car Show at Barcelona.
- Last day for entries for Monaco Aeroplane Competition.
- 6th (S.).—Cambridge University Motor-Cycle Club Reliability and Petrol Consumption Trial.
- 20th-27th.—Cordingley's 14th Annual Motor-Car Exhibition and Market, Agricultural Hall, London.

MAY.

- 2nd (S.).—Targa Florio, Sicily.
- 14th (F.).—British Motor Boat Club meeting at Erith.
- 24th-29th.—Irish Reliability Trials—provisional date.

JUNE.

- 10th-18th.—Prince Henry Trophy Competition.
- 14th (M.).—Commencement of the Scottish Reliability Trial.

JULY.

- 5th-10th.—Auto-Cycle Union's Six Days' Trial.

LIGHTING-UP TIME—LONDON.

| | | | | | | |
|----------------|-----|-----------|-----|-----------|-----|-----------|
| Jan. 16th—5.18 | ... | 18th—5.21 | ... | 20th—5.25 | ... | 22nd—5.28 |
| „ 17th—5.19 | ... | 19th—5.23 | ... | 21st—5.26 | ... | 23rd—5.30 |

BUSINESS NEWS.

MESSRS. D. MOSELEY AND SONS, LTD., have a depot at 129, Ingram Street, Glasgow, where the tyres referred to in our last issue can be seen by Scottish readers.

CUSTOMERS of Mr. R. W. Coan who did not receive the New Year card tray are invited to communicate with him at the Aluminium Foundry, 219, Goswell Road, London, E.C.

A LITTLE pamphlet entitled "Motor Notes" has been issued by the Motor Schools, Ltd., which will doubtless be of interest to pupils of that institution.

MESSRS. H. M. HOBSON, LTD., have been appointed sole concessionaires for the Delahaye car for the United Kingdom, India, Australia, and New Zealand.

In consequence of the increase in demand for the "O.S." speedometer, Messrs. W. Searle and Co. have removed from Glasshouse Street, W.C., and have gone into more commodious premises. These are at 27, Noel Street, off Wardour Street, Oxford Street, W. At the new show-rooms the well-known instruments of the firm can be inspected at leisure.

MESSRS. STANLEY ALDER AND COMPANY, of Dundas Street, Sunderland, have been appointed district agents for the B.S.A. cars.

MESSRS. HUNTLEY WALKER AND CO., LTD., have taken the late Argyll depot in Deansgate, Manchester, for the sale of Darracq cars. Mr. R. H. Carlisle will be manager of the depot.

MESSRS. PHILIP, SON AND NEPHEW, South Castle Street, Liverpool, the well-known publishers, are just now making a great show of the "Holland" series of motor maps. These maps, with their one, two, three, and four miles to the inch, should satisfy the requirements of all motorists, the price being also exceptionally reasonable. Bartholemew's and Johnson's are the maps used.

THE head office and show rooms of the Ariel Motors (1906) Ltd., are now located at Camberwell New Road, London, S.E., to which address all communications should be sent.

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COMMENTS.



MOTORISTS do not always oppose applications for the reduction of speed limits; and, where adequate reasons are given, will generally be found to support such suggestions. Unfortunately, the proposals often made have been innocent of real necessity; hence the feeling that has been aroused in some districts against local authorities. Not often is such an amicable arrangement arrived at as was made a few days ago at Findon.

Mr. F. J. Willis, an Inspector of the Local

Government Board, held an inquiry into an application by the West Sussex County Council for a regulation restricting the speed limit of motor-cars to ten miles an hour, on a section of the main Horsham and Worthing road through Findon parish. Mr. de Montmorency, on behalf of the County Council, explained that a very satisfactory arrangement had been come to. He had had a consultation with Mr. Rees Jeffreys (representing the M.U. and the Sussex A.C.) and Mr. G. Dean (representing the Royal A.C.), and an application could be made, which would receive the support of all parties, including those who had given notice of opposition. The amended application was that the speed should be limited to ten miles an hour on the main road between a point fifty yards south of Nepcote Corner, on the Worthing side of the parish, and on the north a point between the Gun Inn and the Arundel Road—to be determined by the Inspector; also that the same speed should apply to a section of the Findon to Arundel road from the Gun Inn for a distance of 400 yards west, thus bringing the section to the motor sign erected by the County Council. Such a circumstance should suggest to local authorities the value of more “round table conferences” with motorists.

Our Short Story Competition.

So many competitors have sent in Short Stories in connection with the competition recently announced that we are still engaged on the work of adjudication. We hope to publish the name of the successful writer in our next issue.

Motor Problems of the Immediate Future.

THE “Daily Mail” Year Book for 1909 comes with its 270 pages of information on practically every subject of current discussion, ranging from the Saving of Daylight Bill to the danger of invasion by airship. Of particular interest is the article by the Rev. Arundell Whatton, who refers to the automobile progress of the past year and declares that the problem of the immediate future will be to obtain very much greater efficiency without sacrifice of steadiness, quietness, flexibility and capacity to run for extended spells without losing power and final durability. So far as the factor of efficiency goes he agrees that the recent advance has been surprising and urges that some modification, probably of the under structure of cars, is needed in order to minimise their dust-raising abilities. The road problem forms the subject of another article, in which the conclusions of the

recent International Road Congress find a conspicuous place. As a volume of statistical importance the “Daily Mail” Year Book is running some of the older publications very close.

The Scottish Motor Show.

THE annual Motor Show in the Waverley Market at Edinburgh is now open and will continue until the 30th inst. It affords ample demonstration of the continued utility and popularity of motor-car exhibitions, and should prove an augury of success for the next Show of the season, viz., that at the Agricultural Hall, London, at the end of March. Just as the Edinburgh Show provides an opportunity for those north of the Tweed to see the latest types of cars, so the forthcoming Exhibition in London gives a chance for English motorists to be kept informed of the improvements introduced from time to time. More than that, it has become a great Market, with selling opportunities as well as exhibition advantages.

Another Injustice to Motorists.

AT a meeting of the Standing Joint Committee of Cornwall the request of the Chief Constable for the provision of twenty-four stop-watches for his men was declined, and then the clerk mentioned that he had received a letter from the Home Secretary desiring magistrates to bear in mind that a conviction under the Motor Car Act rendered a person ineligible for an old age pension. Apparently this communication was seriously intended, and although wealthy owners of cars may be able to hear the declaration with equanimity, it will not be wholly pleasant reading for the working chauffeur who has been fined for some technical offence caused by the perversity of a rear light, or convicted on the word of a policeman. Not only are drivers liable to have their licences suspended and thus lose their chance of a livelihood, but the prospect of being cut off from a pension should evil days befall them is a point to be borne in mind by those who, when the attack comes, will defend the motorists' position in the Houses of Parliament.

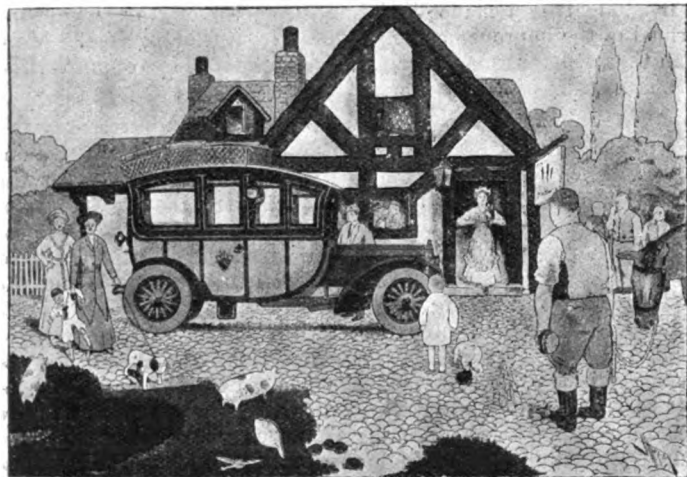
Diary of a Day.

SATURDAY last was a fine day in town, and how much enjoyment can be crowded into a few hours when the motor-car is available is shown in the Diary of a Day which we have received from a well-known contributor. The air, he writes, was clear, although the roads were dirty. A quiet, steady progress was made through Putney and along Kingston Vale by the Robin Hood Gate. As we were proceeding up the hill leading to where the trams start, a policeman stepped out from the path and stopped the car, saying he had been signalled to stop us. Reason he had none, until a plain-clothes officer arrived on the scene and said we had been travelling at the rate of twenty-eight miles an hour. He produced his watch, and then came a second man with a second watch—identical with the first. They claimed to have timed us over a measured furlong, and while our trusty speedometer had never recorded more than eighteen miles an hour on the journey, the police watches told of 28 m.p.h. A glance back over the road confirmed our view that no accurate signalling could have taken place, while the congestion of the traffic was against the speed.

alleged. After that all went merrily save for the sense of injustice that lurked over the occupants of the car. Away to the Bush at Farnham for lunch, and then back to the Hut at Wisley for tea, where we found Mr. C. I. Thornton, returned from his travels abroad, and Mr. Gwinneer. On the way we passed a Napier cab being pushed by half-a-dozen men, its previous occupants, Miss Dorothy Levitt and her friends, apparently superintending operations. Leaving the Hut, a careful journey was made to London. After dinner we saw "What Every Woman Knows," at Hicks's Theatre, and, curiously enough, three of our motorist friends of the afternoon were near neighbours in the stalls. And then the day ended with supper at the Carlton Hotel, where among other motorists was Mr. W. H. Buxton, who retrieved the famous car of Miss Charlesworth.

Technical Instruction.

How popular is instruction in automobile matters from the technical side has been demonstrated during the past session at the Pembroke Technical Schools, Dublin. There were no fewer than 181 students in the motor engineering classes, and most of these have qualified for the certificate of the Irish A.C., while the excellence of the training has been recognised beyond the school—judging from the applications which have been received at the institution for competent motor drivers.



The Modern Touring Coach.

Reproduced from the poster lately issued by the Welch Motor Car Company of Pontiac, Mich., U.S.A.

Extinguishing Petrol Fires.

FROM the British Fire Prevention Committee comes a report of a series of tests in the application of asbestos cloths, sand and steam as applied to burning petrol. These were carried out by the committee at the instance of the Incorporated Association of London Dyers and Cleaners, the idea being to ascertain the effect of the application of the materials mentioned, more particularly under conditions which would be met with in processes employed on the premises of dyers and cleaners. The tests demonstrated the complete efficiency of asbestos cloths in subduing fires caused by spirit vapour, and proved that where trade processes require the employment of petrol these cloths form a most valuable first aid appliance. It was amply demonstrated that they could be of great service in confining a fire to a limited area until other appliances could be brought into play. The efficiency of sand was proved where it could be employed to soak up spirit, the vapour of which is ignited, but in the opinion of the committee further tests should be carried out before anything like an authoritative conclusion is published. With regard to the employment of steam the effect of this was most marked. While there was plenty of ventilation in the upper part of the hut in which the

tests were made to correspond with what would be arranged for in buildings occupied for processes of manufactures requiring the use of volatile spirit, the steam nevertheless quickly diffused throughout the building and quenched the fire. It is, however, important in this connection that the amount of available steam should bear a suitable relation to the cubic contents of the room or rooms to be protected.

Motoring in the Isle of Wight.

MOTORING in the Isle of Wight is being freely indulged in both by residents and visitors, and it was a thoughtful provision of the former to provide a dinner and social gathering for the rural road men throughout the Island on Saturday night. This was intended as an acknowledgment by local motorists of the help rendered in improving the condition of the highways. Acting on the French proverb that gratitude is generally a lively anticipation of favours to come, the occasion was also used to enlist a sympathetic consideration for further improvements. Not only is the maintenance of a high standard of roadway in the Isle of Wight of importance to those who motor, but, having regard to the attractions of the island to owners of cars from a distance, the local authorities would do well to continue their interest in bringing the roads into as fine a condition as possible. The Deputy Governor of the Isle of Wight, Mr. T. P. Cochrane, has actively interested himself in that phase of improvements, and the results should be gratifying to all concerned.

From the Frying Pan into the Fire.

SUCH was the homely warning which Lord Montagu gave motorists in his speech at the dinner of the clubs associated with the Royal A.C. It is a position from which we have never deviated since the newspaper controversy began, always recognising that any panic legislation will make the lot of the motorist even less tolerable than at present. True, the attempt to reduce the speed of swiftly moving vehicles by Act of Parliament has brought about many anomalies; the administration of the law has become encrusted with many prejudices among people who have hitherto had a high respect for justice, and no one is satisfied. But if the agitation which has been fostered of late had its way, the difficulties would be greatly increased, and the imposition of a lower speed limit than that which is now in operation might be a matter of possibility. Hence the wisdom of the suggestion to let things remain as they are. Better suffer ills we know, than run to meet a strange fate which may be worse.

A Police Admission.

THE policeman is generally regarded as an immaculate person, whose goodness extends to an incapacity for making mistakes. This is a view which has been steadily cultivated by magistrates and others who have business in courts until it has been regarded as indicating an absence of patriotism to suggest that a constable could err. Of course motorists have been sceptical, and have, from their own experience, known differently; but that has been regarded by official folk as evidence of a kind of mental aberration, just as the possession of a motor-car is thought by some hotel proprietors to indicate a millionaire. At length, however, this faith in the fairness of those who administer the law has received a shock, and the Croydon county magistrates have had confession from the police that in working a "control" they timed the motorist as he put on a spurt to pass some carts. Thereupon the Bench dismissed the case—a rebuff to the enthusiasm of the police which would not have been given in many parts of Surrey. We have always deprecated police traps as un-English and as tending to bring the police into bad odour with a class of citizens who have always sought to exalt and not degrade the administration of the law. The matter is bad enough when the traps are of the length stated and the stop watches are of good quality and proved reliability.

But it is becoming a very low sort of game when doubt may be expressed with regard to the measured lengths and the watches employed—to say nothing of lantern flashes by night and traps downhill by day. Fortunately, however, there are now chances of escape; “timing the defendant as he put on a spurt to pass some carts” does not count in the game of Pop-in-Motorist as played at Croydon.

The Indiscretion of Councils.

SOME months ago we called attention to the way in which certain local authorities were erecting notice boards indicating a reduction of the legal speed limit in a way that was quite unauthorised. Now, similar procedure has apparently been followed in the area of the Hornsea District Council, which is in the East Riding of Yorkshire. Notices apparently showing a five mile an hour speed limit have been placed near some schools there. Unfortunately the Local Government Board has no power to order the removal of such boards although it may recognise their illegality. In the case of the Hornsea Council Mr. G. H. Strong, the hon. secretary of the Hull and District A.C., sent a protest to the Urban District Council requesting the immediate withdrawal

now some fifty miles of roads so constructed, which had in every way exceeded his expectations as to durability. The county of Kent had increased the use of granite macadam from 40,000 tons eight years ago to some 75,000 tons now, and in addition depended largely upon the treatment of the surface with tar to combat the dust nuisance and prevent disintegration. After referring to various experiments Mr. Manning said the deductions he had been able to make from his study of the problem were that before our roads were on the whole fit to take the increasing traffic they must be (1) provided with a substantial foundation, (2) constructed with a much flatter contour than is at present the usual practice, (3) in some way be rendered as waterproof and non-dust-producing as possible.

Left-hand Steering.

IN France and America a few cars are made with the steering on the left-hand side, because the rule of the road in these countries is the opposite to that in force in Great Britain. A gentleman who is selling a small American car over here, which is fitted with left-hand steering, advanced a novel point in its favour during a conversation the other day. He suggested



The new Shed in course of construction at Pont-Long, near Pau, for the accommodation of the Wright Aeroplane.

of the notices. After some discussion and correspondence the Council has ordered the obliteration of the figure “5” on the notices—an example of the work that can be done by local clubs in watching the ways and methods of the authorities when they over-reach themselves.

Modern Road Construction.

AT a meeting of the Midland Association of Local Government Officers, just held at Birmingham, Mr. G. W. Manning, the surveyor to the Staines Rural District Council, has been reading a paper on methods of modern road construction, in which he said the cost of the main roads of the country just prior to the passing of the 1896 Motor Car Act was £1,778,790 for 25,650 miles, or say £68 per mile; the cost after ten years of motor traffic was £2,478,500 for 27,380, or say £90.7 per mile, an increase of about 30 per cent. These figures were only averages, but served as a basis of comparison. After referring to the methods of road construction adopted by Telford, Macadam, and others, the speaker said that the county surveyor of Northumberland had recognised that the one starting point was foundation, and for the past six years had been providing a section of about eight miles with a substantial foundation. The result was that he had

that out in the country it was immaterial which side the steering was, as far as the driver's outlook was concerned, and that this was also very much the case in traffic driving with a small two-seated car. “But,” he said, “when you're overtaking trams, where you pass on the left-hand side, the left-hand steering is the only thing. You have trams, now, on every road out of London, and you know what it is on an ordinary car, craning round to see if the way is clear. Now on my car you are just where you want to be, and trams don't appear half so troublesome.” This is certainly an ingenious suggestion, whatever else may be thought of it.

MESSRS. E. DESCAMPS AND CO. have made considerable extensions to their motor garage in the Station Road, Kirkcaldy, in order to increase their stock of tyres and accessories for motorists on tour.

AT the British Manufacturers' Committee of the S.M.M.T. on the 14th inst., a recommendation in the interests of British manufacturers was made to the Council in connection with the gate change gear patent. This was reported on the same day to the Council, when it was resolved that, in the event of any action being threatened, the society should inquire into the validity of the claim.

ON PASSING TRAMCARS.

THE decision of the Court of Appeal with regard to the passing of tram-cars by motor-cars has again placed the motorist at variance with the law. For the Lord Chief Justice, while pronouncing the legal position, gave his opinion, in which view his learned brethren on the Bench agreed, that it would be well if the present Rule were completely upset. This the President of the Local Government Board has power to do; and we would suggest to Mr. John Burns that prompt action in the direction indicated will not only bring the official regulations into harmony with common sense, but will obviate the risks that now occur in many places where tramcars and motor-cars run along crowded streets.

Several readers have endorsed our Comments on the case in the last issue of the *M.C.J.*, and from the mass of correspondence received on the subject we select a few typical letters from representative motorists which will be of interest.

All our correspondents dwell on the way in which the Lord Chief Justice dealt with the matter. Dr. Godfrey Lowe, the hon. sec. of the Lincolnshire A.C., says that "L.G.B. regulations can be altered, and this one should be"; adding that "the case for some amendment could not be more ably put than by the Lord Chief Justice." "I have motored," writes Mr. H. J. Wells, the hon. secretary of the Barnsley and District A.C., "considerably through most of the English counties, and have invariably passed on the near side without any complaint from the police authorities. It is a blessing that most of the police regulating the traffic are gifted with common sense, and it is earnestly to be hoped that in the public safety they will receive instructions to ignore such a foolish decision as that just given." We have also had a letter from Mr. J. E. Hodgkin, M.I.E.E., the hon. secretary of the North-Eastern A.C., to this effect:—

The great object to be attained in the regulation of traffic in congested areas is an increase of speed consistent with safety, and this is the attitude taken by the Metropolitan Police, who have to deal with the largest volume of traffic in the country. If this be admitted, the argument that a motor-car should be obliged to wait behind a standing tram when there is room to pass on the left, and not to the right, would fall to the ground.

The question of safety of the passengers alighting from the tramcar is of course of great importance, but it is far easier for a motorist overtaking a tram to avoid an accident when passing it on the left hand side, where passengers crossing the road to or from the car are easily seen, than by overtaking it on the other side, where cases have frequently happened of foot passengers passing in front of a stationary tram who are hidden from the overtaking motorist until he is right on top of them.

The question is complicated by the use, in many cases, of centre standards, which are the source of the greatest possible danger, and which make it a very risky proceeding to overtake a tramcar on the right hand side, even assuming that there is apparently room to do so. The tramcars under these circumstances frequently start forward just as the motor-car is getting abreast of them, and the motorist is obliged to choose between the risk of spurting ahead on what is the wrong side of the road or again dropping behind the tramcar in order to avoid being nipped between the car and the post.

My own feeling is that it would be a great pity to lay down any hard and fast law on the subject, and I trust that when motor-car legislation comes before the House of Commons such difficulties as these will be left to the common sense of the motor driver, as it is obviously almost impossible to legislate for all conditions of road traffic and the very varying positions in which the tramway tracks are laid on the highways.

Dr. B. Holroyd, the hon. secretary of the Harrogate and District A.C., writes:—

There is no doubt that the Local Government Board ought to be approached to see if this regulation cannot be amended. To me, as an old motorist, it is ridiculous that a motor-car should have to pass a tramcar on the off side on account of the approaching traffic, especially when central standards are erected. Besides, I cannot see that a tramcar can in any way become a motor-car in the sense implied in the Act. Surely it should be classified under the heading of a light railway. I consider that if our representative governing bodies in motoring would work for the interests of individual motorists in these matters instead of quarrelling with one another it would be better for all concerned.

VIEWS OF TRAMWAY MANAGERS.

We have also endeavoured to ascertain the views of the tramway managers themselves on the subject. They are practically concerned in the matter, and, as many of them are motorists as well, they are able to consider both sides of the case. The difficulty

that has been raised is purely a legal one, as is evident from the opinion with which Mr. A. R. Dayson, M.I.E.E., the general manager of the Sunderland Corporation Tramways, has favoured us to the following effect:—"We have as yet had no actual difficulties here, and no local rules dealing with the matter. I am convinced, however, that in very many cases more consideration should be shown by motorists when passing tramcars, especially when discharging passengers. I often see instances where justifiable complaint might be made against the motor-car driver. As a keen motorist myself, you will appreciate that I am not speaking with prejudice."

Similarly at Rochdale no difficulties have arisen and therefore no local rules have become necessary. Mr. J. S. D. Moffet, A.M.I.C.E., sees "no reason why a motor-car should not be allowed to pass a moving tramcar on the near side when all is clear and so long as the other side of the road is blocked or partially blocked by either tramcar or other traffic. I consider, however, that no driver of a motor-car, or other vehicle for that matter, should attempt to pass a car on the near side which has been stopped either to set down or pick up passengers, owing to the great danger of accidents at such times. The reason we have had no complaints is due to the fact that the majority of drivers of motors and other vehicles have worked on the above lines whilst in this borough."

Confirmation of the absence of real difficulty comes from Mr. Frank Ayton, A.M.I.E.E., the manager of the Ipswich Corporation Tramways, who, like Mr. Dayson, is also a motorist. He writes:—"I think it will be very difficult to formulate any definite rule of the road for the passing of tramcars by motor-cars, simply because tramcar lines do not always occupy one definite position relative to the centre of the roadway. I think that, with careful driving on both sides, no difficulty should be experienced in avoiding accidents."

A practical opinion is that of Mr. C. W. Gordon, the manager of the Dublin United Tramways Company, Ltd., whose opinion is:—"If there be ample room on the near side of a stationary electric car, the motor-car should undoubtedly pass the standing car on that side. If there are passengers boarding or alighting from the car, and it would be dangerous for them if the motor-car passed on the near side, the motor should pass on the off side if it is perfectly free of traffic."

Most emphatic endorsement of the line that is universally taken by motorists is given by Mr. H. E. Blain, the tramways manager to the West Ham Corporation, who believes that "the recent decision with regard to the passing of trams by motor-cars will add a new terror to the existing dangers of the road and enormously increase the number of collisions occurring between motor-propelled vehicles and traffic proceeding in the opposite direction. Practically everywhere the tram lines are laid in the centre of the roadway, and it has always been understood in this district that such motor vehicles as proceed faster than tramcars should, if it is necessary to pass the latter, do so on the near side."

Mr. C. Challenger, the traffic manager of the Bristol Tramways and Carriage Company, Ltd., recently issued a rule of the road for local service, and this, although, so far as the motor-car is concerned, against the L.G.B. Regulation, has enabled traffic to be conducted smoothly and safely. It is to the following effect:—"The safe and proper way to pass by a tramway car, if overtaking it, is on the left hand side of such car."

THE Bradford Stipendiary Magistrate has just declared that the practice adopted by some motorists in trying to pass tramcars when they were picking up and putting down passengers was intolerable, and would have to be put down. This announcement has been made since the appeal decision and has been followed by the fining of several local motorists.

THE Board of Trade have issued a circular to all the companies working electric tramways or light railways on public roads in the United Kingdom, recommending them to fit a certain proportion of the cars on their system with speed indicators, to enable motormen to be trained in judging speeds. In view of certain difficulties connected with the introduction of speed indicators, the Board do not at present consider it advisable to require them to be fitted to all cars.

COSSIP FROM PARIS.

French Motor-cars Abroad.

England, even with her free trade, and Germany, Belgium, and Italy, are fast, so to say, expelling French automobiles from their respective markets. The United States, Russia, and Turkey are the only foreign countries to which France exported more motor-cars last year than in 1907. It is natural she should be most anxious to keep those good customers, and that French manufacturers should have received with joy the idea of the revision of the Franco-American Customs tariffs and the establishment of preferential tariffs, with the lowering of the duty on automobiles imported into the United States. But the turn taken by events has not been in their favour. The movement in America for the maintenance of the protective tariffs has become very strong, and the manufacturers of automobiles on the other side of the Atlantic have gone so far as to demand an increase in the import duty on motor-cars. They assert that labour in France is so much cheaper than in the United States that, after the payment of even the present duty and the carriage, French automobiles cost in New York less than similar home-made vehicles. I do not pretend to know whether the statement is correct, but it has to some extent awakened the French makers out of their apathy. At the present moment they are seeking to furnish the French authorities, which may have to discuss the question with Washington, all the necessary statistics to refute the argument. It may be doubtful that they will succeed, but in any case they will have to work hard not only in negotiations, but in their factories, if they are to continue to reap the rich harvest they have till now found in the United States.

The Troubles of French Motorists.

The men at the gates of Paris and other French towns entrusted with the collection of the town dues have always been the bugbears of motorists. Petrol being heavily taxed, the driver of an automobile leaving Paris had to stop to declare the quantity of *essence* in the tank, and when he returned he was required to produce the ticket on which that quantity had been inscribed, and to show he did not bring back more than he took out. The vexatious part of the business was, and, as a matter of fact, still is, that the motorist was constrained to make the declaration of the quantity of fuel in the tank both on leaving and returning, while the officials had always the right to verify the declaration, and to accomplish this to oblige the unfortunate driver to empty his tank, which was not an easy or short job. If by chance the motorist had made a mistake to the detriment of the Octroi a *procès verbal* was drawn up and a heavy fine inflicted. To remedy the inconveniences of such a vexatious system, motorists were last spring invited to have their petrol tanks officially measured and stamped once for all, and duly provided with a measuring stick, to make it easy to ascertain exactly how much spirit the tank contained. Each driver was also given a little book in which the Octroi men were to inscribe the quantity of *essence*. The charge of 20 francs, with what are called the "additional centimes," amounting to some two or three francs more, were, however, paid willingly by most people for that little operation, in the expectation that it would save much time and the loss of temper formerly entailed so frequently by the Octroi officials making them empty their fuel tanks.

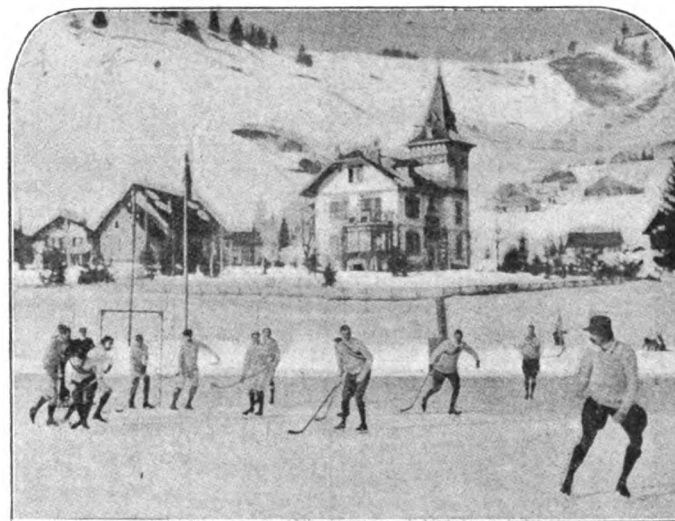
A New Trouble.

Till recently this arrangement worked fairly well, but the town due officials have now found a new means of annoying motorists. When a car provided with a stamped tank and a measuring stick stops in front of the Octroi bureau, the official is very often dissatisfied with the declaration of the driver. To seek to prove an attempt at fraud when there is no such intention, he makes the motorist place his car in a different position, either a little further back or a few steps more ahead or even across the road. Then, condescending to verify the declaration with the measuring stick, he naturally finds a few litres more or less of spirit, as the case may be. Several of my friends have been annoyed in this way, and so many people have complained of it, that the automobile journals are loudly demanding the repeal of the regulation com-

elling the motorist to make a declaration concerning the quantity of fuel in the tank. If he makes an unintentional mistake he is, nevertheless, liable to a fine, and in some cases to imprisonment. The Octroi officials should use the measuring stick themselves.

Taxi-cab Charges in Paris.

The Paris motor taxi-cabs, with their little flags showing whether they are free or not, are for the future to be prevented from plying for hire under false colours. At least, that is the promise made by M. de Selves, the Prefect of the Seine, who has approved the proposals made in M. Dausset's report to the Municipal Council on the subject. If its application is not delayed too long, the reform is one which will be highly appreciated by foreigners visiting La Ville Lumière, as well as by the Parisians themselves. Till now, no one on hailing a taxi-cab knew exactly how much he would have to pay on arriving at his destination. The vehicle might be a 20 or 30-h.p. car charging the maximum tariff, or one of 8-h.p. plying at the same price as the horse-drawn cabs. There will, however, it is affirmed by the Municipal authorities, very soon be no longer any excuse for the "animated" discussions which so frequently take place between the drivers and their fares. Be that as it may, M. de Selves' decree will do much



Winter Sports in Switzerland.—A Hockey Match on the Ice at Leyrain. [La Suisse Sportive.]

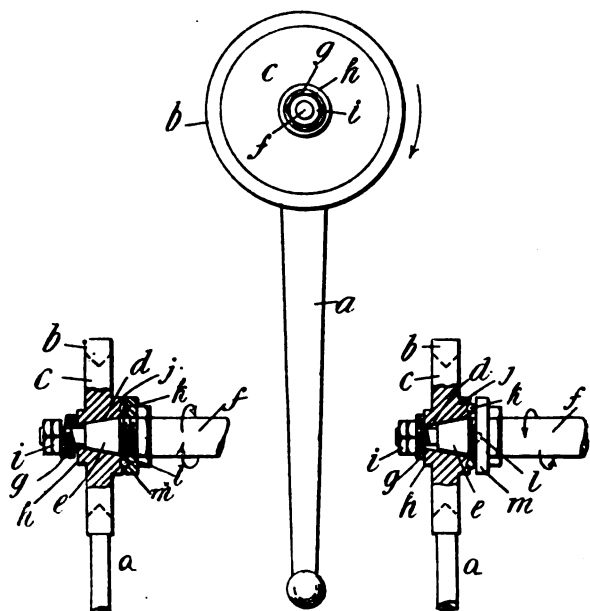
to put an end to the chaotic state of things now existing, which is as detrimental to the taxi-cab companies and their drivers as it is annoying and vexatious to the general public. When the new regulations are applied the colour of the little metal flag will in itself indicate the price per kilometre, which, moreover, is to be inscribed on it in figures. In the case of the tariff varying according to the number of passengers, &c., that fact must be shown by the counter, which is to be placed in full view of the passengers in the vehicle, to enable them at all times to see at a glance at which tariff the counter is working.

MARNEY.

THE engineer of the Renard Road and Rail Transport Corporation, Limited, writing from Bombay on the 20th ult., reports that "Yesterday we made arrangements with the Post Office people for the road-train to meet the P. and O. mail steamer and take to the station and G.P.O. the various mails and parcels which had come for the whole of India. This work is usually done by bullock carts, and when the mail steamer is late in arriving—as it was yesterday—this delays all the up-country train departures. Owing to the road-train being used yesterday all the mail trains got off up to time. There were over 1,200 large boxes and bags of letters and parcels to be taken, and the weight was over 90 tons. They were taken by the Renard train in seven journeys, two of which were to the railway station with up country mails, and the remainder to the G.P.O. with local letters and parcels. The train was able to carry 180 large boxes as against seven for a bullock cart."

A NEW SAFETY STARTING HANDLE.

WE illustrate herewith a new safety starting handle, to prevent any accident arising owing to a back kick or back fire of the engine, which has recently been devised by Mr. A. J. Maffuniades, of 39, Duke Street, Aldgate, E.C. Referring to the accompanying drawings it will be seen that the handle proper *a* is provided at its enlarged end *b* with a clutch or free-wheel device *c*. At its centre the latter is pierced with a conical hole *d* in which fits the correspondingly-shaped end *e* of the motor shaft *f*, a firm frictional engagement being made between the surfaces by means of the spring *g* interposed between the face of the boss of the clutch and the lock nuts *i* on the outer end of the motor shaft *f*. The rear face of the clutch is provided with a boss *j* having its face suitably arranged to carry balls *k* adapted when the handle is in its normal or working position to fit in corresponding recesses *l* in the face of a collar *m*; this is secured on the shaft *f* in such a way that on the handle being rotated the clutch and shaft move with it as one piece, but on a back fire taking place the engine shaft in its rearward movement or by its sudden jerk forces the boss *j* and the collar *m* apart by reason of the balls *k* riding out of the recesses



on to the plain surface of the collar. This action takes place against that of the spring *g*, which is compressed, causing the clutch and consequently the handle to move and to break the frictional contact between the conical surfaces, leaving the shaft free to rotate backward whilst the handle is stationary. Directly the recesses in the collar on the motor shaft again come opposite the balls the handle at once moves to its original position under the action of the spring, bringing the balls into engagement with the recesses and effecting at the same time the re-engagement of the conical surfaces so that the device can be rotated as a whole. As will be seen, the employment of the free wheel, in addition to preventing a backfire injuring the operator's hands or arms, enables the improved starting handle to be directly connected to the engine shaft, so doing away with the usual saw-tooth clutch.

AT 11, New Bailey Street, Salford, Manchester, Messrs. Slater Bros. have garage accommodation for about thirty cars. Plant is available for carrying out repairs of all kinds, and a large stock of accessories is kept on hand.

MR. EDGECLUMBE ROGERS has just published the thirteenth quarterly issue of departmental decisions by the Local Government Board and other authorities. Some of these will be of interest to those motorists who are watching the conduct of the local authorities with regard to tarring roads and in other ways making the highways possible for vehicular traffic.

FIRE MOTOR PRIME MOVERS.

FIRE engineers throughout the world are at present exercised in mind concerning the best type of prime mover for motor fire pumping machines. There are four methods of propelling such vehicles, each having its supporters. They are steam, petrol, electricity, and a combination of petrol motor, dynamo and electric motor. Until a few months back England favoured steam, simply because it was the only system in use here, but a change is taking place which may resolve itself into a preference for either petrol or electricity, or a combination of both. On the Continent hardly any other prime mover is thought of besides electricity. Vienna has a fleet of thirty electric pumping engines, tenders, escapes and chemical engines. Berlin also has gone solid for electricity. It is building two fire stations for nothing but electrically-propelled machines, escapes, pumping engines, hose tenders, and chemical engines. It has ordered sixty electric fire motor vehicles of various patterns, the object being, like Vienna, to discard every horse-drawn machine. The United States built the first steam motor fire engine many years ago, but is now wavering between allegiance to steam or a transfer to petrol or electricity.

The greatest problem of all, however, is whether to work the pumps by the motor driving the vehicle or to use separate engines. If the latter system be adopted, should both sets of motors be of the same type? In Europe and America both single and dual propelling and pumping plants are used, and opinion is divided as to which is really the best. The dual systems comprise petrol or steam, two engines of the same type, one for driving the vehicle and one for the pumps, and petrol-steam—one engine for pumping, the other (steam) for propulsion; steam-electric—steam for pumping and electricity for driving. Biebrich, Germany, has an example of the double steam type; Vienna and Berlin, with other continental cities, have steam-electric pumps; Breslau has a steam-electric vehicle; and Wayne, U.S.A., has lately put into commission a double engine petrol machine. There has been ample experience with steam-electrics, but little with the others. The Wayne machine has two petrol motors which can be coupled for pumping or propulsion, although usually only one at a time is used. Venice has a fire float with pumps which are driven by a 20-h.p. steam engine, but a 20-h.p. petrol motor is also provided for operating the propellers. Both engines can be coupled for propulsion, but not for pumping. The system is reported to work well. Vienna and Berlin prefer the steam-electric system to steam-driven pumps and vehicle, whether by one or two engines.

Examples of the single engine pumping and propulsion steam fire pumps are in use in London, Liverpool, and many other home and Colonial cities. Lord Rothschild has a fire-pump with a petrol motor used for both pumping and propulsion. The single petrol motor system is somewhat at a disadvantage compared with the steam motor serving both purposes; the petrol motor has not so great a reserve of power, and for other reasons does not give a water pressure in proportion to the power expended. For this reason a petrol motor used for pumping requires to be at least 20-h.p. greater than the power of a steam pumping engine doing the same work.

FROM the Star Cycle Company, Ltd., of Wolverhampton, comes a leaflet arranged in a somewhat novel form, and giving illustrations and descriptions of the "Little Briton" car. The vehicle, which is fitted with a 10-h.p. two-cylinder engine and two-seated racing type body, has a speedy appearance, while, judging from the testimonials given, it is giving much satisfaction to users.

THE Leeds City Diary for 1909 comes from Messrs. J. D. Robinson, Ltd., of 8, New Station Street, Leeds, with full local information, the diary portion interleaved with blotting paper making the volume a useful addition to the desks of Yorkshire firms. The various municipal activities are well set forth by Messrs. Robinson, Ltd., who are to be congratulated on their publication.

AERONAUTICAL NOTES.

A NEW aeroplane of the articulated monoplane type is being built in France by M. Robert Nau for the Monaco competition.

M. VANDENBERGH, of Antwerp, has built a new type of aeroplane. It is fitted with two wings, which work like those of a bird, and one rudder.

THE Club Aeronautique Helvetica is the name of a new association which has been formed in Neuchatel to foster the aeronautical movement in Switzerland.

THE Vendome aeroplane was taken out for trial at Bagatelle, near Paris, at the end of last week. Unfortunately owing to the strong wind prevailing, the apparatus met with an accident and was seriously damaged.

It is reported that King Alfonso intends to add aeroplaning to his other sports. It is, in fact, stated that he will shortly visit Pau, where he will make some flights in company with Wilbur Wright, and that he has purchased two machines for his own use.

RULES have been compiled by the Aviation Committee of the Aero Club of France for the issuing of pilots' flight certificates. So far these certificates of competence have been issued to Messrs. Bleriot, Santos Dumont, Delagrangé, Esnault-Pelterie, Henry Farman, Captain Ferber and the brothers Wright.

SOME trials were carried out near Turin last week with a new aeroplane designed by Signor Faccioli. The apparatus covered a distance of about 110 yards at a height of twenty-three feet from the ground, when the steering rudder suddenly broke, causing the machine to fall to the ground. The aeroplane was considerably damaged, but fortunately the designer got off without serious injury.

THE Czar has signified his consent to the petition of the All-Russia Aero Club, submitted by the Minister of the Interior, requesting his Majesty to open an all-Russian subscription to provide funds for the construction of an airship fleet. The statutes of the club provide that in time of war the fleet would be taken over by the Admiralty for the purpose of national defence.

M. LEON DELAGRANGE, who has entered two aeroplanes for the Monaco competition, has ordered a firm of boatbuilders to construct for him two floats for fixing on to his machine when launched in flight over the Bay of Monaco. M. Delagrangé is resolved to try a relatively heavy motor with a view to ensuring reliability of running, and has consequently secured a 40-50-h.p.

Chenu engine weighing 400 lb. or approximately 8 lb. per h.p. He has also ordered a Wright type of aeroplane, and will presently make some trial flights with it at Pau.

Two of the principal electrical engineering concerns in Germany—the Allgemeine Electricitäts Gesellschaft and the Siemens Schuckert Gesellschaft—have already seriously taken up the construction of airships. In the case of the Allgemeine concern their departure takes the form of the promotion of a company to study the problems relating to motor airships and to carry out the trial and improvement of new inventions relating to the above subject. The new company has acquired the rights of the Parseval balloon, and the further experiments of Major von Parseval have been undertaken under the auspices of the company. The airship section of the Siemens-Schuckert Works is now making a start with the

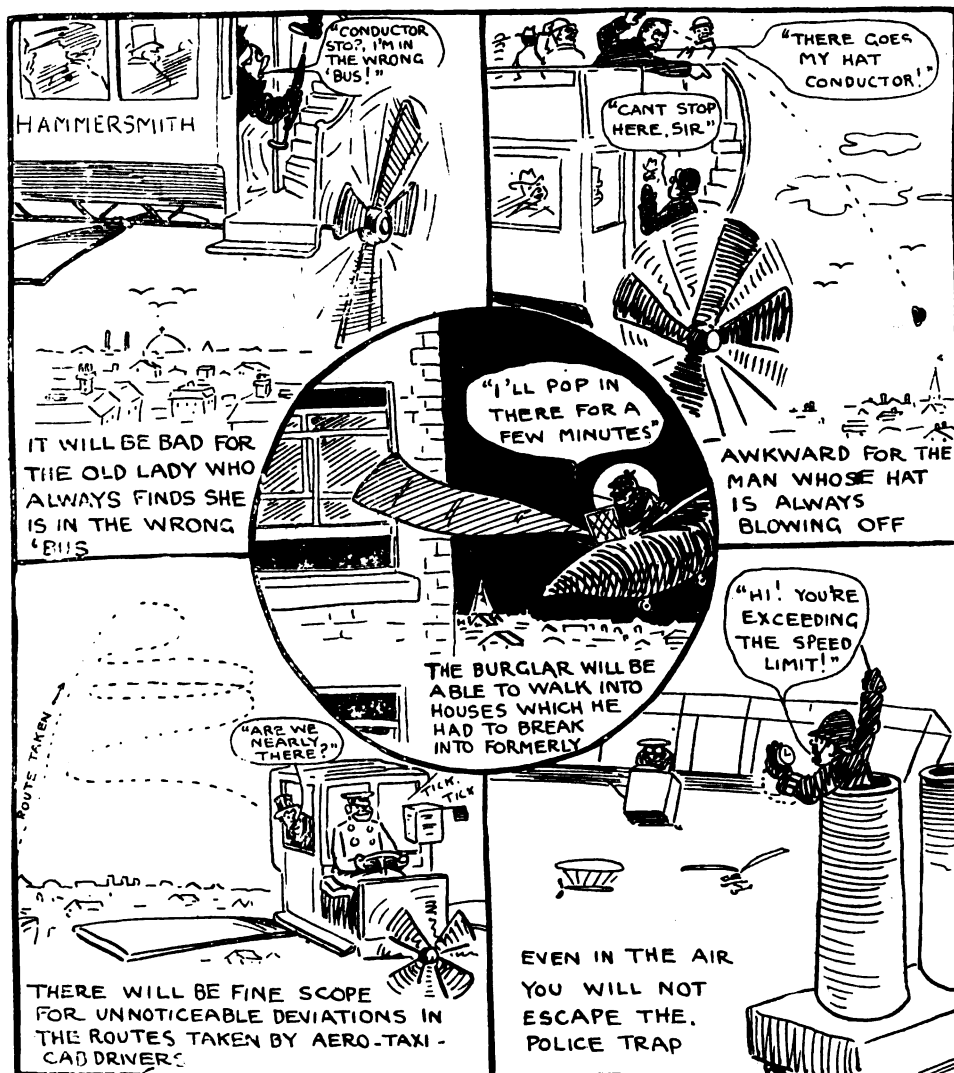
building of its first airship. As far as is at present known this balloon will be of the non-rigid type, but it will differ in many material respects from the Parseval. The balloon will have a capacity of over 12,000 cubic metres while the motive power will be supplied by engines of 550-h.p.

In order to provide German inventors with object lessons in aeroplane flight and construction, the "Lokal Anzeiger" of Berlin has arranged a series of demonstrations on the Tempelhof parade ground, beginning on the 28th inst. Messrs. Voisin Freres, of Paris, have undertaken to send one of their machines there in charge of M. Armand Zipfel, who will carry out a series of flights for the edification of the public.

ANOTHER company, with the title The Association for Aerial Traffic in Germany, has, it is reported, been formed at Düsseldorf for the purpose of carrying

on regular traffic by means of airships. The concern is said to have been founded through the co-operation of the municipal authorities of that town and a number of leaders of Rhenish-Westphalian industry. It is understood that application has already been made to the Ministry of the Interior for a concession for an aerial line between Düsseldorf and the German capital.

MR. HOWARD T. WRIGHT's aeroplane factory in London is now working double shifts on the production not only of complete machines, but also of components. Mr. Wright specialises on propeller construction, being able to turn out complete propellers in a few days. He has completed four large aeroplanes, and has a further three on order, in addition to a large bi-plane which is to be finished in about a fortnight, when he will be testing it in the grounds either of the Aero Club or the Aeronautical Society.



In the days of the Aeroplane.—An Anticipatory Sketch from the "Daily Mirror."

Aeronautical Notes—continued.

A NEW dirigible airship has just been completed at the works of Messrs. Clouth at Cologne. The trials, however, will not take place until the spring.

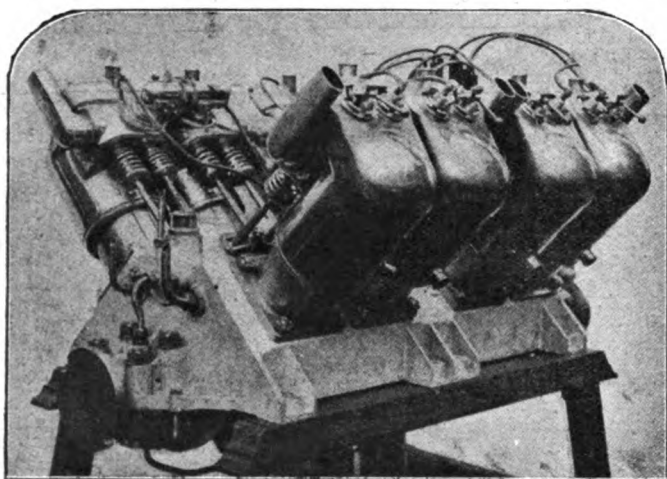
FROM St. Etienne, France, it is announced that the construction of a new aeroplane of the bi-plane type has just been completed by Messrs. Tezenat and Reynaud.

THE Municipal Authorities at Dinard, Brittany, are considering a proposal to organise a competition of flying machines between that town and St. Malo during the coming season.

THE brothers Wilbur and Orville Wright are busily engaged in re-assembling their aeroplane at Pont-Long, near Pau. It is not expected to be possible to make any flights on the new trial ground before February 1st.

AT Chalons-sur-Marne, on Monday, Mr. J. T. C. Moore-Brabazon succeeded in making several flights of a distance of about a mile and a quarter, at heights varying from twenty to twenty-five feet, on his Voisin aeroplane.

MESSRS. ROLLS-ROYCE, LTD., have been entrusted with the construction of the framework of the new Army aeroplane, built to the design of the War Office, of a special weldless steel tubing, the joints being made by an oxy-acetylene welding process without the use of ordinary lugs.



General view of R.N.V. Eight-Cylinder Engine. (See page 1017.)

THE French Ligue Nationale Aérienne has organised a school of aerial navigation, to which it is attracting many of the future engineers of the country now studying at the highest technical colleges. It has eighty pupils from the Ecole Polytechnique, fifty from the Ecole Centrale, and a large number from the Ecole des Mines. Practical instruction on actual aeroplanes will be given at the Aerodrome at Juvisy.

AN experiment was made at Croydon, the other day, with a large model aeroplane which has been invented by Captain H. A. Sanders. The aeroplane, which has small wheels attached to it, ran along a platform and then soared into the air to a considerable height. The chief feature of the invention is the use of tractors, or propellers, which are fixed to the front of the aeroplane. Captain Sanders has expressed himself confident of making his invention more successful than other machines. Plans have been prepared for an aeroplane, which will be named the Comet, measuring fifty feet from tip to tip.

AFTER nearly three years' searching the U.S. Patent Office has granted a patent to Messrs. Wright for a means of flexing the rudder of a flying machine, the object of the system being to provide means by which the front as well as the rear edges of a flexible rudder will be positively actuated at different angular velocities to adjust the said rudder to the desired angle, relative to its normal position, in synchronism with the flexing of the rudder in such a way as to present the rear part of it to the action of the wind at a greater angle than the forward portion, thereby increasing the effectiveness of the rudder.

M. HENRY KAPFERER, the pilot of the dirigible balloon "Ville de Paris," has been awarded the Cross of the Legion of Honour in recognition of his services to aviation.

WE hear from Paris that a new type of aeroplane is being built by M. Bernard de Marigny. The machine will comprise a number of articulated planes, by means of which it is hoped to obtain greater stability both longitudinally and transversely.

WHAT is probably the first professorship for aeronautics has been instituted at Göttingen University, where the German Minister of Education has appointed Professor Prandtl, Professor of Philosophy at Göttingen, to lecture on the whole field of aeronautics.

FROM Magdeburg, Germany, it is announced that some trials have just taken place there of a new aeroplane designed by Herr Gradt. The apparatus, which is of the tri-plane type, succeeded in flying a distance of nearly 450 yards, but was only able to lift itself a few feet off the ground.

THE ground at Crayford, in Kent, which Messrs. Vickers, Sons and Maxim formerly occupied as a trial ground for motor-cars will shortly become the testing ground for aeroplanes and kindred experiments. It is intended to provide housing room for the flying machines, and also to establish repair shops in the vicinity of the open space.

THE inhabitants of Le Mans have arranged to present Mr. Wilbur Wright with a handsome souvenir chosen by M. Leon Bollée, president of the Sarthe Aero Club, as a memento of his stay in their district. It takes the form of a fine bronze group executed by M. Louis Carvin and representing the brothers Wright watching an eagle about to swoop on to their aeroplane, while the Muse of Aviation leans over the pioneers, inspiring them with the knowledge of flight.

MR. WILBUR WRIGHT has succeeded in flying a distance of almost eighty miles. This is more than sufficient to cover the streak of water between Holyhead and Dublin, and the idea has occurred to Messrs. Meccredy, Percy and Company, Ltd., that a successful flight between the two places would create an immense amount of interest and incidentally afford an exciting experience to thousands of Irish people who would foregather in Dublin to see the first of those who attempt the trip successfully alight in the Phoenix Park. The idea should prove attractive to aeroplanists. Messrs. Meccredy, Percy and Company, Ltd., will contribute £100 to a prize fund to the first who accomplishes this feat during the year 1909.

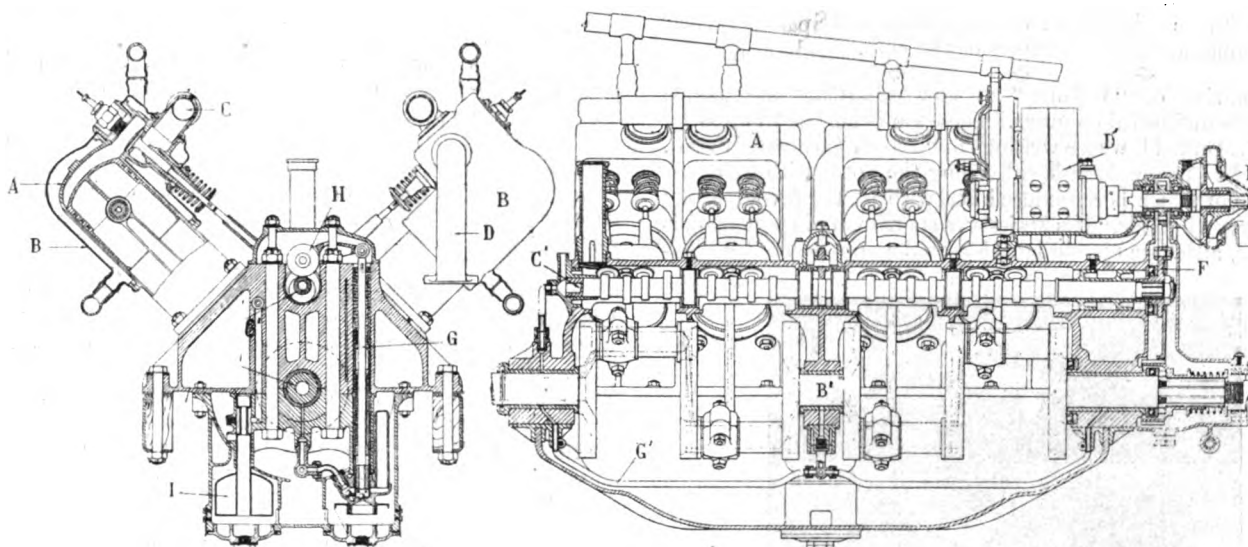
IN the "Times" a Royal Commission on Aeronautics is suggested to consider the whole subject in its widest sense. Some idea of the importance of the inquiry can be gleaned from the following rough summary of the heads under which the Commission might consider its work:—A. (Secret)—(1) Military applications of airships. (2) Naval applications of airships. (3) Types of machines. (4) Systems of attack and defence. (5) Airships for colonial defence. B. (Public)—(1) Present position of aeronautics. (2) Uses and applications of airships. (3) Aerial navigation. (4) Types of vessels. (5) Schemes of encouragement. (6) International aerial laws in peace and war. (7) Recommendations as to airships in war. (8) Recommendations as to competitions and races. (9) State aid for experiments. (10) Consideration of international "open routes" for all airships. (11) Applications of airships to scientific research and exploration.

MR. GRIFFITH BREWER, who is one of the most active members of the Aero Club, believes that it will be ten years before flying will emerge from the experimental stage. Of course, he has told a representative of "The Manchester Guardian," there are uses to which the flying machine can be put even at the present time. In the Sahara, for instance, where perfectly level surfaces could be found, or in the country round the Nile, it might be most useful for sending letters, provided that the aeronaut's track lay between telegraph stations, so that in case of a breakdown a message could be sent saying what time he started. Continuing, he expressed the view that it would be perfectly feasible to fly from London to Manchester on Mr. Wilbur Wright's machine, but it would be necessary to keep at a high altitude—two or three hundred feet—to avoid all towns and hills. Mr. Brewer regards the picture drawn by Mr. H. G. Wells in his book "The War in the Air" as very little exaggerated.

THE E.N.V. AERONAUTICAL ENGINE.

CONTINUING our descriptions of the petrol engines specially designed for aeronautical purposes which were exhibited at the recent Salon in Paris, we come to the E.N.V., the production of an English company known as the E.N.V. Motors, Ltd.—in which several well-known British motorists are, we understand, interested—with works at Courbevoie, near Paris. As will be seen from Fig. 2 the engine comprises

The crank shaft is carried in three long bearings and is provided with four throws, the connecting rod of one cylinder on each side of the V working on to a common crank pin. The webs of the cranks take the form of discs. The cam shaft C has all the sixteen cams cut from the solid bar, and, like the crank shaft, has a hole drilled through its centre for the passage of oil to the bearings. An interesting feature is the provision of a means of running the engine at different compression pressures, this being obtained by means of the skew gearing which drives the



Figs. 1 and 2.—Sectional Elevations of E.N.V. Eight-Cylinder Engine.

A.—Cylinders.
B.—Water-jackets.
B'.—Crankshaft.
C.—Admission pipes.
C'.—Cam shaft.
D.—Exhaust pipes.
D'.—Magneto.

E.—Water circulating pump.
F.—Gear wheels driving water pump and magneto.
G.—Oil pump.
G'.—Oil circulating pipes.
H.—Oil pump operating gear.
I.—float chamber for oil supply.

eight cylinders, arranged in two sets of four in the form of a V. The cylinders, which are 110 mm. bore by 130 mm. stroke, are cast singly, and are turned both inside and out with the view of rendering them of equal weight and capacity to give a uniform compression pressure in each. The inlet and exhaust valves are all located on one side of the cylinders and operated off a single centrally-located camshaft. It will be noted that the valve seatings are arranged in such a way that the valve stems are slightly out of parallel with the centre of the cylinders. The

cam shaft, as by sliding the skew wheel on the shaft the action of the cams is made early or late as required.

The water jackets are of copper, electrically deposited on top of wax moulded round the cylinder. A section through one of the cylinders and its copper jacket is shown in Fig. 3; the method adopted is claimed to insure perfectly water-tight joints under all conditions of heat and expansion. The water circulation is maintained by a turbine pump E, mounted on the same shaft as the magneto at the front end of the engine.

Special attention has been devoted to the question of lubrication, which is maintained by a small plunger pump G, located in a special compartment at the centre of the crank case, and so arranged that it can be withdrawn by simply removing two nuts of the cap which covers it. It is actuated by a pivoted crosshead H, operated by a special cam on the cam shaft. The oil is forced through the passages in the crank shaft to the main and big end bearings and thence up the connecting rods into the gudgeon pin, whence it flows through the piston on to the cylinder walls. By a special arrangement the latter only receive a charge of oil at the end of the downward stroke of the piston. A float chamber I in the crank case regulates the quantity of oil drawn up by the pump, so that all danger of over-lubrication and consequent obnoxious smoke is obviated.

The engine is stated to develop 55-h.p. at a speed of 1,000 revs. per min. and weighs complete 308 lbs.

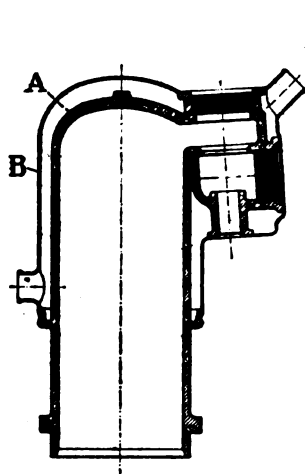


Fig. 3.—Section of Cylinders of E.N.V. Engine.
A.—Cylinder. B.—Copper water jacket.

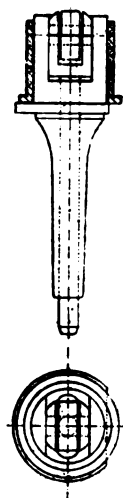


Fig. 4.—Elevation and Plan of E.N.V. Valve and Tappet Guide.

design of the valve tappet is illustrated in Fig. 4; it will be seen that at the lower end the tappet is forked to receive a roller which bears on the cam.

At the Rhyl County Court, before the registrar, Messrs. J. E. Price and Co., St. Asaph, claimed from Miss Violet Charlesworth £28 for petrol supplied. Miss Violet Charlesworth's name was at the request of the registrar called three times loudly. The registrar said that after notice of defence had been given he had received a second letter, which in effect withdrew the notice of defence, because it asked for an adjournment *sine die*, and stated letters of administration had better be waited for. Mr. Joseph Lloyd, for the plaintiffs, asked for judgment forthwith, and it was granted.

B

THE SOCIAL WHIRL.

THE King, who has been staying with Lord and Lady Alington at Criche, Dorset, paid a visit to Wimborne Minster on Saturday morning. In the afternoon His Majesty motored to St. Giles and spent some time with the Earl and Countess of Shaftesbury.

At the meeting of last week's committee of the Royal A.C. it was reported that His Majesty the King of Spain and H.R.H. the Crown Prince Ferdinand of Roumania had signified their desire to become honorary members of the club.

My confrère of "Golfing" is now admitting automobile jottings to his delightful columns. These are being contributed by Mr. Edgar N. Duffield, whose writings in "Punch" are widely read. Mr. Oswald H. Cunningham is enlivening the notes with excellent sketches, one of which is reproduced herewith by the favour of my contemporary, who adds, "His Majesty, a sportsman of sportsmen, is a keen golfer, although his available leisure does not permit his play-



as often as he might desire. His Majesty uses his car on every possible occasion, however, so that there are three reasons for his selection as the subject of our first drawing."

THE inaugural dinner of the associates of the Royal A.C. was the social event of the motoring season. Nearly four hundred guests—to be precise 381—were assembled to meet H.S.H. Prince Francis of Teck and his brother, while the sprinkling of ladies relieved the black coat dullness of the scene, as viewed from the overflow tables on the stage. The innovation introduced by Mr. J. W. Orde—whose urbanity is a delightful and never-failing quality—of arranging the guests at small tables each for fifteen diners, promoted sociability and was hailed as a precedent worthy to be followed. Four tables were set apart for the North Middlesex Club, which had fifty-six members present, and others were allotted to the Bedfordshire, Kent, Essex County, Liverpool, Kensington and Hampshire Clubs.

MANY of the musical items in the programme were encored—a fate which did not befall the speeches, good though they were. Mr. G. C. Ashton Jonson waxed eloquent over the deeds of the Navy and Army: Sir Charles Campbell confessed to his ability

to get into "hot water," and raised a laugh at some unidentified mayor of Bath; Sir Henry Rawlinson was careful not to go beyond military bounds; Lord Montagu was in the unaccustomed position of proposing, instead of responding for, automobilism, and then came the speech of the evening from the chairman. Prince Francis is a capital speaker at postprandial functions, and his rendering of the old song about the arrow as though it were aéro was delightfully topical. Mr. A. Armitage, J.P., scored against the "Times"; the Earl of Kimberley was brief, and after Sir Edward Henry had made a better impression than do many of his men, an important announcement was made with regard to Brooklands.

THIS is now in the capable charge of Major Lindsay Lloyd, who is determined to assist Mr. Locke-King to retrieve some of the expenditure he has incurred in a venture the public appreciation of which has yet to be won. If 1,000 members of the R.A.C. or its associates join the Brooklands A.R.C. they will be admitted for an annual subscription of two guineas—an offer that should prove tempting to all who have any idea of the sportive side of automobilism.

MR. GEORGE ALEXANDER tells a story in the "Era Annual," illustrating the humour of the London cabdriver. "Being in a hurry to get home from the theatre a few days ago, I walked to the corner of King Street. An old cabman with his hansom was the first on the rank, but I shook my head at him, and called a taxi. As I approached it the hansom cabby said: 'So, Mr. G. A., you've no use for 'osses now; but you'll 'ave to 'ave one to take you on the day you're buried.' 'I went home in that hansom after all.'"

LORD MONTAGU OF BEAULIEU has accepted the office of President of the London Hampshire Society for the present year, and will preside at the annual meeting, to be held at Kennan's Hotel, Cheapside, London, E.C., on Wednesday next.

THE date of the Rodakowski dinner, at which the Earl of Lonsdale has kindly consented to be chairman, has now been definitely fixed for Wednesday, February 24th.

MR. WILLIAM VINCENT, whose high grade productions in motor bodies are well known in Society circles, has just started a service of motor-cabs in Reading. Half-a-dozen four-cylinder Unic cabs are now plying for hire in the town under his aegis and attracting the attention of visitors by the appearance of their smart landaulet bodies. A cab rank has been established outside the railway station.

MR. PERCY NORTHEY is well known to motorists, he having won distinction in the first Tourist Trophy race. The other day he set forth from London for Italy on a 12-h.p. Sizaire-Naudin. From the Nettuno Hotel, Pisa, on New Year's Day, he wrote to Mr. C. Jarrott to the effect that he reached that point without having had to consider the car in any way. "This may not sound much," continues Mr. Northey, "but when I tell you that although I have in the past driven over the Sierra Guaderamos twice, surmounted the Pyrenees 'en automobile,' and (by mistake) descended in a car from La Turbie by the packet of hairpins short cut to Monaco, I nevertheless did not meet with a tithe of the breakneck, apparently impossible conditions of precipices and hopeless road surface such as I had to negotiate along the west coast of Italy. The only "spare" I want is time. I am now off to Rome and Naples—earthquakes permitting."

At the annual dinner of the Sussex Motor Boat Club, on Saturday, an important announcement was made to the effect that as the result of negotiations with the Admiralty, a letter had been received, granting permission to the members of the Sussex Motor Yacht Club to fly the Blue Ensign on board their motor-boats and yachts.

ON Sunday last the "missing motorist" was the subject of the sermon preached at the church of St. Mary-at-Hill, Monument, London, E.C. Many motorists were missing on the occasion in question, including

LOLLIUS.

WHO'S WHO?

THE annual publication of "Who's Who" is always the occasion for reviving memories of men and their pastimes. A few years ago its pages were conned to ascertain the men and women of distinction who regarded motoring as among their pastimes. Then the novelty wore off and the car became a necessity rather than a sporting delight. We are all motorists now—even the errand boy who mounts the motor-bus and pays his penny fare as proudly as though he were buying petrol. One result is that scattered about the 2,000 pages of this indispensable work of reference are fewer references proportionately to those who indulge in motoring as a pastime. Thus, the Duke of Sutherland, the president of the R.A.C., is not, according to "Who's Who," one who counts motoring among his pleasures; and yet we had a letter from his Grace a few weeks ago in which we were informed that he employed the motor-car to facilitate his visits to his estates in Scotland—a considerable task, seeing that he owns about 1,358,600 acres. Then, too, everyone knows that both the Premier and the ex-Premier are motorists; they appear as golfers only. Similarly, the Countess of Warwick is not only a devoted horsewoman, but she recognises the motor-car as a pleasurable means to political ends. These few instances illustrate the point that motoring has become a commonplace useful convenience—but an economiser of time.

At the same time there are many people of note who still class motoring among their pastimes. Thus Sir Hugh Bell, the president of the Cleveland Automobile Club, is not only a great ironmaster and an acceptable novelist, but he motors also. Sir Stanley Bois, of Colombo, who was motoring in England during the summer, has twin joys in music and motoring, and Mr. A. T. St. George Caulfield, J.P., of Roscommon, delights in "motoring and stargazing"—two forms of pleasure that should not, however, be satisfied simultaneously. We are not surprised to find that Mr. Rees Jeffreys has "motoring, golfing, cycling" as a trio of recreations, to which billiards might be added. Mr. Joynson-Hicks, M.P., also adds motoring as well as the Presidency of the Motor Union to his hobbies, while Mr. C. D. Rose, M.P., is well known as a breeder and owner of racehorses as well as a motorist. Mr. Charles Cordingley, whose pioneer work for automobilism in this country is recognised by "Who's Who," has pastimes associated with travel, as have half-a-dozen others who are prominent in the motor world. Sir David Salomons, Bart., like Mr. Rose in England and the Baron de Zuylen in France, combines interest in horses and mechanical matters, the pastimes enumerated including driving a four-in-hand and examination of automobile designs. Many sportsmen have their hobbies on land and water; Mr. Dugald Clerk, when not investigating the problems of the gas engine, divides his time between yachting and motoring, as does also Mr. Godfrey Baring, M.P. Tennis and motoring are ranked as the recreations of Mr. Percy Barlow, M.P., and Mr. J. B. Henderson, M.I.E.E. Others whose pastimes include the motor-car are Canon A. T. Barnett, the English chaplain at Borghidera, Italy, Mr. W. T. Madge, the well-known journalist, and Mr. A. F. Calvert, the traveller. Probably the car might have been included among the pastimes of General Booth, but for the fact that he uses the automobile for a really serious purpose.

Of course there are still many men who have not yet taken up motoring—either as a pastime or a business. The Rt. Hon. Augustine Birrell has not disturbed the calm of his *Obiter Dicta* by references to the motor-car, and still delights in "pedestrianism." The Rev. H. J. Astley, M.A., Vicar of East and West Rudham, Norfolk, whose name has been frequently in the "Times" of late, however, is able to continue his archaeological studies while motoring a little. Major Baden-Powell does not claim to be a motorist; he indulges in cycling, but aspires to higher flights, for he is described as a balloonist. After glancing through the volume of "Who's Who," with its 23,000 biographies, we have found one venturesome parson, the Rev. W. Benham, rector of St. Edmunds, Lombard Street, London, who for his recreation finds his greatest delight in "riding on the top of omnibuses."

HERE AND THERE.

THE Grand Hotel Garage at Worthing is now under the control of Mr. F. G. Searle.

MR. J. S. MATTHEW, the Scottish manager of the Dunlop Tyre Company, has been appointed managing director of Argylls, Ltd.

A DRIVER of a motor tri-car, who while drunk caused bodily harm to a cab driver, has been fined £5 with £10 costs at the Newington Sessions.

THE Godalming Borough magistrates have warned two motorists appearing before them that it is very important that number plates should be kept clean.

MESSRS. THOS. B. JEFFERY & CO., of Kenosha, U.S.A., claim to have built 13,800 Rambler cars during the past seven years, as follows: 400 in 1902, 1,500 in 1903, 2,100 in 1904, 2,300 in 1905, 2,500 in 1906 and 5,000 in 1907 and 1908.

THE Bute Dock Motor Company, of which Mr. J. Blower is the manager, have opened an up-to-date garage and repairing shop at 5, West Bute Street, opposite the Dowlais Hotel, at Cardiff. Stocks of tyres, petrols, oils, accessories, &c., are kept.

THE Aachener Stahlwarenfabrik, whose Fafnir petrol engines are already well known in this country, have recently made a new departure which will be of interest to motor engineers and traders generally. We refer to the complete set of components they have lately put on the market for the building of a 16-h.p. live axle chassis of up-to-date design. The set includes a pressed steel frame, four-cylinder engine (including clutch, carburettor, water and oil pumps, magneto, &c.), front and rear axles with hubs, change-speed gear, cardan shaft, steering gear, radiator, clutch



and brake pedals, change-speed and brake levers and their connections, and the channel steel torque rod with spring at the fore end. We give a view of the latter in the accompanying illustration. The components are delivered in sections, each unit being completely built up; as all the parts are made to template and are supplied with the necessary bolts and nuts, the makers claim that the only tool required to turn out the complete chassis is a machinist's spanner or wrench. Full particulars of this novel set of Fafnir chassis parts can be obtained from the British agents, Messrs. Strauss and Co., 211, Upper Thames Street, London, E.C.

WE hear that the fourteen damaged racing and touring cars, accessories, and other salvage goods consequent upon the recent fire at Mr. Huntley Walker's garage at Hayes, Kent, will be put up shortly for auction. There should be brisk bidding, as some of the racing engines, gears, chassis, &c., are not beyond repair. A quantity of accessories, tools, &c., damaged by fire and water, will be included in the sale.

ANNOUNCEMENT is being made by the Apperson Brothers Automobile Company, of Kokomo, Indiana, U.S.A., that they own the two American controlling patents on dual ignition systems, and will enforce their rights and prosecute all infringers. About two years ago Mr. Apperson bought the U.S. patent No. 617,806, which was granted to F. E. Canda, of New York, January 17th, 1899, for "electric igniters for explosion engines," and he has himself been granted patent No. 905,625 on December 1st, 1908, for "improvements in explosion engines." It is claimed that these two patents cover broadly the use of dual systems of engine ignition involving the use of two sparking plugs or points per cylinder, with a magneto and battery with spark coil separately connected to each, with means for separately or jointly switching both sets into action.

Here and There—continued.

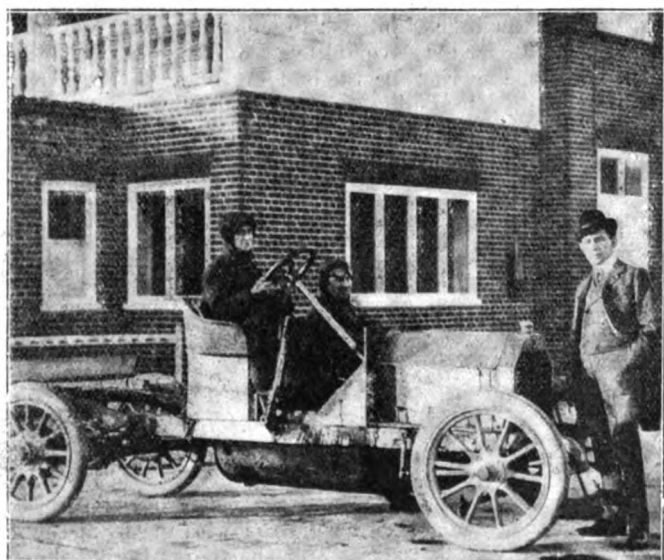
MESSRS. LESLIE PORTER, LTD., have at their garage in Howard Street, Belfast, accommodation for about forty motor-cars.

THE Commissioner of Police for the Metropolis has suggested to the Westminster City Council the provision of additional street refuges in Pall Mall.

As illustrating the great popularity of covered motor-cars, we may mention that no less than a dozen were drawn up at one time outside the offices of the *M.C.J.* on Tuesday afternoon last.

ACCORDING to a note just issued to its members by the French Syndicale de l'Automobile, a company has recently been formed, with a capital of £120,000, to start an industrial motor vehicle service in South America, and is now in the market for twenty motor lorries of from three to five tons capacity.

THE old-established firm of wagon builders, wheelwrights, body makers and motor repairers, Messrs. W. Till and Sons, Ltd., of New Cross, S.E., have just opened a large garage and repair depot for commercial vehicles, &c. The garage is of fire-proof construction with up-to-date lighting and heating arrangements, and is open day and night, whilst the services of a breakdown lorry and staff are obtainable at any time.



Miss Edith Paterson on the 16-h.p. Imperia.

Miss Paterson drove the car 53 miles in the hour on the Brooklands Track on the 15th inst. Mr. C. E. Whitaker is seen standing by the bonnet of the car.

OWING to his increasing theatrical engagements, Mr. Scott Russell has been obliged to dispose of his motor repair depot and garage at 242-4, High Street, Lewisham. The business has been purchased by Mr. R. Wernick, who has had many years' experience of automobile and motor launch construction in England and Germany, and is also a Daimler and Mercedes expert. Mr. Wernick is laying down further plant and is adding several well-equipped cars for hiring purposes.

FROM Messrs. Humber, Ltd., comes a copy of the 1909 catalogue of Humber cars. This is a very complete production, and gives full particulars and illustrations of the different models that are being turned out for the coming season. Details are also given of the Humber motor-cabs and travellers' cars, as well as of the combination pleasure and business vehicle. The latter is provided with two different bodies, either of which can be fitted on to the chassis in a short space of time.

A SMALLER companion volume to "Who's Who" is a New Year Book similarly published by A. and C. Black, and made up of tables of official information, race meetings, literary pseudonyms, and other knowledge that the busy man should always have near at hand. "Who's Who" is decidedly one of the most useful books of the day, its pages affording interesting reading for odd moments and being absolutely essential to those whose business it is to know a good deal about people.

THE Daimler Motor Company has intimated to the R.A.C. its desire to submit its 1909 type engine to an official trial, under the auspices and direct supervision of the club.

THE County Garage, opposite the railway station at Preston, is now in the ownership of the Lancashire Motor and Engineering Company. It is open day and night for the convenience of motorists.

MR. FAVEILL, of Sydney, N.S.W., recently visited Liverpool, and after testing the Forrest car, has purchased several of these from Messrs. J. A. Wade and Co. Mr. Faveill, who took the first car out with him on Saturday last, has acquired the sole selling agency for Forrest cars in New South Wales.

AT a meeting of the Stranraer and Wigtown U.F. Presbytery, the moderator, Mr. A. W. Black, in submitting the report on "Life and Work," said that they had still to complain of the pleasure-seeking motorist who "disturbs the quiet of the Sabbath Day. During the autumn a motor race was conducted through the district on the Sabbath, and the Presbytery most emphatically protested against having the quiet of their Sabbath disturbed by such senseless conduct."

AT the Pimlico Wheel and Motor Works, in Fulham Palace Road, Hammersmith, there is no indication of the rumoured slackness in the motor trade. Messrs. Smith, Parfrey and Co., Ltd., are very busy in all departments, repairing and renewing wheels, axles, springs, frames, gear shafts, &c. Their speciality, the lightening of too robust springs and the strengthening of those that are too "whippy," is not unnaturally occupying most of their attention, but Mr. Partridge, on the occasion of a recent visit, announced the company as being comfortably busy all round.

"WHERE to live round London" is the second edition of an excellent work published by the Homeland Association, Ltd. It deals with the northern side, and has a chapter on the geology and sub-soils. An alphabetical arrangement is adopted to facilitate reference, and interesting pages of letterpress are given with regard to places on the eight lines of railway serving London north of the Thames. As a work of reference the book deserves commendation. A chapter giving some particulars of the roads, hills, &c., would have been a feature of considerable interest to motorists, who must be ranged among those able to look for dwellings in the more distant suburbs of London.

AN entirely new type of front driven petrol lorry, with the engine, radiators, gear-box, clutch, differential, &c., in one unit, has been built by the Coborn Motor Works, Bromley, Kent, who have been granted the British and foreign patents for the machine. For 'buses and commercial vehicles the chief advantage claimed is that in the case of a breakdown the engine and the entire driving mechanism can be readily removed and another set fitted. It also renders overhaul or inspection simpler and quicker, whilst the saving in the cost of production over the ordinary type is said to be over 25 per cent. Another advantage claimed is that skidding is overcome. The vehicle has undergone severe tests with loads of 2 tons and upward over hilly southern roads, and also made the return run from Bromley to Coventry and back in a satisfactory manner.

MESSRS. BLERIOT, LTD., whose acetylene headlights are well known in the automobile world, are introducing quite a new departure in car lighting, which we had an opportunity of inspecting a few days ago. The arrangement consists of a small dynamo known as the "Phi"; this is mounted on the offside step of the car, and is driven off the clutch shaft by means of a belt; the machine, which has a capacity of 25 amps. at 12 volts, equal to 300 watts, is of a special self-regulating type, the voltage remaining constant no matter the speed at which the engine is running. Not only does it supply the necessary current for lighting a couple of head lights, two side lamps, the tail lamp and a lamp in the interior of the car, but it also maintains in a fully-charged condition a small battery of accumulators located under the driver's seat. When the engine is running the current for the lamps is furnished by the dynamo direct; when, however, the car is standing with the motor at rest, the lamps are switched on to the battery circuit. Altogether the Phi dynamo is able to supply electrical current equal to a total of 100 c.p. We hope to refer at greater length to the arrangement in a subsequent issue.

CONTINENTAL NOTES.

The Brussels Motor-car Show.

The eighth annual motor-car exhibition in the Palais du Cinquantenaire, Brussels, opened on Saturday last and will continue until Monday next. Belgian motor-car builders are, of course, well to the fore, the vehicles on view comprising the Metallurgique, Auto-Mixte, Bovy-Dheyne, Imperia, Dasse, Germain, Royal Star, Linon, Minerva, Nagant, Pipe, F.N., De Coninck, Saventhem, Vivinus, Springuel, F.I.F. and Salve. The last-named vehicle, which is shown by La Société des Voitures Salve, of Herstal, is a little two-seater with a novel system of transmission; the drive is through one or other of two pinions on countershaft, the power on the first speed and reverse being conveyed through the near side chain, and on the top speed through the chain on the right, only one road wheel at a time being driven. The French industry is also well represented by Clement-Bayard, Berliet, De Dietrich, Brasier, Panhard, De Dion, Delahaye, Delaunay-Belleville, Peugeot, Charron, Sizaire-Naudin, La Buire, Darracq-Serpollet, Chenard-Walcker, Gregorie, Mors, Renault, Rochet-Schneider, and Brillie. From Italy come the Fiat and Itala, while Germany sends the Mercedes, N.A.G., and Benz. Considerable interest is being taken in the aero section of the show. In addition to a large number of models, the exhibits comprise Baron de Caters' triplane with Vivinus engine, Baron Pierre de Crawhez's monoplane, an orthoptere by M. Adhemar de la Hault, and a helicopter by Messrs. Tips and Vlemincx.

Touring in France.

The Director of the French Customs Office has just issued a circular of which those motorists contemplating a tour in France will do well to make a note. The circular explains that the Customs officials have been directed to reduce the quantity of tobacco, cigars, and cigarettes which travellers are allowed to import for personal consumption to half what is now allowed. Accordingly, after May 1st, travellers will be forbidden to bring into France more than ten cigars, twenty cigarettes, or $1\frac{1}{2}$ oz. of tobacco. It is expressly stated that the traveller must choose between tobacco, cigarettes, or cigars, and will not be allowed to bring in the stipulated quantities of each, and that no traveller may fill his pockets with the share of a companion who may be a non-smoker. The Director of Customs also refuses to recognise the right of women to smoke, and so forbids them the privilege of importing even the smallest quantity of cigarettes free of duty.

A Hill-Climbing Competition in Algeria.

The Automobile Club of Algeria is organising a hill-climbing competition for February 14th; the event will be held on the hill known as the Camp des Chenes at Medea, the length of the course being twelve kilometres. The competing vehicles will be divided into nine categories, ranging from single-cylinder cars having engines of 100 mm. bore to six-cylinder vehicles.

The French Military Authorities and Motor Vehicles.

The valuable services motor-cars are capable of rendering the army in time of war are now recognised in all civilized countries. For several years past the automobiles in France have been subject to requisition, and now the military authorities have made public the conditions which the heavy self-propelled vehicles used in commerce and industry should fulfil to be of special use to the army. General Picquart has taken up this matter most seriously and has presented to the Chamber a proposal to encourage the manufacture of such cars by granting a premium to the purchasers of the vehicles. The Minister of War has also given his entire approbation to the action of the Société Militaire d'Automobilisme, the object of which is not only to impart to the officers belonging to it the technical instruction and practical knowledge necessary to obtain the driver's licence, but to render them capable of directing the movements of a caravan of horseless vehicles of all descriptions. The theoretical instruction is, with the authorisation of the Military Governor of Paris, to be given

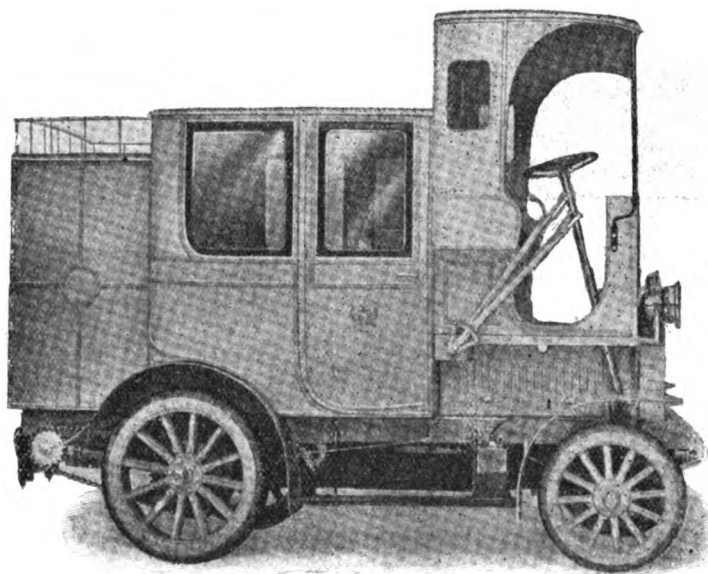
at the Military Club, the first lecture being fixed for the 28th inst.

A Novel Motor-mail and Passenger Vehicle.

The illustration given below depicts one of the novel combination passenger and mail-carrying vehicles recently built by Messrs. Laurin and Klement, of Jungbunzlau, Bohemia, for the postal authorities in Montenegro. Owing to the peculiar nature of the roads in that country the vehicles have had to be built to a special design, the wheelbase having been reduced as much as possible. As will be seen, the engine—a 28-32-h.p. four-cylinder—is arranged under the driver's seat, while the differential shaft, which drives the rear road wheels, is located at the rear of the back axle instead of at the front as is usual.

Motor Car v. Airship.

Now that the airship seems to be within measurable distance of being given a place in military operations, the attention of experts is being centred on the subject of how best to meet the



attacks of the latest implements of war. To this end the Rheinische Metallwarenfabrik, of Dusseldorf, have lately completed a semi-armoured motor-car, in the rear portion of which is mounted a 5 cm. quick-firing gun, which is so mounted that it can fire its projectile in almost a vertical direction. The vehicle, which is fitted with a 60-h.p. engine and can attain a speed of over forty miles an hour, enabling it to follow any airship, has a special body, the sides of which are formed of 3 mm. thick nickel steel armour-plate. The Ehrhardt Works, of Dusseldorf, have also built a somewhat similar vehicle, this being, however, completely armoured, the driver, the gun, and the operators of the latter being enclosed in what may be termed an automobile turret.

Miscellaneous Items.

It is reported that Messrs. De Dion-Bouton have secured an order for 100 motor-buses for service in New York.—An automobile club has lately been formed at Pilsen, Austria.—A company has just been formed in Königsberg, Germany, to introduce a service of motor-cabs in the town.

Les Canots Automobiles à Messine.

Dans l'affolement bien compréhensible causé par le cataclysme qui détruisait Messine et Reggio, les canots automobiles furent de précieux auxiliaires pour les sauveteurs. Pouvant évoluer aisément, ils recueillirent de nombreux survivants et les transportèrent sur les grands bateaux, venus dès les premières heures sur le lieu du désastre. Combien de vies humaines n'ont-elles pas été conservées ainsi grâce à l'automobile.

MOTORING ACCESSORIES.

The "Little Nipper" Drinking Cup.

Messrs. Tom Norton, Ltd., of Llandrindrod Wells, have recently introduced a little novelty which will appeal to motoring tourists. We



Fig. 1.

refer to the Little Nipper drinking cups illustrated in Fig. 1. As will be seen, the set consists of half-a-dozen electroplated cups so graduated in size that they can be packed one inside the other and enclosed in a leather case. As the latter only measures 1½ in. by 1½ in., it can be carried in the motor coat-pocket

or in any suitable receptacle on the car. Other specialities of Messrs. Norton include the "Norton" motor stove and oil drip pan, each of which form useful additions to the equipment of private garages.

"Raybestos" Brake Lining.

An excellent brake lining that is both durable and efficient is that known as "Raybestos," and placed upon the market by Messrs. Brown Bros., Ltd., of Great Eastern Street, London, E.C. This is a material which is productive of more friction than metal when against metal, and we have been reliably informed that cars have travelled 20,000 miles without their Raybestos brake lining showing any material signs of wear. The feature of the material is indicated clearly in the accompanying illustration, from which it will be seen that it is composed of asbestos woven with brass wire. It will neither burn nor carbonise in any heat, and has been subjected to many extremes, withstanding all to the satisfaction of the experts. Raybestos is supplied in two thicknesses, and has already proved its merits—a fact which adds confidence to our recommendation.

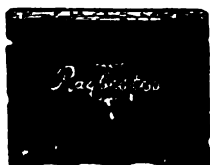


Fig. 2.

Raybestos is supplied in two thicknesses, and has already proved its merits—a fact which adds confidence to our recommendation.

The "Orno" Nut-catcher.

Messrs. G. T. Riches, Ltd., of 19, Store Street, London, W.C., are always taking up new lines in accessories, &c., for the comfort and convenience of motorists or the economical running of cars. Their latest speciality is the Orno combined nut-catcher and torch illustrated in Fig. 3. This is an electro-magnetic tool sufficiently powerful to attract and hold spanners, bolts, nuts, &c., up to about 3 lbs. in weight. It is used in connection with a four-volt accumulator, and those motorists who have experienced difficulty in reaching bolts and nuts which fall into the mud shield will appreciate the value of this device. The simplicity of construction is clearly seen in the illustration, and as its service is not affected by oil or grease it will be found useful for removing loose pieces of metal which may have become mixed up with the contents of the gear-box. The ease with which it recovers missing articles which have rolled away into odd corners is a really remarkable feature. Another point in connection with the tool is that it can be made to perform a dual purpose, the head being detachable, so that it can be readily replaced by a small electric lamp for inspection purposes. The tool is nickel

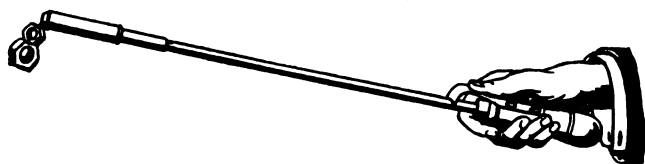


Fig. 3.

plated, and with five feet of flexible wire should prove a popular accessory on the car.

The Samson Tyre.

Having observed the good features of the Samson non-skid tyre at the last motor show in London, we have taken occasion to watch its behaviour in actual service. This has been very satisfactory, and the Samson (Licensed) Rubber Company, of Hythe Road, Willesden, N.W., have evidently secured a speciality which can well maintain the claims made by the makers. The main feature of the tyre is the provision of diagonal grooves which, in themselves, restrict any tendency on the part of the tyre to deviate from its proper course. In each groove four hardened steel studs are inserted with good effect. Thus 160 studs are fitted to do the work previously performed by six times that number, the manner of their fitting rendering the service equally efficient. There is, however, a saving of weight which is very material, while the injury caused by

the generation of heat from nearly a thousand studs is obviated. This is a most important consideration. Recently the company have instituted a new method of fixing the studs in the tyre which secures them a great advantage. The usual method of attaching these in the form of a bifurcated stud has been abandoned, the breaking of one or both of the prongs being a frequent cause of looseness. When the system is adopted, too, the case-hardening of the stud itself is never too well done. Now, however, the Samson Company has got over both weaknesses by having the head of the stud perfectly case-hardened as a separate piece. This is then sunk upon the portion coming up through the tyre, and cannot possibly get away. The sunken centre of the stud further contributes to the non-skidding effect of the device, and altogether the new stud gives the Samson tyre ability to withstand the roughest treatment on the most greasy roads.

The "Ward" Cape Hood Extender.

We illustrate in Figs. 4, 5, and 6 the Cape hood extender which has recently been put on the market by Messrs. George Ward and Co., of the Central Garage, Gordon Street, Southport, to facilitate the raising and lowering of Cape hoods, the makers claiming that the arrangement enables this to be done single-handed and from the inside of the car. Many motorists know from experience how inconvenient it is to have to get out of the vehicle and to stand in the rain whilst fixing the Cape hood in position, while it is nearly always necessary to have two persons to manipulate the hood. As will be seen from the drawings, the "Ward"

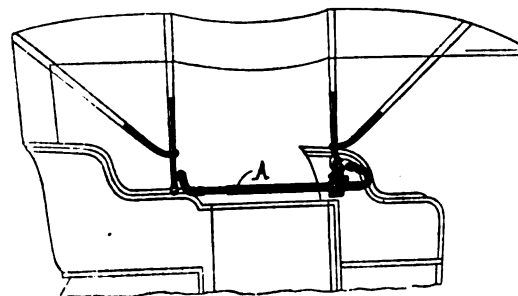
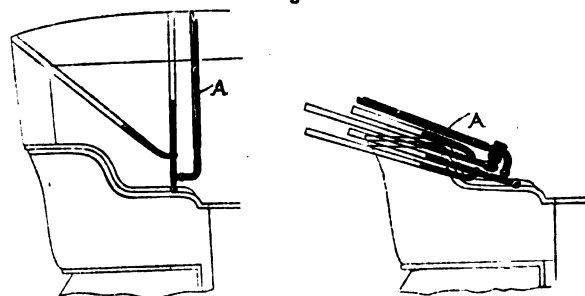


Fig. 4.



Figs. 5 and 6.

device consists of a pair of telescopic rods A, upon which loose lugs are fitted, which can be moved along to enable the forward portion of the hood to be put into position. A pair of brackets which bolt into the existing eyes on the front seats are also supplied; these brackets receive the ends of the rods when in position for raising the hood. The extender rods are pivoted to the eyes in the back brackets where the front portion usually goes when the hood is down. The forward portion is fixed into the lugs on sliding rods, and always remains so fixed, the whole folding flat when not in use. When the hood is to be raised, the telescopic rods are brought down to the front brackets, where they automatically secure themselves. All that remains to be done is to slide the front portion of the hood along the rods into position, where it can be locked with the thumb screw in the lug, and the rods lifted clear to allow admittance to the car, as shown in Fig. 5. The rods when in this position clip to the uprights at rear of hood. Messrs. Ward inform us that the arrangement can be fitted to existing hoods in three minutes.

At their establishment in Cheapside, London, E.C., Messrs. Benet, Link and Company, Ltd., are giving practical demonstrations of the economical method of electric lighting by means of metallic-filament.

CAPT. THEO MASUI, the sole concessionaire for Germain and Greig cars, has just purchased the stock and goodwill of the Chester and North Wales Motor and Garage Company, Ltd., City Road, Chester which he will completely reorganise, and where a full stock of cars, tyres lamps, &c., will be held.

THE "GATE CHANGE" PATENT.

AS we mentioned in our last issue, a report is current in motoring circles to the effect that the British representatives of the holders of the patents relating to the Mercedes cars, particularly as regards the "gate change," are about to make a demand for a royalty on all chassis fitted with the same. The claim is based on the patent applied for on May 9th, 1899, by, and granted to the late Herr Gottlieb Daimler, of Cannstatt, Wurttemberg, for "engaging and disengaging devices for gearing." As the patent No. 9805, 1899, is one of which much is likely to be heard in the near future, we reproduce below the complete specification as also the drawings appended to the same:—

The present invention relates to a gearing, and more especially to engaging and disengaging devices in an arrangement of gearing in which the driving shaft is connected to the motor shaft by means of a friction coupling actuated by spring pressure, and in which an alteration in the gearing of the toothed wheels can be effected only after the friction coupling and the toothed wheels have been put completely out of gear.

The chief feature of my invention, in view of the devices hitherto used, consists in an arrangement whereby the actuation of the friction coupling is effected by moving a hand lever which serves at the same time to alter the position of the toothed wheels. A further important advantage is

obtained in that my mechanism can be used for gearing which consists of two or more pairs of toothed wheels, and whereby the relative positions of these wheels can only be altered after the hand lever has been placed in its middle position, thereby disengaging all the toothed wheels. Further, by means of my arrangement it is possible to reverse the direction of rotation of the driving shaft. I attain this object by the employment of an intermediate wheel. Also this intermediate wheel can only be actuated after the gearing is completely out of gear by bringing the hand-lever to its middle position.

My invention will be more fully described with reference to the drawings filed with the provisional specification, in which the gearing consists of two and four pairs of wheels, and in which: Fig. 1 shows a section through the gearing, which consists of two pairs of wheels, the hand lever being in the middle position. Fig. 2 illustrates a section through the gearing, where the friction coupling device has been put into gear and two spur-wheels engage with each other. Fig. 3 represents a section through gearing consisting of four pairs of toothed wheels. Fig. 4 is a plan of the quadrant. Fig. 5 a transverse section through the same, illustrating clearly the hand lever H and its details. Fig. 6 is a detail of the lower part of the hand-lever in plan. Fig. 7 represents a view similar to Figs. 3 and 4, the coupling device and one pair of spur wheels being shown in gear. Fig. 8 is a transverse section through Fig. 7. Fig. 9 is a detail view of the lower extremity of the hand lever H in plan. Fig. 10 is a detail view of the hand lever H and its connections. Fig. 11 is a plan of Fig. 10 partly in section. Fig. 12 is an elevation partly in section of mechanism for reversing the direction of rotation of the driving shaft. Fig. 13 is a transverse section through Fig. 12 showing the hand lever and its connections. Fig. 14 is a plan of Fig. 12. Fig. 15 illustrates another position of the mechanism represented in Figs. 13-16. Fig. 16 is a transverse section of Fig. 15. Fig. 17 is a plan of the same. Figs. 18 and 19 are detail views of the quadrant M.

A is the friction coupling box driven directly by the motor shaft. This friction coupling box encloses a friction cone D fixed to a shaft B, which at one end runs in a bearing in the motor shaft, and on the other end within a bush C. This shaft B can be moved horizontally. Loosely mounted on the shaft B are the toothed wheels E¹ E². Another pair of toothed wheels F¹ F² is rigidly connected to the countershaft G. From the latter motion is communicated further in any suitable and known manner. A hand lever H is provided for the purpose of altering the relative position of the toothed wheels E¹ E². This hand lever is connected to a rod J¹ guided through a casing. By means of this hand lever H and the rod J¹ the toothed wheels E¹ E² can be altered in position so as to engage either with the wheel F¹ or F². A spring L is suitably attached above the sliding rod J¹ for the purpose of pressing the friction cone D into its casing A. The hand-lever H is shown in its middle position and the toothed wheels E¹ E² engage neither with F¹ nor with F².

The shaft B and consequently the friction cone D is in connection with a lever mechanism consisting of the lever K and rod i. By means of this lever mechanism the friction cone can be pressed into this casing or can be withdrawn. The spring L arranged above the rod J¹ acts in such a manner as to draw the lever K in the direction of the friction cone, so that this latter will be pressed into its friction box A. The hand-lever H is provided with a nose h¹ having a semi-circular surface. When now

obtained in that my mechanism can be used for gearing which consists of two or more pairs of toothed wheels, and whereby the relative positions of these wheels can only be altered after the hand lever has been placed in its middle position, thereby disengaging all the toothed wheels. Further, by means of my arrangement it is possible to reverse the direction of rotation of the driving shaft. I attain this object by the employment of an intermediate wheel. Also this intermediate wheel can only be actuated after the gearing is completely out of gear by bringing the hand-lever to its middle position.

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the hand-lever H is in its middle position the nose h¹ will abut against the end of the rod i and the friction coupling and the wheels will be put out of gear, as shown in Fig. 1. If now the hand-lever H is drawn for instance to the left, as shown in Fig. 2, the toothed wheel E¹ comes into engagement with the toothed wheel F¹ rigidly connected to the countershaft G. The nose h¹ by the same movement of the hand-lever H liberates the rod i. Thereupon the spring L comes into action and draws the lever K to the left, whereby the friction cone D is pressed into its casing A. The hand-lever H moves in a special guide or quadrant M arranged for the purpose to determine the motions of the lever, as well as to fix a middle position. When the hand-lever is brought into its middle position, the friction coupling will be disengaged as already explained. This device can also be employed in gearing consisting of four or more pairs of toothed wheels. Gearing consisting of four pairs of toothed wheels is represented in Figs. 3-9. In this construction besides the parts before described one additional pair of toothed wheels F³ F⁴ rigidly connected to the countershaft G and a corresponding pair E³ E⁴ loosely mounted on the driving shaft B are provided. For changing the position of the two pairs of toothed wheels E¹ E² and E³ E⁴ I employ two rods J¹ and J²; the construction is similar to that described in Figs. 1 and 2. These two rods J¹ J² at one end are each provided with teeth engaging with a segment h² of the hand lever H. The hand lever can be moved axially on its pivot pin, so that its segment h² can alternately be brought into connection with the rod J¹ or J². By means of this arrangement it is possible to move either the one or the other pair of the toothed wheels forward or backward.

(To be concluded.)

Correspondence.

[Letters to the Editor should be addressed to the offices, 27-33, Charing Cross Road, London, W.C.]

HOW SHOULD WE PASS TRAMCARS.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—I trust you will open your columns to a discussion of the problem raised by the decision of the Court of Appeal in the Bradford case, to which you referred in your last issue. Your Comment will be endorsed by every practical motorist, and the authorities concerned with the regulation of tramway traffic must see the rightness of the opinions expressed by the Lord Chief Justice. How the Local Government Board came to issue such a regulation as that which formed the reason for the prosecution I cannot comprehend. It surely is discarded in every town, and not one motorist in a hundred obeys its ridiculous rule.

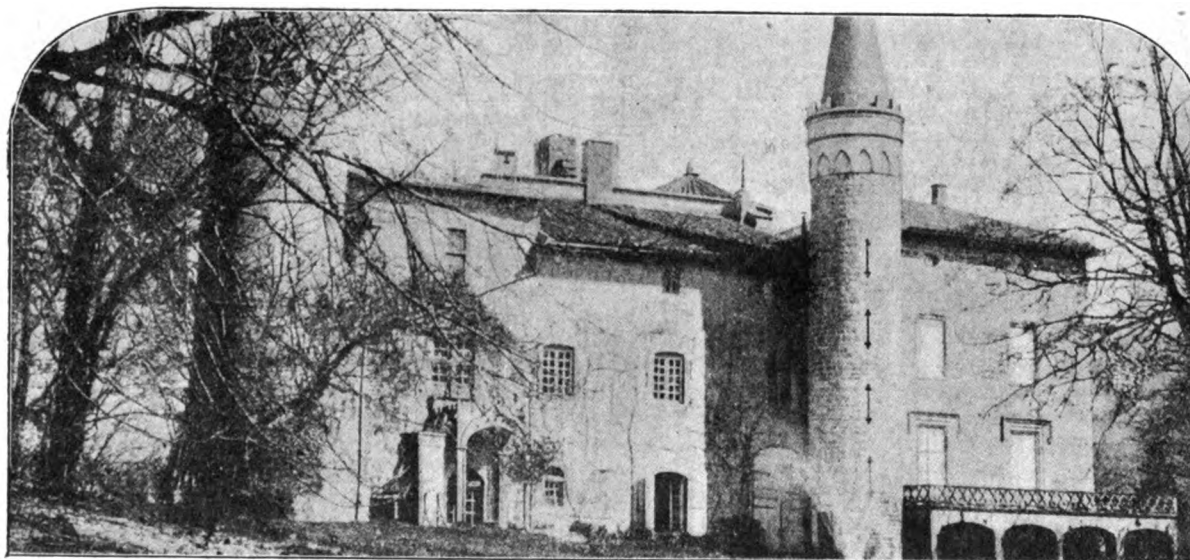
Has not the time come for a revision of the law as concerns the travel of trams generally? They scuttle along at a great pace, the drivers generally in blissful ignorance of their real rate of speed. Then they suddenly draw up in such a way as to constitute a great danger to traffic coming from the rear. Could not a coloured disc be shown from the rear when the driver intended to stop? Something of that kind is becoming absolutely necessary for the safety of other users of the road.

Anyhow, one thing should be done by every motorist. Never attempt to pass a car, or a motor-bus for the matter of that, when passengers are alighting. Disobedience to such a precaution may cause

out being used. Would it be best to partially discharge these and then recharge them? I understand it is injurious to accumulators to let them stand without being charged and discharged. I should also like to know whether accumulators should be entirely discharged before emptying the acid in order to clean them. If so, how should they be discharged?—Yours truly,

NOVICE.

[An accumulator which is to stand idle can be treated in two ways, either of which can be selected to suit the convenience of the user. It should either be thoroughly discharged or kept thoroughly well charged, in which latter case it is, of course, always ready for use. In the first instance, proceed as follows:—Thoroughly discharge the accumulator by connecting it to a 4-volt lamp or a coil of iron wire until it has discharged down to 1½ volts per cell, or 3·5 volts for a 4-volt set. Immediately after discharge, empty the acid out, and rinse the cells with water until they are quite free from acid in the plates or in the cell. Then drain it out and thoroughly dry the terminals and top of the case. Carefully vaseline the terminals and rubber bands to keep the latter soft, and put away in a card box to prevent dust settling on the top. In the second instance, charge up the accumulator so that it can be said to be thoroughly well charged. If there is a connecting wire joining the two cells together at the terminals, take this away, as it leaves the two



Touring in France.—Lamartine's House at St. Point, near Macon.

accident—and we motorists cannot be too careful, not only from feelings of humanity but from the point of view of the welfare of the motor movement.—Yours truly,

A. SYMONS.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—With reference to my letter of the 14th inst. (see page 1012) I have now seen your article on the above subject.

I had not realised before that both tramcars were stationary at the time of the alleged offence. The situation seems to me to be Gilbertine. The motorist cannot overtake the car which had been proceeding in the same direction as himself on what the judges hold to be the right side of the road without at the same time infringing the law as to passing the other standing tramcar. Also I should think a point might be made of the fact that the cars being stationary the motorist might be said to be passing both vehicles instead of overtaking them.

If any other form of vehicle came to a standstill in the middle of the road, no matter in which direction it has been travelling previously, I should hold that another moving vehicle would be at liberty to pass on either side where it had the most room.

Of course I do not profess to be stating any legal opinion, as I only look at the matter from a common sense point of view.—Yours truly,

J. E. HODGKIN.

Hon. Sec. North-Eastern A.A.

THE CARE OF ACCUMULATORS.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—I should be obliged if you would give me some hints as to how an accumulator which is not in constant use should be treated. I have two accumulators, and they often have to stand for several months with-

cells with their pressure divided. See that the top of the cell is very clean and vaseline the terminals and rubbers; take out the vent corks, as they cause spraying. After three months charge up again if the accumulator appears to have lost its voltage. After an accumulator has been once properly formed, it is not necessary to charge and discharge it when standing, provided it has received a good charge before standing. The easiest method of discharging is by connecting a lamp up to the terminals and leaving it until quite out.]

ACCESSIBILITY.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—Nothing is more deceiving than the apparent simplicity of some cars that are, in reality, extremely difficult to get at when the time actually comes to make a repair by the roadside. This is particularly the case with some of those cars which—in chassis form at a show—present a remarkably clean and simple appearance. One is often told, for instance, that “All you have to do to remove the magneto is to undo those two nuts and the magneto will come away,” but when it comes to undoing those two nuts, although they look eminently accessible and easy to reach, it may be found that it requires a human snake with special spanners to get them off, and that it is then a long job to manoeuvre the magneto out of its resting place.

In the same way, one often sees a carburettor which looks as if the whole thing could be dismantled in a few minutes, whereas it is really necessary to remove the inlet-pipe complete before the body of the carburettor will come away, and it may then be necessary to break two or three more joints before the jet can be reached. And here I should like to plead strenuously for an instantly detachable jet on every carburettor made. The stopping-up of the jet is about the only serious trouble that one experiences with good carburettors nowadays, and, in spite of it being

the easiest thing in the world to arrange the jet so that it can be instantly detached (by forming it with a hexagon-shaped base which extends outside the body of the carburettor) it is very much the exception to find a jet made in this way. An easily dismountable jet also makes tuning up far easier and tends towards better efficiency and petrol economy. When it takes two hours to remove and replace the jet one is not tempted to make the experimental adjustments for obtaining the greatest power and efficiency, which one would readily do when these adjustments are quickly done. Everyone who buys a car, particularly those who look after their own vehicles, should convince himself—it is even more important in the case of “herself”—that the accessibility of every part is real and not merely apparent—two very different things.—Yours truly,

EXPERIENTIA DOCET.

BALL-BEARING CRANKSHAFTS.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—There has been a good deal of discussion lately on the subject of ball-bearing crankshafts, but I do not think I have seen the position reviewed in the light of what practical experience has demonstrated in the past, together with what present-day developments foreshadow in this direction. The fact is that the theory and practice of ideal ball-bearing crankshafts—practice, that is, as regards ease and convenience of manu-

seems to indicate that this principle is correct and may prove the eventual solution of the ball-bearing crankshaft question.—Yours truly,

180141 10754 11481 ENGINEER.

A CLUTCH QUERY.

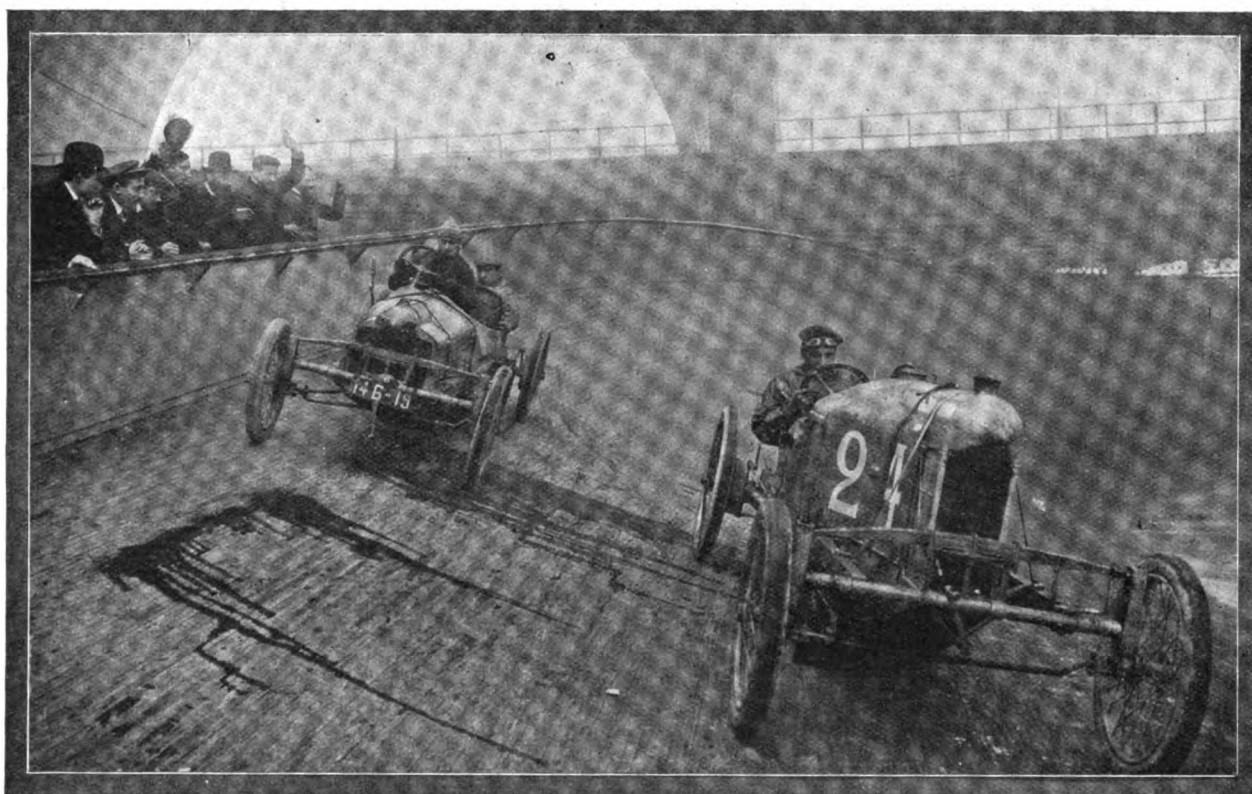
TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—I should feel greatly obliged if you would let me know, through the interesting columns of the *M.C.J.*, if a leather-faced plate clutch requires any special treatment. Should it receive lubrication of any sort? What should one do in the case of the clutch slipping; or, on the other hand, of it becoming too fierce? Are there any English or French cars fitted with such a clutch?

Also, is a coil made specially to be used in conjunction with a 6-volt accumulator likely to cause misfiring if a 4-volt battery only is used?—Yours truly,

AN INQUISITIVE NOVICE.

[The leather should be kept dressed with oil to prevent its becoming dry and hard. Various kinds of oil are advocated, among which castor oil is perhaps the most popular, although neat's foot oil is really better. A mixture of castor oil with a little paraffin soaks in very well. The best way to ensure the dressing permeating the leather thoroughly is to



M. Sisalre and M. Naudin practising on a covered cycle track in Paris in preparation for a speed trial to be held in the near future.

facture—are directly opposed. The ideal ball-bearing is as small in diameter as possible with very large balls, so that the speed of rotation is kept low and wear is thereby reduced. But the difficulty arises from the fact that with a one-piece crankshaft it is impossible to pass a small ball-ring over the cheeks of the crank, and consequently resort has to be had to a large ball-ring with comparatively small balls. For, with a bearing that can be easily fitted, using large balls, the size will be so great that the speed of revolution of the balls is considerably increased.

This difficulty has been cleverly overcome in the case of one English car by using a built-up crankshaft which, from the careful and ingenious way in which the design has been carried out, appears to be entirely successful. By building up the crankshafts the ball races do not have to be passed over the crank-cheeks, so that they can be kept small in diameter, although very large balls are used. This would seem to be a very satisfactory way of effecting the necessary compromise.

The fact that one of the leading engineering firms—Hotchkiss—and the Mercedes Company have abandoned ball-bearing crankshafts shows that these two experienced makers were not satisfied with them, and, in the case of both cars, the crankshafts were in one piece. It must be remembered, too, that the Hotchkiss Company originated this form of crankshaft and would not have abandoned it without very good reason; at the same time it is interesting to notice that the Mercedes Company even fitted ball bearings to the connecting rod big ends on a few of their cars, but soon dropped the practice. The success of the built-up crankshaft

soak the latter in tepid water, and afterwards, as it is drying, to paint the surface continually with the oil. The water soaking opens the pores of the leather and as the water dries out the oil is sucked in. If the clutch slips when the leather is properly dressed, a stronger spring should be fitted; or, if there is means provided for adjusting the present spring, it might be tightened up, and *vice versa* if too fierce. Plate clutches are used by De Dion, but they are not covered with leather, but we believe that one or more of the American cars have leather-covered plate clutches. A German car, the Bugatti Hermes, had a plate clutch, but this again was metal-to-metal. With regard to the 6-volt coil, this being designed for use with a 6-volt battery is very likely to be irregular in action if used with only a 4-volt accumulator.

STARTING HANDLE FOUND.—In Fenton (Staffs.) a starting handle has just been found by a small boy. It can be obtained on application to Mr. Alfred Meigh, Ash Hall, Stoke-on-Trent.

MESSRS. BRANWIN, CLARK, WISE AND CO., Milton House, Chiswell Str et, London, E.C., ask us to mention that they are open to receive on behalf of a Colonial firm catalogues of motor-cars and cycles with prices.

“PARTINGTON” writes:—“Will those motorists who have had experiences of dissolve acetylene write their experience of the same, stating whether it has proved satisfactory and how it compares with the ordinary acetylene lamp and generator?”

CLUBS AND ASSOCIATIONS.

ROYAL.

THE first annual dinner of the Royal Automobile Club and Associate Clubs was held at the Hotel Cecil, London, on the 14th inst., when Prince Francis of Teck, K.C.V.O., presided over a gathering of 380 ladies and gentlemen who are interested in the development of motoring. Those present included H.S.B. Prince Alexander of Teck, the Earl of Kimberley, K.G., Lord Montagu, and the gentlemen whose names appear below as speakers, Sir David Salomons, Major H. C. L. Holden, Messrs. W. H. Allen, J.P., W. Worby Beaumont, Dr. E. F. Bindloss, Dr. W. H. Copeland, C. Cordingley, Capt. F. S. Dyke Acland, T. W. Staplee Firth, A. W. Gamage, Charles Hardy, E. H. Hepper, Granville Kenyon, E. M. C. Instone, G. H. Smith, G. E. Learoyd, J. Stewart Mallam, H. B. Maybury, Mervyn O'Gorman, A. Lyle Rathbone, Percy Richardson, W. E. Rowcliffe, J. Lyons Samson, F. Thoresby, R. Todd, W. A. Vincent, T. H. Woollen, and many other gentlemen well known in club and motoring circles.

After the loyal toasts had been enthusiastically honoured that of "The Naval and Military Forces" was proposed by Mr. G. C. Ashton Jonson, in a speech scintillating with references to doughty deeds and full of admiration for the heroes of both services. Vice-Admiral Sir Charles Campbell, K.C.M.G., responded for the former, and Sir Henry Rawlinson, Bart., C.V.O., for the latter. Sir Henry referred to the assistance that motorists could render the Army, and trusted that their help would always be as readily given as had been the case hitherto. The internal combustion engine would not only be of service to the defensive forces on land but it promised to go into the air with equal success.

Lord Montagu, proposing the toast of "Automobilism," said that a few years ago motoring might have been said to have been the sport of the rich, but now it was enjoyed by all classes, and was no more confined to any one class than was any other form of locomotion. With the extension of the use of the motor-car to all classes the road was only coming back to its own. It had been said that the users of motor-cars looked upon roads as if no pedestrian should ever be allowed to wander upon them. But no motorist ever desired to interfere with the legitimate rights of the pedestrians; all the motor-car users wanted was the freest road they could get with the smallest number of obstructions—whether moving or fixed. They desired to show courtesy perforce to the fixed obstruction and the greatest goodwill to the obstruction that moved. It lay in the power of motor-car users to see that automobilism was worthily represented throughout the country. He was glad to notice that the abuse of automobilism was diminishing rapidly, and that arose not only from a better understanding of what automobilists were, but also because of more considerate driving on the part of automobilists themselves. There was a remarkable difference between the way in which cars were driven to-day and the way in which they had been driven five or six years ago. No vehicle in the London streets was driven with more consideration than the motor-car. In the agitation for a change of the law motor-car users must beware lest they fell out of the frying-pan into the fire. They knew the evils they had now to endure, and new evils cropped up every day. Even a few days ago they had learnt that they must always pass a tramcar on the off-side. What would Sir Edward Henry do if he (Lord Montagu) drove over Westminster Bridge and tried to observe that judgment? As long as the law remained what it was motor-car users must abide by it. There was a tendency to treat them more fairly on the part of the police and the magistrates, and that tendency should make them less willing to see any change in the law unless they were sure that it would be to their advantage.

Prince Francis of Teck responded, and referred to the great amount of employment the motor-car industry gave to the working classes and the prosperity it had brought to country inns and hotels. During the past year the membership of the Club had increased by 1,200 members, that of the Scottish Club by 181 members, and that of the Irish Club by 100 members. In the last year thirty-seven clubs in the various counties of the United Kingdom had thrown in their lot with the Club, representing 6,917 members. The Auto-Cycle Union had brought in thirty-six clubs, with 2,253 members. The total membership of the seventy-three associated clubs was 9,170, and the number of individuals in those clubs and in the national automobile clubs was 14,495. In 1905 there were 95,000 registered cars in the country; now there were 195,000.

Mr. A. Armitage, J.P., proposed "Our Guests," responses being made by the Earl of Kimberley and Mr. H. T. Rutter.

Sir Edward Henry, the Commissioner of Police for the Metropolis, in proposing "The Chairman," expressed the obligation which he said the police were under to the chairman and the committee of the Royal A.C. for the help they were always ready to give the police when it was required. The newspaper correspondence last year indicated that there was considerable public disquietude on the subject of motor-car driving. Nothing was so calculated to remove such scares as a belief on the part of the public that such organisations as this club were endeavouring to control dangerous and inconsiderate driving. That had always been the attitude of the Royal A.C. The force of example and the pressure of public opinion had reduced drunkenness in this country, and the abuses of motor driving could be cured by the same influences. There would always be a limited number of persons who must be left to the police, but he looked forward to the time when dangerous driving would come under the same opprobrium as drunkenness, and would be universally recognised as "bad form." Social sanction was and always had been more potent than penal sanction.

Prince Francis in his reply made the announcement that the Brooklands A.R.C. had made the offer to admit to membership of that club any member or associate of the R.A.C. at the reduced fee of two guineas per annum, provided 1,000 members and associates availed themselves of the offer. He further remarked that, while England was often accused of lagging behind in automobilism and aviation, it had through the enterprise of Mr. Locke-King outstripped all other nations in having the only motor track in the world, and this being so it was in his opinion the duty of all those who enjoyed the sport of automobilism to support Mr. Locke-King by every means in their power, as, entirely apart from the racing side of the venture, the track was undoubtedly an invaluable asset for testing cars and proving their merits.

BROOKLANDS.

THE offer of the Brooklands A.R.C. to receive members of the R.A.C. in its ranks for an annual subscription of two guineas for the year commencing on March 1st is being well taken up. The condition attached is that 1,000 new names are received by that date.

Miss Edith Paterson has established the first lady-driver's record on Brooklands Motor Track by running a 16-h.p. Imperia car fitted with Dunlop tyres for an hour continuously, the total mileage in that time being approximately fifty-three miles, while the fastest lap was done at a fraction over fifty-five miles an hour.

SOUTHEAD AND DISTRICT.

THE second annual general meeting of the Southend and District Motor Club will be held on Tuesday next at the Hotel Victoria, Southend, when the committee's report will be considered. This will review the various social events of the year as well as the activity of the Essex county police.

During 1908 the club was the means of rendering assistance to members in many ways, such as in connection with exceeding the legal limit, claims in respect of patent rights by the De Dion-Bouton Company, matters of insurance, unsatisfactory hotels, &c. Captain Newman not being any longer politically connected with the district, has sent in his resignation as president of the club, and the committee is now endeavouring to fill the vacancy. As we have already announced, Mr. A. Warnery is resigning the hon. secretaryship and Mr. H. Greenfield has been invited to become his successor.

BLACKHEATH.

THE annual general meeting of the Blackheath A.C. will be held at 12, Charlton Road, Blackheath, on the 28th inst., when fifty active and five honorary members will be reported in the ranks of the club. The finances are in a satisfactory state, a balance of £13 19s. being carried forward. Lately the club has supplied the Greenwich Borough Council with two danger signs to be erected at Blackheath. The committee have agreed to affiliate with the M.U., and a resolution confirming this decision will be submitted to the meeting. At the same gathering the programme for the coming season will be discussed and an endeavour made to arouse the enthusiasm of members in the proceedings of 1909.

CYCLE AND MOTOR TRADES BENEVOLENT FUND.

MR. A. J. WILSON, of 154, Clerkenwell Road, London, E.C., the general hon. sec. of this fund, sends us a copy of the report for 1909, which contains a list of members, the rules of the Fund, bye-laws for the management of branch centres and a balance-sheet showing that the funds in hand exceed £7,000. We commend the society to the attention of all engaged in the motor trade, and anticipate that its usefulness will considerably increase as the years go on.

INSTITUTION OF AUTOMOBILE ENGINEERS.

THE R.A.C. has accepted the invitation of the Incorporated Institution of Automobile Engineers to appoint delegates to serve on the Research Committee now being formed by the Institution to investigate the relations of the dimensions of a petrol engine to the horse-power developed.

SUSSEX MOTOR YACHT CLUB.

THE second annual dinner of the Sussex Motor Yacht Club was held on Saturday evening at the headquarters of the club in Middle Street, Brighton, Sir Theodore Angier presiding.

During the evening the Rear-Commander, Lieutenant O. Summer, R.N.R., who was in the vice-chair, read an interesting paper on "Rudders and Helmsmanship." The author, who is also the hon. secretary of the International Motor Yacht Racing Association, submitted facts and data for the benefit of the amateur owner, in order to render him less dependent on the advice of the maker or the paid hand.

BRITISH MOTOR-BOAT CLUB NOTES.

IN order to comply with the B.M.B.C. rule that boats shall not bear any trade name, the secretary has been informed that Mr. F. S. Edge's Napier Major will be called Major and the new eight metre racing boat which he is having built will be called Lucinha. The new boat which Mr. Mawdsley Brooke will be racing will be called Baby III.

AEROPLANE.

THE first annual dinner of the Aeroplane Club of Great Britain and Ireland was held at the Savoy Hotel, London, on Wednesday of last week, Mr. Horridge, K.C., M.P., being in the chair. Among the company present, which numbered 160, were Captain Ferber, aeroplane expert of the French army; Major Baden-Powell, Mr. F. W. W. Hutchinson, Mr. Roger Wallace, K.C., the president of the Aero Club, the Prince of Kapsorphala, Colonel H. S. Massy, C.B., Sir C. Champion de Crespigny, Colonel Mark Mayhew, and Major Templer.

Colonel H. S. Massy, proposing the toast of "The Club," said that it had only been in existence three months and yet it had 950 members. Englishmen were a little bit behind hand in these matters, he added, but they would no doubt muddle along in the old English fashion, and in the end English grit would place them at the head of the nations in the science of aeroplanes.

The Chairman, replying, remarked that all members wished the best possible inventions to be discovered in their club for the protection of the military interests of Great Britain against the world. The old saying on leaving home in the morning, "We are going to take the air," would have a new meaning in the future. When that was done, they would have to consider new conditions, and he foresaw great difficulties, say, in regard to the safety limit. It seemed almost impossible to imagine two policemen, in respective aeroplanes, busy taking tests on the measured

ROAD REPORTS.

TEN MILE LIMITS IN SURREY AND SUSSEX.

The Local Government Board have made regulations for a speed of ten miles an hour for motor cars on the following highways: (1) Through the village of Hersham, from the Congregational Chapel along Hersham Road and Queen's Road, to Westcar's Lane, a distance of 1,250 yards; (2) so much of Bridge Street, Walton, as extends for a distance of 500 yards from Church Street to Mount Felix; and (3) High Street and Chertsey Road, Woking, for a distance of 600 yards from Duke Street. These regulations come into force on Monday next.

Applications for similar limitations of speeds have also been the subject of public inquiries at Mayfield and Cowfold, opposition being made on behalf of the M.U. by Mr. Rees Jeffreys, and of the R.A.C. by Mr. G. Dean.

ACTON.—A new thoroughfare 50 ft. wide is to be made from High Street, Acton, to Mill Hill Road, running into Park Road North. Later a road will probably be built across the North London Railway at South Acton, so that vehicular traffic may have a straight route through to Acton Green and Chiswick.

HEREFORDSHIRE.—From a report of the Roads and Bridges Committee, presented at a meeting of the Herefordshire County Council, it appeared that the County Surveyor, Mr. G. H. Jack, did not favour the tar



One of the Motor-Cars used in the recent Military Manœuvres in Germany.

[Allgemeine Automobil Zeitung.]

mile in the air. There would be rules of the air, as there were rules of the sea. With the aeroplane it would be possible to discover the North or South Pole in three or four hours from the jump-off, travelling, as they would do, 300 miles an hour. Custom House officers would be no longer required, as people would fly into other countries without being stopped at the frontiers.

Colonel H. S. Massy also foresaw the arrival of the aeroplane. It was inevitable that, if we wished to go any faster, we must abandon the roads and take to the air. "There, at least," he said, "there will be no more bursting tyres, and we shall be no longer smothered with dust; no more sharp corners, no dangerous hills, no cross roads, no heaps of stones, no flocks of sheep, nor Saturday bicycle clubs. I was about to say no policemen, but that would be too much optimism; and I now prophesy, on the contrary, that the most exciting part of future existence will be a speed of 300 miles an hour, with a police-plane in hot pursuit." The aeroplane, he thought, would not come into use as an aid to scientific and industrial or commercial undertakings so rapidly as it would for various other purposes. Man, who was essentially a bellicose and quarrelsome animal, was already arranging for its use as an engine of war.

THE Motor Cycling Club has resolved to discontinue affiliation with the A.C.U. for 1909.

painting of roads as a lasting success. He had lately seen some roads in Breconshire constructed under a new process, which affected the whole of the crust and not the surface only. There was no oil or tar in the process. He was much impressed with the appearance of the roads after much motor and other traffic. He was informed that the life was at least three years, and the cost from 1½d. to 2d. a yard over and above the cost of a water-bound road. If this were so it would be much more economical than tar. It could be laid down in any weather, and overcame the great difficulty of slipperiness, which were two very important considerations. The committee resolved to give no rural or urban districts consent to their tarring the roads.

SUSSEX.—It is intended to repair the following main roads in East Sussex during the week:—Between Muddleswood and Henfield; Clayton and Ditchling; Haywards Heath and Ardingly; Lewes and Shortgate; Newhaven and Rottingdean; Wadhurst and Lamberhurst; Eridge Station and Tunbridge Wells; Catsfield and Battle; Bodiam and Staple-cross.

MESSRS. EASTON AND MELVILLE, LTD., 85, Shaftesbury Avenue, send a neat waistcoat calendar for 1909, which also serves as a reminder of their Ilo lubricating oil, which is well known to motorists.

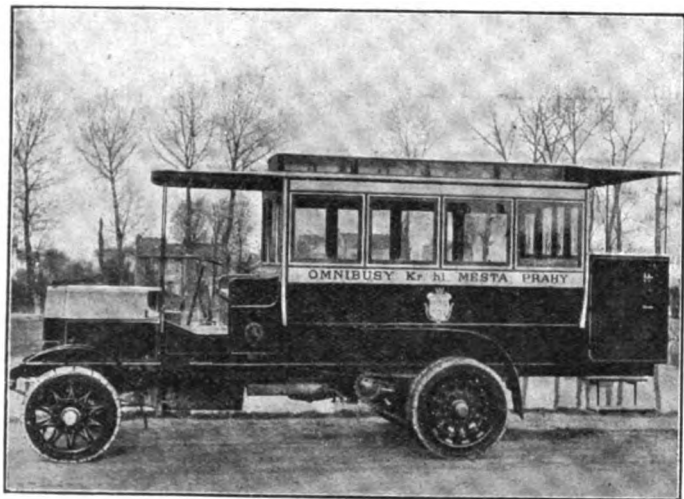
INTERNAL COMBUSTION-ENGINEED BOATS.*

By F. R. S. BIRCHAM.

For the sake of clearness, I have divided up the boats into classes A, small, entirely open boats, such as dinghies; B, larger, open or partly decked boats; C, cabin boats; D, fishing and commercial boats; E, racing installations.

In each of the above classes we shall find features in the design, installation and use particularly applicable to it; and to make the various details forming the installations clear they may be divided as follows:—1. Engines. 2. Lubrication. 3. Ignition. 4. Exhaust and water services. 5. Fuel supply. 6. Installation in boat. 7. Shafting and propellers. 8. Clutches and reversing arrangements. 9. Control.

In class A the engines are of necessity placed in close proximity to the passengers, and owing to this and to their liability to rust there should be as few outside moving parts as possible. What there are should be efficiently protected. In class B there is not the need for the extreme compactness and protection of parts from mechanical injury as in the smaller boats. This is owing to the fact that engine cases are nearly always fitted. In many of the lower powered and smaller of these boats, horizontal motors under cross thwarts would be a distinct advantage, giving greater neatness to the boat and more room. In class C there is not the need of designs for running in the open without protection, nor is there the need for the extreme compactness. It will indeed be better to design these engines for accessibility. Design must therefore tend to simplicity of overhaul in place. For class D engines cannot be too simple. Very large bearing surfaces, either ring or wick lubricated, answer best, with the addition of splash lubrication in the crank case. The crank case can be of a box form of



One of the Aries Single Deck Motor-Buses recently supplied for a service in Hungary.

iron casting enclosing all gear of whatever kind. The engines will be required to run without attention for long periods, and often for weeks without skilled attention. They should be so designed that nothing is likely to wear unduly, nor require attention inside the crank-case for at least a fishing season. Racing engines are a class by themselves. There is no limit to the amount of originality that can be used in their design. No racing formula limiting the design in any way should for a moment be considered, as it is these engines that show what can be done with advantage and safety in standard practice. They are intended to give as much power as possible in given cylinder dimensions or for a given consumption, and to go on giving this power indefinitely. Special arrangements are made as to cooling, and generally large bearing surfaces are advisable. The working parts must be specially light, and all valves and passages specially large and free from obstructions.

The only really satisfactory lubricant system for marine work is the forced feed system, except, perhaps, for the smallest sizes. It gives perfect lubrication, is constant, and requires no attention. At most the only extra working parts are those of the pump and its drive. A pressure gauge indicates when all is well. Pressure may be regulated either automatically by a relief valve or by hand with a three-way cock; in each case the oil is returned to the crank case. It is simple to cool the oil by pumping it through a cooler or through a pipe running outside the boat, and this, besides saving oil, results in far cooler bearings. A service tank of large capacity may be placed in the oil system, so that when once filled no further attention is required until all is used up, the time depending on the heat and the wastefulness of

the engine and size of tank. No other system should be adopted for other than the smallest engines or those running at very moderate speeds with low bearing pressures.

The worst work that is seen about installations, without exception, is the ignition. Turning to our various classes of boats, A requires rather special treatment, which also applies to the smaller engines in class B.

In class A and most small engines of B the ignition is almost invariably high tension or low tension with an induction coil and battery, the cost of the plant being unable to stand the cost of a magneto. As a rule there are separate wires run in every one's way unprotected to the contact-breakers and plug. It appears that there would be no difficulty in casting with the cylinders or bolting on a coil and battery case with a tight rubber jointed cover. From this the high tension lead would run to the plug in a removable casing, or in a flexible tube ending in a plug cover as suggested above. The contact-breaker, if of the eccentric type on two-cycle engines, could also be enclosed in the same case. This would ensure at small cost an excellent system. When engines have more than two cylinders, however, magnetos as a rule are used, when the general suggestions above will apply to the installation. C.—This class will invariably have magnetos of the high tension or low tension types, as well as, possibly, coil ignition as a stand-by. D.—This class must have a simple ignition, and probably the best is low tension magneto ignition with a battery as stand-by and for starting. This, however, may vary according to circumstances and the type of engine. E.—These engines are invariably fitted with high or low tension ignition, preferably the former, and the greatest pains should be taken as to the insulation.

The exhaust arrangements depend very considerably on the arrangement of the accommodation on boats. The simplest, with decked or partly decked boats, is the use of a funnel silencer. This entails the minimum of exhaust piping, and is simple. A.—In this class it is usual to have bare exhaust pipes, asbestos lagged, generally by binding cord round them. This looks rough, and does not fully protect persons and goods from damage. These often are the most costly items in the installation of the plant, owing to each having to be carefully bent to the form of the boat. It would appear that a system might with advantage be worked out in which the circulating water was turned into the exhaust pipe, having a drain of ample area to the sea at the lowest point. Thus all water not carried off as steam would be carried to the sea direct, and some amount of cooling would result. The silencers are a considerable difficulty, there being so little room in which to place them. The usual bark of these small engines in most annoying, and difficult to prevent. It might be avoided if the silencers were placed vertically alongside the engine, and were of a tubular water-cooled type, having much cooling surface, the circulating water passing through them. B., C., D.—Any of the types suggested may be used for these boats except uncooled pipes. These are quite inadmissible. E.—The most usual form of exhaust is that of a plain pipe having the circulating water turned into it. This generally, with the length available, gives sufficient silence. It is a question whether Koerting type ejectors giving an exhaust vacuum will not be found the most efficient arrangement in spite of added weight and the power taken by the water pump.

The system of fuel supply has been thoroughly worked out, and many excellent arrangements are to be found. The points in the designing of the supply and storage are, firstly, that the tanks be thoroughly protected from mechanical injury, and are sufficiently strong in themselves. They should be invariably riveted and brazed, unless weldless steel tanks are used. The latter, although very strong, are liable to rust. In small boats the fore peak is not a suitable place for a tank if it is used for any other purpose. It is usually required for ground tackle. It is, however, the only place from which a gravity feed can be obtained. This in classes A., C., D., is probably the best system, as in the latter classes the tanks can be on deck, and in the former it saves all pressure service and complication.

The installation of machinery in boats is often a most troublesome matter owing to the fact that few of the smaller plants are designed in collaboration with the boat-builder. The aim in the design should be to construct a plant requiring as little fitting in the boat as possible.

Generally, the result to be aimed at is to so instal the whole plant that any part may be removed and replaced with as little work as possible and without the necessity of removing any other part.

Shafting and propellers are sections which it is impossible to discuss fully in the limits of this paper. Propellers are chosen for the work the boat is intended for, a compromise being aimed at where towing is a part of its duties. Generally, speeds of revolution are preferably kept low except in the fastest boats, and in the case of those boats intended for towing yachts this is particularly important. Shafts are preferably of bronze or delta metal, as no trouble will then be caused by corrosion and rust. The strength of these metals is such that shafts of small section may be used.

Nearly all methods of reverse depend on a gear or on reversing propellers, few engines being arranged at present to themselves reverse and re-start readily enough to depend on. The gears used are of many types, some with gear-boxes and separate clutches, others with clutch-gears almost open, and, again, others with totally enclosed clutches running in oil. Of these types the latter is that which only can be called entirely satisfactory. It is preferable, where possible, to include the reverse gear in the engine casting, thus making one unit, or when not possible, to mount it on steel bearers with the engine. In the former

* From a paper on "Some points in the design and use of small internal combustion-engine boats," read before the Incorporated Institution of Automobile Engineers, on January 18th, 1909.

case the flywheel could readily be placed at the forward end of the engine.

In this paper I have attempted shortly, and within the limits of the title, to set out the ordinary practice obtaining in motor-boat work. I have not attempted to include every point, nor to discuss various fuels and their use, nor other than standard two or four cycle engines, but to point out desirable features in boats having any type of engine using any kind of fuel.

CASES AGAINST MOTORISTS.

THE SPECIFICATION OF POLICE TRAPS.

The further hearing of the adjourned summons against E. A. Lastsmith, Drayton Gardens, Kensington, for driving a motor-car at an excessive speed in Morden Road on November 29th, was heard at Wimbledon on the 13th. The case was reported in the *M.C.J.* of January 9th. Mr. Douglas Leechman had objected to the relevancy of the summons, on the ground that it was wanting in specification, and the Bench adjourned the case to consider the point. Mr. Knight appeared for the police, and stated that a measured furlong was covered in 16.5 sec., which was equivalent to over twenty-seven miles an hour. Mr. Leechman objected to the case being stated until the preliminary point raised by him had been decided. His objection was that the summons did not specify the speed the car was going at, over what part of Morden Road the defendant was exceeding the limit, and over what distance he was timed. The Chairman: What it does state is that it was on a public highway, and he was driving at a speed exceeding twenty miles an hour on Morden Road, at 10.40 a.m. on November 29th. Mr. Leechman said that a Scottish complaint to which he had referred alleged contravention of Section 9 of the Motor-Car Act, and in particular over a quarter of a mile at Caterbog Farm, on the Ballock road, Dumbartonshire. The Chairman: He was driving at an excessive speed over a certain quarter of a mile, and he was entitled to know the quarter of a mile. If we had specified that you drove over a specified furlong we would have had to state it. I have been in Scotland and know what they do there. They don't stop the car and the man does not know what charge will be preferred against him. The police take the number and the speed at which the car is travelling, and then he is summoned. After further argument, the objection was repelled, and evidence was given by the police. The defendant and his driver stated that, owing to the condition of the car, it could not run at twenty miles an hour. The Bench imposed a fine of £2 and £1 13s. 6d. costs.

BATCHES.

The Mortlake justices on the 13th inst. imposed fines amounting to £29 on motorists for exceeding the speed limit on the public highway at Barnes Common.

At the Wimbledon Petty Sessions, Mr. J. B. White, the employer of a chauffeur who was summoned for exceeding the speed limit, had a discussion with the chairman with regard to his reliance upon the evidence of police witnesses. Mr. White is also the chairman of a bench of magistrates, and said that he timed the car from milestone to milestone, and was sure they were going very slowly at the time in question. Despite this, however, a fine of £2 and costs was imposed. On the same occasion seven other motorists were fined similar amounts. Two motorists were fined £1 and £2 respectively at Kingston for exceeding the ten mile speed limit in Clarence Street of that borough.

Several cases have lately been heard before the Brighton Borough Bench in which motorists have been summoned, and fined, for leaving motor-cars in the streets unattended.

Several motorists were summoned at Grantham on Saturday for exceeding the speed limit on the Great North Road.

HEAVY DAMAGES.

The Lord Chief Baron and a special jury at Dublin concluded on the 14th inst. the hearing of the case of "Gregg v. the Department of Agriculture and Technical Instruction." The plaintiff, an ex-soldier, residing in Dublin, sought to recover damages for personal injuries which he alleged he had sustained through the negligence of the defendants' servant in driving a motor-car on August 14th. The case for the plaintiff was that he was knocked down by the motor-car a few miles from Inchicore, on the Naas road. Mr. T. W. Russell, M.P., Vice-President of the Department of Agriculture, Mrs. Russell, and the chauffeur were the occupants of the motor-car. The plaintiff had just jumped off a milk-cart and was crossing the road when he was struck. His left leg was fractured, and it was stated by a medical witness that the injury was permanent in its effect. The defendants pleaded contributory neglect on the part of plaintiff. The jury found for plaintiff and awarded £370 damages.

TWO SUMMONSES ON ONE DAY.

Capt. Fletcher was charged at the Sittingbourne (Grantham) Sessions, on Saturday, on two summonses for having driven a motor-car at a speed exceeding twenty miles an hour on the Great North Road on December 22nd. The police evidence showed that the defendant was first trapped south of Grantham, and a few miles north of the town fell into a second trap. He was fined £5 and costs.

The Standard Motor Company, Ltd., have appointed Messrs. Schrader and Co., of 51, Avenue de la Grande Armée, their agents in Paris for the Standard cars, and report that they are already doing a nice business in the French capital.

DE DION-BOUTON PROSPECTUS.

MR. JUSTICE NEVILLE gave judgment on Tuesday in the Chancery Division, in the motion brought by Mr. A. C. Tweedy, of Monmouth, a shareholder in De Dion-Bouton (1907), Ltd., and a further motion by Mr. H. Stonehouse, on behalf of 124 other shareholders, for the rectification of the register of the company and the return of their subscriptions, on the ground of false and misleading statements in the prospectus.

After arguments by counsel for the respondents, his Lordship, without calling upon the applicants, gave judgment in their favour. He said there was no allegation of fraud. The prospectus invited subscriptions to the company to carry on the manufacture of De Dion-Bouton cars. The statement was made that it had been formed to acquire the De Dion patents relating to road and water traction. This was not quite correct. Then there were set out certain patents, said to be De Dion patents, under which the company would be able to manufacture. Was that a true representation? He thought it was remote from the truth. The truth was that the patents which the company was formed to acquire really formed only a small proportion of the patents the acquisition of which would be necessary in order to manufacture the same kind of car as that manufactured in France. His Lordship was of opinion that there had been material misrepresentation, and ordered the rectification of the register and the return of the money paid on the shares by all the applicants, together with costs.

Mr. Astbury, KC. (for the company), said the whole amount—some £5,000—should be paid into court within a fortnight, notice of appeal to be given within that time.



Miss Sheila O'Neill, London's First Lady Professional Chauffeur.

Although Miss O'Neill is not permitted to ply for hire owing to the views of the hackney carriage drivers' licensing authorities, she is for all that kept quite busy with her numerous engagements. Miss O'Neill is to be found at Mr. A. E. Mills's Garage, in Little James Street, W.C., and has proved herself a skilled and practical driver in the crowded streets of the Metropolis. Moreover, she is quite capable of attending to any adjustments which might be required on her car. She has recently testified to the admirable qualities of H.V. lubricating oil and greases, which are used at the above garage.

INCORPORATED INSTITUTION OF AUTOMOBILE ENGINEERS.

A GENERAL meeting of the members of the London branch of the Graduates' Section of this Institution will be held at 1, Albemarle Street, Piccadilly, W., on Tuesday next, when Mr. C. F. T. House will read a paper on "Horse Power and its Estimation." Mr. J. S. Critchley will preside.

At the inaugural meeting of the Birmingham centre more than 100 pupils and apprentices were present.

At the last meeting of the Council there were present:—Dr. H. S. Hele-Shaw (in the chair), Messrs. Mervyn O'Gorman, F. C. A. Coventry, Charles Wheeler, Charles Marston, L. A. Legros, T. B. Browne, D. J. Smith, F. L. Martineau, J. S. Critchley, and Kees Jeffreys (secretary).

The following have been elected members of the Institution:—Messrs. J. W. H. Gill (Ceylon), R. W. Harvey-Bailey (Preston), E. G. E. Beaumont (London), L. Bell (Peebles), C. W. Hacking (London), E. A. Rainer (Pewich), C. E. Simms (Birmingham), F. Strickland (Malton), F. W. Hudlass (London).

New associate members include Messrs. S. de Beer (London), J. A. Doring (Coventry), J. C. Jolly (Coventry), S. H. Peppin (London), J. T. Taylor (Sevenoaks).

FORTHCOMING EVENTS.

JANUARY.

- 22nd-30th.—Scottish Motor Exhibition at the Waverley Market, Edinburgh.
 23rd (S.).—Annual Dinner of the Coventry Motor Club at the Craven Arms Hotel, Coventry.
 Annual Dinner of the Lancashire A.C. at the Park Hotel, Preston.
 26th (T.).—Scottish Motor Trade Association Dinner at Edinburgh.
 30th (S.).—Annual Dinner of the Auto-Cycle Club.

FEBRUARY.

- 2nd (T.).—Annual Dinner of the Scottish A.C. at Glasgow. H.S.H. Prince Francis of Teck will be among the guests of the club.
 4th (Th.).—Annual Dinner of the Southern Motor Club.
 19th-27th.—Manchester Motor Show at Belle Vue.
 17th (W.).—Paper on Lubrication by Mr. J. W. G. Brooker at the R.A.C.
 20th (S.).—First Annual Dinner of the Sutton Coldfield A.C. at the Royal Hotel, Sutton Coldfield.
 24th (W.).—Annual General Meeting of the British Motor Boat Club.

MARCH.

- 1st (M.).—The Road Trials in connection with the Army Council Competition for light tractors commence.
 Motor-Car Show at Barcelona.
 Last day for entries for Monaco Aeroplane Competition.
 6th (S.).—Cambridge University Motor-Cycle Club Reliability and Petrol Consumption Trial.
 20th-27th.—Cordingley's 14th Annual Motor-Car Exhibition and Market, Agricultural Hall, London.

MAY.

- 2nd (S.).—Targa Florio, Sicily.
 14th (F.).—British Motor Boat Club meeting at Erith.
 24th-29th.—Irish Reliability Trials—provisional date.

JUNE.

- 10th-18th.—Prince Henry Trophy Competition.
 14th (M.).—Commencement of the Scottish Reliability Trial.

JULY.

- 5th-10th.—Auto-Cycle Union's Six Days' Trial.

LIGHTING-UP TIME—LONDON.

| | | | | | | |
|----------------|-----|-----------|-----|-----------|-----|-----------|
| Jan. 23rd—5.30 | ... | 25th—5.33 | ... | 27th—5.37 | ... | 29th—5.40 |
| „ 24th—5.31 | ... | 26th—5.35 | ... | 28th—5.38 | ... | 30th—5.41 |

COMPANY NEWS.

In the case of New Companies the file number is given at the end of the particulars.

THE Wimbledon Motor Cab Company, Ltd., has been registered with a capital of £5,000 and offices at 29, High Street, Wimbledon.
 VALVELESS, LTD., is the title of a company which has been registered with a capital of £5,000 and offices at 7, Upper St. Martin's Lane, London, W.C.

SYNDICAT FRANCAIS DES BREVETS E. M. BOWDEN, LTD.—At the seventh annual meeting of this company, to be held on Tuesday next, the directors' report will show a profit of £4,264 for the year, which, with the balance brought forward from the last account, will give a total of £5,754 available for distribution. From this a dividend at the rate of 20 per cent. per annum will be declared, £1,500 placed to general reserve, £852 carried to the next account, £188 provided as directors' extra remuneration and £313 written off the expenses of the new issue.

A. VEDRINE AND CO.—The accounts for the year ended September 30th show a net profit of £2,364, and, after reserving £6,500 in respect of doubtful debts, the credit balance of £4,370 brought forward was reduced to £235. For the previous period of seventeen months the preferred dividend was paid and 5 per cent. on the ordinary shares.

THE STORAGE OF PETROL.

AT Westminster, Walter James Meager (Meager and Adams), of a motor garage in Glendower Place, South Kensington, was summoned for a breach of the conditions of licensing for the keeping of petrol. Mr. Greenwood, prosecuting for the L.C.C., said that in view of the accidents which had occurred the Home Office regulations as to the storage of petrol spirit were very stringent. Under particular restrictions as to ventilation and storage the defendant was allowed to keep 200 gallons of petrol. An inspector found on the premises 160 gallons in excess of the quantity allowed, some of it being outside on the pavement. The defendant said that on that day they had a number of heavy orders to execute. It was usual to deliver the petrol in such cases direct from the trucks outside the shop, but on this occasion accidental circumstances prevented this from being done. Mr. Horace Smith imposed a fine of £10 and two guineas costs.

"DEWAR" CHALLENGE TROPHY.

THIS trophy, which was kindly presented to the R.A.C. in 1906 by Sir Thomas Dewar, M.P., is awarded for the most meritorious trial held during the year under the Long Distance Trial Regulations of the R.A.C. It has been unanimously agreed, after careful consideration of the performances made in such trials during 1908, that the trophy shall be awarded to Messrs. the Anglo-American Motor Car Company, Ltd., for their standardisation test of three 10-h.p. Cadillac cars, carried out on February 29th, 1908.

The 22-h.p. "Valveless" car entered by Messrs. "Valveless," Ltd., for a 1,000 miles trial was given the second place and was specially commended.

AUTOMOBILE ACCIDENTS.

AT an inquest held at Ilford concerning the death of a man who was knocked down and killed in the High Road, Ilford, the jury returned a verdict of "Accidental death." The coroner in his summing up said he did not think any blame could attach to the driver, but it was unfortunate that he should have swerved—as had been stated by his solicitor, in order to avoid deceased.

WHILE a motor-car in which Lieutenant George L. Browne and Lieutenant P. D. Campbell, of H.M.S. Ganges, were being driven from Shotley Naval Barracks to Ipswich, was passing over a level crossing close to the town it collided with a goods train. The train, which was being shunted, was going very slowly, but the motor-car was moving at a good pace. Lieutenant Campbell was thrown out violently against one of the trucks, but fell clear of the line and escaped with some bruises. Lieutenant Browne and Mr. H. C. B. Peck, who was driving, remained in the car and were unhurt. The front of the car was much damaged.

AT the Westminster Court on Monday, the coroner held an enquiry with reference to the death of an errand boy who was run over and killed by a motor-bus in Whitehall on the previous Thursday. The boy was riding a bicycle and fell under the vehicle from his machine in trying to avoid a collision with a motor-cab that cut right across in front of him. The jury returned a verdict of "Manslaughter by an unknown cab driver" and exonerated the driver of the bus from blame.

"POLICE CONTROLS."

THE police trap in the Eltham Road, Eltham, has been in frequent operation of late.

THERE is a measured quarter of a mile in the vicinity of Dunbarton. THE measured furlong in the Shooter's Hill Road has been in frequent operation of late.

BUSINESS NEWS.

THE Motor Schools, Ltd., have issued a neat pamphlet of Motor Notes which will be of service to their pupils.

WOULD-BE car purchasers will be greatly interested in the guarantee recently issued by the Junior and O.T.A.V. Cars Company, Ltd., of Long Acre, W.C. This guarantee is issued with every car purchased from the company, and practically covers the whole cost of upkeep with the exception of petrol, lubricating oil, and insurance for one year or for a distance of 5,000 miles. Such important matters as tyres, adjustments, replacements, and repairs are all covered, and every detailed form of inspection and rectification that the car is likely to require under fair usage for the time and distance named. At the end of the first year the purchaser has the option of renewing the guarantee by paying the Junior Company a moderate fee, and is thus enabled to run his car on the most economical lines and yet feel that his vehicle is at all times in thorough road-worthy condition. A noteworthy feature of the guarantee is that the Junior Company undertake to send a qualified mechanic, free of all cost to the car owner, to any part of the British Isles, in order to carry out such adjustments and repairs as may be required.

LADY EDWARD SPENCER CHURCHILL speaks in the highest terms of her 15-20-h.p. Coventry-Humber landaulet, which is now nearly two years old. Writing from Queensmead, Windsor, Lady Edward states that the car has just taken her, Lord Edward, a maid, a valet and a chauffeur, the luggage in boxes fitted on the top and on the carrier behind, also guns, cartridges, bags, &c., over the most severe hills in Shropshire and Herefordshire. Some of the cross country roads were in a deplorable state, but, in spite of all, the vehicle ran without a stop and took the hills without a falter.

IT may not, perhaps, be generally known that it is now possible to buy an aeroplane in London much as one purchases a motor-car, including in a similar way the option of several different makes, of varying horse-powers and different carrying capacities. Yet such is the case, and the whole transaction may be carried out within a mile of Charing Cross, and provision made for the entire supervision of the necessary testing before delivery. The firm who have taken the matter up is Messrs. Markham and Prance, 143, Strand, W.C., a firm which has for some time been well known in connection with land and marine motor matters, and which has now made all arrangements to meet the wishes of those who would desire to take up the aeronautical side of automobilism.

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OUR PRIZE STORY.

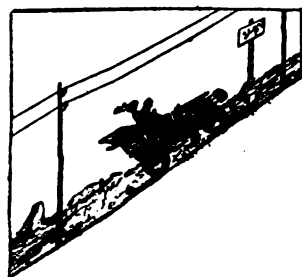
WE recently offered a Prize of Two Guineas for the best Short Story in which the motoring interest was strong. After most careful perusal of the many MSS. submitted, we have decided to make the award to

MR. T. CRAVEN JOHNSON,
125, Walton Street, Oxford,

for his Story, "The Comet of Puddlehampton." A cheque for the amount of the Prize is being forwarded to Mr. Johnson.

Several of the Stories submitted were of considerable merit, and some—for which the authors will receive payment at our usual rate—will appear in the *M.C.J.* after the publication of "The Comet of Puddlehampton."

COMMENTS.



ONE of the innovations by which Major Lindsay Lloyd will seek to popularise the Brooklands Track during the coming season is concerned with the provision of a test hill up which members may be able to drive their cars in order to ascertain what they are really capable of doing. Now that road trials of an official character are a thing of the past, and those which may possibly take place in an unauthorised way are not regarded with favour by motorists or the public generally, the

provision of such an opportunity for gauging the speed of vehicles as is afforded by Brooklands becomes a real necessity. We understand that the hill which has been devised in the members' enclosure of the track makes an ascent of 60 ft. in a length of 275 ft., the average gradient being one in six. There is a stiff bit of one in three, this being near the top. No charge will be made to members of the Brooklands Club for the use of this test hill, and this opportunity of judging the powers and capabilities of their vehicles will doubtless be of interest to many automobilists who otherwise would have no chance of such knowledge. While the sporting side of automobilism will of course appear largely in the Brooklands programme, the serious work of testing vehicles both for manufacturers and private owners will give the place an element of success which has previously been wanting.

The Police View of the Bradford Case.

LAST week we gave the views of some leading motorists and tramway managers with regard to the Bradford case, which has secured a legal decision at variance with the safe practice universally adopted. Now we are able to emphasize the views generally expressed by giving the opinions of some representative Chief Constables, who agree that to pass a tram-car on the right-hand side is a foolish, if not a dangerous proceeding. Practically Bradford stands alone in this matter. In that city the legal position will be maintained by the police authorities. Surely it should be made the opportunity for a protest by local motorists, who should have the support of the Yorkshire A.C., and the bodies associated with that sportsmen's organisation, in showing the citizens of Bradford the lack of wisdom displayed by their rulers in adhering

to a law which has been condemned even by the men who have had to declare its meaning.

Fewer Offences, Larger Fines.

STATISTICS prepared by the Chief Constable of Cheshire on the subject of offences under the Motor Car Act were presented at a meeting of the Standing Joint (Police) Committee at Chester on Saturday. From these it appeared that,

although the total number of prosecutions in 1908 was 248, compared with 275 in 1907, the fines had amounted to £350, against £337 in 1907. Mr. J. J. Evans (Bebington) said the decrease in the number of prosecutions showed that drivers must be more careful, as there were in all probability more motor-cars on the roads. Prosecutions against drivers for exceeding the speed limit had fallen from sixty-eight in 1907 to twenty-four in 1908. On the other hand, magistrates appeared to have been more strict, and it was probably in the public interest.

The Scottish Motor Show.

THE twelfth annual Exhibition of the Scottish Motor Trade Association, which has been held during the past week at Edinburgh, is proof of the interest that is maintained in such displays. It was opened by Sir J. H. A. Macdonald, who, as chairman of the Scottish A.C., has done much to further the motor interests north of the Tweed. He rightly pointed out that one of the most notable features demonstrated by the exhibition was the favour with which coachbuilders regarded the motor industry, not only in supplying bodies for motors but also in becoming agents for motor-cars themselves. The Lord Provost, the Right Honourable J. P. Gibson, was in the chair at the opening ceremony, and Mr. Thomas Shaw, of Dundee, the President of the Scottish Motor Trade Association, voiced the thanks of those present for the interest which both he and Sir John Macdonald had shown in the enterprise.

The Irish Trial.

MANY members of the trade have most pleasant recollections of the Irish Reliability trials which have taken place during the last few years. Those for 1909 have now been definitely fixed to commence on May 26th, concluding on June 1st. On the first day the run will be from Dublin to Portrush; on the 27th from Portrush to Sligo, a speed trial being included on Magilligan Strand. The trip from Sligo to Galway on the next day will comprise a run through Connemara, this being succeeded by the journey to Killarney. After a rest on the Sunday the trial will be resumed from the lakes to the city of Cork. Then on June 1st the way will be made back to the Irish capital. On the last day a hill climb will be arranged and the petrol consumption will also be taken.

Horses v. Motors.

WE are now able to arrive at some accurate conclusions with regard to the comparative number of motor-cars and horse-drawn vehicles on the road. These are reached through the Inland Revenue returns. Until 1903 they showed a steady increase so far as the latter class of carriages were concerned, the totals in the year being 49,321 and 70,644, on which

two guineas and one guinea respectively had been paid as licence duty. There has been a steady fall in both categories since then until the returns for 1907, only recently available, show 40,254 for the two guinea and 62,343 for the one guinea class. Those vehicles on which the fifteen shillings duty is demanded were 326,029 in 1903 and 334,957 in 1907; but as motor-cycles, being two-wheeled vehicles, have been included in the latter classification, it is evident that this section of horse-drawn traffic is also on the down grade. On the other hand, the Inland Revenue returns relating to motor-cars show that the figures in the two guinea class have doubled, and those in the four guinea division multiplied eighteen times until they reached the large totals recorded in a recent issue. These figures have value in confirming what every motorist knows, *viz.*, that he practises a system of locomotion that will ease the horse of the burdens that have been his since the days when Hera the goddess queen went her way to harness the gold-fronted steeds and "Hebe put to the car the curved wheels of bronze, eight-spoked, upon their axle-tree of iron." Apart from the conclusions arrived at in connection with the Inland Revenue returns are the statistics of the Board of Agriculture, which show that the number of horses in the United Kingdom decreased by 12,312 in the last twelvemonth.



The Run of the Women's Motoring Club from New York to Philadelphia and back.
Fourteen cars entered for the contest but only nine actually competed, all being driven by ladies.

Clothing for Aeronauts.

THE standard lines of motoring garments having now been fully established, our sartorial contemporary the "Tailor and Cutter" is considerably exercised with regard to the clothing of those who go up in the air by ships, planes and balloons. We understand it is about to offer prizes for the best design or description of a costume suitable for wear when aero-planing or ballooning, and in sport generally above the clouds. The old terms that have been used in engine construction occur in the conditions; originality of idea; accessibility of fastening devices; practicability as regards cut, make and materials; adaptability as a life saver in case of mishap; reliability under all atmospheric conditions, and general durability are points that inventors and designers should bear in mind when preparing for the competition.

The British Army Experiments.

IN our Aeronautical Notes we have recorded, from time to time, the adventures that have befallen the efforts of the War Office to secure a flying machine. The whole history, so far, has been a series of mishaps followed by assurances of official confidence and the raising of the sanguine hopes of the experimenters. It would be interesting to ascertain the expenditure that has been incurred since September, 1906, when a war

kite went up from Chichester and let its passenger down among the trees at Goodwood Park. The subsequent series of optimistic starts and sudden stops is well known. Without seeking to discourage those who are striving towards success in Hampshire, we would, however, suggest that they have lessons to learn from the Englishmen, Frenchmen and Americans who are actually flying in France. Mr. Moore-Brabazon has been longer in the air than any of the Army men at Aldershot—and if accounts could be compared, his successful flights would be found less costly than have been the rather lame performances under the ægis of the British military authorities.

Signals for Deaf Cyclists.

ON many occasions the suggestion has been made that those cyclists who are unfortunately deaf should make the fact known to other users of the road by means of some distinctive badge or sign. The matter has now received careful consideration from the Royal A.C., the line of discussion being a proposition that deaf cyclists should be able to obtain "safety" discs for attachment to their machines, in order that motorists and others overtaking them may drive on such occasions with more than ordinary caution. Such discs would of course only be supplied after careful enquiry. A letter from the patentee was read at the last meeting of the committee, which approved of the idea in principle and referred the question to the Touring Committee. A suggestion was made that the discs should be numbered as a further precaution against improper use, and it would appear that a practical realisation of the notion is now in view.

Times and Trades Change.

NOW that there are nearly 200,000 automobiles of various kinds in the United Kingdom there is no reason for surprise at the changing character of the industries in many places. Some of the Midland towns have felt the alteration in the nature of demand very considerably, and complaint is pretty general that the country saddler is having a difficult task to act up to old-time prosperity. The trade decline with regard to saddlery is shown very conspicuously in the present position of the staple trade of Walsall, although another branch of industry in the town—malleable ironfounding—has been improved by the advent of the motor. The lethargy of the saddler in trying to adapt himself to the new condition of things will leave him in a condition of business isolation ere long—indications of troublous times for that industry have been fairly frequent of late in the lists of financial embarrassments.

Manual for Engineers.

ONE of the latest publications of Messrs. C. Griffin and Co., Ltd., is that on "Oil Motors, their Development, Construction and Management"—a handbook for engineers, owners, and all interested in engines using liquid fuel. This is a translation of a volume by G. Lieckfeld, which is recognised as a standard work on the subject in Germany, and has more than 300 illustrations scattered over nearly that number of pages. After a preliminary dissertation on liquid fuels as a means of power production the author goes on to treat of the development of petrol and paraffin motors. Here we are reminded that seventy years ago William Barnett took out an English patent for a gas engine worked with some easily volatilised hydro-carbon. Acknowledgment is made of the first engine worked direct with petrol, which was that built in 1873 by Hock, of Vienna. This, however, was never regarded as much more than an experimental engine, although it contained a number of original features. For the first time use was made of the open-ended cylinder of the trunk piston and the direct drive on to the crank. Then came the Brayton engine and the invention of the four-stroke cylinder compression engine by N. A. Otto. With considerable detail, illustrated by many drawings, the author traces the subsequent development of petrol and paraffin motors,

together with their construction and component parts. A useful chapter is that on ignition devices, while one of the most practical is that on the correction of irregularities in running. The history of automobile engines, and also of road and rail vehicles and airships, is carefully written, the latter section being brought as far as the Zeppelin and "Ville de Paris" dirigible airships. In this section history is still being made. The volume is a good addition to the literature of automobilism, and should have great interest to all who have been technically concerned with the development of the motor-car.

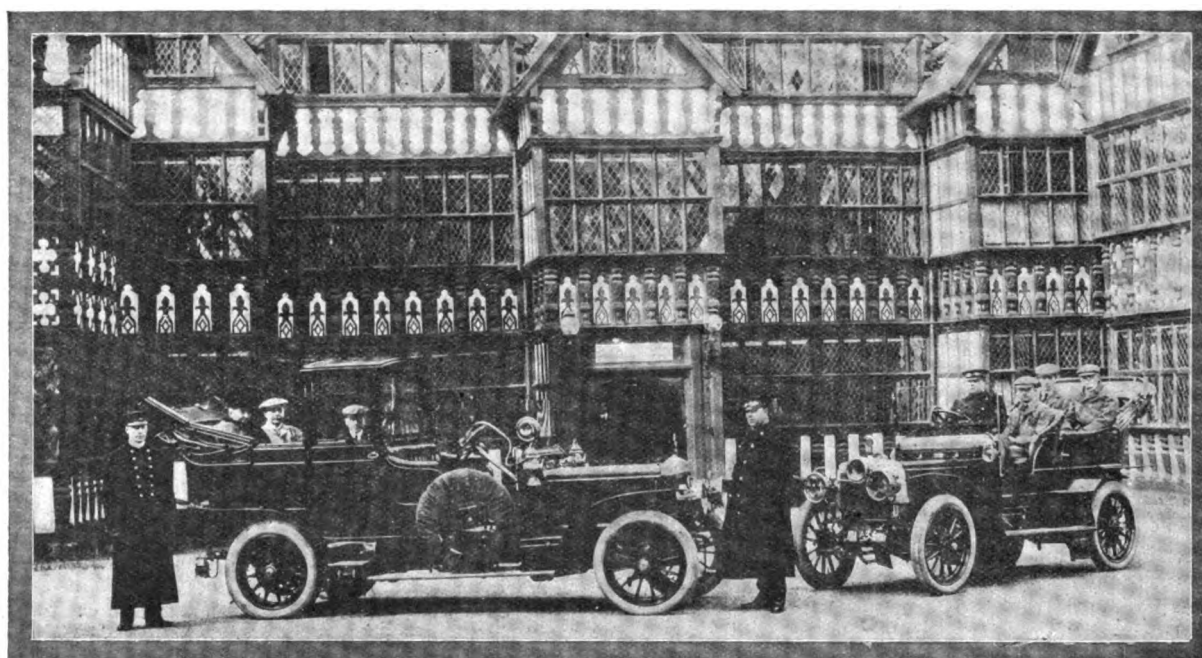
Sheep on the Highway.

A MEETING of the Cumberland and Westmorland farmers has been held at Penrith to protest against a proposal that is being made to the councils of those two counties by owners of automobiles, to the effect that sheep which are being driven along the highway at night should be preceded and followed by a light. Several speeches of protest were made and it was apparently thought that the many years sheep have been known to spread themselves out over the whole of the roadway

for the Bromley Rural District Council, and at the last meeting a letter was read from Mr. Granville Kenyon in which he added, "I take it, of course, that the Council will maintain the boards after erection." The Chairman, Sir H. A. Lennard, Bart., referring to this, said the reference put a different complexion on the matter. The letter was thereupon referred to the Farnborough Parish Council. We hope that wise counsel will prevail and that both bodies will recognise that they have a public duty to perform in encouraging those who possess sufficient local patriotism to do the work that the authorities have neglected to perform.

Unrolled Metal for Motorists.

ALTHOUGH the responsible newspaper correspondents often make ridiculous suggestions with regard to thwarting the progress of automobile matters, it is not often that persons who are elected to public bodies actually go so far as to move such resolutions as that which Mr. R. S. McCaig raised at the last meeting of the Rhins District Committee, held at Stranraer. This was to the effect that the district committee should "instruct their road surveyor to put down road metal (unrolled),



Mr. and Mrs. Alfred Wynne Corrie, of Park Hall, Oswestry, and their two Daimler Cars, which are used to the fullest extent on the excellent Shropshire roads.

constitutes a precedent which should not be departed from, whatever additions are introduced into the traffic of the highway. Although the meeting was obviously one of protest against the proposals of motorists, it quickly resolved itself into an aggressive attitude and ultimately passed a resolution suggesting that the County Councils of Westmorland and Cumberland should apply for a speed limit of ten miles an hour. This proposal was adopted unanimously and is now being referred to the Councils concerned.

The Erection of Warning Notices.

THROUGHOUT the country the various automobile clubs have done good work in providing notices and warning boards for erection at dangerous corners, cross roads, and other places. As a rule the local authorities have recognised in this enterprise economy for the ratepayers, and when the clubs have borne the first cost have rightly accepted the responsibility of maintenance. Apparently, however, in some parts of Kent a different line is being taken. We would suggest that the authorities who decline to maintain the boards are really neglecting their duties to the public. The Kent A.C., for example, is providing warning boards

on the roads at dangerous places to compel motorists to drive at a more reasonable pace." In the course of his speech he referred to the police traps which had been established at considerable expense and also to the dust nuisance, concluding by explaining that the surveyor should put down this rough metal where the speed was apt to be exceeded in order to moderate the pace of motorists in the district. The motion was seconded, but on a vote being taken was lost, only five members supporting while eight were against. The Earl of Stair presided, and the discussion, which was undertaken in a very serious spirit, would serve to remind readers in Scotland that there are still a large number of members of the local authorities inclined to regard the motor-car with something like aversion.

THE British Xylonite Company, Ltd., of Hale End, London whose City showrooms are at 3, Fore Street, E.C., are specialising on transparent accumulator cases in xylonite (celluloid) for the trade. They have brought out some excellent types of corrugated separators in sheets or pieces, and are well able to carry out special work for makers of accumulators, &c.

A Visit to an Aeroplane Factory.



THERE can be no question that the year that has recently closed will mark an epoch in the aeronautical world, and particularly that portion of it related to the aeroplane or heavier-than-air form of flying machine in contradistinction to the airship or dirigible balloon type. The successful flight of one kilometre accomplished by Mr. Henry Farman in the first month of 1908 gave the necessary impetus to the movement, since when progress has been so rapid that at the time of writing the record flight, to the credit of Mr. Wilbur Wright, stands at 77½ miles in 2 hr. 20 min. 23 sec. In addition to Wright and Farman there are many others at work in the development of the flying machine, among them being Messrs. Delagrangé, Bleriot, Santos Dumont, Levavasseur, Esnault-Pelterie, Welferinger and Mr. J. T. C. Moore-Brabazon. Apart from these now well-known names there is a very large number of enthusiasts quietly engaged in experiments, and according to one authority there are at the present moment not less than 350 aeroplanes of various designs in course of construction in different parts of France, many of which are being built with the view of competing for the thousand and one prizes that are offered to aviators.

When in Paris on the occasion of the recent Salon an opportunity was afforded me of visiting the works which have recently been established at Billancourt for the construction of aeroplanes by Messrs. Voisin Freres, two enthusiastic students of aeronautics who have been experimenting with aeroplanes since 1903. The works, which are situated on the bank of the Seine, nearly opposite to the exercising ground of Issy-les-Moulineaux, where so many experiments in aviation are carried out, comprise an extensive erecting shop, a machine shop, where the fitting up and adjustment of the mechanical portion of the apparatus is undertaken, and an experimental department, where trials are made with the bearing or sustaining surfaces of the machines and where the motors are tested. The machine shop calls for no special remark beyond that in it are produced the propellers and other metal portions of the aeroplanes, the firm having to turn out these themselves, for, as my guide remarked, there are as yet few, if any, firms making a speciality of catering for the demands of aeroplane builders.

In the experimental shop, in addition to a special bench, on which engines intended for aeroplanes are carefully tested, there is an interesting piece of apparatus which may be termed an artificial wind maker, intended for the testing of various types of bearing or supporting planes.

Quite half-a-dozen aeroplanes were in various stages of construction at the time of my visit, among them being a tri-plane for Prince Bolotoff, with which he intends to make an attempt to fly across the English Channel; it is to be fitted with a Panhard 100-h.p. engine and is designed to carry three persons. In one corner of the shop stood a somewhat novel machine known as the "Flying Fish," built for Henry Farman, work, however, on which has been suspended until a suitable motor is obtained. Instead of having double planes, the new machine has, on either side, three wing-like single planes, giving it the appearance which has suggested its name. The body, made of ash, has, indeed, the exact shape of a long and slender fish, tapering backwards with a gentle drooping

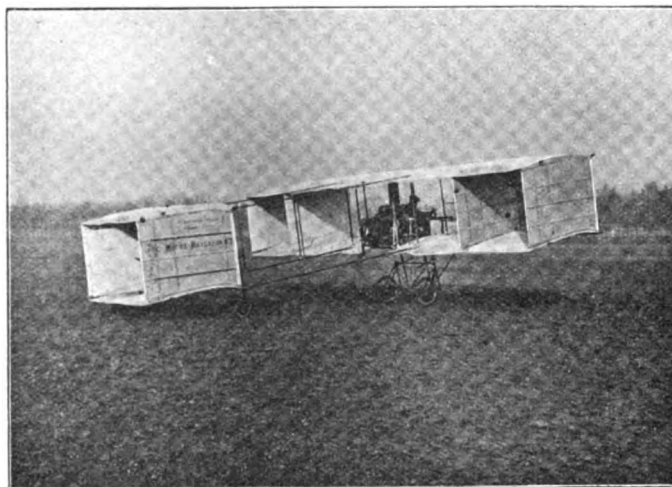
curve. It is 46 ft. long, square in section, and comes somewhat sharply to a point in front, where an aluminium plate supports the shaft of the propeller. The four members are connected by wooden ties and steel stays, producing a girder of great rigidity. The machine is mounted on two wheels placed well forward under the motor platform. The steel framework which carries these wheels, as well as that of a third wheel placed near the tail, is provided with strong spiral springs intended to reduce the shock when alighting on the ground. The six rectangular "wings" are fixed towards the head of the machine, and are each 8 ft. 8 in. long and 1 ft. 3½ in. wide; they consist of wooden frames rising towards the extremity, slightly curved and tapering on the same lines as the body of the "fish" itself. They are covered by a double layer of thin fabric. The second plane on each side is placed somewhat lower than the first and the third slightly lower than the second. At the tail are two similar but rather shorter planes, the hindmost of which is movable on its axis, and acts as a horizontal rudder for regulating the height of flight. At the end of all comes the vertical cellular steering rudder. The whole body is covered with light textile material, but in front of the pilot's position sheets of mica are fitted in order that his view may not be obstructed. The total bearing surface is 24 square metres. A novelty has been introduced into the steering apparatus; the wheel, which resembles that of a motor-car, is mounted vertically and acts normally upon the vertical rudder, but when moved horizontally it acts by means of a lever on the horizontal rudder.

Messrs. Voisin are not advocates of high-flying, nor as yet of aeroplanes flying over towns; they believe that, for the present at least, it is desirable to fly at a reasonable height and in the open country only, the machine coming to earth when it is necessary to pass through a town, and with this in view are designing an aeroplane the overall width of which will be such as to enable it to be taken through the streets without difficulty. The firm

have now standardised their designs, and are so confident of the ability of their productions to fly that they are prepared to guarantee that the owner shall make a flight of from one to two kilometres before definitely taking over the machine. Incidentally it may be mentioned that the cost of a modern aeroplane is £800.

The firm are open to build flying machines of any design; what may be termed their standard pattern is a bi-plane somewhat similar to the Farman and Delagrangé machines. To briefly describe the apparatus, it may be stated to comprise a lengthy, spindle-shaped body, to which wings or supporting planes are applied, while in addition it serves for the support of the engine, the propeller, and the aviator. It has also attached to it the metal framework on springs which serves for the attachment of the cycle wheels used for propelling the aeroplane along the ground to enable it to attain the necessary speed to lift itself into the air. The steering apparatus is placed at the front end, and at the rear are the arrangements for imparting stability to the machine. The planes are composed of surfaces of light waterproof material stretched on frames of poplar, united by uprights of the same wood. The Farman machine is 42½ ft. long, 39½ ft. over all width, and 5 ft. 10 in. high: its total bearing surface is 60 metres, while the weight, including the 50-h.p. engine and the aviator, is 11 cwt.

C. J. W.



Mr. J. T. C. Moore-Brabazon's Aeroplane, built by Messrs. Voisin Freres.

GOSSIP FROM PARIS.

A Breeze in the French Motor Industry.

The French Chambre Syndicale de l'Industrie Automobile is getting into hot water. An official notice sent to the Press last week said:—"All persons wishing to purchase automobiles for touring or industry can apply to the Chambre Syndicale de l'Industrie Automobile, Place de la Concorde, Paris, which will indicate to them the manufacturers most capable of furnishing the required cars." A great many motor-car makers do not like this, and contend that was not the object for which the Chamber was created. The agents and intermediaries who have from the first worked so hard, it is true in their own interest, but simultaneously in the interest of the automobile industry, also read with surprise that the Chamber was seeking to substitute itself for them. M. Sapène, managing director of the Motobloc Company, in a letter on this subject addressed to the editor of "Les Sports," said he did not wish to throw suspicion on anyone, but he declared: "It is probable that even among the manufacturers forming part of the Chamber there will be great uneasiness concerning the distribution of the demands received. Will not those demands flow towards specially favoured firms?" He concluded by suggesting a general consultation of manufacturers and intermediaries on the question as to whether the Chamber should occupy itself with the sale of cars. M. Sapène's letter has had the good effect of provoking a reply from M. Bazin, the Secretary of the Chamber. He points out that the first portion of the incriminated notice calls the attention of all its members to a demand it had received for twenty-five cars, and declares the concluding portion of the circular notice should be read to mean that the Chamber would continue to act in the same way with all the applications it should receive. I cannot say this explanation has entirely satisfied all the interested parties, because the promise made in the official notice "to indicate to them (the buyers) the manufacturers most capable of furnishing the required cars" was very explicit, and scarcely in accord with M. Bazin's subsequent declaration.

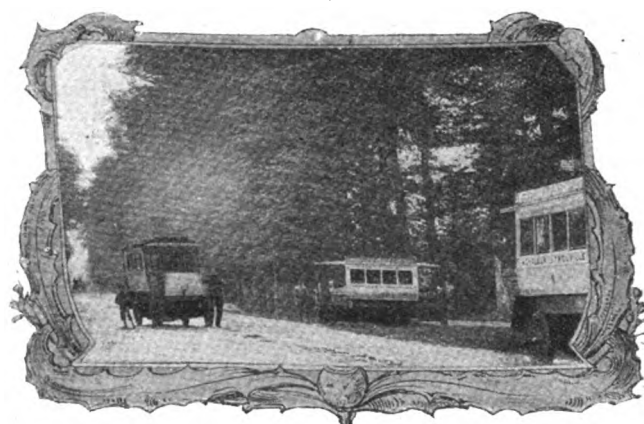
An Aeroplane Fete at Angers.

The committee formed at Angers for the Grand Prix is determined not to be completely balked. When the A.C.F. refused to organise the great international race the Angers committee announced that it would dispense with the assistance of the club, and hold the automobile competition on the Anjou circuit, so to say, in spite of the official authority. It is probable its members, though influential men in the department of the Maine-et-Loire, were not equal to the task. At any rate, they abandoned it, and perhaps wisely. What was to be done to make up for the loss of their long-cherished hope? At a meeting held at Angers, under the presidency of Doctor Monprofit, the Mayor of the town, it was unanimously agreed to substitute a great aeronautic and aviation competition for the defunct automobile Grand Prix. The epoch chosen is the second fortnight in September next. The programme of the fêtes comprises a challenge cup for an aeroplane flight from Saumur to Angers, various other competitions for machines heavier than air, a steerable balloon race, and a competition for ordinary spherical balloons. The Municipal Council of Angers is to be asked to transfer its subsidy of 25,000 francs from the Anjou Circuit fund to the organising committee of the projected fêtes, and all the other contributors to the Grand Prix fund will be requested to follow the example. By that means it is believed the new committee, which is virtually the same as the old one, will have quite enough money to offer the rich prizes necessary to tempt aeronauts and aviators. It is possible the venture will be more successful than that of the Grand Prix, especially as it is said there is in the neighbourhood of Angers a large expanse of meadow land suitable for aeroplane experiments.

The Progress of the Aeroplane.

Wilbur and Orville Wright, accompanied by their sister, have been entertained royally by the Pau authorities. The two

aviators richly deserve all the honour which can be paid them, for it is certain that not only did they invent the first practical flying machine, and also constructed the first reliable light motor, which none of the French makers has yet been able to equal, but Wilbur Wright by his performances at Les Hunandières Racecourse, and at Auvours Camp, near Le Mans, gave such an impetus to the movement that no one now doubts the era of aerial locomotion is at hand. It may be that Wilbur Wright would not have revealed his mastership of the air so promptly if Henry Farman had not made his circular flight of a kilometre (five-eighths of a mile) at Issy-les-Moulineaux on January 13th, 1908. But even the English aviator said to me last week: "Most surely we should not be where we are to-day if Wilbur Wright had not come to France. He has convinced the most sceptical, and, what is more, he has fired the French aviators with the ambition to excel him. That is a great thing. His aeroplane has qualities and defects, as my old machine had. Neither his nor my machine, nor any of the existing aeroplanes, can be called the definitive type of flying machines, and it still remains to be seen whether it will be Wright or some other aviator, perhaps still unknown to fame, who will be the first to create an aeroplane which can be safely put into the hands of the general public to be used for sporting and touring purposes before being employed for every-day work."



Some of the Motor-Buses in Service between Honfleur and Trouville, France.

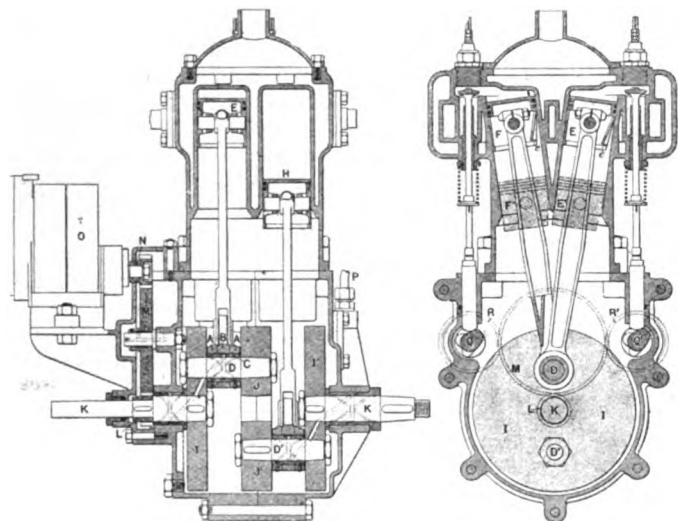
A Proposed Chair of Aviation in France.

M. Archdeacon, the well-known patron of the French aviators, is strongly in favour of France following the example set by the German Minister of Education, who has appointed a learned professor to lecture on aeronautics at the Göttingen University. He considers that, as in the case of a science so young as aviation it is above all on the young rising generation its development must depend, it is useful and even necessary to teach the leading principles to prevent the youth of the land from losing their time in useless trials to prove the truth of ideas which their predecessors have by experience shown to be false. M. Archdeacon has already spoken to the Minister of Public Instruction about the advantages of creating a professorship of aviation at the Collège de France, and has found him most favourably disposed towards the idea. But here the red tape steps in. The project cannot be realised to-morrow. The Minister is not all-powerful. Such a matter as the creation of a professorship depends exclusively on the Superior Council of Public Instruction. Then, supposing the principle of the aviation professorship adopted by that Council, the Chamber and Senate would have to vote the professor's salary, unless it should be secured by a private donation. It is therefore pretty clear M. Archdeacon will have enough to do for some little while to secure the prompt adoption of his idea, especially as he wishes also to create in Paris a laboratory of aero-dynamics destined to furnish aviators with the necessary elements for the construction of aeroplanes.

MARNBY.

A NOVEL FOUR-CYLINDER ENGINE.

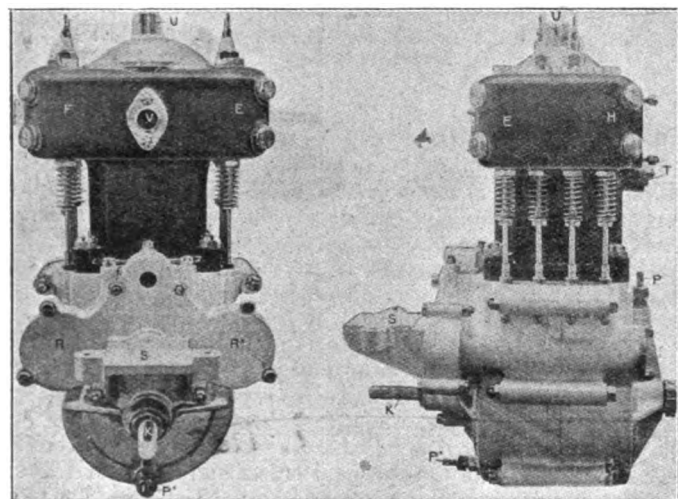
WE illustrate herewith an extremely novel design of four-cylinder engine which has just been put on the market by La Société des Automobiles Aries, of Villeneuve-la-Garenne, Paris. A first glance at Figs. 3 and 4 would give the impression that the engine is just an ordinary one



Figs. 1 and 2.—Sectional Elevations of Aries novel Four-Cylinder Engine.

A.—Big end of connecting rod of piston E.
B.—Crank-pin.
C.—Crank-pin.
II' and J.—Crank discs.
KK'—Crank-shaft.
LM.—Half-time gear wheels.
N.—Magneto driving pinion.
O.—Magneto.
P.—Lubricating oil inlet.
QQ'—Cams.
e.—Depression in pistons.

of the two-cylinder type; closer inspection, however, will show that the company have struck out in an entirely new direction, and have produced an engine which, within usual dimensions, comprises not two but four cylinders. The only difference from the customary pattern is that the head is somewhat larger than



Figs. 3 and 4.—Front and side views of the Aries novel Four-Cylinder Engine.

E F H.—Three of the four cylinders, the fourth one G is invisible, being behind F.
K.—Crank-shaft.
PP'—Lubricating pipes.
RR'—Half-time gear case.
S.—Platform for magneto.
U.—Outlet for water from jackets.
V.—Inlet port.

usual, and that it contains eight valve covers. By examining the line drawings Figs. 1 and 2, it will be seen how the four cylinders are somewhat originally arranged, there being two sets of pairs of cylinders set in the form of a sharp V, the connecting rod of each piston of the pairs of V-shaped cylinders being connected to the same crank pin. The crank shaft is of the built-up

type, and has two throws set at 180 deg. one to the other, the crank webs taking the form of discs I I' J (Fig. 2).

As the connecting rods of the cylinders E F work on the same crank pin, the outer ends of the pistons would dash into one another were special provision not made to prevent this; at one portion of the outer surface of the piston, where it has the least pressure on the wall of the cylinder, a depression e (Fig. 2) is formed. It will be noticed that the depression also appears on the piston of the cylinder E; in this case it serves no useful purpose, and is only employed on the grounds that the makers prefer to use the standardised form of piston.

The big end of the connecting rod A is of the forked type, while that of B is of the ordinary pattern. While the valves, inlet and exhaust, for each cylinder are located on one side, those for the left-hand cylinders are naturally on that side of the motor, and those for the right-hand cylinders are on their respective side, two cam shafts being thus, of course, required. The engine is said to be perfectly balanced, and to have given very satisfactory results on the test bench; the object of its introduction has been to supply a four-cylinder engine which can be substituted for single and double cylinder engines in old vehicles with but little difficulty. We are indebted to our French contemporary "l'Omnia" for the illustrations.

SOME REMARKS ON TYRES.

It is astonishing what widely varying experiences motorists have with regard to tyres. Some can run thousands of miles without experiencing any trouble, while others may only go a few hundred miles ere punctures, bursts and other tyre worries are encountered. We have heard of several cases lately where motor-car owners have complained of excessive wear of outer covers of the front tyres. Although the blame has been laid at the door of the manufacturers, we are inclined to think that if the motorists in question would carefully examine their cars they would find that the front road wheels are not perfectly parallel. The least departure from parallelism causes a certain amount of sliding friction between the tyres and the road, with disastrous results to the former. In the correspondence columns of the *M.C.J.* recently Mr. A. Duckham raised a point in regard to the use of partially-worn tyres on the front wheels of motor-cars which is deserving of close attention. The bursting of a tyre is not a matter to be regarded lightly, and when it occurs on one of the steering wheels may be the cause of a serious accident owing to the driver temporarily losing control of the steering gear.

ELEVEN coil-manufacturing concerns in the United States have just formed the Allied Coil Manufacturers' Association, the object of which is to protect the legal rights of its members to manufacture, use and sell interchangeable unit spark coils. The association will defend any suit instigated against its members, or any of its customers, involving the basic principle of interchangeable unit coil construction.

CONSIDERABLE interest has been evinced by the announcement that Humber, Ltd., are about to place a new 16-h.p. model upon the market. The car has a greatly improved engine, being much more silent and flexible than any the company have hitherto turned out. The method of oiling is similar to that adopted for the new 8-h.p., and will be found relatively economical. The system is also very effective in preventing smoke from the exhaust, whilst it thoroughly lubricates every bearing and reciprocating part. At the same time, it also prevents the escape of any particle of oil, thus leaving the outside of the engine and parts perfectly clean. These are outstanding features which will appeal to motorists. The universal joints are of the "ring" design, which prevents any back lash. The gear-box and back axle are of the same pattern as on the 20-h.p.; the springs are three-quarter elliptic, and the utmost care has been taken to ascertain the exact strength of spring required, thus ensuring the acme of comfort. The tyres are 815 by 105 mm., which, it will be recognised, are of ample dimensions for a car of this size.

AERONAUTICAL NOTES.

It is proposed to establish an aeroplane trial ground at Avor, near Bourges, France.

A PARIS optician, who evidently means to be up to date, is making a speciality of goggles for aviators.

A COMPANY has just been formed in Paris (25, rue le Peletier) with a capital of £16,000 and the title La Société Générale d'Aéro-Locomotion.

It is announced that a French insurance company has already started to issue policies on the lives of aviators. The premiums are considered to be somewhat high.

New aeronautical clubs are springing up all over France; one entitled Le Sport d'Amiens has just been formed at Amiens, while at Orleans has just been established the Aero Club du Centre.

THE new Zeppelin airship now in course of construction at Friedrichshafen, Germany, will be completed in March. The balloon, which supports an aluminium hull, is divided into seventeen compartments or "ballonnets." There are two motors, each of 100-h.p. The length of the airship is 450 ft. and the diameter 42 ft., the cubic capacity being 15,000 metres.

THE Aero Club of France has received two new prizes, the first of which, £20, will be awarded to the maker of the French motor installed on the aeroplane which holds the record for flight on June 30th next. The other prize is one of £8, which will go to the maker of the engine of the machine which takes the second place.

SOME successful flights were last week made on the practising ground at Issy-les-Moulineaux, near Paris, by the Antoinette IV. aeroplane. Piloted by M. Welfringer a speed of forty-seven miles per hour was attained and some excellent turning demonstrations made. The machine also flew a distance of 500 metres, having a passenger on board in addition, thus creating a record for an apparatus of the monoplane type.

It is reported that aeronautics is to form part of the studies of the midshipmen at the U.S. Naval Academy at Annapolis. While serious thought is not being given to the subject by the naval authorities at present, the practical value of heavier-than-air machines is acknowledged by naval experts, and the fact that the U.S. Navy Department intends to acquire four flying machines of this type indicates that the question of aeronautics in its relation to naval strategy has been considered.

AN airship is at present being built for the Russian Government by Messrs. Lebaudy, at Moisson, France, where also a second steerable balloon, to be called the Liberté, and intended for the French Government, is in course of construction. The latter will be fitted with a Panhard 135-h.p. engine, while the one for Russia will be of the same size and model as the République, which was finished and sent to Verdun last year, but the motor will be of 90-h.p. instead of 80-h.p.

THE flat lands of Essex have naturally found favour with those who have been looking about the country for a suitable ground whereon to test the various aeronautical machines that are now being fashioned in this country. Stretching between the eastern suburbs of London and the little town of Grays, in Essex, are miles of dreary fields without an elevation and with only one or two villages of any size. Near Dagenham the Aeronautical Society has acquired some open ground which will prove an ideal testing place for inventors. Surrounding the site acquired is a flat open country with few trees and houses, while the advantages of the selection are increased by the presence of a piece of open water for service in connection with motor boating. This will also serve to keep the crowd away from the experimental grounds—an important consideration, judging from the experience of the experimenters at Le Mans, France. The site at Dagenham is reached from London in less than three-quarters of an hour.

THERE is some talk of establishing an aeroplane trial ground at Knocke, a growing Belgian seaside resort.

A LADIES' aeronautical club has just been founded in Paris. The club has been named the Stella, and under the rules each adherent must make at least one ascent a year.

M. VAN DEN BERGH has obtained permission from the Belgian Minister of War to use the military parade ground at Antwerp for experimental flights with an aeroplane he has invented and built.

THE Aero Club du Littoral is the name of a new association which has been formed at Ostend. It is considered that the beach at that popular seaside resort would at low tide form an excellent trial ground for aeroplanes.

It is announced that M. Léon Bollée is about to build an aeroplane. M. Bollée, who was one of the pioneers of the motor-car, has been intimately connected with Mr. Wilbur Wright during the latter's sojourn at Le Mans.

FOLLOWING the establishment of a Chair of Aeronautics at Göttingen University, the Charlottenburg Technical College has petitioned the Prussian Ministry of Education for funds for the establishment of a chair of Airship Construction to be attached to the Marine Engineering Faculty.

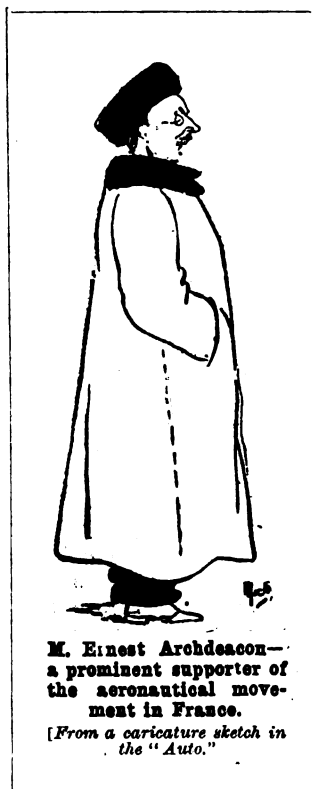
M. ANDRE FALIZE has increased the prize he has offered to the French Ligue Nationale Aérienne to £80; it will be awarded to the first aviator who succeeds in flying from the Invalides, Paris, round the Vendôme Column and the Arc de Triomphe back to the Place des Invalides.

IN addition to Messrs. Farman and Moore-Brabazon two other aviators have now taken up their quarters at Chalons-sur-Marne; they are M. L. Demanest and Capt. Burgeat. The former will make experiments with a monoplane of his own design, while the latter will make trial flights with an Antoinette monoplane.

MESSRS. VINOT AND DEGUINGAND, the makers of the well-known Vinot cars, have just completed a 50-h.p. petrol engine specially designed for aeronautical purposes; it comprises four vertical cylinders arranged in two pairs, with the valves on opposite sides. It is fitted with high tension magneto ignition and a separate exhaust pipe for each of the cylinders; the weight of the motor is given as 338 lbs.

SIR HIRAM S. MAXIM has written and Messrs. Whittaker and Co. have published a new volume on "Artificial and Natural Flight," which has current interest and permanent importance. The chapters deal with air currents and the flight of birds, the flying of kites, flying machines, aeroplanes and balloons, the letterpress

being elucidated with the help of nearly a hundred diagrams and illustrations. Reference is made to Sir Hiram's own experiments in 1889 before the petrol motor had been reduced to its present degree of efficiency and lightness, and when he was practically limited to the steam engine. How quickly events move in the aeronautical world is apparent from the air of dubiety with which the author regarded the flights of the Wright Bros. in America on p. 109 and then on p. 160 accepts the records they made in France. In fact, the history of the flying movement is comprehended within a very short space of time, although some of the principles now successfully adopted were originally advanced some years ago. Sir Hiram Maxim notes that "all flying machines that have met with any success have been made on the same lines; all have superposed aeroplanes, all have fore and aft horizontal rudders, and all are propelled with screws; in this respect they do not differ from the large machine that I," continues the author, "made at Baldwin's Park many years ago." Those who are following the present boom in the air will welcome this volume, which is written, it should be noted, with a freedom from technical terms that will secure its acceptance by the general public.



M. Ernest Archdeacon—a prominent supporter of the aeronautical movement in France.

[From a caricature sketch in the "Auto."]

Aeronautical Notes—continued.

LA SOCIÉTÉ FOREZIENNE D'AVIATION is the name of a new association which has just been formed at St. Etienne, France.

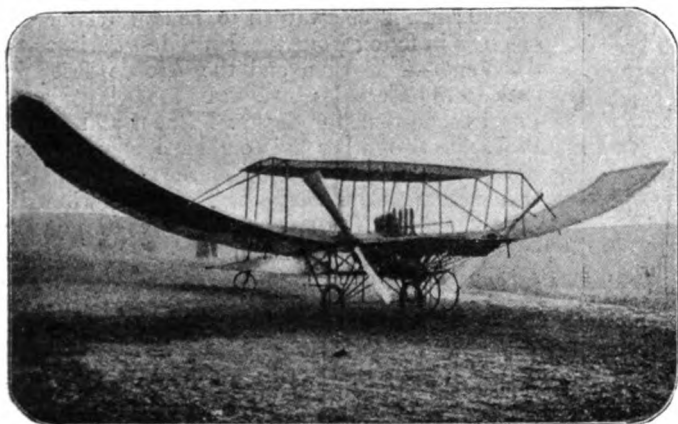
M. GUYOT, who on a Delage car proved the winner of the Grand Prix des Voiturettes last year, is proceeding to Pau in order to be initiated into the art of manœuvring a Wright aeroplane.

WE understand that Mr. Frederick Simms, of the Simms Manufacturing Company, Ltd., Welbeck Works, Kilburn, has acquired the exclusive British rights in Messrs. Voisin Freres' aeroplanes.

It has been decided by the Aero Club of France to introduce a new regulation in connection with the Michelin Cup for this year, it having resolved that it will not be awarded unless the distance of 77 miles traversed by Mr. Wilbur Wright when he won it last December is at least equalled. The flight has to be made on a closed circuit.

M. BLERIOU achieved a successful flight on his new single-plane flying machine at Issy-les-Moulineaux last week-end. He covered a distance of about 200 yds. at an estimated speed of forty-six miles an hour. This machine, which is fitted with a 25-h.p. engine, is notable for its small area of plane surface, the total being 110 sq. ft., as compared with the 500 sq. ft. spread of the Wright machine.

ON Saturday last Prince Henry of Prussia made a trip lasting over an hour in the Gross military motor airship. The



The Robert Aeroplane with which some trials are at present being carried out at Amiens, France.

weather was brilliant, but very cold. The airship ascended from the balloon quarters at 9.15 a.m., and headed for the centre of Berlin. After passing over Unter den Linden to the Royal Castle it returned to Tegel, following the route of the principal business thoroughfares to Charlottenburg.

THE Aero Club de France has formulated the regulations according to which certificates of proficiency, carrying the right to the use of the title "pilote-aviateur," will be granted to users of heavier-than-air machines. Candidates must make three complete circular flights, each of not less than a kilometre, without allowing the flying machine to touch the ground. The three flights must be made on different days, yet must be executed within a space of thirty days.

IN our club notes we give a summary of the lecture by M. Esnault-Pelterie before the Aero Club in London, on Tuesday. Our visitor was awarded the Cross of the Legion d'Honneur a fortnight ago for his services to aeronautics. He is singular among investigators with an engineering education in that he has never devoted himself to any branch that has not had a bearing on aerial locomotion. At Wissant, in 1904, he began gliding experiments to test the claims of the Wright Brothers, achieving practically identical results.

ALTHOUGH the Monaco aeroplane meeting was due to begin on Sunday last, none of the machines had arrived, and there is no immediate prospect of any of the entrants attempting the journey from Monaco Harbour to Cap Martin and back. According to the secretary of the International Sporting Club, M. Demanest, who

controls both the motor-boat meeting and the Concours d'Aviation, it is unlikely that any attempt to cover the course will be made before the second week in February at the earliest. Several large sheds have already been built to receive the aeroplanes of the competitors.

CAPTAIN VON WALACH HALLBORN delivered an interesting lecture at the Austrian Automobile Club in Vienna on Friday, last week, on his project for the construction of a steel airship. The gist of his project is that an airship built of steel and filled with gas would give far greater stability than is attainable with any dirigible balloon, and would, by reason of its impermeability, retain its gas for an indefinite length of time. A ship of 50 ft. diameter would need to be 500 ft. long. It would rise and fall by the operation of a device which Captain Hallborn has patented. The platform would be 328 ft. long, and would be attached to the steel body by a net of steel wire. Two propellers and two steering screws would be driven by three 150-h.p. petrol motors. The cost of construction would, it is claimed, be only a fraction of that of Count Zeppelin's aluminium airship.

"It is practically certain that we shall fly from Paris to London this year." This is the firm belief of M. Surcouf, who was responsible for the construction of the Clement-Bayard dirigible air-ship which is owned by M. A. Clement, a vice-chairman of Clement-Talbot, Ltd. M. Surcouf has expressed his surprise at the backwardness of Great Britain with regard to aerial navigation, and intimates that his firm is negotiating for the formation of an English company. If the negotiations are successfully carried out, a big fillip will certainly be given to the advancement of aerial flight in this country. It may be mentioned that the Société Astra, of which M. Surcouf is a director, are at present constructing a large aerial cruiser for the French Government, a high-speed cruiser for another customer, and between twenty-five and thirty aeroplanes, which certainly indicates plenty of activity in the new industry.

FOLLOWING the example of his brother Henry, Maurice Farman has had built an aeroplane with which he is about to make some trials at Buc. It is of the double plane pattern, the planes being 32 ft. over all length. The frame carrying the motor and the pilot is, as usual, in the centre. The steadying device consists of a single plane, which may be raised or lowered by a lever, and by a special arrangement will always remain in the position left by the pilot. The rudder for steering right and left is operated by an endless cable. The chief innovation is the arrangement by which the after part of the planes may be raised or lowered at will. The arrangement is such that when the after or rear part of the right plane is lowered, the corresponding part on the left side is automatically raised. The frame for the machinery rests on two strong bicycle wheels. Maurice Farman is at present trying two motors, one a R.E.P. 40-h.p. weighing 220 lbs. and a Renault which weighs 374 lbs., and has developed 58-h.p. at a trial. There is only one propeller with two blades $8\frac{1}{4}$ ft. in diameter, which will run at 800 revolutions per minute. The weight of the machine, without the motor, pilot and accessories, is about 5 cwt.

AN accident has occurred to the aeroplane built at the military balloon factory at Farnborough. In our issue of the 16th inst. we illustrated and described this machine. Between then and its trial on the 20th some alterations had been made, notably the transposition of the radiators from the rear to the centre of the aeroplane and the deflecting planes being fixed midway between and at either end of the superposed planes, thus giving an extra length of about eight or nine feet to the hull. At the trial the aeroplane was steered by Mr. S. F. Cody and rose about twenty feet. It had travelled about a hundred yards when the machine dipped, and the wheels lightly touched the earth. Rising again, however, the aeroplane continued its flight. At first the aeroplane rose to a height of between 20 ft. and 30 ft., but before a quarter of a mile had been covered this height had sunk to 10 ft. With the machine still heading for the balloon factory, the spectators stood awaiting a turn or halt, when suddenly the aeroplane dropped to earth, bounded up again about 10 ft., and then pitched face downwards to the ground. Fortunately Mr. Cody was not hurt and the damage was confined almost exclusively to the lifting plane and to the cycle wheels which support the chassis and engine.

CONTINENTAL NOTES.

The French Tax on Motor-Cars.

A little surprise is in store for all automobile owners in France. To avoid fine they should have already made the declaration to the fiscal authorities concerning the horse-power of their cars. January 15th was the last legal delay. When they receive the notice to pay the tax on them many will be disagreeably astonished to discover it is considerably in excess of the amount charged last year. The duty has not been increased, but the interpretation of the clause relating to the horse-power of the motor has been modified. The supplementary tax of five francs per horse-power was instituted before the manufacturers adopted the system of designating motors with two figures to protect themselves against prosecution by their customers. It had happened that purchasers of motor-cars were discontented when by chance the motor sold as a 10, 20, or 30-h.p. gave a trifle less power. Several makers were, consequently, sued and condemned to pay compensation. That is why they now call their motors, for instance, 10-12-h.p., 20-30-h.p., &c. Till this year the fiscal authorities contented themselves with charging the horse-power tax on the middle figure. A 10-12-h.p. car paid on 11-h.p., and a 20-30 h.p. car on 25-h.p. That satisfied everybody, but now M. Caillaux's instructions are to charge on the highest figure, that is to say, on the 12-h.p. for the 10-12-h.p. motor, on the 30-h.p. for the 20-30-h.p. engine, &c. This arrangement, which, it is calculated, will transfer from the pockets of motorists into the coffers of the State an extra contribution of some £20,000, naturally discontents both automobile manufacturers and their customers, who consider they were already too highly taxed. It is certainly not a good way to encourage a new industry.

A Taxi-cab Procession in Paris.

A novel demonstration was organised in Paris on Wednesday last week, by a large number of chauffeurs, in favour of one of their comrades, named Girard, who was recently condemned to three months' imprisonment for striking a police official. Girard has always protested his innocence, and the taxi-cab drivers of Paris are convinced that he was wrongfully condemned, consequently twenty-five motor-cabs assembled outside the Tuileries Gardens. Each was laden with members of the Chauffeurs' Union and exhibited a large yellow poster with the words "Affaire Girard! A judicial infamy! An innocent man condemned!" The manifestants then drove their cabs round the boulevards the procession attracting much attention.

A Competition of Speed Controlling Devices.

A new law was passed in Austria in October removing automobiles incapable of exceeding a speed of 25 kilometres per hour from certain restrictions. In view of this the Automobile Technical Association of Vienna is organising a competition for a speed governor which will prevent a car from attaining speeds in excess of 25 kilometres per hour, on level roads, "continuously, reliably and independent of the will of the driver." A prize of 1,000 crowns is set out, which may be awarded to the best or the several equally good solutions of the problem. The device must comply with the requirements laid down in the law referred to. The association will appoint a committee to examine and test the devices submitted, and those which from a study of the drawings and descriptions appear to be the most practical will be first selected, the inventors of these being requested to submit an instrument in two months' time, after which the practical road tests will be carried. The prize will therefore be awarded only to devices actually built and not to mere designs. Entries for the contest, full particulars of which can be obtained from the Association, at 9, Severingasse, Vienna IX 2, will be received until March 15th next.

German Motor-Car Imports and Exports.

The imports of foreign motor-cars and parts into Germany during the eleven months ending with November last only attained a value of £613,455, as contrasted with £831,618 in the corresponding period of 1907. On the other hand, there has been a slight

increase in the exports of automobiles from Germany—from £624,120 to £648,005.

The Prince Henry of Prussia Touring Competition.

The rules of the Prince Henry of Prussia Touring Competition, which is to be held from the 10th to the 18th June next, have now been issued. The event is being organised by the German Imperial, Austrian, Hungarian and Bavarian Automobile Clubs, and is open for all four and six cylinder touring cars of from 7-h.p. to 28-h.p. and capable of carrying four persons. The competing vehicles must belong to the entrant, who must be a member of a recognised automobile club. In order to prevent the entrance of vehicles fitted with "freak" touring bodies, the regulations specify the lines on which the latter must be built, the dimensions in millimetres being shown in the accompanying sketch. The daily runs are as follows:—June 10th, Berlin to Breslau (speed trial *en route*); June 11th, Breslau to Tatra Lomnitz, in the Carpathian Mountains; June 12th, Tatra Lomnitz to Budapest; June 13th, exhibition; June 14th, Budapest to Vienna; June 15th, exhibition; June 16th, Vienna to Salzburg; June 17th, Salzburg to Munich, where the competition will terminate. A speed trial will also be held *en route* on the last day. Entries must be sent to the Imperial German Automobile Club, in Berlin (whence full particulars of the competition can be obtained) not

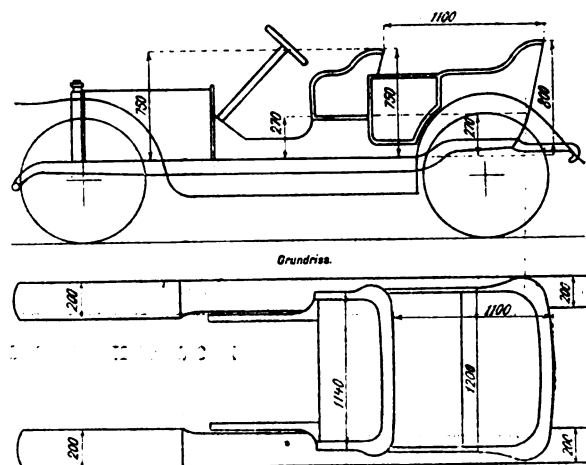


Diagram of standard body (with dimensions) of cars eligible for the Prince Henry of Prussia Touring Competition.

later than April 1st, together with an entry fee of £25. Late entries can be accepted till May 1st, but only with a double fee of £50. The competition will not take place unless at least fifty cars have entered. On the other hand, if a large entry list is received, the number of competitors may, if considered necessary by the organisers, be limited.

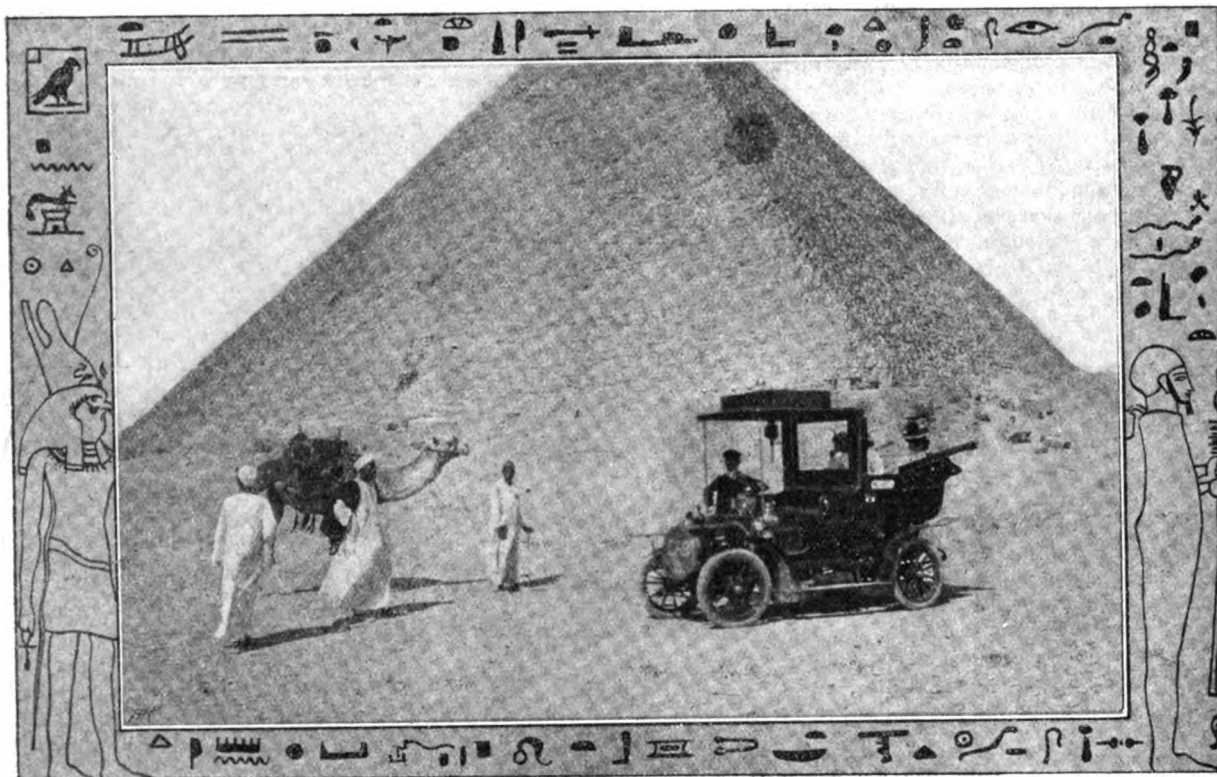
Miscellaneous Items.

The French postal and telegraph authorities in Paris are at present inviting offers for the conveyance of the mails between Bernay-Gare, Giverville and Lieurey by motor vehicles.—The Prussian State Railway authorities are building a number of railway vans specially designed for the transport of motor vehicles.—The Bavarian Automobile Club, of Munich, has just celebrated its tenth anniversary.—While there will be no automobile exhibition in Berlin this year, the German Imperial Automobile Club has decided to organise one for motor-boats, airships, aeroplanes, &c., in March, 1910.

Le Garage d'un Chemin de Fer.

L'automobile réussirait-elle ce miracle de vaincre la routine des grandes administrations? On le croirait volontiers à voir les exemples qui nous viennent de temps à autre. La Compagnie du Chemin de fer du Nord vient d'installer, à proximité de ses ateliers, un garage où les fournisseurs et personnes ayant affaire auxdits ateliers pourront laisser leur automobile. Souhaitons—puisque nous sommes dans la période des vœux—que les autres administrations suivent ce bon exemple.

Motor Touring in Egypt.



The Old and New Methods of Travel at the foot of the Cheops Pyramid.



Old and New Methods of Travel.—Held Up at a Railway Level Crossing.

[Allgemeine Automobil Zeitung.]

MESSRS. WEATHERLEY AND SONS, of Lewisham, an old-established firm of motor repairers and agents, have just opened new and large showrooms.

A PROPOSAL to purchase a motor-car for the use of the Chief Constable of the West Riding of Yorkshire has been deferred until the next meeting of the Standing Joint Committee.

THE Royal Garage, of Theatre Street, Preston, have secured the sole concession in this country for the Passe-Partout cars.

ACCRINGTON motorists are evidently preparing for the season. Mr. James Broadley has acquired a new model 15-h.p. Humber landaulet, supplied by Mr. J. S. Cordingley, of Haslingden.

MESSRS. DUCROS MERCEDES, LTD., have received an order from His Majesty King Edward for a new Mercedes 65-h.p. four-cylinder chassis. The vehicle will be fitted with an exceedingly comfortable type of limousine body by Messrs. Hooper.

THE South Wales Motor Transport and Trading Company, Ltd., have opened new premises in Charles Street, Cardiff. This firm make a special feature of hiring cars for travellers and doctors' use. They are also contractors for the haulage of heavy materials by motor vehicles.

THE firm of Messrs. Wallach Bros. has been turned into a private limited liability company, with Mr. Julius Wallach and Mr. L. C. Wallach, A.M.I.E., as directors. The business will be continued in the Royal London House, Finsbury Square, E.C., on the same lines as those upon which it has been conducted for the past nineteen years.

MESSRS. BUSSY BROS., of Montpelier Vale, Blackheath, are looking after the requirements of motorists in Blackheath in a thorough manner. They have a large garage well lit with arc lamps, and on the occasion of the recent International football match this was in good request. The firm stock a large range of accessories, Vacuum oils, &c.

MR. HENRY SOAR, of 21, Clifton Road, Church End, Finchley, sends us some photographs and particulars of an ingenious combination speedometer and speed-recording instrument that he has lately introduced. The apparatus automatically records on paper the speed of the car as it progresses. It may also be arranged to register the time of starting, the time taken to cover each mile, and to record all stoppages, and the duration of the same.

MUCH has been done of late in the repair of cylinders, crank cases, and broken castings generally, which a few years ago was apparently impracticable. At their works in the Hazelville Road, Hornsey Rise, London, N., the Whittington Engineering Company are now undertaking such repairs by a welding and brazing process which secures the work being turned out in a style that is almost equal to that of new castings. The company is also undertaking the repair of petrol tanks, as well as boiler work.

EVEN the S.E. and C. Railway is assisting to make the roads of Kent safer and suitable for modern travelling. Thus a bridge at Gravesend is being widened entirely at the company's expense, whilst the overline bridge at New Eltham has recently been reconstructed and is now safe for the heaviest motors. The company intend to slightly raise the toll on motor vehicles on their bridge over the river Swale, which connects the Isle of Sheppey to the mainland of Kent, and it is only fair that motorists should pay something towards the cost of upkeep.

THAT the motor-car should have been a silent factor in the remarkable escapade at Tottenham, near London, on Saturday, was apparently in accordance with the modern character of the whole adventure. Two desperadoes, intent on securing bags of money from a motor-car, were making off after firing several shots. A number of people took up the chase. The chauffeur was injured by a shot, but he leapt pluckily to the steering wheel of the car, and some of the employees also entered the car and went in pursuit of the men. They turned into Chestnut Grove with the motor-car gaining on them, and, perceiving this, they discharged shots at their pursuers as they ran. Bullets tore their way through the wind screen of the car, and finally a bullet pierced the radiator.

HERE AND THERE.

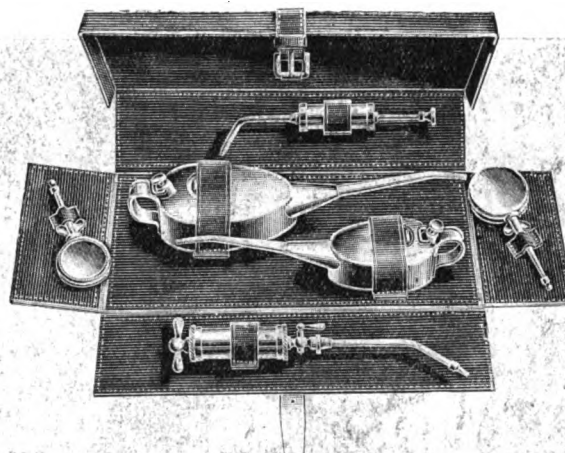
THE Municipal Council of Shanghai, China, is in the market for the supply of a petrol motor fire hose wagon.

WE regret to announce the death of Mr. E. J. Jarvis, managing director of Messrs. E. J.

Jarvis, Ltd., motor-car agents, Edgware Road, London, W. The deceased was one of the first cycle agents in London to recognise the possibilities of the motor-car, he taking up their sale as soon as the Red Flag was abolished in 1896.

IT is announced from Peking that the Automobile Club of China has just been formed in that city.

WE illustrate herewith the "Doal" Oil Cabinet, which has just been put on the market by Messrs. Avery and Roberts, Ltd., 64, Stanley Street, Liverpool. The collapsible case is so constructed that immediately the strap is released all the oil cans and lubricators are to hand for use. The arrangement has been specially designed for the purpose of keeping all the oil cans, &c., together; it prevents leakage and rattling, takes up very little room, and is exceedingly handy and compact. The case is lined

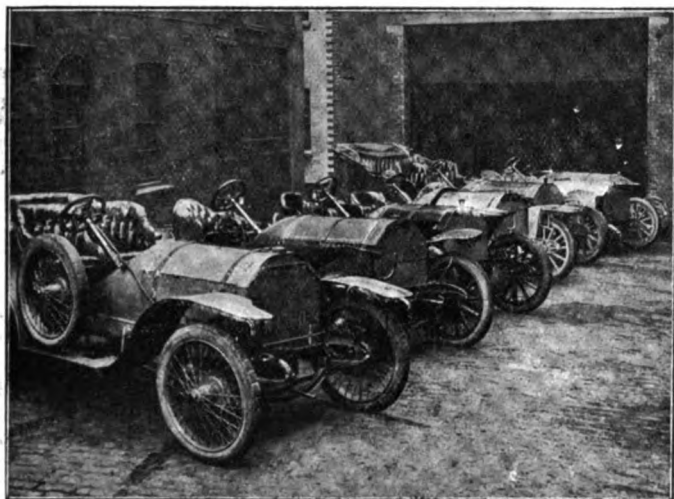


with non-absorbent lining, while the contents include a half-pint oil can, a quarter-pint oil can, a screw grease injector, a spring petrol injector, and two small oilers.

THE single-cylinder Sizaire car entered by Messrs. Jarrott and Letts, Ltd., left the R.A.C. Motor House, 18, Down Street, W., on Friday of last week, at 8.11 p.m., and arrived at Edinburgh on the following day at 4.8 p.m. The weather was fine throughout. Near Grantham the spare sparking plug blew out of the cylinder, and nine minutes were spent in replacing it. For this purpose the engine was stopped for one minute. At Markham Moor the car ran out of petrol, and the engine therefore stopped for five and a half minutes while refilling. Otherwise the run to the Scottish capital was absolutely a non-stop one. Messrs. Jarrott and Letts have just issued a booklet which will prove indispensable to all owners of Sizaire-Naudin cars. Practically every main component of these well-known vehicles is illustrated both by photographs and line drawings, accompanying which is a very full and clear description of the purpose and operation of the same. Full instructions are also given as to the care and attention necessary to give to the various parts, the methods of lubrication, adjustment, &c. A number of pages are also devoted to useful hints, which should be of assistance in case a breakdown of any sort is experienced. Some idea of the complete character of the book may be gauged from the fact that it extends to close upon eighty pages, and the only criticism that we have to make with regard to it is that an index to the various chapters and sub-headings might have been included. A copy of the booklet will, we understand, be sent on application. Messrs. Jarrott and Letts have also sent us a very artistic sketch depicting in colours the three Sizaire-Naudin cars which took the first, second, and fourth places in the Coupe des Voiturettes race in France last year. We do not know whether Messrs. Jarrott and Letts propose to send these sketches out broadcast, but we feel sure that all Sizaire enthusiasts would deem them worthy of a frame.

A FLEET OF RACING CARS.

THE accompanying illustration is reproduced from an interesting photograph recently taken at the premises of the Motor House, in Euston Road, London. It depicts a row of seven racing cars, each with its history. The first car, fitted with Rudge-Whitworth wheels, is the 135-h.p. Mercedes, run with such striking success at Brooklands. It will be remembered that this car missed the Grand Prize of £1,500 in the first Montagu Cup Race owing to the driver (Resta) running past the finishing straight at the conclusion of the race. The second vehicle formed one of the 120-h.p. Mercedes team built for the first Grand Prix race in 1906, which was won by Sziisz on a Renault. It has since taken part in many smaller events with unvarying success. The third car is a 90-h.p. Mercedes built for the last Gordon Bennett race, which was won by Thiery on a Brasier. The fourth machine is the Mercedes which made world's records for a number of distances at Nice so long ago as 1902. No one looking at the car can appreciate that it could possibly have been constructed so long ago, as it compares favourably in all details with those of the present day, while the condition of all wearing parts is so good that very slight repairs were found necessary to put it in proper order.



and condition. The fifth car also formed one of the 120-h.p. Mercedes team for the first Grand Prix, and was purchased by the Sultan of Johore after the race. He had a short tonneau body fitted to it so as to make it suitable for touring purposes. The sixth machine is a Rochet-Schneider, built specially for the Semmering Hill Climb, which it won. The seventh car is the 120-h.p. Darracq which ran away from the field for the first few laps in the first Montagu Cup Race at Brooklands. Seeing that it is very unlikely that any more high-powered racing cars will ever be built, the above cars, with several other racers, form an interesting exhibit at the Motor House at the present time.

Now that the Post Office authorities are using motor mail vans on a large scale, it is interesting to recall the fact that the first trial made for the Post Office was undertaken by Mr. C. H. E. Rush, in November, 1896, with a 6-h.p. Panhard vehicle.

A PROPOSAL is under consideration to construct an automobile track, twenty-six miles long, near Indianapolis, U.S.A. A tract of land one mile long and one-half mile wide is stated to have been purchased. The track at the outer edge will be two miles long, winding towards the centre, making in all a twenty-six mile course.

THE New York Board of Aldermen has recently issued a new regulation to the effect that "No operator of any automobile or other motor vehicle, while operating the same upon the public highway, within the city, shall use any acetylene, electric or other headlight, unless properly shaded so as not to blind or dazzle other users of the highway, or make it difficult or unsafe for them to ride, drive or walk thereon."

THE SOCIAL WHIRL.

NEW members of the Royal A.C. include the Earl of Gifford, Baron Percy De Worms, Sir John Dickson-Poynder, M.P., Sir R. Macleod of Macleod, Count Bela R. Zichy, Hon. L. V. Harold Willoughby, Sir Wilfred Peek, Bart., Sir Frederick Robinson and Captain T. M. Kincaid Smith, M.P.

MR. JULIAN ORDE, of the R.A.C., has disposed of his 45-h.p. Daimler and expects delivery of a new 50-h.p. Silent Daimler early in April. At the present time I notice he has a four-cylinder 16-20-h.p. Rover in use.

LORD STRATHCONA has accepted the presidency of the Imperial International Exhibition which is to be held at the "Great White City," Shepherd's Bush, from May to October of the present year. Mr. Imre Kiralfy will again be the Commissioner General, and among the General Committee are the managers of most of the leading railway companies, the presidents of various Chambers of Commerce, and many gentlemen of influence in the industrial and commercial centres of the country.

Place aux Dames. I learn from Paris that a ladies' aeroplane club, "Les Aériennes," is being formed in London, and, although little is known concerning the venture on this side, the news is interesting. Already we have quite a number of associations, the members of which are seeking to navigate the air; the advent of a club for the ladies who would fly is quite in the natural order of things nowadays.

LADIES, as a rule, take considerable interest in the doings of the provincial automobile clubs and are eager participants in their runs. Last season more than thirty ladies attended the meets of the Sheffield A.C., adding greatly to the popularity of the various events. Prizes were offered to those who made the best attendance at these runs, and I hear that these were won by Mrs. Herbert Beesley and Mrs. Gerald D. Flather, who each made exactly the same number of attendances.

THE Earl of Kimberley left for the Continent a day or two after attending the dinner of the R.A.C. and Associates. His lordship is chairman of the Motor Car Act Committee of the Norfolk County Council, which has just submitted a useful report to that body in favour of erecting warning notices on roads where the danger is not plainly obvious to the careful motorist, and of adopting a uniform system of warning in connection with concealed corners. The Council has accepted the offer of the Norfolk A.C. to provide ten danger posts, on condition that their maintenance is guaranteed by the local authorities.

MOTORISTS generally receive impartial treatment at the Bromley (Kent) Police Court. Mr. J. Coles Childs, J.P., the chairman of the bench, is a motorist, owning and driving a six-cylinder car. Judge Emden, of Bromley, whose verdicts on recent car obstruction, cross-road collision and other cases have been so much quoted, is also an enthusiastic motorist, and he makes use of his Talbot car wherever possible.

ONE of the most successful house dinners held at the Motor Club, in Princes Street, W.C., was that which took place in connection with the British Motor Boat Club last week. Mr. C. Temperley was in the chair, and among those present were Admiral Sir William Kennedy, Col. W. J. Bosworth, the Hon. Algernon Bourke, the Hon. J. W. Taverner, and Hon. C. H. Rason, the two latter gentlemen being the Agents General for Victoria and Western Australia respectively.

AT the R.A.C. dinner Sir Henry Rawlinson pleaded for the encouragement of the Territorial Army by motorists, and on Tuesday Mr. Haldane motored along the worst road in London to Stratford in the interests of his scheme. Curiously enough the eastern suburb has a non-motoring M.P., although the adjoining divisions of Bow and Romford are represented by two enthusiastic motorists—Sir J. H. Bethell and Mr. Stopford Brooke. LOLLUS.

ON PASSING TRAMCARS.

THE ACTION OF THE CHIEF CONSTABLES.

NOW that the Lord Chief Justice has declared that the regulation of the Local Government Board with regard to the passing of tramcars by automobiles is not in accordance with safe practice, there is little doubt that the Royal A.C. will meet with success in their forthcoming application to Mr. John Burns. As Sir Edward Henry reminded the company at the R.A.C. Associates' dinner, the removal or revision of Art. IV. of the L.G.B. regulations with regard to motor-cars is not a matter for Parliament; it is within the province of the Department of State. Before the reassembling of M.P.'s on the 16th prox. the matter should be settled.

Meanwhile, some of the Chief Constables, recognising the absurdity of the position—almost Gilbertian, as Mr. J. E. Hodgkin suggested last week—have determined to be guided by their own common sense. We learn that Mr. A. J. Atkinson, Dr. Coates, and Mr. G. H. Strong, representing the Hull and District A.C., have, on behalf of the motorists in that district, taken up the matter with Major Malcolm, the Chief Constable of Hull. As the result of their interview, the Chief Constable has issued an order to the police to the effect that if a motorist chooses to overtake a tramcar on the right, or off side, there can be no action taken against the driver, unless by his act he causes danger to the public. On the other hand, the police will not interfere with the driver of a motor-car who conforms to the old and certainly the safer plan of passing a tramcar on the near side. In a communication to ourselves Major Malcolm points out that "any attempt of a driver to pass on the right side would be fraught with very great danger."

The Chief Constable of Birmingham informs us that he is not issuing any special instructions in that city, but he gives the assurance that "no summons is likely to be issued against motorists in connection with a similar case here. There are many streets in the city only sufficiently wide for a single tram line in the middle, and room for one vehicle at each side. Along the single line the tramcars pass alternately, first in one direction and then the opposite. If vehicles were to pass trams going in the same direction on the off or right side of these streets they would meet the down-coming traffic, and the result would be that the motor-cars would either not be able to pass the tram at all, or would infringe sub-section 3."

At Coventry, Mr. C. C. Chursley, the Chief Constable, has taken an equally common-sense view of the matter, and has given similar instructions, adding in his letter to us on the subject that "it has been found in our narrow streets to be practically impossible to conform with the rule of the road as laid down without incurring great danger to traffic coming from the opposite direction."

Elsewhere we believe the police authorities, while recognising the absurdity of the present regulation, have decided to await events, by which we take it no prosecutions will be authorised. Thus Mr. W. E. Jones, the Chief Constable of Southampton, is "waiting the decision of the L.G.B. on the action taken by the Royal A.C.," and at Bournemouth the matter is still under consideration. This attitude is not isolated, but is typical of that adopted in several places. Bradford is, perhaps, an interesting exception, for, according to Mr. J. Farndale, the Chief Constable of the town in which the test case occurred, "the practice which will operate in this city will be in accordance with the law as defined by the courts."

In some distinction to the views of other tramway managers—most of whom, it will be remembered, were inclined to agree with the Lord Chief Justice in regarding the regulation with disfavour—is that of Mr. F. Schofield, the tramway manager for the Leyton Urban District Council, who writes:—

Dear Sir,—I am of opinion that the Bradford test case with regard to the passing of trams by motor-cars is extremely useful as a precedent. The question of right or wrong side of the road is very definite, and this was more than confirmed by the Motor Car Act of 1904. There would no doubt be a very great risk to users of tramcars if the general rule was allowed to be violated by fast travelling vehicles, and this particularly so having regard to the high speed

which motor-cars attain and the silence with which some run. The conditions of the road must of course be an important factor of a case, and should to a certain extent govern which is the right or wrong side. We have in Leyton several places where it would be really dangerous to pass on the off side of a tramcar; but this, of course, is the exception and not the rule.—Yours faithfully,

F. SCHOFIELD, Tramways Manager.

One of the managers of a leading corporation tramway system in the north of England, who, however, does not wish his name published, informs us that he has had no difficulty with regard to motor-car traffic, but "it has been observed that motor-cars pass on the left-hand side of the car when following rather than on the right or off side, and providing the motor-car slackens speed or stops when the tramcar is picking up or setting down passengers, undoubtedly the left-hand side of the road is the proper side to pass. To pass on the off side is extremely dangerous. First, he cannot be certain that a car may not be coming in the opposite direction, neither can vehicular traffic be avoided which may be coming in the opposite direction, and the motor-car driver could not see it until he had got round the car he was endeavouring to pass."

In connection with this matter we may recall that the regulation with regard to automobiles, against which such universal, as well as legal, protest is made, is Article IV. of the Motor Car (Use and Construction) Order, 1904, sub-section 3 of which is to the following effect, the words upon which the Bradford case was determined being italicised:—

He shall, when meeting any carriage, horse, or cattle keep motor-cars on the left or near side of the road, and when passing any carriage, horse, or cattle proceeding in the same direction keep the motor-car on the right or off side of the same.

Traction engines are governed by the special Acts applying to such vehicles. Bicycles are regulated by the Local Government Act, 1888, Sec. 5, and other vehicles by the Towns Police Clauses Act, 1847, Sec. 28, and by the Highway Act, 1835.

The sub-section which we have quoted from the Motor Car (Use and Construction) Order, 1904, is apparently an imperfect adaption of Sec. 28 of the Towns Police Clauses Act, 1847, governing ordinary vehicles. This section makes it an offence for any person who, to the obstruction, annoyance, or danger of the residents or passengers, commits certain offences. With regard to the passing of other vehicles, the offence is stated to be a person "who in passing another carriage does not keep his wagon, cart, or carriage on the right or off side of the road except in case of actual necessity or some sufficient reason for deviation." Article 4 of the Motor Car Use and Construction Order, 1904, in its preamble omits the words to the "obstruction, annoyance, or danger of the residents and passengers," and it makes the Order that persons shall comply with the regulations therein set forth. The regulation under Sub-section 3 says that he shall, when passing any carriage proceeding in the same direction, keep his motor-car on the right or off side of the road, and it does not give him any option such as contained in Sec. 28 of the Towns Police Clauses Act, 1847, to use his own discretion, as the words "except in case of actual necessity or some sufficient reason for deviation" are omitted.

THE following advertisement appeared in last week's issue of a Dartford paper under the head "Garage or Stabling to Let." "To cowkeepers, motorists, and others; magnificent premises, situate —, rent —, five stall stables, large coachhouse; good lofts, &c.—Apply."

It is proposed to hold a four or five days' Motor Reliability Trial in Northern India during the spring. A committee is being formed, with Mr. C. U. Knox, c.o. Messrs. Cox and Co., Rawalpindi, as secretary. The run as at present proposed is:—Lahore, Rawalpindi, Malakand Fort (hill climb), Rawalpindi.

WHAT is to be, in more than one sense, a moving picture show, is a combined motor vehicle and picture machine for which a patent has been granted to Messrs. J. H. Gravell, of Philadelphia, and Mr. G. D. Farwell, of Bridgeport, U.S.A. The specifications of the vehicle include the necessary machinery for the exhibition of moving pictures; an electric generator for operating the show; and a motor which can be employed either in propelling the vehicle or in driving the electric generator.

MOTERING ACCESSORIES.

The "Ideal" Tyre and Tool Holder.

We illustrate herewith two devices which have lately been put on the market by Messrs. Schofield and Co., of the Tulketh Works, Southport, and which will be found extremely useful additions to the equipment of a private garage. Fig. 1 depicts the "Ideal" holder, by means of which tyres or covers can be safely stored away from the bad effects

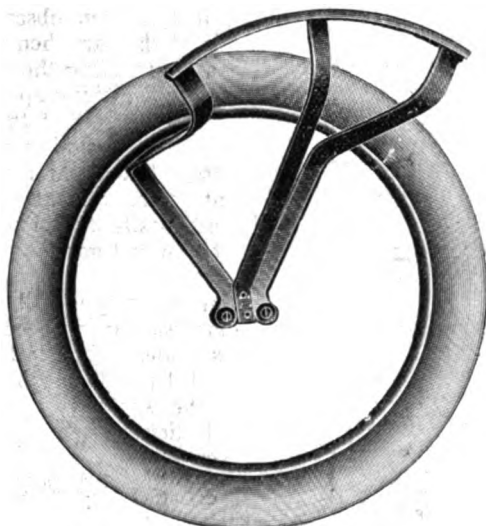


Fig. 1.—The "Ideal" Tyre Holder.

of water and grease, which are often found on garage floors. The device will hold any size and diameter of cover, and correctly fits the circle, while as the cross bars are made convex in section, there are no sharp edges to injure the tyres, which are supported at two places. The second handy arrangement is the "Ideal" adjustable tool holder shown in Fig. 2. This is so arranged that it can be nailed to the wall over or close to the bench, so that the required tool can be seen and withdrawn at a glance. The

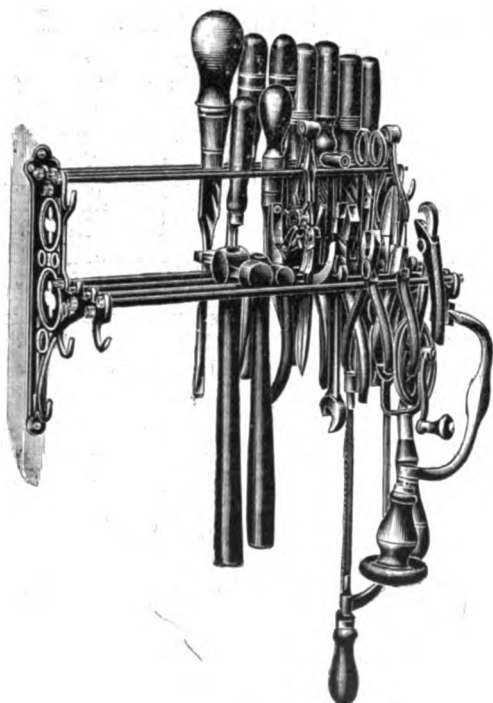


Fig. 2.—The "Ideal" Adjustable Tool Holder.

adjustable sliding bars can be set straight or at varying angles and spaces so as to take various sizes of tools. Eight hooks are also provided on which to hang the larger tools. Other useful specialities of Messrs. Schofield include a car sponge basket, a radial holder for brushes, mops, and odd tools, and the "Ideal" oil tray, of strong galvanised sheet steel, with stiff top edge.

A Motor Tube Tester.

In connection with the vulcanization of motor tyres, Messrs. Harvey Frost and Co., of 39, Great Eastern Street, London, E.C., have attained fame as pioneers as well as in the scientific development of the business, to its present altitude. They have now brought out a motor tube tester and puncture finder, which will materially ease the burden of the motorist distressed by such an unpleasant condition of things as the puncture generally assures. The method of operation is simple. Firstly the tube is inflated to its ordinary running pressure, this being possible without risk of distension by placing the tube within strong netting fastened to two rims. These are clipped together when the tube is placed in position. The tube and tester together are then immersed in a water bath of special design. This provides for plenty of water for the purpose of discovering defects. The device has the advantage of occupying only a little floor space, while one instrument will be sufficient to deal with a given range of tubes.

Millennium Key Spanner.

Mr. R. Broadhurst, of Smithford Street, Coventry, has now taken up the Millennium motor accessories and specialities, one of which is illustrated in Fig. 3. The convenience of this device is clearly apparent. The set consists of twenty-six key spanners, an extension piece, a ratchet spanner or universal joint and a handle which fits both the spanner and the universal joint. The key spanners will fit all nuts, either of English or French sizes, and can be used (1) with the ratchet spanner alone, thus corresponding to improved bent box spanners; (2) with the ratchet spanner

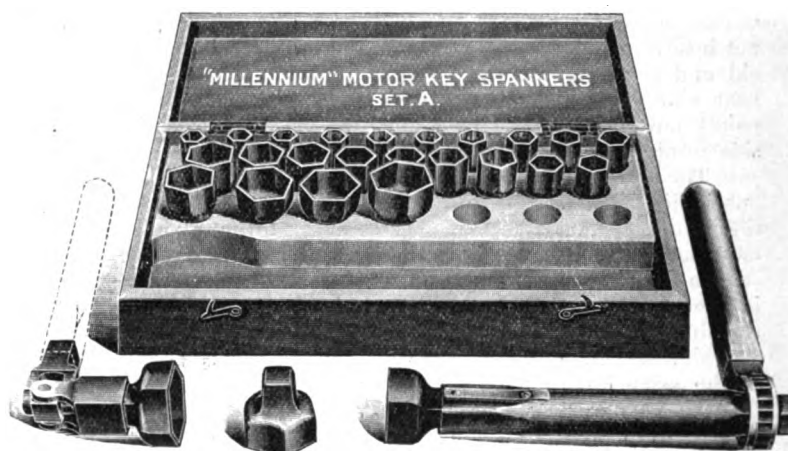


Fig. 3.

and extension piece, thus corresponding to improved straight box spanners; and (3) with the Universal joint, with or without the ratchet or extension piece, thus enabling nuts to be turned which are inaccessible to any

The Rotax Petrol Store.

The Rotax Motor Company, of Great Eastern Street, London, E.C., have several good devices for the motorist, including foot warmers, speed indicators, lamps, horns, &c., as well as a new petrol store—an accessory for the garage which may appropriately be referred to at a time when the dangers of petrol are being so persistently advertised in the general Press. This Rotax petrol store is made with a water course round the top, upon which the lid effectually shuts down. Thus any vapour that may be within is kept from escaping into the open air. There is also a quantity of water kept within the tank. At the bottom of the chamber is a valve which releases as the lid is raised, so that any surplus water or any petrol leaking from the tins is passed away. Should, by any chance, the petrol in the tank become ignited, the fire can be extinguished simply and safely by closing down the lid. The store, which we recently inspected in the company's motor department, has a capacity for ten two gallon tins, and should be regarded as an indispensable adjunct to motor garages.

The "Roslee" Generator.

Messrs. J. T. Williams and Co., of 344, Newtown Row, Birmingham, have had long experience in the design and construction of lamps for vehicles of all kinds. They are turning their attention to those for automobiles, and from our own experience we can testify as to the importance of the work they are doing for motorists. A personal test over four months gives assurance as to the steady light which is uniformly given at all speeds of the car. An illustrated description will be given next week.

Correspondence.

[Letters to the Editor should be addressed to the offices, 27-33, Charing Cross Road, London, W.C.]

THE "GATE CHANGE" PATENT.

To THE EDITOR OF *The Motor-Car Journal*.

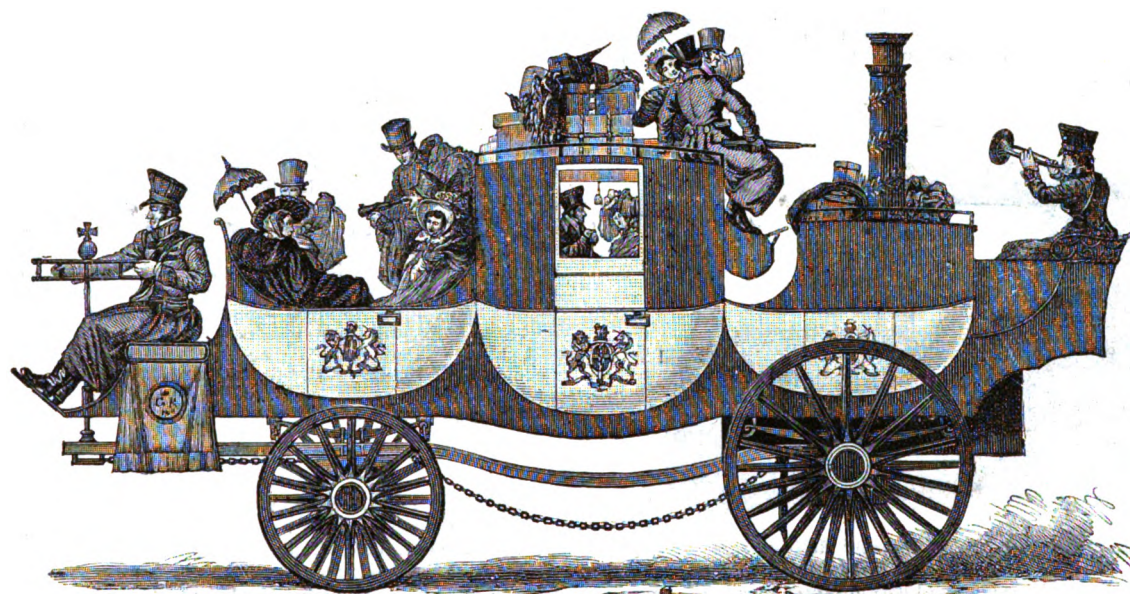
SIR,—It may be within your recollection that on December 4th I addressed to you a letter calling the attention of your readers to the fact that if the holders of the patents in connection with this form of device proposed to take steps to enforce what they considered to be their rights on the matter, it might be a course of action fraught with uncertainty and possibly annoyance to the general body of automobilists. I further mentioned that during Olympia Show I was approached by a director of the company which holds the patents, who informed me of the intention of his company to demand a royalty on Imperia chassis fitted with gate gear.

Acting upon the support and sympathy shown me by other importers, manufacturers, and the Press, I called a private meeting of the trade at the Hotel Cecil on the 12th inst., to discuss the situation, and two days later the Society of Motor Manufacturers and Traders in council resolved that when the formal demand for royalty was made the Society would

THE M.M.C. 8-H.P. CAR.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—Would you kindly advise me on the following subject? I have an M.M.C. 8-h.p. small, low-built four-seated car, which is possibly, I suppose, about four years old, perhaps more. It has all been thoroughly overhauled, worn parts replaced by new; the engine, gears, &c., are all in splendid condition (it has three speeds and reverse), the valves have been ground in, and everything has been done to make the car as perfect as possible. It runs fairly well, but the exhaust pipe after a very short time gets red hot. Should same get hot like that, and is there any danger? Would you think there is anything wrong? Is there any remedy to prevent same? The engine itself does not appear to get overheated, and everything seems to work all right. Also to start the engine sometimes takes a very long time and seems a hard job. I have to keep flooding the carburettor; over half-an-hour yesterday before I could get her to move, and in which time the engine got terribly hot. Do you think the water circulation can be all right? So far as I can



The James-Anderson Steam 'Bus built about 1829.

spend money to investigate the validity of this gate gear and other patents. The Mercedes Daimler Motor Company, Ltd., has announced by circular letter that it is prepared to grant licences for use of the gate gear and other details such as are to be found on motor-cars, and we may readily surmise that it will carry out its threat, embodied in the circular, of taking vigorous action against not merely manufacturers, importers and sellers, but users of cars as well.

I wish to assure your readers that should that threat take effect they may rely upon the support of manufacturers and importers.

The Society of Motor Manufacturers and Traders having been approached will spare no reasonable expense in investigating the merits of the claim, and, as is more than likely, should there be any legal proceedings in this connection hereafter, the public may be certain of the trade standing together to protect their own rights and the rights of their clients.

It behoves all interested in this important matter, whether manufacturers, importers, sellers, or users, to help to present a united front against possible attack.

A committee, on which I have the honour to serve, has been formed to consider the best means of so doing, and any information or communications on this subject addressed to me at 66, Great Russell Street, W.C., will be laid before and carefully considered by the committee.—Yours truly,

C. E. WHITTAKER.

gather it appears to be; but do you consider there might possibly be something in the water tank to occasionally cover the outlet from the tank? The engine has had a fit or two of completely stopping itself perhaps in the middle of a country road, and yet I can see nothing wrong.

At about what speed should this type of motor average, and about how far to the gallon of petrol should it run? I might mention the engine unfortunately takes but very little air. Your advice upon this subject will be much appreciated.—Yours truly,

AMATEUR.

[We should be first of all inclined to think that the exhaust pipe getting red hot may be due to the silencer being clogged up, and we would recommend our correspondent to have this dismantled and cleaned, if it has not already been done. Although it is stated that the engine does not appear to over-heat, it might be well to see whether the radiator and water jackets have become scaled owing to deposit from the water. The fact that the engine will, when running, only take very little air may be another cause of the red hot exhaust pipe owing to the motor working with a too rich mixture. To start the engine the air lever on the steering column should of course be closed, but once the motor is running it ought to be possible to pull up the lever almost if not quite to its full extent. The fact that it frequently takes a long time to start up the engine would seem to indicate that the timing of the ignition may not be perfect. Have the two-to-one gear wheels been at any time dismantled? It is very necessary when this is done to see that when the pinions are replaced

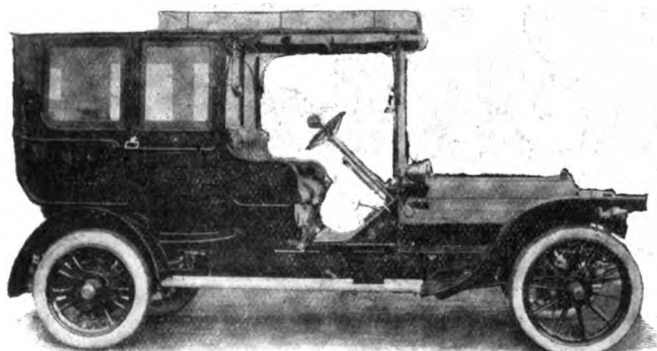
they are put back in exactly the same position as before. A good plan to facilitate starting the engine is to open the compression cock on the top of the cylinder head and squirt in by means of a small cycle oilcan a few drops of petrol. By adopting this method the motor will usually start up with the first or second turn of the handle. We should put the average speed of an 8-h.p. M.M.C. car on give and take roads at from fifteen to sixteen miles per hour, and the petrol consumption at about thirty miles to the gallon.]

ACCESSIBILITY.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—I was very glad to see the letter of "Experientia Docet" in the last issue of the *M.C.J.* Your correspondent apparently writes from experience, and I can heartily support all that he says. In the case of my own car it is quite a difficult matter to take down the water circulating pump, and the operation cannot be effected without having to lie on one's back on the floor underneath the car, and even then it is with the greatest difficulty that one can get a spanner on to the nuts that have to be removed. Many a time I have wished that the designer of the car in question had been at hand when that pump has needed attention. The carburettor, too, is so placed that it was only after I had had the vehicle a year or so that I discovered a screw the purpose of which, when it is withdrawn, is to allow any sediment in the petrol union below the float chamber to be cleaned out. What the use of the screw is it is difficult to see, as when the carburettor is in its proper position it is impossible, owing to other things being in the way, to get a screwdriver near the screw. While I am not in favour of sacrificing durability to accessibility, there is no doubt still much room for improvement in arranging these parts of a car which do occasionally need attention in such a way that the attention can be given with a minimum of trouble.—Yours truly,

AD SUM.



The "Sheffield-Simplex" 45-h.p. Car recently delivered to Mr. Stanley Brotherhood, of Merton Wood Hall, Worplesdon, Surrey. The vehicle, which is fitted with the ordinary three-speed gear-box, is equipped with a handsome Limousine, painted green and luxuriously upholstered in light drab by Hamshaw, of Leicester.

SPARE WHEELS ON MOTOR-CARS.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—I wonder if it has occurred to you how ludicrous modern cars are beginning to look? I refer to those which are now carrying a complete spare wheel and tyre on the step. It certainly does not give one an impression of the reliability of motor vehicles to see them going around with a complete spare part open to the public gaze in this way. If it is desirable to carry a spare wheel, I think it would be much better if some means were devised whereby it could be carried out of sight. Would it not be possible to arrange for this in some part of the body? A year or so ago a motor firm introduced a body in which an ingenious cupboard was formed in the part behind the back seats. The idea struck me as a good one, and I cannot but think that it is one well worth developing.—Yours truly,

R. W. H.

THE DANGERS OF PETROL.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—I was pleased to read in a recent issue the interesting letter from Mr. Haydon, in which he calls attention to the disastrous results which may follow the careless handling of petrol, and I trust that, coming as it does from an authority, the warning may open the eyes of the public and create a due appreciation of the deference demanded by our motive spirit.

The ignorant are not the only offenders in this respect, as many motorists err on the side of familiarity, and numerous accidents, causing both personal injury and damage to cars, have been the result. Two such accidents occurred in my district. In the first, a friend of mine was filling up on the road at night, and, due to erratic pouring, splashed a

quantity of petrol over the coachwork and upholstery of the car. The vapour from this was ignited by one of the side lamps, and the fire which followed did serious injury both to my friend and his car. In the second case, a local dealer was replenishing the tank of a motor-cycle, using a lamp to direct the pouring and also to ascertain the quantity of spirit required. As far as personal injury is concerned, his case was far worse than the first.

These accidents proved clearly to me that the method of filling by means of a funnel is a most undesirable one, and may prove a fruitful source of accident. A large free surface of petrol is exposed, from which evaporation rapidly takes place, and in addition, in the hands of most persons, the petrol evinces a desire to flow spasmodically, causing splashing and waste. After a lot of thought and experiment, I have devised a means of overcoming these difficulties and performing the awkward operation of replenishing the tank in a safe and clean manner. The apparatus, which I have called the Auto-Syphon, was reviewed in your issues of July 4th and August 15th, 1908, and I shall be pleased to forward particulars to any of your readers who may be interested in the same.—Yours truly,

W. DEAN WILLIAMSON.

LOSS OF POWER.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—Being a constant reader of your valuable paper, I beg to ask whether any of its readers can give me any advice on a 24-h.p. De Dietrich car. The vehicle has recently lost power on hills which it used to take without any trouble, and being in the neighbourhood of Porlock, it is important to be well on the hills. The car, however, fails on them, although it is all right on the level. I have thoroughly overhauled the engine, ground all the valves, but without success.—Yours truly,

CHAUFFEUR.

[Of all the questions which are dealt with in these columns there are none which are more difficult to answer, on account of their vagueness, than a complaint of "loss of power." The fact that the car is a De Dietrich 24-h.p. explains no more than if a man went to a doctor and said, "I am a Frenchman, fighting weight ten stone, I do not feel well, what is the matter with me?" "Chauffeur" says he has overhauled the engine thoroughly, but we are inclined to doubt if he has succeeded in putting it in thorough order; for, in the absence of evidence to the contrary, we should ascribe poor performance *on hills only* to something amiss with the engine. The valves have been ground in; so far so good; but is the compression perfect? If not, what about the state of the cylinders, pistons and rings? It often happens that merely taking these parts to pieces and cleaning them results in worse compression when reassembled than before. Perchance "Chauffeur" has found this to be the case with his motor; if so, he must take it to pieces once more, and have things made as perfect in the quarter we have indicated as we have no doubt he has succeeded in doing with the valves.]

THE COST OF UPKEEP.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—I should be glad if any reader of the *M.C.J.* would favour me with information on the following points, i.e.: Is the upkeep of a four-cylinder 14-h.p. car much in excess of a 10-h.p. two-cylinder or 8-h.p. single-cylinder? What is the cost, roughly, of running 1,000 miles on a 14, 10, and 8-h.p. respectively? Is a four-cylinder car much more complicated than a two or one? I may say that I intend buying a car and looking after it myself, and do not want one that will prove too costly to run.—Yours truly,

R. J. SEFTON.

SAXONELLE.—We have an inquiry for the makers of "Saxonelle," a grease which is used to put on brass work after it has been cleaned, to prevent tarnishing.

A LID and inside rim of a tyre trunk were found between Longford and Colnbrook on the 16th inst. If the owner will communicate with the Secretary of the Automobile Association, Princes Buildings, Coventry Street, London, W., every assistance will be afforded him.

ACETYLENE LAMPS IN FOGGY WEATHER.—In reference to the letter from "Sussex" on the above subject, Messrs. George Polkey, Ltd., Birmingham, write:—"From personal experience, we can confirm that acetylene lamps are absolutely useless in foggy weather; as a matter of fact a motorist would be better off without the lamps, as the fog reflects back the light into the eyes of the motorist. We would point out that we are the makers of a paraffin head lamp for motor-cars which is specially suitable for use in foggy weather. The light from these lamps, being more diffused than that of the ordinary acetylene lamp, pierces through a fog."

AN examination for the R.A.C. certificates was recently held in Malta, the candidates being soldiers of various regiments stationed in the garrison.

TENDERS are at present being invited by the French post and telegraph authorities in Paris for the transport of the mails between Grasse and Castellane, in the Lower Alps, by motor vehicles.

THE "GATE CHANGE" PATENT.

(Concluded from page 1023.)

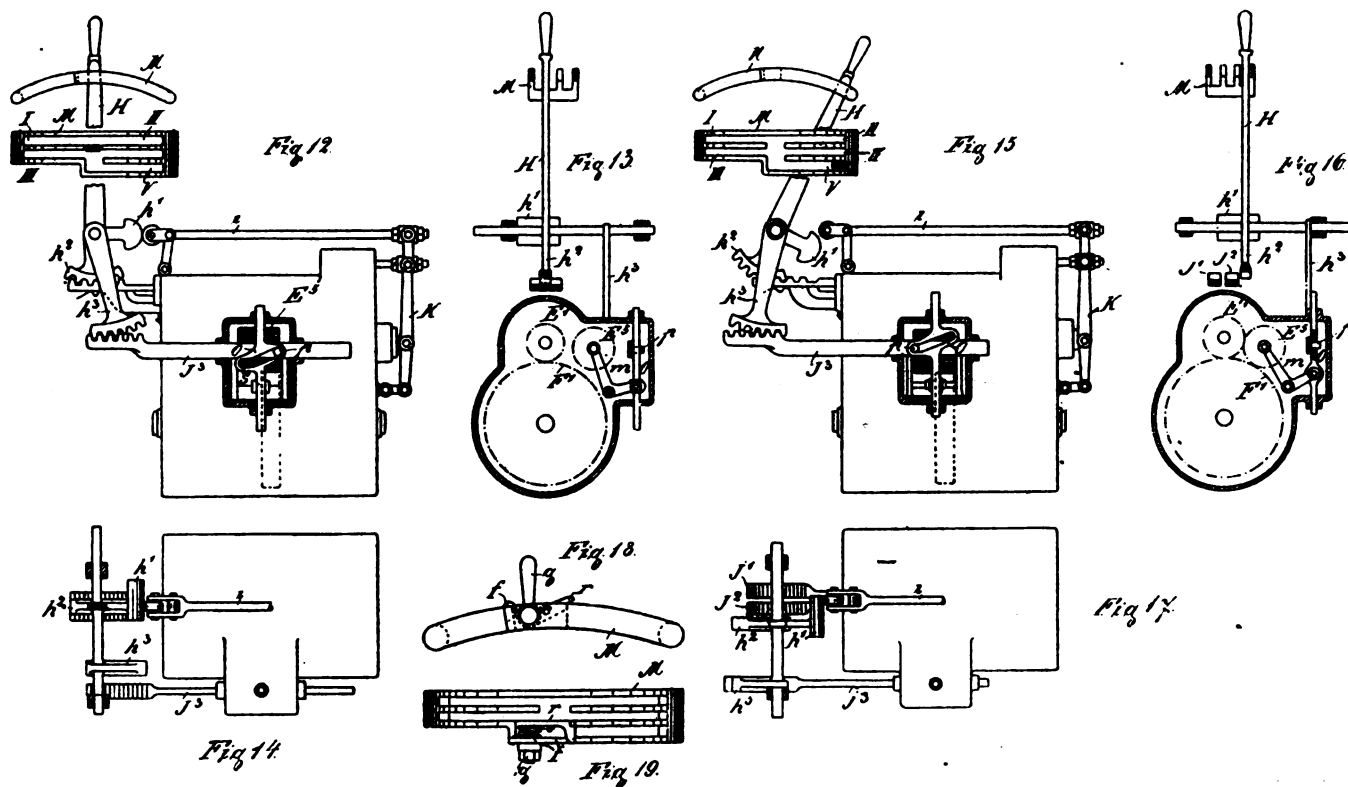
BELOW we give the concluding portion of the patent granted to Herr Gottlieb Daimler in 1899 for "engaging and disengaging device for gearing" which covers the gate change.

In the example already described the hand-lever H slides within a quadrant M provided with recesses 1, 2, 3 and 4. The middle of this quadrant is cut, so that the hand lever can be conducted from one recess into another only after the hand lever has been brought into its middle position. Also in this construction the hand lever H is provided with a nose h^1 with semi-circular surface which in the middle position of the hand lever keeps the friction coupling device out of gear, as represented in Figs. 1 and 3. By this construction of quadrant the alteration in the gearing up of the different toothed wheels cannot take place before the friction coupling as well as the gearing have been put out of gear. Figs. 3-6 illustrate an arrangement of gearing with four pairs of toothed wheels, the friction coupling as well as the toothed wheels being out of action, whilst Figs. 7-9 show the same mechanism in gear.

Figs. 10 and 11 show a modified form of construction for disengaging the friction coupling device, in which the nose h^1 effecting the disengagement of the friction coupling is not attached directly to the hand lever H

with the toothed wheels $E^1 F^1$. In the meantime the nose h^1 has liberated the rod i , so that the friction coupling is put into gear and the direction of rotation of the countershaft G is reversed by the indirect transmission. It will be observed that the gear wheels during the above operation are left in their disengaged position, and that the wheel E^5 is of sufficient width to engage a pair of the speed gear wheels $E^1 F^1$ when in this disengaged position.

In this device also the mechanism has been so arranged that the lever must be brought back into its middle position, that is to say, that the gearing as well as the friction coupling must be disengaged before the intermediate wheel can be brought into gear. To attain this object, the guide M is provided with a fifth recess V. When the hand-lever is brought back into the middle of the quadrant, the sliding-piece O descends and the wheel E^5 is disengaged by means of the crank lever m ; during the whole process the gearing remains out of gear. In order to prevent a mishap in effecting a backward motion instead of a forward motion, it is necessary to determine the lateral displacement of the hand lever; this is effected by a bolt closing the recess V of the hand-lever guide M. Figs. 18 and 19 show a detail view of such a guide. The bolt r is kept downwards by means of a spring f and can be lifted by a handle g so that a connection will be effected between the recesses III., IV. and V. When it is desired to move the hand-lever aside into the recess V, the bolt r is laid back, and the hand lever introduced into the recess, whereupon the bolt returns into the closed position by means of the springs f . When withdrawing the hand lever the bolt is opened automati-



as before explained, but to a special shaft moved by means of a toothed segment z^1 . This segment z^1 is large enough to remain in constant engagement with the segment z fixed to the hand-lever H. The purpose of this construction is the same as the purpose of the original construction, that is to say, the nose h^1 will act upon the rod i and put the friction coupling out of gear. The latter arrangement has the advantage that it can be used with very small toothed wheels, as the hand-lever has only a short movement which is conveniently transmitted owing to the special arrangement of the segments z and z^1 . The rods $J^1 J^2$ serving to alter the position of the toothed wheels are kept in middle position by means of springs n , so that the one pair of toothed wheels is secured against any displacement whilst the other is put into or out of gear. The mechanism for reversing the direction of rotation is represented in Figs. 12-18. Upon the first pin of the hand-lever H a second segment h^2 is attached. This segment h^2 engages with the rack of a rod J^3 . This rod J^3 is provided with a pin p sliding within an inclined slot S of the sliding piece O. This sliding piece O is vertically movable and is connected to a crank lever m carrying on its free extremity a toothed wheel E^5 . Figs. 12 and 14 show the position of the mechanism when the hand-lever H is in the middle position. If now the said lever is moved axially on its pivot pin, so far that the segment h^2 is out of engagement with the rods J^1 and J^2 , and the segment h^3 engages with the rod J^3 (as shown in Fig. 17) when the hand-lever is moved to the right hand side, the rod J^3 will be moved to the left by means of its engagement with the toothed segment h^3 . Owing to the inclined slot s the pin p lifts the slide-piece O, whereby the crank lever m is actuated and the toothed wheel E^5 is brought into gear

cally, the hand lever can be moved sideways and the bolt returns back into its original position.

It will be understood that in all of the devices described above it is preferred to make the nose or cam h^1 on the lever H of such dimensions that the friction clutch is not allowed to come into operation until one pair of the speed gear wheels has been brought into mesh; this arrangement will permit the gear wheels to be brought properly into mesh with one another before driving commences.

Having now particularly described and ascertained the nature of my said invention, and in what manner the same is to be performed, I declare that what I claim is:—

1. In an engaging and disengaging device for gearing the combination of a friction clutch, change-speed mechanism driven through the medium of the friction clutch, a lever such as H operatively connected with the change-speed mechanism and with a nose or cam whereby the friction clutch is thrown out of gear when either of the speeds is disengaged substantially as described.

2. In an engaging and disengaging device for gearing, comprising a friction clutch and change-speed mechanism, the employment of a spring controlled lever such as K, whereby the friction clutch is always brought into operation except when the said lever is forced back against the action of its spring by means of a nose or cam connected with the operating lever of the change-speed mechanism substantially as described.

3. In an engaging or disengaging device for gearing, of the kind described the combination with an operating lever such as H of two or

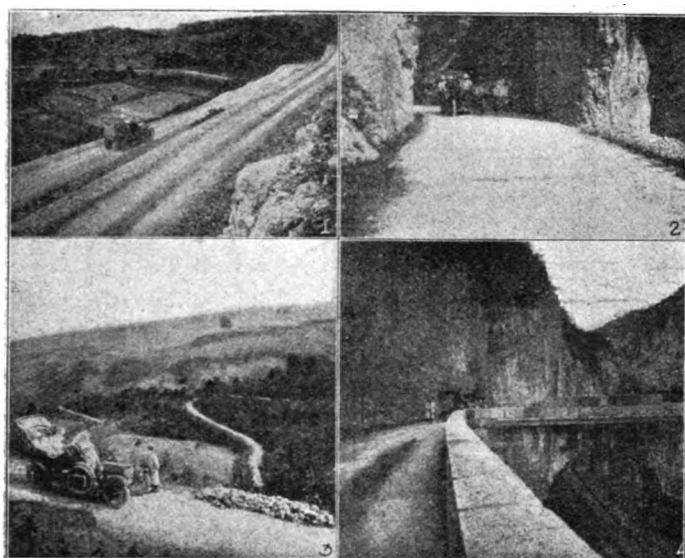
more change-speed mechanisms, the lever being free to slide axially so as to engage any one of the speeds as required substantially as described.

4. In an engaging or disengaging device for gearing of the kind described the combination with an operating lever such as H of a quadrant having two or more longitudinal slots communicating with one another at a point midway of their length, with or without a bolt or lock device across the point of communication substantially as and for the purpose described.

5. In an engaging or disengaging device for gearing of the kind described the combination with an operating lever such as H of a toothed segment for engaging any one of the clutches of the speed gear as required with or without a similar toothed segment for operating the nose or cam and with or without a separate segment for operating reversing gear substantially as described.

6. In an engaging or disengaging device for gearing of the kind described, in which the operating lever is free to move axially the combination with the change-speed gear of a reversing mechanism comprising a toothed wheel adapted to be brought into engagement with one pair of speed gear wheels when the said wheels are in their disengaged position substantially as described.

7. In an engaging and disengaging device for gearing, the combination of a shaft B suitably fixed to a friction coupling, consisting of a friction cone D and a casing A, toothed wheels E¹ E² sliding on said shaft B, a hand-lever H moving within a guide M, a rod J¹ connected to the toothed wheels and to the lower extremity of the hand lever H, levers K connected to the shaft B, a nose A¹ fixed to the hand lever H and pushing against the lever K, a spring L effecting a tension upon the lever K, a fore shaft G running in suitable bearings, toothed wheels F¹



TOURING IN BOSNIA.

1. A Zigzag Road. 2. At Narenta-Defile. 3. A Bosnian Semmering.
4. A View near Peggau.

F² rigidly connected to said fore shaft, substantially as and for the purpose described.

8. In an engaging and disengaging device for gearing, the combination with toothed wheels E¹ E² a rod J¹ provided with teeth, toothed wheels E³ E⁴, a rod J² in construction similar to J¹, a hand lever H carrying on its bottom end a toothed segment A², a guide M provided with four recesses, a fore shaft G, toothed wheels F¹—F⁴ rigidly connected to the said fore shaft, substantially as and for the purpose described.

9. In an engaging and disengaging device for gearing, the combination with a hand lever H moving in a guide M having five recesses, a toothed segment A², a rack J³ engaging with said segment, a slide piece O provided with an inclined slot S, a pin P sliding within said slot, a crank lever M attached to the slide piece O, a toothed wheel E⁵ connected to the slide piece O, substantially as and for the purpose described.

PUBLIC SERVICES.

THE Scotland Yard authorities have notified their approval of the new Lee-Trigwell Detachable Skidless Band and Tyre Protector for use on the taxi-cabs in the Metropolis. This has been introduced by the Automobile Contract Company, Ltd., 51, Co. duit Street, W., and was recently described and illustrated in our columns.

CAPTAIN H. B. CRESSWELL and Mr. H. G. Norris (until recently manager of Itala Automobiles, Ltd.), having combined forces under the title of Cresswell, Norris, and Co., Ltd., with offices at 199, Piccadilly, W. The new concern intend to devote their energies to the sale of cars of every make, and will shortly specialise on repairs.

THE EDINBURGH MOTOR SHOW.

THE twelfth annual Scottish Motor Exhibition opened in the Waverley Market, Edinburgh, on Friday last week and closes to-day (Saturday). It has been organised by the Scottish Motor Trade Association, Ltd., of which Mr. Thos. Shaw is president, and was inaugurated by the Rt. Hon. Sir J. H. A. Macdonald, K.C.B., Lord Justice Clerk of Scotland. The show is the largest which has so far been held north of the Tweed, all the leading British and foreign cars being on view, in addition to which are to be seen a number of industrial motor vehicles, motor-boats, and a large display of accessories.

One of the largest stands is that of Messrs. Thomas Shaw, Dundee, Ltd., the exhibit comprising a Beeston Humber 16-h.p. phaeton, an Ariel 30-h.p. polished chassis and a number of Siddeley cars. Messrs. Jas. Gibbon and Son, Glasgow, in addition to examples of the various models of Rover cars, have on view three Talbot vehicles of respectively 12-16-h.p., 15-20-h.p., and 25-40-h.p. A full range of Peugeots, extending from 9-h.p. to 35-h.p., is exhibited by the Caledonian Motor Company, Ltd., Aberdeen.

The stand of the Daimler Motor Company, Ltd., is as usual attracting considerable attention, as, in addition to a couple of complete 38-h.p. cars, a 57-h.p. six-cylinder chassis and a 38-h.p. silent engine cut away to show the action of the new design, are shown. The Scottish Automobile Company, Ltd., Edinburgh, give prominence to Humbers and to two Mors 15-h.p. vehicles, one having a two-seated body and the other a landaulet.

The St. Vincent Motor and Cycle Company, Ltd., Glasgow, show a "St. Vincent" char-a-banc of their own construction; it is arranged to seat twelve persons, and is fitted with a 14-16-h.p. two-cylinder engine. They have also on view two B.S.A. chassis and a full range of Aster motors. Messrs. Rossleigh, Ltd., display both Siddeley and Napier cars, and in addition have on view a Standard six-cylinder car with side-entrance body and a similar vehicle arranged as a two-seater. The Mass 15-h.p. cars are exhibited by the Belhaven Engineering and Motors, Ltd., Glasgow, who are also showing a Belhaven 30-cwt. chassis and a 2-ton van of their own construction. An excellent display of the 16-h.p. and 30-h.p. Vinot machines is made by Mr. T. Roland Outhwaite, of Cupar-Fife, while a chassis of the Sheffield-Simplex 45-h.p. six-cylinder without the usual gear-box is exhibited by the Scottish agents, Messrs. Middleton and Townsend, Edinburgh, who also show Brasier and Riley cars.

The Stanley steam cars, both 10-h.p. and 20-h.p., are shown by Messrs. W. Galloway and Co., Gateshead; near by the latest type of 15-h.p. White steamer can be examined at the stand of Messrs. Rennie and Prosser, Ltd., Glasgow, who also exhibit Fiat and Panhard cars. A varied display is made by Messrs. Wilfred Foulis, Ltd., Edinburgh, their exhibit comprising a Hotchkiss 40-50-h.p. six-cylinder chassis, a Vulcan 14-h.p. chassis, a Delage 10-h.p. chassis, and examples of the Porthos and Berliet cars, the latter including a cab exhibited for the first time in Great Britain. It is satisfactory to find the well-known Argyll cars again to the front. They are shown by Argylls, Edinburgh, Ltd., who stage examples of the 12-14-h.p., 14-16-h.p., and 40-h.p. models. A new car known as the "Alex" is displayed by Messrs. Alexander and Co., Edinburgh; it is fitted with a 16-18-h.p. engine having three systems of ignition. A standard Stewart-Thornycroft 5-ton steam wagon attracts attention at the stand of Messrs. D. Stewart and Co., Ltd., Glasgow. Other cars on view include the Adams, Albion, Alldays, Austin, Belsize, Chenard-Walker, Clement, Darracq, Dray, De Dion, Delaunay-Belleville, Ford, Gladiator, Hillman-Coatalen, Lancheater, Lorraine-Dietrich, Metallurgique, Halley, Minerva, N.E.C., New Pick, Porthos, Rapid, Renault, Rolls-Royce, Rothwell, Scot, Sizaire, S.P.A., Sunbeam, Swift, Thornycroft, Vauxhall, Werbell, and Westinghouse.

In the accessory section Messrs. Dunhills have their usual range of accessories, which include "everything but the motor." The County Chemical Company, Ltd., are well to the front with their "G.B." specialities, which range from grease and oil to carbide, sparking plugs and tyre repairing materials. Messrs. Avery and Roberts, Liverpool, show a full range of their well-known motor tools and also the new Tesama tyre, which has a puncture-proof tread consisting of two layers of fine steel wire incorporated in the tread. A new acetylene head light and generator known as the Carello, and for which numerous advantages are claimed, is exhibited by the Rapid Car Concessions, Ltd., Gloucester. Other accessory exhibitors include the Union Rubber and Chemical Company, Ltd. (Turco motor oils, tyre repairing material, vulcanizers, &c.); Messrs. H. M. Hobson, Ltd. (the Clandel carburettor); Messrs. Joseph Lucas, Ltd. (lamps); Messrs. Longstreths, Ltd. (Lithanode accumulators); and Messrs. Jas. Thomson and Son, Edinburgh (Blieriot lamps, Harvey Frost vulcanisers, Stepney wheels, Smith's speedometers, Pogonon sparking plugs, C.A.V. accumulators, Crypto transformers, Renold chains, Drummond lathes, &c.).

Among the tyres on view are the Kempshall, Calmon, Dunlop, Michelin, Shrewsbury and Challoner, Continental, Spencer-Moulton, and Clincher. The last named are made by the North British Rubber Company, Ltd., Edinburgh, whose latest introduction is the vacuum-grooved motor tyre, which is claimed to be a most effective non-skid. We hope to give an illustration of it in an early issue. Substitutes for pneumatic tyres are seen in the "Flexible Hub," shown by Smith's Flexible Hub, Ltd., and the Lynton resilient wheel of the Lynton Wheel and Tyre Syndicate, Ltd.

Lubricating oils are exhibited by Messrs. Easton and Melville, Ltd. (Ilo); Messrs. Peter Lee and Sons, Limited, Glasgow (Mobiline); Messrs. Moebius and Son, Stoke Newington, N. (Challenge); and Price's Patent Candle Company, Ltd.; the Anglo-American Oil Company, Ltd., keep their productions, "Pratt's Perfection" and "Taxibus" motor spirit, before the notice of visitors, as also do the British Petroleum Company, Ltd. ("Shell" Spirit) and the Gas Light Improvement Company, Ltd. (Carburine and Glico 760 motor spirit, lubricating oils, &c.).

COMPANY NEWS.

In the case of New Companies the file number is given at the end of the particulars.

ARGYLLS, LTD.—The new board of directors of Argylls, Ltd., of Alexandria, consists of Messrs. J. S. Matthews, managing director; Thomas Dence, London, chairman; John Anderson, Glasgow; R. M. Paterson, Paisley; J. Broadfoot, Glasgow; and Alfred Gausson, London.

THE UNIC MOTOR CAB COMPANY, LTD., has been registered with a capital of £30,000 and offices at 4 and 6, Copthall Avenue, London, E.C.

HUMBER (LTD.)—The report of the committee of investigation, appointed at the annual meeting, will be presented at the adjourned meeting, to be held at Birmingham on February 1st. In the revised reconstruction scheme the committee propose a capital of £653,000, made up of £340,000 six per cent. cumulative preference shares, and the remainder of ordinary shares. The preference shareholders in the present company are to be entitled to exchange three of their fully-paid shares for four in the new company at 16s. 6d. paid up, while the ordinary shareholders are offered one paid-up share at 15s. for each of the present fully-paid shares. The balance can be paid in two calls for preference and three for ordinary shares. The committee anticipate no difficulty in retaining the bank loan of £150,000. The straitened position of the company was due to great expenditure on the works.

STAR ENGINEERING COMPANY, LTD.—An extraordinary general meeting of the Star Cycle Company, Ltd., is being held at Wolverhampton on the 29th inst. to submit a resolution to the effect that the name of the company be changed to the Star Engineering Company, Ltd. The change is made desirable owing to the dominating importance of the motor department.

FRANK LITTLE AND CO., LTD.—This company has been registered with a capital of £7,000 to take over the business of motor and general engineers and garage proprietors carried on by Mr. Frank Little with Mr. F. W. Cawthorn as Frank Little and Co. The company is a private one with offices in College Avenue, Newcastle-on-Tyne.

An extraordinary general meeting of the shareholders of the Spare Motor Wheel of America, Ltd., was held at Birmingham on the 22nd inst. to consider the proposal to issue debentures for an amount not exceeding £30,000. The chairman, Mr. T. D. Crimmet Drayton, said that one of the reasons for the proposed issue was that the bank had asked for a reduction of the overdraft. The proposals were accepted by the meeting.

C. GRAHAME WHITE AND CO., LTD., is the title of a company registered with a capital of £100, and offices at 1, Albemarle Street, London, W.

THE CENTRAL MOTOR CAR AND CARRIAGE WORKS, LTD., has been registered, with offices at 131 to 135, Devonshire Street, Sheffield, the capital being £5,000 in £1 shares.

DUNLOP PNEUMATIC TYRE COMPANY, LTD.—A meeting has been called for Monday next to consider a resolution with regard to granting the Dunlop Rubber Company (Far East), Ltd., the exclusive right to manufacture in or import to Japan and other parts of Asia, motor tyres and rubber goods under the name Dunlop.

THE Pickering Crewdson Motor Company, Ltd., has been registered with a capital of £4,000 in £1 shares.

BENZ MOTORS (LTD.) has been registered as a limited liability company with a capital of £5,000.

THE Draycott Motor Company, Ltd., has been registered with a capital of £2,500 in £1 shares.

MESSRS. BELL AND SMART, LTD., is the title of a company registered with a capital of £2,000 in £1 shares at 48, Tottenham Street, London, W.C.

THE NAIL OF DESTINY.

For the want of a nail the shoe was lost,
For the want of a shoe the horse was lost,
For the want of the horse the rider was lost,
For the want of the rider the battle was lost,
For the want of the battle the kingdom was lost—
And all for the want of a horseshoe nail.

But this, my child, as you doubtless know,
Was a number of hundred years ago.

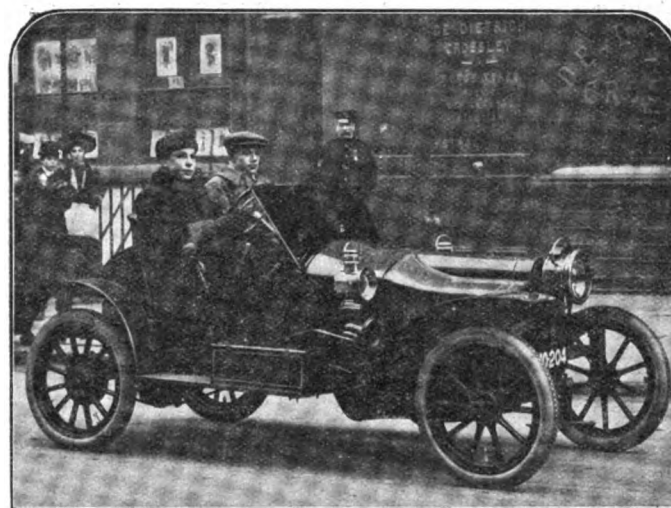
Brought down to date, the facts are these:
The general chooses to ride at least
In a new six-cylinder automobile,
And he punctures the tyre of his off-front wheel;
So the battle goes bump—not for the lack,
But because of a smallish carpet tack.—*Puck.*

LONDON TO EDINBURGH.

As illustrating the excellent organisation of the Automobile Association, we may mention that they got out for some trade members, who were making non-stop runs from London to Edinburgh in connection with the Exhibition, a detailed route *via* Doncaster and Berwick, with special remarks showing where caution was advisable and where loose stones might be expected on the roads. We reproduce this as likely to be of value to readers who may be going north or coming south at any time; the X indicating where caution is advisable.

Mileage.

- 0.—London, Whetstone (X), Barnet (X), Potters Bar (X.)
- 21.—Hatfield, Welwyn, Stevenage (road in good condition; no loose stones), Baldock (X.)
- 46.—Biggleswade, Eaton Socon, Buckden (X, special care Buckden, especially between the A.A. signs), Alconbury (X.)
- 69.—Alconbury Hill (X), Stilton (X), roads fairly good; loose stones in places, Norman Cross.
- 90.—Stamford (X), Great Casterton (X ten mile limit), good many loose stones in road, Witham (X), Colsterworth (X.)
- 110.—Grantham (X), Great Gonerby (X), Foston (X), Long Bennington (X.)
- 124.—Newark (X), drive slowly from the School House, Balderton, to Newark Railway Crossing, Tuxford.
- 144.—Retford (X), ten mile limit, Barnby Moor, Bawtry.
- 162.—Doncaster, drive carefully three miles north of Doncaster, bridge being built over road, Ferrybridge, Brotherton, Aberford.
- 193.—Wetherby (X, Thursday market day), Boroughbridge (few patches of stones here and there), Northallerton.
- 240.—Darlington.



The 12-h.p. Sizaire-Naudin Car, driven by Mr. A. Bray, leaving London for a non-stop run to Edinburgh.

- 258.—Durham (X), enter and leave town very carefully.
- 272.—Newcastle (X), enter and leave town very carefully; Stannington (X), Morpeth (X), Felton, Alnwick, Belford.
- 336.—Berwick (the Berwick to Edinburgh road has been in a bad condition owing to the recent heavy falls of snow, but should the present frost continue the roads will be hard and in good condition), Ayton, Dunbar, Haddington.
- 394.—Edinburgh.

WORLD'S MOTOR-CYCLING RECORD.

DESPITE the fact that he was unfortunate with his tyres, which caused him to stop on no fewer than six occasions, H. V. Colver made a successful attempt on the six hours' world's record at Canning Town on the 21st. Riding a 7-h.p. Matchless, he began his attempt at about 10 a.m., and in the first hour covered 47 miles 1,690 yards. An hour later he had traversed 96 miles 110 yards, but this was not fast enough to beat the record. However, his pace quickened, and at 141 miles he was inside record time. Tyre trouble at 144 miles put him outside record again, and it was not until he had ridden 231 miles that he again created new figures. From this point he beat all records up to the end of the six hours, when he had covered a distance of 270 miles 1,170 yards.

The previous record of 268 miles 285 yards was made on December 22nd, 1908, by O. C. Godfrey.

MR. ERNEST GOULD, who has been driving a Sizaire-Naudin car on a demonstration trip, is not the Mr. Ernest Gould who is managing director of the firm of Gould Bros., Ltd., Exeter—a confusion that has arisen in some quarters owing to the similarity of name.

CLUBS AND ASSOCIATIONS.

ROYAL.

ON the 20th inst. Col. N. Willoughby Wallace, C.M.S., read a paper on petrol and its dangers, in which he gave particulars of the conditions under which motor spirit can be stored, and referred to the Departmental Committee which the Home Office has appointed to deal with the matter. The paper concluded with the advocacy of a safety gauze device based on the Davy lamp principle for the safe conveyance of petrol.

MOTOR UNION.

THE General Committee of the Motor Union held its January meeting at the Hotel Great Central, London, over thirty representatives of the individual members and of affiliated clubs being present. The Finance Committee reported an increase in the receipts for 1908 of over £3 000; the committee also drew attention to the fact that nearly £5,000 was deposited with the Union by British and American members availing themselves of the facilities offered by the Motor Union under the triptyque system to those visiting the Continent.

The Signs and Notices Committee reported that in many cases the granting of a speed limit had been avoided by the Union supplying "special caution" signs, of which nearly 600 have now been issued.

The action of the Legal Cases and Reports Committee in supporting the appeal of a member in the now famous case of *Burton v. Nicholson* was approved, and in view of the importance of the question as to the side on which a motor-car should overtake a tram car the Parliamentary Committee was instructed to again press upon the Local Government Board the importance of amending the existing regulation.

Arrangements were discussed for the Official Tour and Provincial Meet in connection with the conference of the L.I.A.T., to be held in London next July at the invitation of the Motor Union. It was reported that the Borough Council of Swansea has voted a sum of money to the mayor for the entertainment of members of the Motor Union and the delegates to the Congress.

The Union has made an important extension in its touring facilities. After consultation with the Touring Club de France, it has appointed special Motor Union mechanics in fifteen of the chief towns of France, viz., Nantes, Caen, Rouen, Lille, Nancy, Orleans, Tours, Nice, Grenoble, Marseilles, Lyons, Bordeaux, Pau, Toulouse, and Clermont-Ferrand. This series of appointments is distinct from that of the Motor Union agents at the principal seaports, who make arrangements for the issue of driving licences and car permits. A list of these mechanics will in future be inserted in the form of a loose slip in the Motor Union Foreign Handbook.

COVENTRY MOTOR CLUB.

THE annual dinner of the Coventry Motor Club was held on Saturday, Colonel Wyley in the chair. Mr. H. W. Staner, proposing the toast of "The Club," said last year they had a successful year. He mentioned that, at the invitation of the Coventry club, the Royal A.C. were holding one of their two meetings of the year at Leamington, and he hoped some of the associates would go on to Coventry and see the factories. It seemed it would be a good thing to enlarge the local club and make it the Warwickshire Motor Club, Coventry being the largest centre in the county, save Birmingham, which, of course, was not wholly in Warwickshire.

Colonel Wyley, replying to the toast, approved of the suggestion to make the club a Warwickshire one, and in reference to the suggestion that magistrates and members of the County Council should be invited to join, said the latter authority were not concerned only with the question of speed, but also with the wear of roads, and were bound to make regulations. He believed no decent motorists ever exceeded the limit, and he advised them to have regard for the general public rights over the highways. He advised them, too, to agitate for tail lights being compulsory on vehicles, and mentioned his own close "shave" with a cart, owing to the latter having no rear light. Although the club of which he was president had a membership of 120, yet, considering the number of cars and motor-cycles which were on the Warwickshire roads, he thought they should be a much stronger organisation, and he favoured the proposal to expand its borders so as to include Warwickshire as a whole.

Following the presidential address came the presentation of prizes and of a gold watch to Mr. E. W. Walford, the hon. secretary, in appreciation of his work on behalf of the club.

The toast of "The prize donors and winners" was proposed by Mr. E. J. Hardy, Mr. G. H. Smith, Mr. J. Van Hooydonk, and Dr. O'Rafferty responding. The health of "The chairman" was in the hands of Mr. V. Riley, and the response of Col. Wyley brought the proceedings to a close.

SHEFFIELD AND DISTRICT.

THE annual general meeting of the Sheffield and District A.C. was held on Wednesday at the King's Head Hotel, Change Alley, Sheffield; when the committee's report was presented.

In this it was stated that the balance at the bank was now £103 and the membership had increased to 186. Reference was made to the various competitions and social events during the past year. The new

scheme of district honorary secretaries was reported to be working well, the club membership in the Rotherham, Doncaster and Worksop districts being greatly augmented in consequence.

The postal vote with regard to affiliation to a central association resulted as follows:—For the M.U., 61; for the R.A.C., 25; and in favour of neither, 6.

MANCHESTER.

THE annual general meeting of the Manchester A.C. was held on Monday, when the following were elected officers for the year:—President, Mr. A. E. Jones; vice-presidents, Messrs. T. W. Grace, J. A. Morris, and F. Smith; captain, Mr. S. Wallwork; hon. treasurer, Mr. J. Hoyle Smith. The committee were chosen as follows:—Messrs. A. E. Crowdy, E. A. Gadd, T. W. Grace, F. R. Hesse, G. B. Heywood, C. Lee, J. A. Morris, D. A. Parkyn, J. L. Tattersall, and T. M. Young.

NOTTINGHAMSHIRE.

At a meeting of the Nottinghamshire A.C., held at the headquarters on the 21st inst., Mr. C. Y. Knight gave a lecture upon the construction and merits of the new Daimler Silent Knight engine. Mr. W. P. Wells, a vice-president of the club, presided over a large attendance, and questions flowed freely at the end of the address. A hearty vote of thanks was given to Mr. Knight on the motion of Dr. T. Tresidder, seconded by Dr. Gray.

AUTO CYCLE UNION.

THE Auto Cycle Union's first quarterly trial for 1909 took place on the 20th inst., when no fewer than sixteen out of forty-two starters made non-stop runs. No tyre repairs were allowed—a fact which adds to the value of the performances. Those who went through without a halt were as follows:—G. E. Stanley, 3½-h.p. Premier; R. Walton, 3½-h.p. Norton; J. Marshall, 3½-h.p. Triumph; W. F. Newsome, 3½-h.p. Triumph; H. G. Potts, 6-h.p. Riley; W. H. Bashall, 6-7-h.p. Bat; J. T. Bashall, 3½-h.p. Triumph; A. G. Fenn, 7-h.p. Bat; R. C. Griesbach, 3½-h.p. Triumph; R. J. Bell, 3½-h.p. N.S.U.; W. Pratt, 3½-h.p. Phelon and Moore; F. Applebee, jun., 3½-h.p. Rex; T. Silver, 3½-h.p. Quadrant; R. Measures, 3½-h.p. Triumph; J. Stuart Shaw, driving O. von Saal's 6-8-h.p. Phonobile; and J. Portwine, 5-h.p. Auto-carrier's tri-car, the last two being in the passenger class.

SOCIETY OF AUTOMOBILE MECHANIC DRIVERS OF THE UNITED KINGDOM.

THIS society has inaugurated a Glasgow branch at a smoking concert held in the city of St. Mungo, with Sir J. H. A. Macdonald, the Lord Chief Justice-Clerk of Scotland, in the chair.

Sir John attended in his capacity as President of the Scottish A.C., and was accompanied by several other leading members of that organisation. He hoped to see a branch started in his own city of Edinburgh, and urged that the benefits of the society were of great importance to the men. He urged drivers to make the movement popular and not to take delight in annoying their fellow citizens. In town traffic they should be careful not to tear along the side of the road through slush and mud, doing damage to the dresses of pedestrians who were unfortunate enough to be passing at the time. He promised to do what he could to promote the interest of the society and hoped it would have good support.

Mr. G. T. Clark, the general secretary, said that many of the members of the Scottish A.C. had decided to draw their drivers from the society; this was already done in England by the Automobile Association. The society had supplied many drivers to manufacturers, and this he regarded as evidence that they were working along the right lines.

SOCIETY OF ROAD TRACTION ENGINEERS.

A MEETING of this society has been held, when the subject of Electric v. Gear Transmission for the motor-bus was discussed. Mr. P. Frost-Smith occupied the chair. The case for electric transmission was stated by Mr. Stevens, who adduced comparative figures as to the cost of running Messrs. Tilling's petrol-electric and petrol-gear-driven buses over some six months, the figures totalling 8-52d. and 10-106d. per mile respectively, and showing a saving of 1-586d. per mile in favour of the electric transmission. For the gear-drive an attempt was made to substitute 8½d. per mile working cost for the gear-driven vehicle, as more representative of modern practice, but this was contested by the chairman—whose connection with Messrs. Tilling is well known—on the ground that certain items were omitted. The vexed question of depreciation attracted some attention; the increased figure in the case of the petrol-electric bus was shown to be due to the heavier first cost—viz., some 25 per cent. more. But again this a longer life is practically assured, maintenance figuring at 0-82d. per mile as compared with 1-169d. per mile for the gear-driven vehicle.

MOTOR YACHT CLUB.

THE Motor Yacht Club has now sent a formal challenge for the British International Cup to the Motor Boat Club of America, and there is every reason to hope that at least one boat will be built in this country for the contest. Beyond the fact that the challenging boat must be constructed wholly in every particular in the country which it represents, the only

hull restriction imposed by the rules is that the overall length shall not exceed 39 ft. 11½ in. Practically any type of hull is therefore eligible, and it will be interesting to note what effect recent developments in the design of unrestricted racing boats will have on future Cup competitors. No limitation is placed on the form or description of the motive power, but every boat must be able to go astern at a speed of not less than four knots in still water.

AERO CLUB OF THE UNITED KINGDOM.

At a meeting of the Aero Club of the United Kingdom at the Royal A.C. on Tuesday night, M. Robert Esnault-Pelterie lectured on "Aviation," Mr. Roger Wallace, chairman of the Aero Club, presiding. Among those present were Viscount Royston, Professor Huntington, Colonel Massey, Major Baden-Powell, Major Lindsay Lloyd, and Messrs. Crawley, Waller, Lyons-Sampson, Frank Butler, and Harold E. Perriu, secretary of the club. M. Esnault-Pelterie traced the history of the science from the earliest days. He likened the principle whereby an aeroplane could be sustained in mid-air to a skater who passed safely over relatively thin ice because he went relatively fast, whereas once he stopped the ice broke and he would fall through. Investigators had to commence with learning how to balance machines before they could apply motor power to them in actual flight. Those who had attempted to fly before making such tests had their machines turn turtle. The principal question was not to leave the ground, but to maintain equilibrium once the machine was launched. In 1896 Lilienthal learned how to use wings for flights off a hill; and Pilcher, in England, with a horse-hauled machine of similar principle to Lilienthal's, also rose in the air; but both were killed by the aeroplanes overturning when soaring in gusty weather. Their deaths were followed by a period of seeming inactivity on the part of other investigators; but a few years after the Wright Brothers, who had followed Chanute's work with bi-planes, began soaring with bi-planes, on which they lay prone in the manner suggested hundreds of years ago by the painter Leonardo de Vinci.

AERIAL LEAGUE.

THE Aerial League of the British Empire is being formed, with offices in London. Already an influential number of enthusiastic aeronauts have consented to act as vice-presidents. The hon. secretaries, Colonel H. S. Massey, C.B., and Mr. Stephen A. Marples, are pioneering the movement, whose main object is to secure for the Empire the same supremacy in the air as it now enjoys on the sea, doing what the Navy League has done in respect to ships. "Everything British" is the key-note to be sounded, and an adjunct of the new propaganda will be the establishment of prizes for British-made aeroplanes and aero-motors, not forgetting rewards for British models. The provinces are furnishing several of the vice-presidents, and the list so far agreed upon includes Bishop Weldon (Dean of Manchester), the Bishop of Bristol, the Warden of Bradfield College, Lieutenant-Colonel Ivor Phillips, General Arbuthnot, Rear-Admiral Hon. T. S. Brand, the Prince of Kapurthala, Dr. W. H. Rouse (Cambridge), General Sir Harry Prendergast, Captain A. W. Gamlin, and General Cummins, C.B., D.S.O.

ON Tuesday the Cardiff M.C. held its annual meeting at the headquarters at the Queen's Hotel, Cardiff, when the secretary's report paid a tribute to the assistance rendered to the club by the Glamorgan county and city police when holding competitions. The annual dinner will take place on Wednesday next.

THE Lancashire A.C. held its annual dinner at the Park Hotel, Preston, on Saturday, and the yearly business meeting on the 28th inst.

FROM the ninth annual report of the Manchester A.C. it is evident that the club has had a useful season. The list of attendances of its committee is a proof of the interest that they take in its development.

THE Aerial League of the British Empire, of which Col. H. S. Massey and Mr. S. A. Marples are honorary secretaries, has offices at Staple Inn Buildings, London, W.C.

At the third annual dinner of the Essex Motor Club, held on Saturday, Mr. W. H. Bishop was in the chair, and Mr. J. H. Burley proposed the toast of the R.A.C. and affiliated clubs. Mr. J. W. Orde and Mr. F. Straight responded. The chairman proposed the toast of the Essex Motor Club and Mr. A. G. Reynolds made response.

THE annual general meeting of the Norfolk Automobile and Launch Club was held at the Royal Hotel, Norwich, under the chairmanship of Col. E. R. A. Kerrison, who was re-elected chairman of the club. Mr. E. J. Tench has been asked to act as honorary secretary for the present year.

CASES AGAINST MOTORISTS.

CHARGE OF MANSLAUGHTER—MOTORIST ACQUITTED.

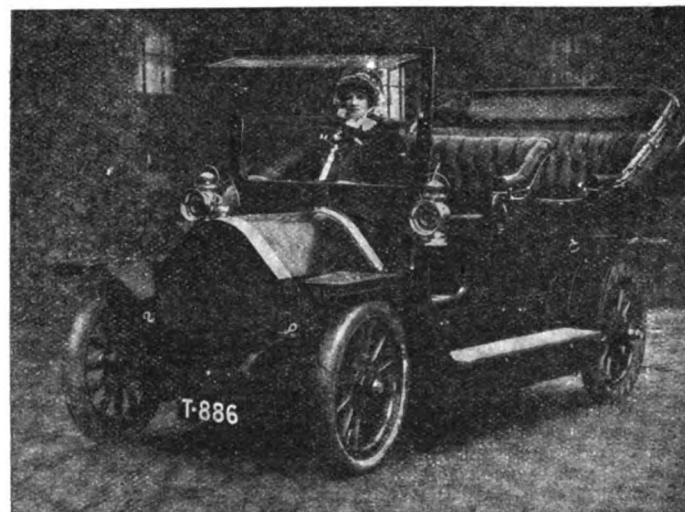
At the Central Criminal Court the trial has been concluded of John Hesket Pearson, twenty-two, upon the indictment charging him with the manslaughter of Mr. James Talbot, who was knocked down and killed by a motor-car owned and driven by the defendant.

In summing up the evidence to the jury the Recorder said that the driver of a motor-car was in precisely the same position at common law as the driver of any other vehicle, and was bound to exercise due care and diligence, taking care that he was not guilty of culpable negligence. The question for the jury in this case was whether the defendant was

guilty of culpable negligence in not easing the speed of the car when he first saw Mr. Talbot, or in not going behind Mr. Talbot instead of in front of him. Nobody suggested that the defendant intended to kill Mr. Talbot, and, if there was any doubt in the case, the defendant ought to have the benefit of it. The jury, after considering their verdict for some time in private, found the defendant not guilty, the foreman adding, "We give the defendant the benefit of the doubt in the case." The Recorder, in directing the defendant's discharge, said to him:—"I hope the experience you have gone through will be a warning to you for the rest of your life, and that when you next drive along the King's highway you will do what your own witness said that he would have done in similar circumstances—namely, ease down."

WRONG PROCEEDINGS TAKEN BY THE POLICE.

At the Radcliffe Police Court, George White, of Manchester, was summoned for unlawfully using a locomotive which did not consume, as far as practicable, its own smoke. The evidence for the prosecution was that on December 11th the driver allowed smoke and vapour to be emitted from the engine for a quarter of a mile, to the annoyance of pedestrians and others using the road. After being stopped by a policeman the engine was restarted without any emission of smoke. Mr. Gordon Hewart, who represented the defendant and also the makers of the engine, Messrs. Foden, of Sandbach, called evidence to show that the engine was of the most modern construction, and that under normal conditions no smoke or steam could be emitted. Any such emission must have had a temporary or accidental cause. The driver said the fire got low while he was taking in water, and one result of the firing up was the emission of steam, but no smoke. The prosecution did not complain that the engine was not properly constructed, and Mr. Hewart asked for the case to be dismissed. The prosecution, however, said there was negligence on the part of the driver. Mr. Hewart replied that that was not the charge on the summons.



Mrs. E. Wetherby Williams, of Wides Court, Crownhill, Devon, at the wheel of her 20-h.p. Humber Car.

The magistrates' clerk agreed that under the Act by which the summons was taken out the driver could not be proceeded against for carelessness. The case was dismissed.

IMPRISONMENT.

At the London Sessions, on the 21st, Henry Bray, a motorist, was sent to prison for three months. He had been previously convicted. The accused was alleged to bear down upon two pedestrians crossing Goldhawk Road, at a speed between thirty and forty miles an hour, seriously injuring one of them. The prisoner stopped and returned to the scene, but then drove off. He was traced by the number on his car.

BATCHES.

At Barnet, on the 20th inst., three motorists were each fined £5 for exceeding the legal limit on the Great North Road; and at Kingston, on the same day, fines of £5 were inflicted upon some defendants who had exceeded the twenty miles limit on the Portsmouth road.

FLASH LIGHT SIGNALS.

The first prosecution in which the electric flash-light signal system was called in evidence against a motorist at Wimbledon was heard on the 20th inst., when a fine of £5 and costs was inflicted on a defendant summoned for exceeding the speed limit in Park Side.

DANGEROUS DRIVING.

At the Bow Street (London) police-court a motor-cab driver has been fined £20, with five guineas costs, for driving a motor-car in a manner dangerous to the public. Sir John Bell, Ex-Lord Mayor of London, gave evidence to the effect that he was run into by the defendant's cab, and the magistrate, Mr. Curtis Bennett, pointed out that it was not the law for a pedestrian to hurry out of the way merely because the driver of a motor vehicle sounded his hooter.

LIGHT LOCOMOTIVE.

In a case stated by the justices of Bridgend and heard last week in the Court of King's Bench, it appeared that the appellant had been convicted under Section 5 (1) (b) of the Locomotives Act, 1898 (61 and 62 Vic., c. 29), for not having three men in attendance on a locomotive, not being a steam roller, as in that section required. The locomotive in question was propelled by steam and weighed 4 tons 15 cwt.

Mr. Simon, K.C., submitted that the conviction was wrong, on the ground that the Act of 1898 had no application. By Section 17 (2) of that Act it was provided that nothing in the Act should apply to locomotives which were light locomotives within the Locomotives and Highways Act, 1896 (59 and 60 Vic., c. 36). Section 1 of the latter Act, besides laying down terms as to the construction and user which were not here material, defined a light locomotive as one whose weight unladen was less than three tons; so that if those statutes had stood alone the conviction would have been good. But the Motor Car Act of 1903 (3 Ed. VII., c. 36) provided by section 12 that the Local Government Board should have power by regulations made under the principal Act to increase the *maximum* weight allowed for a light locomotive, and the Local Government Board, by regulations issued in 1904, had substituted the weight of five tons unladen for three tons unladen, as provided in the Act of 1896, and the latter Act must therefore now be read with that amendment. The Locomotives Act of 1898, therefore, was now inapplicable where the locomotive weighed less than five tons, as was the case with the locomotive of the appellant.

The Lord Chief Justice said that when the sections were looked at chronologically they presented no difficulty. The provision in the Act of 1898 as to three persons being in charge did not apply to a motor-car in the ordinary sense, and by the 1896 Act a motor-car was made to include any vehicle weighing less than three tons. Later it was found desirable to alter the limit of weight, and the Local Government Board, acting under the power given them by the Act of 1903, made regulations which raised the permissible weight to five tons. It was true that in those regulations a distinction was drawn between light motor-cars which weighed less than two tons and heavy cars which exceeded that weight, but still all self-propelled vehicles, whether light or heavy motor-cars, were light locomotives if their weight did not exceed five tons. The locomotive in this case therefore came within the exemption, and the appeal must be allowed with costs. The other members of the Court agreed.

DISMISSAL WITH A CAUTION.

At the Boston Borough Police Court, Dr. Reginand Tuxford has been summoned for driving a motor-car in the High Street at a speed which was dangerous having regard to all the circumstances of the case. After hearing the evidence the magistrates consulted and the Mayor made their decision known in the following terms:—"We have been very much divided in this case. We know that if we convict you your licence will be endorsed, which will be a very disagreeable thing, and if it is endorsed more than once it may be withdrawn, at any rate for a time. There are two points in your favour. One is that we have only the evidence of the police that you were going at too great a speed. There is no evidence that any member of the public was inconvenienced at all, although they might have been. At the same time the Bench feel that the police ought not to wait until an accident does take place, and somebody is injured. It is the first case that has come before us, and it has been decided, with some hesitation, to dismiss it with a caution. If any other cases come before us they will not be so leniently dealt with. I hope you and all others, whether you drive a motor for business or pleasure, will remember that the convenience of the public comes before the convenience of the individual."

ROAD REPORTS.

LANCASHIRE.—Speaking at the London Institution upon County Council finance and audit, Mr. H. A. Windus, A.C.A., recently referred specially to the administration of Lancashire by its County Council. Motorists would be gratified to learn, he said, that in Lancashire, at all events, the fees collected under the Motor Car Act of 1903 were spent in the erection of signposts and dust-laying experiments.

WESTMINSTER.—The City Council of Westminster are pressing the Baker Street and Waterloo Railway Company to construct a subway for passengers from Trafalgar Square to the south side of Charing Cross.

GRINDLEFORD.—The road at the foot of the dangerous hill at Grindleford has been widened very considerably during the past year, towards which improvement the Sheffield A.C. contributed the sum of five guineas.

AYR.—The Ayr District Committee of the County Council has agreed to put up thirty direction posts for the convenience of those who use the roads throughout their district.

INVERNESS.—At a meeting of the Aird District Committee of Inverness it has been reported that motor-cars passed through the district about 12,000 times during the year. The average number of cars was forty per day on the main roads, and as many as 180 has been counted on some special occasions.

BRIDGEND (Glamorgan).—Mr. G. A. Phillips, Borough Surveyor, reports that the County Council has accepted tenders for widening and improving the following main roads:—The Caerphilly and Nelson road, between Caerphilly and Ystrad Mynach; the Cardiff and Pontypridd main road, between Nantgarw and Upper Boat. The Cardiff and Swansea main road is also being widened and diverted near Pyle. These works

are now in progress, but, as the roads are kept open for traffic, alternative routes are unnecessary.

BIRMINGHAM.—Lecturing to the Birmingham University, Mr. H. E. Stilgoe, the City Engineer and Surveyor, a few evenings ago, said, as an escape from the dust nuisance, they had been tar-spraying their macadam roads. The cost of giving two coats of tar was about 2d. per square yard. During last summer they sprayed about seventy-five miles of streets with very beneficial results, people living alongside the roads finding the method a great comfort. An incidental advantage was that after roads had been treated in this way there was much less mud to remove. The saving made in this way, not only in cartage, but in the increased life of the road, more than met the expenditure of 2d. per square yard.

GLOSSOP.—The L.G.B. have declined to grant the application of the Glossop Town Council for a ten mile limit for motor-cars travelling over the principal roads of the borough.

FORTHCOMING EVENTS.

JANUARY.

30th (S.).—Annual Dinner of the Auto-Cycle Club.

FEBRUARY.

2nd (T.).—Annual Dinner of the Scottish A.C. at Glasgow. H.S.H. Prince Francis of Teck will be among the guests of the club.

4th (Th.).—Annual Dinner of the Southern Motor Club.

5th (F.).—Annual dinner of the northern members of the A.A. at the Midland Hotel, Manchester.

19th-27th.—Manchester Motor Show at Belle Vue.

17th (W.).—Paper on Lubrication by Mr. J. W. G. Brooker at the R.A.C.

20th (S.).—First Annual Dinner of the Sutton Coldfield A.C. at the Royal Hotel, Sutton Coldfield.

24th (W.).—Annual General Meeting of the British Motor Boat Club.

MARCH.

1st (M.).—The Road Trials in connection with the Army Council Competition for light tractors commence.

Motor-Car Show at Barcelona.

Last day for entries for Monaco Aeroplane Competition.

6th (S.).—Cambridge University Motor-Cycle Club Reliability and Petrol Consumption Trial.

20th-27th.—Cordingley's 14th Annual Motor-Car Exhibition and Market, Agricultural Hall, London.

MAY.

2nd (S.).—Targa Florio, Sicily.

14th (F.).—British Motor Boat Club meeting at Erith.

24th-29th.—Irish Reliability Trials—provisional date.

JUNE.

10th-18th.—Prince Henry Trophy Competition.

14th (M.).—Commencement of the Scottish Reliability Trial.

22nd-26th.—Royal Agricultural Show at Gloucester.

JULY.

5th-10th.—Auto-Cycle Union's Six Days' Trial.

LIGHTING-UP TIME—LONDON.

| | | | | | | |
|----------------|----|---------------|----|----------|----|----------|
| Jan. 30th—5.41 | .. | Feb. 1st—5.45 | .. | 3rd—5.49 | .. | 5th—5.52 |
| „ 31st—5.43 | .. | „ 2nd—5.47 | .. | 4th—5.50 | .. | 6th—5.54 |

BUSINESS NEWS.

MR. E. H. BOLTON, who has been connected with Messrs. Clement-Talbot, Ltd., for some years past, has taken over the management of Messrs. Dawfield, Ltd., automobile repairers, of 274A, Uxbridge Road, Ealing, W. The company have a well-equipped plant for the carrying out of moto-car repairs of all kinds.

ON Thursday of last week a fire broke out on the building occupied by the Anglo-American Motor-car Company in He don Street, Regent Street, London, W. The showrooms were practically wrecked and the appearance of several new Cadillac cars sadly affected. With characteristic promptness, however, Mr. F. S. Bennett had the place ready for business again by 10 a.m. on the following day.

WE are asked to state that the telephone number of "Vico," Ltd., of 90, Charing Cross Road, London, W.C., is 2918 City.

TO CORRESPONDENTS.

All communications intended for insertion in this Journal or relating to Editorial matters should be addressed to THE EDITORIAL DEPARTMENT, MOTOR-CAR JOURNAL, 27-33, Charing Cross Road, London, W.C., and must be written on one side of the paper only. Letters must in all cases be accompanied by the name and address of the writer, as no notice will be taken of anonymous communications.

THE Motor-Car Journal.

VOL. X.]

LONDON, SATURDAY, FEBRUARY 6, 1909.

[No. 518.]

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COMMENTS.

Motor-cars and Military Service.

WE understand that the Automobile Association has suggested a scheme for the use of motor-cars for transport purposes, which, it is hoped, will be found acceptable to the War Office. The full details are not yet to be published, but the general idea is that the members of the A.A. should place their cars at the disposal of the War Office in any manoeuvres which may be planned for defensive purposes. It is hoped that the War Office may be able to co-operate with the Association in this scheme, and there is reason to believe that the authorities are not averse to the idea. A brigade of motor-cyclists is also to be placed at the disposal of Mr. Haldane, the Auto-Cycle Union having the matter in hand. It is estimated that large battalions of riders of motor-cycles could be raised on the coasts ready for any emergency. Although motor-cyclists might not become actual combatants, they could be extremely useful in conveying messages, scouting and rapid riding generally.

Passing Trams in the Metropolitan Area.

FOLLOWING the opinions of the Chief Constables of leading towns with regard to the passing of tramcars by motorists which we were able to publish in our last issue, we have now been informed by the Commissioner of Police of the Metropolis that he has no power to issue any general directions on the subject, and that in the London area "police action must necessarily be determined by the particular circumstances of each individual case of irregularity which comes to their notice." This seems a satisfactory interpretation of the position by Sir Edward Henry, who is evidently with the Lord Chief Justice in recognising the law as now laid down is really an impossibility if the public is to be protected.

Cattle on the Highway.

MUCH has been heard recently of the danger of cattle on the highway, and the Coventry Motor Club is suggesting to the Warwickshire County Council the advisability of taking action with a view to securing the adoption of a bye-law rendering it imperative that drivers should carry a lighted lamp when in charge of animals on the public roads at night. Particular point is given to the suggestion by the experience of a party of motorists between Derby and Burton early on Saturday last. Mr. R. Peach was driving when, ahead of him, he discerned a herd of cattle leisurely crossing the highway, evidently making from one field to another. Reducing speed and carefully manoeuvring his way, the motorist drove very carefully and was nearly past the animals when one of them charged the car, disabling the radiator with its horns. The party were several miles from a town and were completely stranded. Fortunately a Burton doctor, happening to pass shortly afterwards, was able, on reaching his destination, to despatch another vehicle to bring home the stranded motorists. Instances such as these, which probably our readers could duplicate, should considerably assist the movement now proceeding to secure that those in charge of animals being driven at night time on the highways should give passing traffic some indication of their presence.

Where Garages are Wanted.

SEVERAL correspondents have lately written for information as to suitable places in which to open motor garages or motor repair establishments. So much depends upon local circumstances, as well as upon the amount of motor traffic through the town, that great care should be exercised in advising the establishment of any further motor repair facilities in many places. At the same time there must be several towns where there is yet room for a really smart and well-equipped establishment, the proprietor of which is prepared to give practically his whole time to the interests of motorists passing at any hour of the day and some during the night. In our advertisement columns many opportunities for success in this direction have lately been made known, and those who are interested in changing their present location or commencing in new spheres of enterprise are advised to consult these columns from time to time.

Maps.

MOTORISTS, as much as any other section of the community, are interested in the work of the Ordnance Survey, which is responsible for the provision of topographical maps for this country. The work of the Survey practically began in 1784, and a few years later Parliament ordered the survey of the whole of the country. In 1858 new scales were settled as follows:—(a) 1-500, or 10·56 ft. to the mile, for towns of over 4,000 inhabitants; (b) 1-2,500, or 25·344 in. to the mile, for all except uncultivated areas; (c) 6 in. to the mile; and (d) 1 in. to the mile. These scales had been adhered to ever since, and, with the exception of the 1-500, were periodically revised. The face of the country was constantly altering from artificial and natural causes. The Treasury, therefore, sanctioned, in 1886, a revision of the 1-2,500 scale maps every twenty years, but the work could not be begun until 1894. In Great Britain the original survey was completed towards the end of last century, and the work of the Ordnance Survey is now that of periodical revision of the maps. That, in spite of every precaution, some errors occurred can not be denied, but, when it is remembered that the Ordnance Survey publishes between 90,000 and 100,000 different maps, Col. Sir Duncan Johnston, the late Director-General of the Survey, believes that the errors are comparatively trifling.

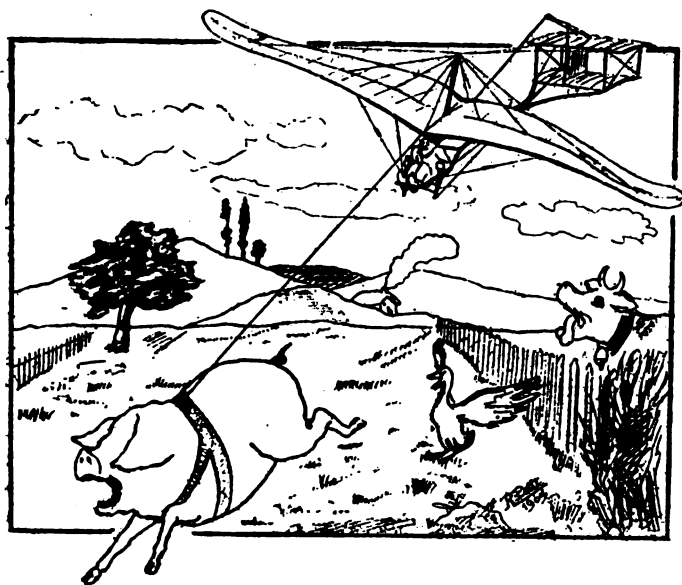
The Taxicab in China.

WHILE tracing in the dynastic histories of China the numerous allusions to a curious chariot in which there was an arrangement for registering the distances traversed, strongly suggestive of the modern taxicab, Dr. Giles, Professor of Chinese at Cambridge University, has recently unearthed a complete specification of its mechanism, according to which it is quite possible to reconstruct such a vehicle. It appears that these taxicabs, to use a convenient term, were first mentioned under the Chin dynasty (A.D. 265-419), and from that time down to the middle of the fourteenth century frequent allusions to such vehicles, known as "measure-mile-drum-chariots," are to be found in the dynastic histories. Under the year 1027 A.D., and again under the year 1107 A.D., full particulars are given as to their construction, the number of wheels, their positions, the number of cogs on

each wheel, &c., being all definitely stated. On completing a translation of the specification, Professor Giles placed it in the hands of Professor Hopkinson, of the Engineering Laboratory, with the satisfactory result that, from a specification recorded by the Chinese some 900 years ago, Professor Hopkinson has constructed a model of a wheeled vehicle which accurately registers the distances traversed. At each li, or Chinese mile, which is about one-third of an English mile, a drum is struck, while at every tenth li a bell is rung.

The Cost of Aeronautical Engines.

WHILE we fully recognise that the production of a petrol engine specially designed for aeronautical purposes must be a much more costly matter than usual, owing to the great attention that has to be paid to secure maximum strength and reliability combined with lightness, we are afraid that the makers are closely following the plan adopted by motor-car manufacturers in the early days of the automobile movement by asking almost a prohibitive price for their productions. For example, the Pipe 50-h.p. motor, of which we have lately published a description, is listed at £600, the Gnome Company quote £400 for a 50-h.p.



A French suggestion for Aviators who find the present price of Engines too high. (L'Aero.)

engine, and £720 for one of 100-h.p., an Antoinette sixteen-cylinder motor developing 50-h.p. costs £660, and one of 100-h.p. £940. Finally the Dutheil-Chalmers motor costs £440 in the case of the 60-h.p. type, and £720 for the 100-h.p.

From 1s. upwards.

AN advertisement, for the insertion of which we now charge nothing, is appearing in the general Press to the effect that "The evils inflicted by the misuse of motor vehicles continue unabated, in spite of the Local Government Board's circular and the disciplinary measures taken by automobile societies. The existing law has proved inadequate to check offenders and there is no prospect of relief until it is amended. A Central Committee has been formed to press this question on the Legislature and to formulate reasonable measures required for the better protection of the public. The Committee includes members of the House of Lords and the House of Commons, delegates appointed by 135 Local Authorities, the Highways Protection League, and the Road Union. The Road Union has undertaken the task of carrying on this organisation, and those who wish to get something practical done can best promote that end by supporting it. Contributions received from one shilling upwards. Address The Secretary of

the Road Union, 47, Victoria Street, S.W." So that for one shilling a man can become a member of the Road Union and feel a national pride when he reads its fulminations against motors and motorists which periodically appear in the Press. We should like to hear from the secretary as to the definite proposals which his Union intends to make, so that we may know exactly how the matter stands. The motorist, equally with the reasonable person who does not own a car, is anxious that the public should be safe on the public roads, and, if the suggestions are really valuable, he, too, might become associated with the Road Union. Meanwhile, however, we await the exact programme.

Organising Motorists.

APPARENTLY the work of organising local centres of the M.U. is proceeding as merrily as is the affiliation of existing clubs to the R.A.C.—a state of things which proves that there is considerable expansion in the motoring community. Otherwise such activity on the part of both organisations would be impossible. At Newark a strong branch of the Union is being formed, and the Lord Bishop of Southwell is lending the weight of his authority to the movement. Meanwhile the R.A.C. reports new adhesions to its scheme. The A.A., too, which, save for its Manchester and Glasgow branches, does not develop local centres, is also gaining members, its methods proving attractive to a great many motorists otherwise unidentified with any organisation.

Motorists as Considerate Drivers.

ALTHOUGH no resolution was adopted at the annual meeting of the Monmouth Chamber of Agriculture at Newport on Saturday, it was evident that the position of the Standing Joint Committee in dealing with the resolution on the subject of motor-cars which the Chamber had previously passed was not welcomed by the members. Several speakers urged that the police should be given emphatic instructions with regard to speed, and the chairman, Mr. R. W. Williams, of Pontypool, confessed that he always feared being made "a box of cold meat" when he went outside his house. Fortunately, Mr. Chas. D. Phillips, who is himself a motorist, was present, and did something to tame the wild assertions of the speakers. He pointed out that an automobile club had been formed for the county, and its main object was the suppression of dangerous practices. Further, he urged that the principal point with which they should concern themselves was the efficiency of motor-car drivers, a matter which is not considered in the present system.

Easter at Brooklands.

AT the Easter meeting of the Brooklands Automobile Racing Club there will be twelve races for cars and four events for motor-cycles. The contests will be over 3 or 5½ miles, and the programme is extremely varied, in accordance with suggestions that have been made from time to time for the popularisation of the track as a sporting rendezvous. The Brooklands Four-Inch Race will be for cars of R.A.C. rating of 25.6-h.p. or under, with no restrictions as to weight; the Limited Four-inch Race will be for vehicles with engines of similar rating to the Brooklands, but with a maximum weight of 2,200 lbs., the minimum being 1,800 lbs. Three cups will be competed for, that known as the Weybridge, limited to cars propelled by engines of R.A.C. rating of 37-h.p., or under, the stroke of which does not exceed 141 mm.; the Southern Cup is limited to engines with a rating of 42-h.p., with a stroke not exceeding 151 mm. A similar limitation of stroke with engines of 60-h.p. or under is made for the Carlton Cup. In the Easter Senior and Junior Handicaps cars of over and under 25-h.p. will run, the distance for the former being 5½ miles and for the latter three miles. Two events are restricted to private competitors, the senior and junior handicaps on similar bases to those just enumerated. An obstacle race, in which a number of figures will be drawn across the course, is also in the programme, as well as a tyre change race for cars fitted

with detachable wheels or removable rims. The motor-cycle events will each be over a distance of five miles, the winner in each case to receive fifteen sovereigns, the second seven sovereigns, and the third three sovereigns. Entries for all these classes close on March 30th, and unless there are ten entrants in the car categories the Executive Committee may declare the races void. A limit of twenty-five entries is placed on the motor-cycle classes. On another page we give a synopsis of the regulations that have been made with regard to the contests.

Instruction in Driving.

A thoroughly practical course is arranged, and the instruction is taken either on a club car or on one provided by the member concerned. Lessons on technical details can also be arranged. In

WHILE the R.A.C. is occasionally adding recognised motor schools to its list of establishments to which prospective motorists may be recommended to go for instruction, it also undertakes automobile tuition on its own account.

roads in Victoria itself are not very creditable, being inferior to those of the surrounding country. The number of cars in this community is increasing rapidly, and the new vehicles being bought are mostly of large size and superior make. The latest addition is the Lieutenant-Governor's new 40-h.p. Fiat landaulet, which is one of the finest cars in the province.

Watching the Press.

THE Automobile Association continues its work of following up the reports of alleged motor-car accidents which are not really attributable to the automobile, as they are made to appear in the daily papers. Keeping pace with these inaccuracies is a work which will tax the energies of Mr. Stenson Cooke to the utmost. At the same time he is performing a useful service to the motoring community, and we hope our friends of the general Press will at least give equal publicity to the corrections as they do to the false reports which are so frequently issued. Whenever a cart collides with a car the heading is "Motor-car Accident," and should an automobile



Motor Touring in Egypt.—An everyday scene on one of the bridges over the Nile.

1906 pupils to the number of 637 received lessons, and in 1907 the number rose to 763, whilst in the year that has just ended 918 underwent the course. The club car was driven 6,000 miles during 1908 without the slightest accident—quite as great a tribute to the car—a Star—as to the method of tuition provided.

Motoring in British Columbia.

This certainly speaks volumes for the British Columbia climate. Not only is the climate mild, but the roads, especially on Vancouver Island, are exceedingly good. Up to the present time the greatest difficulty has been in the absence of a good road to connect the north and south sections of the island. The Provincial Government is, however, at present engaged in making a new road from Goldstream to Mill Bay, which will open up 400 miles of beautiful roads in the upper island to motorists in the south. The

A CORRESPONDENT in Victoria, B.C., writes that cars can be quite comfortably operated here in the winter months is abundantly evidenced by the fact that the Victoria Motor Club purpose holding their annual club run on Christmas Day.

encounter anyone who rushes heedlessly across the road a whole column of vituperation appears against the vehicle that may be quietly pursuing its way. The work of the A.A. may have a corrective effect. On another page is an exhaustive return showing that of a total of thirty-eight fatalities from accidents in which the motor-vehicle was more or less directly concerned during ten weeks, in no fewer than twenty-eight cases the drivers of the cars involved in the accidents have been completely exonerated by juries. In only three cases have the drivers been committed for trial, which, as has been proved in previous motor-cases, does not necessarily mean guilty.

A NUMBER of wealthy mining men at Goldfield, Nevada, U.S.A., are pushing forward their plans to make their city a centre of automobile sport. With a view to holding a grand series of races they have secured a large area out on the desert, about twelve miles from Goldfield, where a circular track, fifteen miles in circumference, has been defined. The locality is stated to be a dry lakebed of great extent, level as a floor and hardened by centuries of baking under the sun.

Our Prize Story.

THE COMET OF PUDDLEHAMPTON.

By T. CRAVEN JOHNSON.

THE village of Puddlehampton was not behind other villages in the matter of small talk to vary the monotony of an otherwise uneventful career. Nay, it had a somewhat bigger share than most hamlets of its size, and had it not been kept busy for the last six months with what, to these simple folk, was quite a sensation?

Seven months back the great deserted Grange, standing in its wild, neglected grounds, was an object to be shunned. It had been unoccupied for many years, and the course of time had not dealt kindly with it.

To the great majority of the villagers this derelict relic of the days gone by inspired a feeling of something that was more than awe, and he would have been considered a bold man who had ventured alone along that road after darkness had set in. In the village inn, when conversation lagged, the men would draw their chairs closer together, and with stern set faces listen while one or another would tell in whispered tones of strange things he

When Puddlehampton had recovered from its first gasp of astonishment that any should make so bold as to inhabit this spirit-infested abode, it naturally looked to see some great alteration in the outward appearance of the house. But here was, perhaps, the greatest surprise at all. The Grange remained unaltered. The paths were still grass-grown, the windows broken, doors and gates unhinged, and a general air of utter desolation. In spite of this, the great motor came and went, bringing the strangest cargoes the villagers had ever seen. They had looked for personal luggage, but, instead, were crates of thin sheet metal, or pieces of weird-looking machinery, or long lengths of drawn steel tube, and numberless boxes, the contents of which could not even be guessed.

As, day after day, and often half through the night, strange sounds of hammering and sawing and the rattle of machines went on, speculation in the village ran high.

Who could the strangers be? What meant all this unusual noise and hustle, and to what use could all this strange machinery be put? Naturally superstitious, the simple folk of Puddlehampton, who had always fancied some evil influence held sway in the old Grange, were now dead certain of the fact. None but those whom the Devil favoured would have dared, in the first place, to take up their abode in a spot that was associated with nothing but evil, and, say what you will, these strange noises and doings boded no good for the neighbourhood, or for the authors of them.

Of these latter next to nothing was known. They seldom passed directly through the village, and then said never a word. No one knew their names or where they came from. One thing was certain, and this was settled nightly in the village inn, the presence of the men would, sooner or later, bring some great disaster to them all, and many were the plans and suggestions that were made to avert the danger when it should come upon them. But there was one flaw in all their arguments. None had any clear idea as to what the danger was he so much feared.

So Puddlehampton lived its life. For six months the village had been in a state of excitement and unrest. The women gossiped daily at their cottage doors, and the men went to and fro from their work, spending their evenings, as usual, in the inn; but over all there was a strange sense of depression, as of impending doom.

Now, at the time with which our story is most concerned, there happened an event that stirred Puddlehampton to its very core. A sensation so startling that even the strange doings at the Grange were completely forgotten for the time.

The villagers were, as usual, seated in the parlour of the inn, when, suddenly, one of the weirdest, wildest, strangest sounds that ever fell on mortal ears was heard. Mugs were at once put down; pipes withdrawn; and a look of blank astonishment overspread the faces of all.

Now the Puddlehamptonians, good and worthy souls though they be, are not renowned for quickness of thought, and it was some time before they fully realised the import of this great commotion. When they did, be it said to their credit, they were quick to move, and, to a man, rushed helter-skelter for the door. They were met by poor George Green, the half-witted youth of the village, who, with hair on end and eyes protruding from their sockets, was running wildly towards them shouting: "Look! Look at the moon! It's flying about!" And, sure enough, there, in the sky, was a great light slowly moving through the air, and the sound produced by the object in its flight was so unearthly as quite to baffle description.

Consternation spread throughout the village, and from all directions came men, women, and children, stumbling and falling in their eagerness to join the crowd on the green.



The Confidences of the Villagers.

"In the village inn, when conversation lagged the men would draw their chairs closer together, and with stern set faces listen while one or another would tell in whispered tones strange things he had heard or imagined he had seen."

had heard, or imagined he had seen—the spirit forms that glided to and fro—unearthly sounds that issued in the dead of night—all due, it was said, to the wicked life of its last owner, one Sir Geoffrey Strangeways, who departed this life just 103 years ago come Michaelmas. If this had been all, there would have been nothing to single out Puddlehampton from among the many rural hamlets with which our land abounds. It would have remained just an ordinary, slow-going community, with just the ordinary tittle-tattle and petty scandal.

But a great event had happened! So great, that the whole neighbourhood seemed paralyzed with astonishment and excitement when the news came out. *There were tenants at the Grange.*

Old Joe Bellamy had seen them with his own eyes, and "might the Almighty strike him dead if he didn't speak the truth."

There could be no denying the truth, for others soon had glimpses of the new arrivals.

A great motor-car had come tearing along the quiet old roads and made its way up to the broken-down gateways of the deserted house, and the doors had creaked on their rusty hinges and admitted the strangers to the uninviting rooms.

Our Prize Short Story—continued.

Every cottage was soon deserted. Not a soul would stay alone under the shelter of a roof when any moment might be the last.

The pale, drawn faces of the women, and the piteous cries of the children, clinging to their mothers' skirts, touched the rough hearts of the men, and the common fear drew them close together.

There, in family groups, they stood silently watching and waiting. Waiting for they knew not what. Watching the great light as it moved above them. On and on it went until it hovered over the farthest limit of the village, the intense brightness dazzling their eyes; the dreadful sound vibrating in their ears, and setting their teeth on edge.

Then! Could they believe their eyes! The object turned and slowly made its way back again. Three times it encircled the village, and then was lost to view behind the wood. Gradually the sound diminished, and finally ceased, leaving a stillness that was almost more fearsome than the recent din.

It is a harrowing sight to see strong men cowed with fear. To see women and children, stiff with fright, placing their trembling hands over eyes that refused even the consolation of tears. We would gladly draw the veil over the scenes of that terrible night. Suffice it to say that no attempt was made at sleep, but all, in the quiet of their homes, spent those hours of darkness as men who know their doom is near. And it would be sacrilege on our part to seek to know the thoughts, or hear the words that passed among them.

As the dawn dispelled the darkness, something of the confidence that daylight brings began to return to most. Then, for the first time, the desire to know something of the cause of all their fear began to make itself felt.

One by one they straggled out into the bright morning air, and, gathering in little groups, stood around their cottage doors, each trying to hide the sense of fear that still lurked in their breasts.

Search the village as you might, you would only have found one to whom this strange phenomenon had brought no feeling of dread, and that was the poor half-witted boy. True, he was even more excited than the rest, but his excitement was due to the fact that he had seen something quite unusual, the novelty of which appealed to his undeveloped mind.

Eagerly he pressed his questions:—

"Tell me, why did the moon fly round?"

"Hush, lad, 'twasn't the moon. There was no moon last night."

"But I saw it! I saw it! What made it make that noise?"

he persisted; but they were used to his questions and let him ramble on unnoticed.

"I've been thinking," said the innkeeper, "and have come to the conclusion that what we saw last night was nothing more or less than a comet."

"Yes," he continued, seeing the eager faces turned towards him, "a comet. You know, a kind of big star that flies through the air. Sometimes they have a tail of fire; and sometimes they—Well there! There's no accounting for what comets do."

This lucid explanation seemed to impress the village folk, who held the innkeeper in high esteem. He had travelled somewhat in his time, and his knowledge of the world was a constant source of wonder to these trusting souls, who did not know enough themselves to be able to doubt the truth of all the wonderful tales he told.

As soon as the village had fully agreed that their visitant of the previous night could be nothing but a comet, they were all agog with wild excitement. Now that the danger was passed—at any rate for the time being—tongues vied with one another in discussing this epoch-making event.

Not only had Puddlehampton witnessed a phenomenon that is denied to many a generation, but the heavens had singled out this one spot, above all others, over which to make its display. The comet had not only passed over Puddlehampton, but it had turned and circled around it three times, as though loth to leave so charming a place, or wander farther into the cold world.

The great news spread rapidly throughout the whole district. Puddlehampton had seen a real comet! Everybody had seen it!

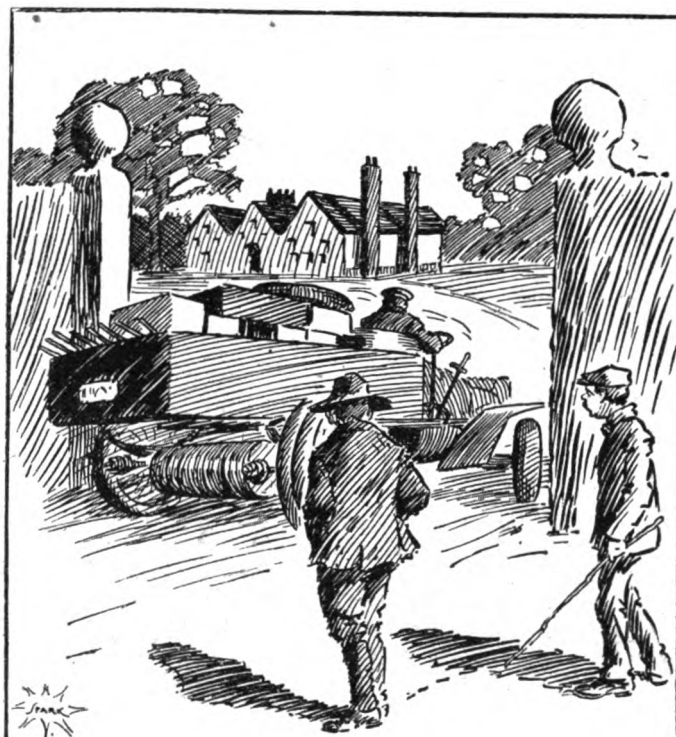
A great star, as big as the moon, that went round and round the village. A star, whose light was so bright that their eyes were dazzled! And that made the weirdest, strangest sound that anyone had ever heard!

All day long crowds of people kept pouring into Puddlehampton, eagerly questioning the villagers for details of the great event. In all its long and brilliant career Puddlehampton had never been so crowded, and the villagers were filled with pride at suddenly finding themselves famous. Each time the story was repeated some new detail crept in, until it was borne home upon the neighbours that a more gallant, daring and heroic people never existed than the watchers on the green the previous night.

Towards evening the excitement was immense.

Would the comet reappear!

Eagerly they waited, straining their eyes to catch the faintest gleam of light; straining their ears that even the slightest sound should not escape them. But all in vain. The



The Mysterious Cargoes.

"They had looked for personal luggage, but instead were crates of thin sheet-metal or pieces of weird-looking machinery, or long lengths of drawn steel tubes, and numberless boxes, the contents of which could not even be guessed."

comet did not come that night, and so the expectant neighbours slowly made their way, disappointed, to their homes.

* * * * *

A week passed and no further sign of the comet had appeared.

Puddlehampton was beginning to settle calmly down again to its ordinary life; proud that so important a thing as a comet had singled them out for special favour, but heartily glad that it had not continued to thrust its patronage upon them.

This thankful spirit, however, was of no avail, for that very night the darkness was rent with cries of anguish.

"The comet! The comet is coming!"

In wild confusion men, women, and children rushed out from their homes. There, sure enough, was the dreaded object.

"It's coming straight for the village. Now it's over Gregory's field. Now it's . . ."

Bang!

A blinding flash. A terrific explosion. A rattling, tearing, clanging, snapping sound. A dull thud, and then—a silence as of death.

Paralysed with fear, the watchers stared at one another in blank amazement. Their tongues refused them utterance, and

Our Prize Short Story—continued.

their hearts were throbbing wildly. As, however, some time elapsed and nothing further had occurred, a sense of great relief came over all, and, with but little discussion, they wended their way back to their homes.

There was no desire to investigate further while darkness lasted, but as soon as daylight came a small group of the more venturesome members of the community made their way towards Farmer Gregory's field.

On reaching their destination, a surprise greater than they had anticipated awaited them. Instead of a mass of molten earth, as they had expected, was a quantity of wreckage of some great machine scattered about the field. Pieces of metal framework, steel tubing and rods, parts of an engine, and cog wheels, and a big electric searchlight were all cast about in utter confusion. Farther along they came to what appeared to be huge silken wings, and, underneath, the dead and mangled bodies of the strangers from the Grange.

Slowly the true meaning of it all dawned upon them. "The six months of mystery at the deserted house had been the preparation of this mechanical monster, that had cost its makers their lives just as they thought success to have been achieved.

Little had these two known the consternation they were causing in the hearts of the simple folk of Puddlehampton, and if they had been told that their flying machine would be mistaken for a comet they would have laughed outright.

But now they were beyond the power of human emotions, and does it not seem a significant fact, what they had been unable to do in life, death had accomplished?

Their souls, being freed from the encumbering moulds of clay, had taken flight into the great unknown.

CARBON DEPOSITS IN PETROL MOTORS.

THE carbonisation of piston heads and the surfaces of the combustion spaces of petrol motors is a condition which is generally regarded as inevitable after extensive service. The average motorist is fully aware that his engine, while in use, is gradually accumulating carbon incrustations, and probably in some cases attributes to carbonisation operative defects which are due to other causes. Nevertheless, a deal of trouble is occasioned by these deposits, the presence of which is recognisable by well-known symptoms. As with most other evils which afflict petrol motors methods of prevention and of cure are both desirable of application. The avoidance of too rich or imperfectly gasified fuel mixtures and the employment of a not excessive quantity of a grade of lubricating oil which is as free as possible from a tendency to produce solid residue are obvious preventives.

Notwithstanding all preventive measures deposits will form in the course of time, and the method of their removal may be either mechanical or "chemical." Scraping out the deposits is a perfectly sure method, but if thoroughly done involves the taking down of the motor and a considerable amount of hard work. The majority of motorists utilize the so-called chemical method by occasionally treating the cylinders with paraffin, which seems to keep down the incrustations to a considerable extent. Scraping is, as a rule, finally resorted to after a long period of service. Quite recently there have appeared upon the market compounds known as "decarbonizers," which, when applied to the combustion spaces of a motor, are claimed to remove all accumulations from the metallic surfaces by a purely solvent action, often described as "chemical." Experience has shown that some, at least, of these decarbonizers possess decided merit, and that they do cause the breaking up and separation of carbon accumulations and lead to their expulsion from the cylinders, leaving the parts in a relatively clean condition.

M. BRISAUD, writing to one of our French contemporaries, states that he is the inventor of an aeroplane with which he means to fly to the North Pole in 1910, and that he is anxious to find a partner to finance the undertaking.

CONTINENTAL NOTES.

A Hill-climbing Competition near Toulon.

The Automobile Club of Toulon is organising a hill-climbing competition at Bornes for the 28th inst. Categories will be provided for cars ranging from single-cylinder up to six-cylinder vehicles; nine cars—three each Rochet-Schneider, Cottin-Desgouttes and La Buire—have already been entered.

Public Services in France.

A public service of motor vehicles, consisting of two 40-h.p. ten-seated Peugeot cars, has just been established between Grasse and Thorenc, in the South of France. A Lorraine-Dietrich covered char-a-banc is also making a daily trip between Nice and Peira-Cava.

Motor Cars in Spain.

According to a recent report there are now about 3,000 motor-cars in use in Spain. Madrid is credited with 500, Barcelona and district with 600, the province of Guipuzcoa with 300, and the province of Vizcaya with 300.

Motor-cabs in Berlin.

A somewhat startling item of news reaches us from Berlin. It is to the effect that the police authorities have just issued a notice that no more taxi-cabs fitted with petrol engines will be licensed; the order, if insisted upon, will have serious results, as a large number of cabs are still on order in respect of which deposits have been made.

An Italian Road Race Cancelled.

It has been decided to postpone the motor-race meeting at Bologna, Italy, until 1910. Last year the meeting was one of the principal fixtures of the Italian season as regards long distance road racing. In its place it is proposed to organise contests for aeroplanes in conjunction with the Brescia Circuit Committee, prizes to the value of £4,000 being offered.

A Motor-cycle Volunteer Corps in Germany.

Arrangements have now been completed between the Prussian Ministry of War and the Association of German Motor Cyclists for the establishment of a Volunteer Motor Cycle Corps. Members will be expected to put in a certain number of attendances during the year for military instruction, and, in the case of mobilisation, to immediately report themselves to the headquarters in Berlin.

Motoring in Tunis.

The automobile movement is making excellent progress in Tunis. While in 1905 there were only about a dozen cars in the country, the latest returns show that there are now over 210 vehicles registered, the majority being of French construction. The traffic regulations are the same as those that are in force in Algeria and France; on the open roads a speed of twenty kilometres per hour is allowed, this having to be reduced to twelve kilometres when passing through villages. At present Tunis, unlike Algeria, has no automobile club, but a number of enthusiasts are considering the question of organising one or two sporting events during the coming season.

An Austrian Motor Sleigh.

A feature of the recent meeting at Chamonix, organised by the Touring Club de France, was the trial of a number of motor-propelled sleighs. The subject is one which is engaging the attention of Austrian as well as French engineers. We illustrate on page 1059 the novel machine recently built by Herr Wels, a Viennese engineer, who is also greatly interested in aeronautical matters. The sleigh is fitted with a 24-h.p. eight-cylinder engine, the power of which is transmitted to an air propeller at the rear. The latter, which runs at 1,400 revolutions per minute, is of a special design, drawing its air, not directly from the front but angularly from the sides; it is driven by a belt off the rear end of the extension of the engine shaft. The steering, which is controlled like a motor-car by means of a hand-wheel on an inclined

column, is effected by a couple of rudders at the back of the sleigh. The braking and pulling up of the apparatus is effected by four claws—two on each side—actuated by a lever at the side of the driver.

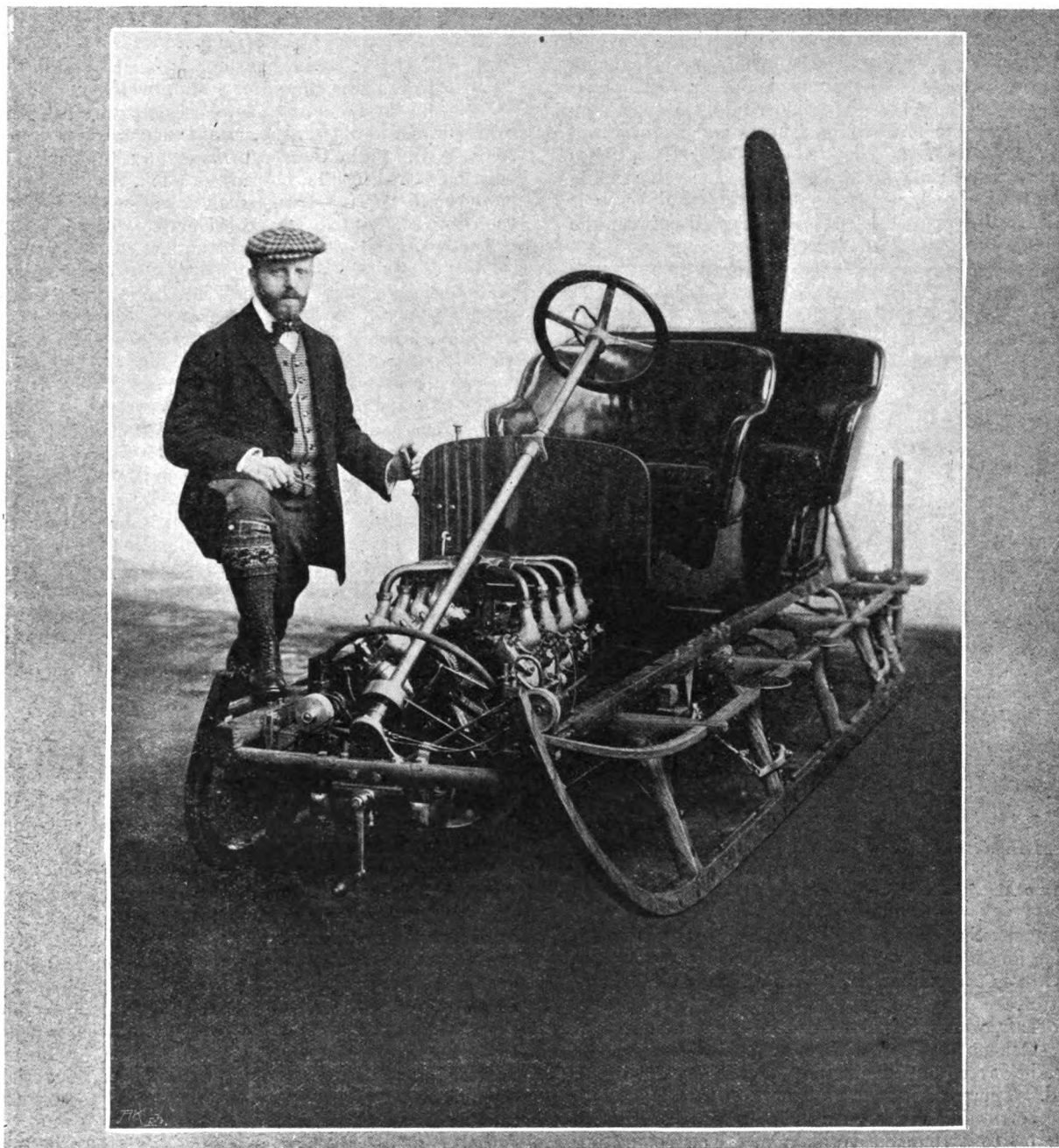
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Miscellaneous Items.

It is reported that a Riga company is about to put 150 motor-cabs in service in St. Petersburg.—It has been resolved not to hold the usual annual motor-car exhibition in Vienna this year.—The sixth annual International Automobile Exhibition in

newcomer in the hands of the Bourgmestre.—The municipal authorities of St. Quentin, France, have just issued a notice restricting the speed of motorists passing through the town to five miles per hour.—The German Imperial Automobile Club has decided that its Trials of Industrial Motor Vehicles shall extend from April 23rd until May 13th next.

◆ ◆ ◆
Automobiles Militaires.

En Allemagne, dans les grandes garnisons qui possèdent des boucheries militaires, des voitures automobiles spéciales vont être



The Wels Motor Sleigh.

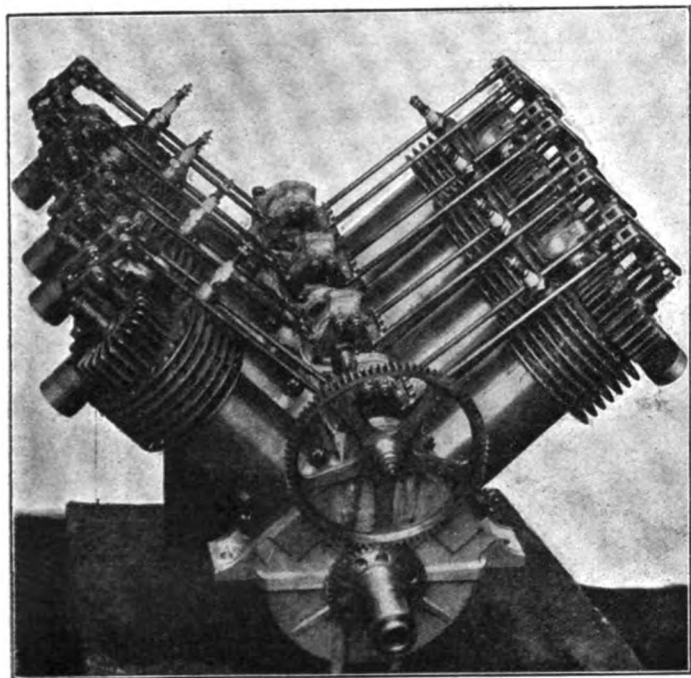
(Allgemeine Automobil Zeitung.)

Turin was opened on Saturday last.—Motorists visiting the South of France with their cars will do well to remember that the municipal authorities of Mentone have just issued a regulation limiting the speed of motor-cars to five miles per hour. The use of sirens, whistles, and open exhausts is also forbidden.—The Motor Cab Company, in Copenhagen, which has already thirty Renault cabs in service, has placed an order for a further twenty-one.—The horse cab drivers in Brussels do not look with favour on the intervention of the motor-cab; the other day they went in procession to the Town Hall to lay a petition against the

introduites, dans le but de transporter les viandes de la boucherie aux casernes. Cette innovation pratique vient d'être réalisée pour la première fois à Metz. Par suite de la grande distance qui sépare les forts extérieurs de la ville, les fournitures de viande à effectuer par la boucherie militaire n'arrivaient souvent pas à temps à leur lieu de destination. L'administration militaire a fait construire par une fabrique de l'Allemagne du sud des voitures automobiles spéciales, pourvues d'une chambre frigorifique et d'autres installations modernes. Ces voitures peuvent couvrir 50 kilomètres à l'heure.

THE J.A.P. AERONAUTICAL ENGINE.

IN continuation of the descriptions we have already published of new petrol engines especially designed for aeronautical purposes, we come to the J.A.P., which, although it made its first public appearance at the Paris Salon in December last, is a British production, being made by Messrs. John A. Prestwich and Co., at their works at Lansdowne Road, Tottenham, N. As will be seen from the accompanying illustration, the engine, which is of the air-cooled type, comprises eight cylinders set in two sets of four at right angles to each other in the form of a V. The cylinders, which are cast singly, are 85 mm. bore by 95 mm. stroke; they are machined all over and for about half their length are provided with horizontal radiating ribs of a very "clean" character, holes being pierced in the same to increase the circulation of air. The inlet and exhaust valves are located in the cylinder heads and mechanically operated, through the medium of tappets and an overhead pivoted lever, off a single centrally-located cam shaft; the latter is of nickel chrome steel and runs on ball bearings. The valve timing gear is of hardened steel and is placed outside the crank case; it will be noticed that short pivoted levers are interposed between the



General view of the J.A.P. Eight-Cylinder Aeronautical Engine.

cams and the tappet rods. The valve-box, which is provided with vertical radiating fins, is cast separately and secured by two studs; the valve seats are in the head of the cylinder, so avoiding any joints in the latter.

The crank shaft, which is hollow, and, like the cam shaft, of chrome nickel steel, is provided with long plain bearings; the crank pins are, however, furnished with ball bearings, 7-16 in. balls being used. There are four crank throws, set at 180 deg. to each other, the connecting rod of one cylinder on each side of the V working on to a common crank pin. The connecting rods are made of steel stampings, the end of one being forked and the other of the usual pattern fitted between the fork.

The mixture is furnished by one of the firm's latest type of automatic carburettors, in which the extra air holes are closed by balls of phosphor bronze, and which, when the suction on the jet exceeds a certain amount, lift off their seating and let in the necessary quantity of additional air. The lubrication is effected on the J.A.P. combined system of drip feed and splash, a constant supply of oil being maintained by the partial vacuum set up in the crank case by a special vacuum valve. The crank case, which is of aluminium, is divided into four separate compartments, to ensure perfect lubrication to each pair of cylinders. All the parts

are made on the interchangeable system, the cylinders, pistons and rings being within $\frac{1}{1000}$ th of an inch of perfect accuracy.

The engine, which will be exhibited for the first time in this country at the forthcoming Cordingley Show at the Agricultural Hall, is rated at 35-h.p. at the normal speed of 1,500 revolutions per minute; its weight complete is 170 lb., or just under 5 lb. per horse-power. We may add, in conclusion, that Messrs. Prestwich are also building an eight-cylinder motor on similar lines, but which will be water-cooled, the cylinder jackets being of electrolytically-deposited copper.

A FAR-REACHING GUARANTEE.

ABRIEF reference has already been made in these columns to the new guarantee system which is being introduced by the Long Acre Autocar Company, Ltd. (the successors to the Junior and O.T.A.V. Cars Company, Ltd.), of 117, Long Acre, W.C. From the very exhaustive pamphlet which has just been published by the company we find that the guarantee is a more comprehensive arrangement than we at first thought and one that is likely to attract considerable attention.

As may be gathered from the fact that the booklet extends to fourteen pages, we have not space to reproduce the whole of its terms. It may be briefly stated, however, that in future a guarantee is to be issued with every car purchased from the company, which practically covers the whole cost of upkeep with the exception of petrol, lubricating oil, and insurance for one year or for a distance of 5,000 miles. Such important matters as tyres, adjustments, replacements and repairs are all covered, as also every detailed form of inspection and rectification that the car is likely to require under fair usage for the time and distance named. At the end of the first year the purchaser has the option of renewing the guarantee by paying the company a moderate fee, and is thus enabled to run his car on the most economical lines and yet feel that his vehicle is at all times in thorough road-worthy condition. A noteworthy feature of the guarantee is that the company undertake to send a qualified mechanic, free of all cost to the car owner, to any part of the British Isles, in order to carry out such adjustments and repairs as may be required. The pamphlet, a copy of which will be sent on application to the address given, is well worthy of close study, in view of the radical departure it outlines.

AN UP-TO-DATE CITY IN FLORIDA.

THE Mayor of Kissimmee City, Florida, evidently means to be up-to-date, as he has just issued a series of regulations with regard to aerial traffic. According to these the Municipal Authority extends not only to the terrestrial limits of the city, but to all the space above it to a height of twenty miles. No shed for an airship or aeroplane can be erected without the authority of the Council, who demand an annual tax of £20 for the licence; a scale of annual registration fees has also been drawn up, ranging from £4 for an ordinary balloon, to £40 for an aeroplane of the ornithoptere type. Apparently the Mayor of the city, which should quickly become famous, is a firm believer that the day of the flying machine is at hand, for he has provided for a supplementary annual tax on aerial machines capable of carrying passengers, the scale ranging from machines capable of carrying from five to no less than a thousand persons. Aerial craft for the transport of goods are to be especially encouraged, for no tax will be imposed on these for the first fifteen years. When flying at heights between ten and twenty feet above the house-tops no machine must exceed a speed-limit of eight miles per hour, but the higher one flies the greater is the speed permitted; in fact, the Mayor of Kissimmee City will allow anyone who will rise to a height of a thousand feet to travel at 200 miles per hour—if he can. Article XI. of the regulations provides that any violation of the same will render the offender liable to a fine of £100 or imprisonment for ninety days; It is also stated that the Municipal Council will, as soon as possible, acquire an aeroplane of the latest type to enable its representative to see that the regulations are duly carried out.

AERONAUTICAL NOTES.

M. CORNU, of Lisieux, France, is building a new flying machine of the helicoptere type.

HERR BUSCHBAUM, of Berlin, is building a new aeroplane, with which he hopes to carry out some trials in May next.

THE Aero Club des Ardennes has just been formed at Charleville to foster the aeronautical movement in that part of Belgium.

It is stated that a French captain of Engineers named Comte is about to make some trials at Boulogne-sur-Mer with an aeroplane of his own design.

THE U.S. House of Representatives has just passed a bill for the addition of £100,000 to the Army Appropriation Bill, to be used in aeronautical experiments.

THE "Gazzetta dello Sport," of Milan, is organising for the coming summer a competition for flying machines between Turin and Milan. A sum of £600 will be offered in prizes.

THE association of merchants in Tunis known as the "Tunisie Industrielle" is offering a prize of £200 to the first aviator who shall fly from Carthage to Utique and back within an hour.

THERE is some talk, in connection with the international exhibition which is to be held in Brussels next year, of organising regular services of steerable balloons between the capital and several of the large Belgian towns.

UNDER the patronage of Prince Albert of Belgium a new company has been formed in Brussels for the construction of dirigible balloons and aeroplanes. The building of two large vessels is to be put in hand immediately.

MR. J. T. C. MOORE-BRABAZON last week succeeded in making a flight of about five kilometres on his aeroplane at Chalons-sur-Marne; the apparatus, which is of the Voisin type, is fitted with a Vivinus motor.

THE U.S. Senate has passed a resolution instructing the Secretary for War to award Messrs. Orville and Wilbur Wright gold medals in recognition of the services rendered by them in the advancement of aerial navigation.

A NEW aeroplane has recently been built by Herr Mosser, of Hagenau, Alsace. Two engineers of the Alsace Engineering Company, of Mulhausen, are also reported to have made a successful flight on an aeroplane they have lately constructed.

AN Austrian engineer named Hermann Stofa is building a new type of aeroplane near Vienna. In place of the surfaces being horizontal, cylindrical revolving surfaces are employed, the propeller screws being fitted behind them, the aim of the system being to achieve stability.

CHALONS-SUR-MARNE is becoming quite an aeronautical centre. In addition to Messrs. Farman and Moore-Brabazon and the names mentioned in our last issue, other aviators who are about to make trials with aeroplanes at that place include Prince Rolodoff, M. G. Soisin, M. Goupy and Mr. Hubert Latham.

IN order to remedy the backwardness of Austria-Hungary in the navigation of the air an Austrian syndicate has purchased M. Farman's aeroplane, with the exclusive right to use it in Austria and Germany. M. Farman is instructing an Austrian mechanic in the use of his aeroplane, which will be taken to Vienna during the course of next week. The first flights will, it is stated, be made by M. Farman himself.

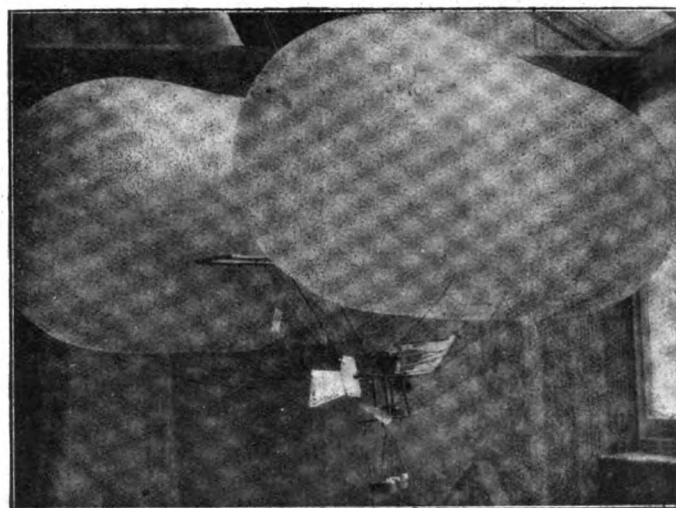
THE committee of "pupil-pilots" formed by the French Ligue Nationale Aérienne is daily expecting delivery of the first of the aeroplanes which have been ordered for the purpose of enabling practical instruction to be given in the handling of flying machines at the new aerodrome at Juvisy. The first will be of the Delagrange-Farman type, built by Messrs. Voisin, Billancourt, near Paris.

THE All-Russia Aero Club, which enjoys the patronage of the Czar, who has approved the idea of making a national collection for the equipment of an aeroplane fleet, has decided to acquire one of the Wright machines. The cost is said to be £1,200, and the machine will be obtained as early as possible, so that flights may be made in Russia during the coming spring.

MR. SANDON PERKINS proposes to make use of a flying machine in his next polar expedition. This Arctic explorer proposes to go as far north as possible by boat, after which he will make use of aeroplanes, one of which will ascend in a vertical direction to enable him to dispatch wireless telegrams en route. A model of one of the aeroplanes which Mr. Sandon Perkins proposes to use, is being exhibited at the Motor Club in London.

A SUM of £4,000 having been provided for in this year's Budget by the French Government for the encouragement of aerial navigation, M. Louis Barthou, the Minister of Public Works, has appointed a commission to superintend the administration of the fund. Amongst the members are M. Henri Deutsch de la Meurthe, the well-known patron of aeronautics, M. Leon Barthou, president of the Aerial Committee of the Touring Club de France, M. Bleriot, and M. Painlevé, vice-president of the Ligue Nationale Aérienne.

WE illustrate herewith the model of a novel design of airship recently built and patented by Mr. W. Friese-Greene, of Brighton. It is made up of two gas balloons placed side by side, the idea being that should one bag collapse there will be no fear of accident. The airship has also a gyroscope balancing device. Four motors are provided, one driving the gyroscope, another the propeller, while two are kept in reserve. The gyroscope is used for steer-



ing, its position being altered by means of gear attached to an ordinary ship's wheel. The airship can be made to rise or descend by a movable weight travelling on an endless band from end to end of the machine. Two planes are also used to alter the angle of the airship.

THE French Ligue Nationale Aérienne, in whose charge the competition for the Pommery Cup has been placed, have decided that the flight must be undertaken as one continuous effort, without landing or replenishing. In other words, it must be in the nature of the cross-country trip which Farman made between Chalons and Rheims. The cup is of the value of £2,000, and is awarded half-yearly, the winner receiving £300 in cash.

NAVAL men are probably taking great interest in aeronautical matters, but the Royal Naval Aero Club, which a contemporary has reported to be in course of formation at Devonport, is apparently still "in the clouds." Lieut. A. Williamson, R.N., who was said to be the hon. secretary, knows nothing of the matter.

CAPTAIN W. WINDHAM, who has done service for the aeronautical movement in the organisation of the Aeroplane Club, is reported to have designed an aeroplane. Captain Windham's machine is a bi-plane with a 25 h.p. Duthell-Chalmers engine, the front plane being for lifting and that at the rear for steering. It is fitted with both horizontal and vertical rudders, and has two wooden propellers. The machine is being constructed at Messrs. Pischhoff-Koechlin's works in Paris, and it is said that, should it prove a success, the Russian Government may make an offer of purchase.

Aeronautical Notes—continued.

THE Danish Aeronautical Club has just been formed in Copenhagen.

A NUMBER of aeronautical enthusiasts in the Cannes district are establishing an aeroplane trial ground in the Laval plain, near La Napoule.

THE Syndicat des Inventeurs Aviologistes is the name of the latest society to be formed in Paris, in connection with the aeronautical movement.

IT is reported from Tokio that the Japanese Government is establishing a department to carry out experiments with airships and aeroplanes.

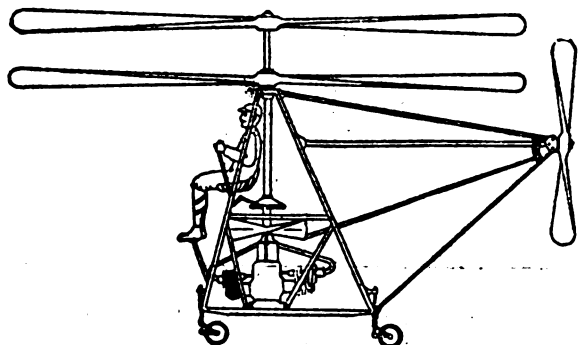
LE SYNDICAT D'INITIATIVE DE VICHY is looking into the question of establishing an aeroplane trial ground in the neighbourhood of Vichy, France.

AMONG the newcomers at the Issy-les-Moulineaux trial grounds, near Paris, is the Witzig-Liore-Dutilleul aeroplane; this is of the bi-plane type and is fitted with a 50-h.p. Renault motor.

As a result of a meeting held last week at Nancy, France, when M. Quinton gave a lecture on aeronautical matters, it has been decided to form the Ligue Nationale Aérienne de l'Est.

A NEW aeroplane known as the Borgnis was subjected to a trial at Gennevilliers, France, on Sunday last, when a short flight was made. The apparatus is of the tri-plane type and is fitted with a 30-h.p. six-cylinder engine.

WE illustrate a novel flying machine lately designed by Messrs. Vuitton and Huber, and which has been entered for the competitions at Monaco. The apparatus, which is of the helicopter type, is being fitted with one of the Farcot eight-cylinder engines described in a recent issue of the *M.C.J.* The vertical shaft of the motor operates two propellers rotating in opposite



directions in a horizontal plane, these being relied upon to sustain the machine in the air. A third propeller is fitted at the rear for propelling purposes. The machine is being constructed in the Paris district, and is already completely erected with the exception of the engine.

UNDER the auspices of the Aero Club de Nice the "Eclaireur de Nice" is organising an exhibition of models of airships and aeroplanes to be held in Nice from the 1st to the 15th March next. No charge is being made for space, but entries should be sent in to the newspaper named before the 25th inst.

MONSIEUR F. RAMEL, of Glennes-les-Fismes, France, has just completed the construction of a new type of aeroplane which differs in many respects from those that have hitherto been seen. Instead of the pilot's seat being on the aeroplane itself, it is suspended from the machine in such a way as to act as a sort of balancing device. M. Ramel will shortly commence trial flights with his apparatus, which, including the pilot, weighs about 1,100 lbs.

THE French Ligue Nationale Aérienne, realising that the charges to aviators using the practice-ground at Issy-les-Moulineaux, near Paris, are becoming increasingly heavy, amounting now to as much as 32 francs a day each for the mere service of having the place kept clear for them, has decided that as from the 1st inst. it will defray from its own funds half the cost of guarding the course. Efforts are also being made to induce the authorities to lower the charges.

MESSRS. WILBUR AND ORVILLE WRIGHT have now completed the remounting of their aeroplane at Pont-Long, near Pau, and Wilbur will probably make his first ascent early next week.

MR. J. A. MACKLE, of Liverpool University, has been lecturing on the progress of flight, before the Coventry Graduates' Centre of the I.I.A.E. He gave descriptions of most of the aeroplanes which have attained success on the Continent.

M. H. DESCHÉ, the Mayor of Morsang-sur-Orge, France, has placed under the control of the Aero Club de France a plot of land near that town as a prize to the aviator who first succeeds, during the present year, in flying for a distance of 20 kilometres and landing within 60 yards of the land in question.

FOLLOWING the example of the University of Göttingen, the authorities of the Technical College at Charlottenburg have appointed the well-known German aeronaut, Major Parseval, inventor of the airship which bears his name, as Professor of Aeronautics. The Major will immediately begin a course of lectures on aeronautics, which henceforth will be added to the regular subjects of study at the College.

IT is reported that Count Zeppelin intends to carry out many important manoeuvres this year with his dirigible airships, and these will be studied very closely by the German military authorities. Although an airship presents a very big target to a specially-designed and rapidly portable gun, it will be the aim of the Count to show that his vessel can accomplish much useful work without incurring an excessive amount of danger from these weapons.

THE new Zeppelin airship, which is being constructed at Manzell, on Lake Constance, is expected to be ready for its first trial on March 15th. Zeppelin No. II. will be 136 metres long and 13 metres wide, with a capacity of 15,000 cubic metres; it will be fitted with two German Daimler motors, each of 200-h.p. The "cabins" will be more luxurious and more comfortable than in the former airship, and will include a bedroom (with a real bed) for the count, and another with hammocks for the crew.

IN connection with the aeronautical exhibition to be held at Frankfurt-on-Main next year, it is proposed to run an airship regularly between that town and Homburg, the fashionable watering-place. The aerostat would be connected by ropes with two cables, one on each side of the route, which would render the control a much simpler matter than if it were hovering free in the air. It is proposed to employ a balloon which could carry a car containing sixty persons. The cost of the undertaking is estimated at £30,000.

THE first aeroplane seen in Berlin attracted a crowd of at least fifty thousand persons to the Tempelhof Parade ground, on Thursday, last week, when M. Arnaud Zippel made experiments with a Voisin machine. The weather was bitterly cold, but the aeronaut mounted his apparatus and dashed off at a high speed; he, however, only rose a few feet from the ground, and then for only a minute or so. Continuing the trials on Monday, M. Zippel was more successful, he flying nearly three-quarters of a mile against a brisk wind at an average height of 30 ft.

THE aeroplane trial ground, which has recently been established by La Société d'Aviation near Juvisy, ten miles to the south of Paris, and which has become known as Port-Aviation, is now in daily use. The perfectly flat field, over 250 acres in area, has a circular track of about two miles, a straight-away of one mile, and, surrounding it, sheds for aeroplanes and dirigible balloons, workshops and garages, coal and hydrogen gas plants, observation towers, grand stands and postal and telegraph offices. Already there are several aeroplanes, including an Antoinette 50-h.p. bi-plane, and lessons are being given to a number of the student-pilots of the Ligue Nationale Aérienne, under the direction of Capt. Ferber and M. Legagnur. In connection with these lessons an amusing incident occurred. When the little party of students turned up to take their first lesson they were eager enough until it came to the question of making a practical trial, when each pupil was anxious to cede the honourable first place to another. Finally, as none of the six would venture, M. Delagrangé himself went for a short flight. Since then, however, several of the students have succeeded in making short flights.

GOSSIP FROM PARIS.

An Aeronautical Exhibition.

The idea of holding a great aeronautical and aviation exhibition in Paris next year is fast gaining ground, but the French Government, which should take the enterprise under its direct patronage, has not yet given its decision. The Public Works Committee of the Chamber has examined the project and pronounced favourably on it. The Champ de Mars is no longer available for international shows, but various other sites have been suggested. Among them are the Esplanade des Invalides, the Tuileries Gardens, and the Issy-les-Moulineaux parade ground; but there seems to be a majority among the most interested parties for the great open space in the Bois de Boulogne between Bagatelle and the Seine. The French, who claim to be the pioneers in all sorts of aerial navigation, are most anxious to have the honour of organising the first great international exhibition, to which all the civilised nations of the world would be invited to send their spherical balloons, dirigibles, and aerial craft heavier than the air. Of course aerial competitions of every description would be held, as it is believed they would prove a great attraction.

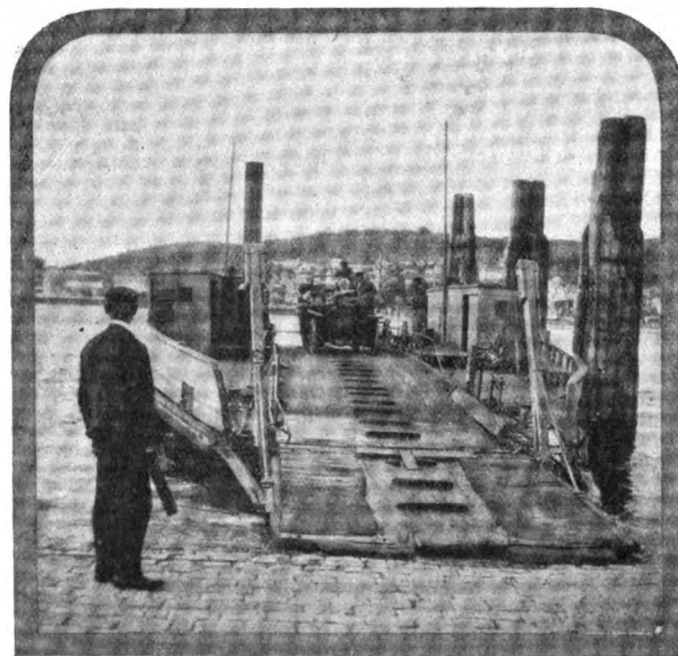
The Monaco Aeroplane Competition.

When the Monaco aviation fêtes were announced some months ago, quite a number of aviators hastened to inscribe their names as competitors for the tempting prizes of £3,000, £600, and £400. They were MM. Demarest (Antoinette monoplane), Delagrangé (biplane), Pierron (biplane), Louis Bréguet (gyroplane), Baron de Caters (biplane), Louis Bréguet (biplane) and G. Vuitton (heli-coptère). Probably they did not quite realise what was required of them. At first sight a flight of some six miles from Monaco to Cap Martin and back, to be repeated on three days at the choice of the aviator, did not look a very terrible enterprise. Delagrangé was, however, the only man among them who had flown that distance; some of the others had never left the ground on their machines. It has been said several times that if Wilbur Wright did not go to Monaco to gain an easy victory he would at least send one of his pupils. And Henry Farman's name was also mentioned as certain to be found on the list of entries. However, the competition, which closes at the end of March and which opened on January 24th, has not yet attracted any one to Monaco, and it is a significant fact that Wilbur Wright and Henry Farman, the two men who have achieved the most remarkable aerial feats, have never expressed the intention to seek to win the prizes. On the contrary, Wilbur Wright has established himself comfortably at Pont Long, Pau, where he is to complete the education of his three pupils, and Henry Farman has sold his machine. Probably if the competition had been quite so easy as its organisers may have imagined the American aviator would have obtained from the Weiller Company a short delay in the training of the men who are to ride his machines, and Henry Farman would have rejected the offer to buy his old aeroplane or have stipulated a delay for delivery. Neither of them did anything of the sort. Why?

Some Difficulties.

I can imagine at least some of the reasons which influenced them, and which have probably prevented Delagrangé from hurrying down to the sunny South. To make the flights may be comparatively easy—at least, for Wright, Farman, and Delagrangé; but how are they to land on the quay, which is not more than thirty yards wide, with an available length of 100 yards at the utmost? Wright with his skis might manage it safely, but assuredly all the aeroplanes depending on wheels for landing would run great risk of rolling over the quay-side into the water. Then Wilbur Wright and all the other aviators put their machines together very carefully after a journey and test them well in short flights before undertaking anything like a remarkable performance. But at Monaco there is no open space for preliminary trials. It can be easily imagined a man would hesitate to get on his machine to fly over the Monaco bay if he had had no opportunity to ascertain for certain whether

it was in good working order. It is true the regulations of the competition require that each of the flying machines shall be provided with an apparatus of some sort to prevent the aerial vessel from sinking in the case of its falling into the sea; and when the organising committee realised the difficulty of the landing of the aeroplanes on the quay, it decided to allow both the start and the landing to be made from the water. But an aquatic aeroplane has not yet been invented. I have spoken to a good number of aviators and patrons of aviation with regard to the Monaco competition, and the general opinion seems to be that at the present moment there is only one man in France who could with a fair chance of success attempt to accomplish the feat required by the conditions of the competition, and that man is Wilbur Wright. He could with his skis land on the quay, but the question is, would he venture to set out on a flight over land and sea without first testing his machine? I doubt it. Delagrangé has ordered floats for his aeroplane, and Henry Farman's new machines, one of which will soon be ready, will be provided with wheels for starting and with skis for landing. Both these aviators may try to win the prize as well as Moore-Brabazon, who has already accomplished remarkable performances, but I think it



Touring in France.—Crossing the Ferry over the Seine at Caudebec.

is unlikely. The public must not be astonished or disappointed if no one should even attempt to capture the £3,000. MARNEY.

THE Board of Health of Indianapolis, U.S.A., has ordered an electric motor ambulance to be used by the City Dispensary in place of the horse-drawn vehicle hitherto employed.

THE Canadian authorities have raised the embargo on American motor-cars, which was put in force about two months ago to prevent the spreading of the foot and mouth disease from the United States to Canada.

THE increased use of the planetary or epicyclic type of change-speed gear was perhaps the most noticeable feature at the recent Motor Show in New York. The number of cars fitted therewith increased from 4 per cent. to 11 per cent. of the total. The friction drive also advanced in numbers from 11 per cent. to 17 per cent.

MADRAS AUTOMOBILES, LTD., is the name of a new company which has lately been formed in Madras, India, the share capital having been subscribed among the principal motorists of the presidency. The company's works are situated in a three-storied building 100 ft. long and 32 ft. wide, and are fitted with most up-to-date machinery driven by electric power.

THE SOCIAL WHIRL.

HIS MAJESTY THE KING and his Royal Highness the Prince of Wales motored from Windsor Castle to the Flemish Farm one day last week, intending to have a day's shooting over the adjoining coverts. They had fair sport in the morning, but after luncheon, which was served at Cranbourn Tower, the park became enveloped in a dense fog and the Royal party had to return to the Castle.

"To smoke or not to smoke" in the library of the new automobile club-house in Pall Mall. That is the question which is agitating many good people at the present time. Mr. Richard Muirhead, of Gravesend, who ranked among the first score of members of the old A.C.G.B.I., is against smoking in the library as tending to give a "frowsy" smell to the volumes, and Mr. Carew-Gibson and Colonel J. R. Magrath have also written against the permission of such a practice. Probably the better way would be to provide a room adjoining the library where books and papers could be taken by those who wished to enjoy the weed while reading. Another point in connection with the new club-house concerns the admission of ladies, and Mr. J. Colquhoun Reade, of Brooks's, suggests their admittance as members on the same conditions as those under which they are now received as members of the Bath Club.

THIS week I am able to reproduce a photograph of Mr. G. P. Mills, M.I.M.E., A.M.I.C.E., who has been appointed works' manager to Messrs. Clement-Talbot, Ltd., in succession to Mr. C. R. Garrard, who has gone to Sheffield. His way of progress from a cycle works at Biggleswade to the management of the great establishment in the Barlby Road, Kensington, is known to all who have followed the course of the cycle world. He made several long distance records on the cycle, and the road from Land's End to John o' Groat's was vanquished by him long ago. Mr. Mills also did much to organise the works of the Raleigh Cycle Co. In motoring annals his conspicuous success was winning the Heavy Tourist Car Trophy



race in the Isle of Man, in 1907, on a 30 h.p. Beeston Humber. With Mr. F. W. Shorland at the head of the commercial side, and Mr. Mills in command in the works, the Clement-Talbot Company will continue to add to its laurels.

THE Hon. A. Stanley is disposing of his Kentish seat and estate, including Holwood Park and House. The estate extends to Cudham, and the famous test hill runs through the Cudham estate. The garage at Holwood House includes two Austin cars, two Napiers and a Napier station brake, as well as the Mercedes petrol-electric car that the late Earl Derby purchased and used.

MR. HUNTLEY WALKER's country seat at Pickhurst, Hayes, Kent, is now being rebuilt after the recent fire. His letter of thanks to the officers of the Farnborough and Beckenham fire brigades was read at the annual dinner of the latter brigade last week and much appreciated.

MR. HARVEY FROST informs me that he is leaving London on Thursday, the 4th inst., for the Far East on a business tour in connection with the vulcanisers which bear his name. He is travelling by the overland route to Marseilles, where he will embark on the P. and O. s.s. "Malwa," for Bombay. There he will remain until March 1st, when he will proceed by rail to Calcutta, spending about ten days in that city. On March 17th steamer will be taken to Rangoon and about a week spent in Burmah.

On March 25th the trip will be resumed to Singapore, which Mr. Frost expects to leave about April 6th for Colombo. From thence he will take steamer to Port Said and visit Alexandria, Cairo, and other Egyptian centres. Although doubtless he will take advantage of the opportunity of seeing the sights to be met on his interesting journey, the primary reason of the trip is to get into personal contact with many of the numerous customers of the firm in India and the Straits Settlement, where there is an increasing business in vulcanising plant. Letters addressed to Poste Restante of the various ports which Mr. Frost will visit will reach him up to the date mentioned.

THE motor-car comedy planned by Mr. F. T. Jane, of Portsmouth, and Lieutenant Wilson in connection with the "abduction" of Mr. Victor Grayson, M.P., on the last day of the labour congress in the naval port, was worthy of George Bernard Shaw, who was also a delegate, though he apparently travelled by ordinary train and did not use his motor-car, in the driving of which he is said to be an expert. Taking Mr. Grayson right away from the ocean of oratory saved the delegates from a speech—"for which relief much thanks," as Shakespeare would say.

MAJOR KENNETH COOMBE, of the Royal Horse Artillery, is one of those sportsmen who use the motor-car on the hunting field. Like many another follower of the hounds he finds it a great convenience to be able, at the conclusion of a meet, to hand his mount over to a groom and fulfil any further engagements with the help of the motor-car.

MANY adventures might be recorded as taking place in the fog of last week. Miss Paterson, who recently attained distinction on the Brooklands Track, started from the Carlton Hotel, London, on the afternoon of the 26th ult. on a 16-h.p. Imperia car for a twenty-four hour non-stop run to Edinburgh. On account of the impenetrable fog it took her ten hours to do sixty miles from Grantham northwards, and she ran off the road twice into a farmyard, and also went in and out of Bawtry twice. While between Doncaster and Darlington a speed of more than four miles an hour was impossible owing to the fog. During all the journey, however, they were not stopped once for mechanical reasons.

THE issue of a Guide to Boston, in Lincolnshire, by the Homeland Association, Ltd., reminds me of the Peacock and Royal Hotel in that ancient town. This is under the proprietorship of Mr. R. H. Clemow, and is in connection with Anderson's Hotel, in Fleet Street, London, E.C. There is good motor-car accommodation at the Peacock, which might well be made the headquarters for a tour of the Lincolnshire fens. Boston is well regarded by motorists, for, although the narrowness of some of the streets necessitates care at all the turnings, there are no specially dangerous corners in the town. Although there are several ferry and bridge tolls in the county of Lincolnshire, there are none in the vicinity of Boston, where the Automobile Association has appointed Messrs. Holland Bros. as its agent. With their help in replenishing the petrol tank and the guidance of the Homeland Handbook a pleasurable week-end can be spent in the ancient Lincolnshire borough. LOLLIS.

FROM Sir Isaac Pitman and Sons, Ltd., comes a new edition of the Business Man's Guide, by Mr. J. A. Slater, this being a repository of commercial information of every description. In addition to commercial terms and phrases much geographical information which will be of value to business men is included in the volume, and the French, German and Spanish equivalents of English terms and phrases are also given. Reference is made to the motor-car, and the letters of identification are included. This, however, should have been brought up to date by those for Merthyr Tydvil and the new London letters being added to a list otherwise complete. It is obvious that many matters cannot be fully dealt with, and a little guidance as to special works to be consulted might prove a useful addition to a volume which is becoming a recognised work of reference.

THROUGH Messrs. Boon and Porter, Messrs. Lyons and Co., Ltd., the well-known London caterers, have purchased a number of Renault and Lacre motor vehicles.

A SYNDICATE has just been formed in Berlin, with a capital of £20,000, for the purpose of establishing a motor racing and speed trial track in the neighbourhood of the German capital.

DEPRESSED at being unable to secure a licence as a motor-driver, George Dorsen, of Westminster, was found in the Thames, and a verdict of "Suicide" was returned at the inquest on Monday.

COLONEL R. E. CROMPTON, C.B., has consented to open the forthcoming show of the Manchester and District Motor Trades Association, Ltd. This will open at Bellevue on the 19th inst. and close on the 27th.

AT the extraordinary general meeting of the Star Cycle Company, held on the 29th ult., with Mr. E. Lisle in the chair, the resolution to alter the title of the firm to the Star Engineering Company, Ltd., was adopted.

CAPTAIN KELLY is reported from Cairo to have successfully completed the first trip in a motor-lorry from Khartoum to Kassala and back. The distance between the two places is 255 miles. The journey out occupied four, and the return trip two days.

SUPPLEMENTING the particulars we gave in our last issue regarding the novel four-cylinder engine lately put on the market by the Société des Automobiles Aries, we may state that the bore and stroke of the pistons is 60 mm. by 100 mm. and that the engine is rated at 8-10-h.p.

THE Brixton Motor Works, of 283, Brixton Road, London, S.W., have lately opened an additional garage, with accommodation for about twenty cars, a few doors away from their present premises. The firm are able to undertake all classes of repairs and have also plant for vulcanising tyres and charging accumulators.

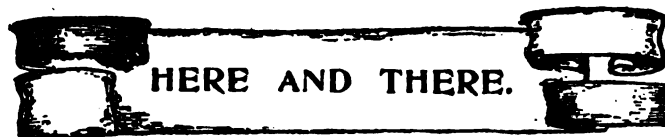
FURTHER tests are about to be made at Constitution Hill, Chatham, that is claimed to be the stiffest hill within a wide range of the Metropolis, and which was recently climbed by a 15-h.p. Talbot. The gradient is 1 in 4½, and, on account of the right-angled turn at the foot of the hill, it can only be taken on first speed. There is no doubt it is an extremely severe trial.

WE hear that the Star cars have become a popular type in Australia, and in view of the increasing demand agencies have been established in three leading centres. The agents in Sydney are Messrs. Larke, Hoskins and Co., in Melbourne the Herne Motor and Engineering Company, while in Adelaide the interests of the Star Engineering Company are looked after by Messrs. Vivian Lewis, Ltd.

THE annual race meeting on the Ormond-Daytona beach, Florida, will be held from March 23rd to 26th inclusive. Several important events have been proposed, including a race open to cars which have contested the Vanderbilt Cup, the race for the Minneapolis Trophy, a stock car sweepstakes, and the competition for Sir Thomas Dewar's £400 trophy, the winner of which must attain a speed rate of 120 miles per hour, or two miles a minute.

SOME interest is attached to the new garage that has been opened by Mr. D. T. Allen, on the London Road, Bromley, Kent, as it adjoins the goods yard at South Bromley station, where Signor Scarfoglio's Pekin-to-Paris car was destroyed by fire in October last, the local mechanic, Maynard, receiving fatal injuries. The new head-quarters of the Bromley and Beckenham Motor Drivers and Mechanics' Club are in proximity to the garage. The club has fifty members, and the new club-house is being provided with a billiard room, &c.

ACCORDING to a return just published relating to registration and licensing under the Motor Car Act, eighty-five motor-cars and eighty-two motor-cycles were registered in Croydon during 1908, this being exclusive of transfers of ownership. The number of driving licences granted, exclusive of renewals, was 612, and the total sum received in fees was £314 8s. For the four years ending 1907 440 motor-cars and 586 motor-cycles were registered, 2,068 driving licences were granted, and the fees received by the borough came to £1,344 10s.



AN exhibition of agricultural motors is to be held at Amiens, France, from July 17th to 26th next.

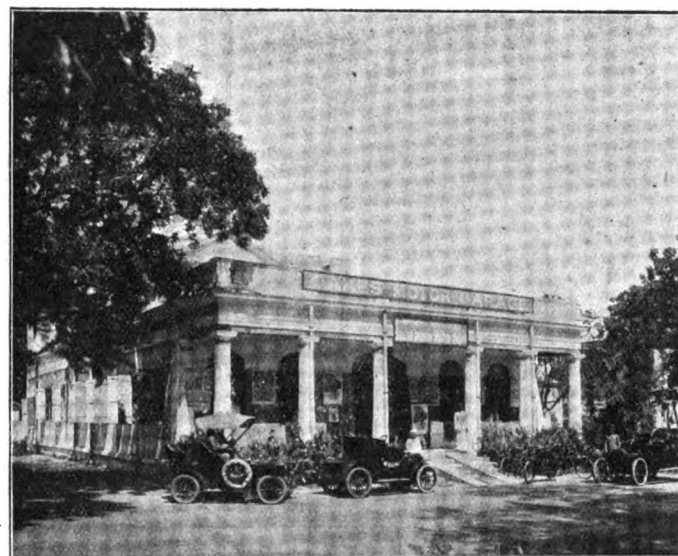
THE French postal and telegraph authorities are at present inviting tenders for the carriage

of the mails between Aix-les-Bains and Chatillard, Savoy, by motor vehicles.

MESSRS. O. MACKAY AND SONS, whose motor garage is near the West Park, Harrogate, have facilities for assisting motorists visiting the town and have also motor-cars for hire by residents and others.

MR. W. CHAPMAN has lately considerably enlarged his premises at South Norwood and has now accommodation for a large number of cars. Repairs of all kinds can be carried out, and plant is available for vulcanizing tyres, charging accumulators, &c.

A NEW car known as the Acme, and constructed by the Acme Motor Company, of Reading, Pa., U.S.A., is being introduced into this country by Messrs. R. Scott and Co., of 96, Castlenau, S.W. The first vehicle that has been received is a 30-40-h.p. four-cylinder model; the engine has separately cast cylinders, and the final transmission is by side chains.



An Indian Motor Depot.

The above illustration depicts the motor depot and garage of Messrs. Oakes and Co., Ltd., Madras. The firm are agents for several of the leading types of cars and are well equipped for carrying out repairs.

MESSRS. LUND AND SERGENT, whose show rooms are in Princess Street, Stockport, are arranging trial runs on a 10-h.p., four-cylinder, two-seated Delage car. They have a large business in the exchange of motor vehicles, taking old cars in part payment for those of different makes. Keeping a good stock of such vehicles, they are well able to meet the requirements of clients in the north of England. Messrs. Lund and Sergent will have a display at the forthcoming Manchester Motor Show.

WHAT may safely be described as the biggest fire which at any time has visited an automobile centre occurred in Boston, U.S.A., on the 17th ult. Within half-an-hour after the first flames shot up from the rear of a big garage building near Park Square, about 400 automobiles, valued at between £140,000 and £180,000, were reduced to shapeless masses. The heaviest losses, so far as can be ascertained, are as follows:—Park Square Auto Station, 150 cars, valued at £70,000; Concord Motor Company, fifty-four vehicles, valued at £30,000; Messrs. Thomas B. Jeffery and Co., forty-four cars, valued at £25,000; Boston Auto Exchange, thirty machines, valued at £20,000; and the Mills Transportation Company, eight cars, valued at £5,000. A number of sightseeing cars and commercial vehicles, owned by various companies, were among those destroyed, as well as many cars owned by private individuals.

Here and There—continued.

A NEW garage has been opened at 11, London Road, Tunbridge Wells. The proprietors are Messrs. Clarke and Rawson.

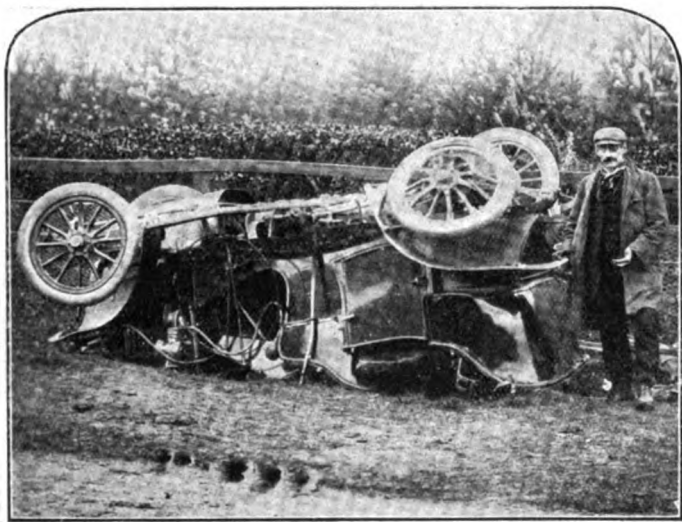
A NEW automatic carburettor, for which several claims are made, has lately been brought out by Messrs. F. Ray and Sons, motor engineers, Elms Buildings, Eastbourne.

MR. T. NORMAN STONE, of the Victoria Motor Works, Godalming, has a well-equipped establishment and is able to render good service to the many motorists of Surrey.

No. 3 of the Daimler Company's Bulletin has just come to hand. It is well illustrated and contains several interesting articles, notably one on a trip in Australia and another by Mrs. Kennard, who gives her views on the new Daimler engine.

THE French Automobile Club has decided to organise another trial of industrial motor vehicles in October and November next. It will be held in conjunction with the test of military vehicles, and the trial runs are expected to be over roads radiating from Paris.

THE Motor House have obtained the whole stock of the sole concessionnaires for the Maja cars, and these chassis are now being offered at considerable reductions from their original prices. The vehicles are 20 to 30-h.p., and the selection includes both chain and live axle drive. Any type of body can be fitted to these chassis, which present favourable opportunities for acquiring cars.



A Motor Accident near Whitechurch.

A somewhat remarkable motor accident occurred on the high road leading from Whitechurch to Market Drayton on the 22nd ult. Mr. E. Norton, accompanied by his wife and a lady friend, was driving to a dinner party in his 12-14-h.p. Argyll; they had only gone about three miles when they encountered a bit of road which after being wet had become frozen, with the result that it was simply a sheet of ice for about twenty yards. The car skidded, badly breaking one of the road wheels, causing the vehicle to turn over with the occupants under it. Fortunately the car fell over a drain close to the railings, therefore affording means of escape. The ladies were practically uninjured and suffered only from shock. Mr. Norton, who was driving, received a slight bruise on the thigh.

Photo by]

[Pace, Whitechurch.

THE exports of motor-cars and parts from the United States during the eleven months ending with November last only amounted to £936,884, as compared with £1,091,108 in the corresponding period of 1907. Great Britain headed the list with £332,384, Canada being second with £215,073, and France third with £109,656.

THE new catalogue of the Swift Motor Company, Ltd., Coventry, is conspicuous even among the handsome productions one has come to regard as normal in the case of motor manufacturers. It is copiously illustrated, written with pleasant if forceful argument, and one feels confident that if it falls into the hands of a prospective motorist it will certainly convert him, and probably decide him to buy a Swift. Full particulars are given of the various models—10-12-h.p., 15-18-h.p., and 18-24-h.p.—that are being turned out for the 1909 season; not only are these fully illustrated, but a series of views of the different sections of the Swift Company's works is included. Another interesting feature is a number of full-page coloured pictures, showing the Swift vehicles in their various spheres of utility. A copy of the catalogue will be sent to all applicants mentioning the *M.C.J.*

THE Russian postal authorities in St. Petersburg are now using a Stoeber motor-lorry for the transport of the mails between the General Post Office and the railway stations.

THE United States Civil Service Commission has just held an examination for the position of chauffeur in the quartermaster's department at large. Two vacancies exist at a salary of £15 per month each, which will be filled as a result of the examination.

THE Kempshall Tyre Company, of 1, Trafalgar Buildings, Northumberland Avenue, W.C., have arranged with the R.A.C. for a certified trial of the non-skid properties of the new ribbed low pressure Kempshall tyre. This we understand will take place on the 18th inst.

MESSRS. WITHERBY and Co. have brought out a new monthly magazine, "Travel and Exploration," which is devoted to every form of travel-sport, from hunting trips in Central Africa to skiing in the High Alps. Motoring is included and aviation is not overlooked.

THE "Auto," of Paris, has brought forward a proposal to establish a museum of mechanical locomotion in the French capital. It is suggested that this should not be confined to examples of the early motor-cars, but should also include specimens of the first cycles, motor-boats, balloons, airships, aeroplanes, &c.

TAKING the water-cooled cars exhibited at the recent exhibition in New York as compared with those displayed a year ago, it was found that the use of honeycomb radiators had decreased from 69 per cent. to 62 per cent., while the number of gilled tube radiators had increased from 17 per cent. to 31 per cent.

IN contradistinction to the tendency in Europe, the recent motor exhibition in New York showed that there is a considerable decrease in the percentage of shaft-driven cars, the reduction being from 82 per cent. to 57 per cent.; on the other hand, the double chain drive has increased from 15 per cent. to 41 per cent.

A NOVEL "Panne" competition, on the lines of one organised in France a year or so ago, was held last week by the Birmingham Motor-Cycle Club. Two motor-cycles were provided at the Central Garage in that city; one was fitted with magneto and the other with accumulator ignition, both machines being out of order. The rules provided that the competitor taking the least time to diagnose the fault and get the engine running would be declared the winner.

FROM the Société des Automobiles Peugeot, whose London depot is at 46, Knightsbridge, S.W., comes a copy of their new catalogue. This is one of the most handsome productions of the kind that we have so far received. The list gives illustrations and particulars of the different models of Peugeot cars that are being turned out for the 1909 season. From the point of view of an artistic production the catalogue is a veritable triumph of the printer's art.

THE following particulars of a motor trip in Australia, taken from a leading Australian daily paper, will give British motorists some idea of the touring conditions met with in that country. Mr. Wagstaff, a member of the Victorian Automobile Club, reached Adelaide, from Melbourne, on Sunday, November 1st, having made the whole journey by motor-car. Accompanied by his wife and two friends, he set out from Melbourne on October 25th on his 36-h.p. Daimler, not with the idea of establishing a record, but purely on pleasure bent. Mr. Wagstaff was anxious to demonstrate that his car, the weight of which loaded was 2½ tons, could negotiate the so-called "ninety miles desert." The previous heaviest car to make the journey weighed only 26 cwt., so that the enterprise was distinctly venturesome. The trip was made in easy stages; the actual running time apart from the ninety miles desert was 24½ hrs. for 591 miles. It took another day to cross the desert. Upon his arrival Mr. Wagstaff remarked, "We got right through without any mishap, and experienced neither mechanical nor tyre troubles, nor had we any occasion to use a spanner during the whole trip. I would strongly recommend motorists not to attempt the journey unless they have had a fair amount of experience in motoring generally, and it is not advisable to undertake it in any but a high-clearance car. We encountered a few deep sandy patches which were overcome only by the use of coconut matting, of which we carried two 36 ft lengths."

MOTORING ACCESSORIES.

The "Roslee" Acetylene Generator.

In our last issue we mentioned the motor-car head lamp placed upon the market by Messrs. J. T. Williams and Co., of 344, New Town Row, Birmingham. This shows up a clear road for eighty or ninety yards ahead. The generator used in connection with this is easy to understand and manipulate and lights very quickly.

The lamp and generator is strongly made, some points of the latter being

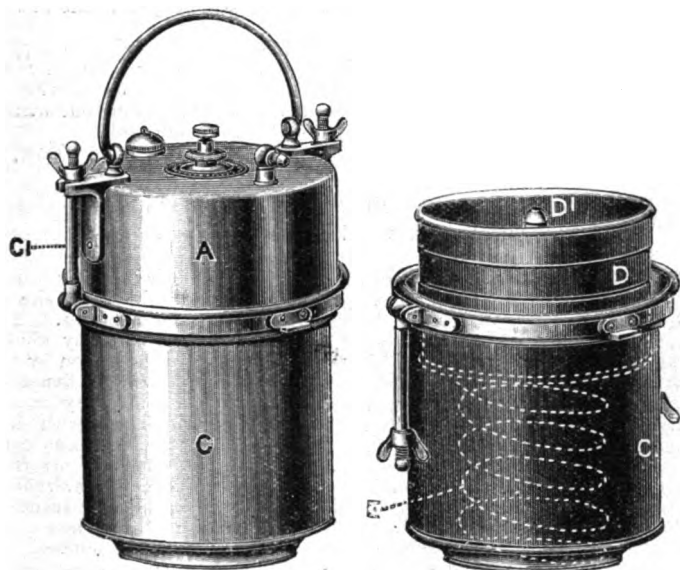


Fig. 1.

Fig. 2.

distinctly valuable. In the "Roslee" acetylene generator, as it is known, the water overflow point within the generating chamber is gradually lowered at the same rate of speed as the top surface of the water is lowered. So that by making use of the expansive power of the carbide a uniform head of pressure of the water upon the gas is ensured. The flow of water to the carbide is regulated by the backward pressure of the gas within the generating chamber, so that, whatever number of burners

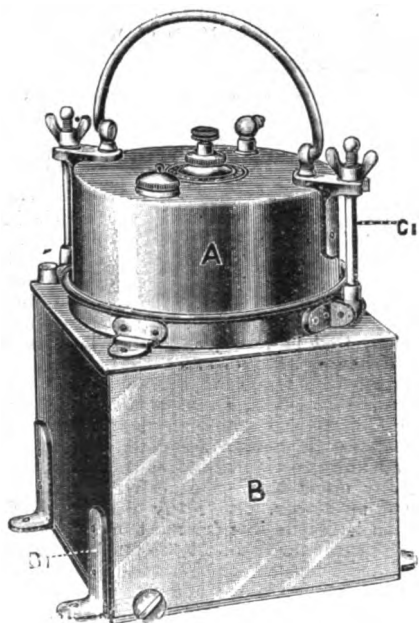


Fig. 3.

are used, both the supply of water and gas are automatically regulated to suit the latter. As originally placed on the market the generator was made in only one size. Its merits have, however, proved so acceptable that Messrs. J. T. Williams and Co. are now making a larger size, in which, while the same system of water supply is utilised, the general

construction of the generator has been altered to render it of greater convenience in use. The generator is illustrated in perspective in Fig. 3, and is intended to be fixed to the step of a car: it has a carbide box D (Fig. 2), which is shown extending above the top of the generating chamber and resting upon a spring E, which is shown in dotted lines. In operating the generator, the body A is turned to the left—an act which releases it from the bayonet catches on the top of the body B. The latter part is filled with water for the purpose of cooling the generating chamber C (Fig. 1). The carbide box D is taken out, as well as its displacer, and filled with ordinary carbide up to the level of the swage. A blotting-pad is put upon the top of the carbide, the displacer is then placed above this, and the box returned to its place on the top of the spring E. The body is then put back and a gas-tight joint made. One or two other simple operations render the generator ready for working. The gas nozzle of the generator is then attached to the purifier and condenser and is ready for use. Well made, as well as well designed, the Roslee generator will prove an economical as well as an efficient device for the use of the motorist who is anxious to maintain a good and uniform light on his car. The device is entirely automatic in action, and will supply gas for two full-size head lamps for over eight hours, or with two acetylene side lamps in addition, for more than six hours. Shown at the recent Scottish Motor Exhibition it attracted considerable notice from experts, and it can be recommended to all anxious to start the touring season free from trouble with their lighting arrangements.

The "Grip" Motor Pedal Cover.

It is claimed for the "Grip" pedal cover, recently introduced by the Pedal Cover Company, Balmoral Chambers, 73, Bridge Street, Manchester.

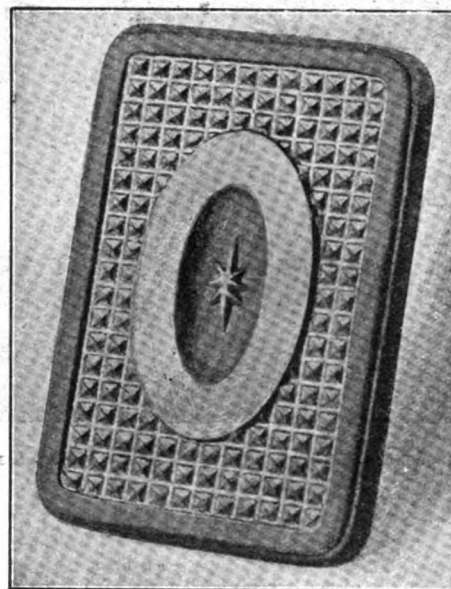


Fig. 4.

and illustrated in Fig. 4, that it supplies a much-felt want amongst motorists generally, and forms a most convenient method of eliminating the smoothness caused by wear in the use of the clutch and brake pedals of a car. It is also stated to add to the comfort of the driver by absorbing vibration, and to save many times its cost by the economy resulting from the reduced wear of the soles of the driver's boots. The makers also claim that the slight "give" in the covers enables the clutch to be more delicately humoured, thereby saving a certain amount of wear on the gears and tyres. The cover can be fitted instantly to the pedal, all that is necessary being to stretch the lower lip of the arrangement over the plate, using a small tyre lever if necessary. In ordering, the size of the pedal plate has to be mentioned.

MESSRS. R. BURR AND SONS will sell by auction on the 19th inst. the premises at the corner of Edgware Road and Church Street, London, W., which are eminently suitable for occupation as a motor garage and showrooms.

MESSRS. W. AND G. DU CROS, LTD., have nearing completion at their Panhard-Levassor works, Acton Vale, W., a fleet of six rebuilt Pioneer motor-buses, which are shortly to be shipped for use in Constantinople.

Correspondence.

[Letters to the Editor should be addressed to the offices, 21-33, Charing Cross Road, London, W.C.]

OUR PRIZE STORY.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—I have to thank you for your favour of yesterday, enclosing cheque, for which please accept my warmest thanks.

I was gratified to note that you considered my short story of sufficient merit to receive the prize in the competition organised by the *Motor-Car Journal*.—Yours truly,

T. CRAVEN JOHNSON.

[The prize Story, "The Comet of Puddlecombe," appears on another page of the present issue.]

MOTOR POSTAL SERVICES.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—I see you refer to the early trials of motor vehicles by the Post Office as taking place in 1896. They may have had some experimental runs in that year, but I had always thought that Messrs. Gilbert, Bros., of Lincoln, were the first to really undertake the delivery of letters by motor-car. Perhaps they can let us have some reminiscences of their early enterprise in that direction as a matter of interest as well as of historical accuracy.—Yours truly,

A. FENMAN.



A modern Hunting Party in the Rocky Mountains.

ADVENTURES IN THE FOG.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—It would be interesting if your readers who were out in the fog in London would give their experiences. Some must have had a very exciting time. I was in the Eltham Road on the Wednesday evening, driving my little 10-12-h.p. vehicle as carefully and as slowly as any Haywards Heath magistrate would desire, when I nearly ran into a couple of motor-buses that had just collided with each other. Fortunately, from the financial point of view, they belonged to the same company, so the question of which was the offender will not reach the public. I hear that in a south-eastern suburb the fog was responsible for a somewhat peculiar motor accident. The driver of a car proceeding along the main road missed his bearings, and, passing his own premises, mounted the pavement in front of his neighbour's shop and smashed three large panes of plate glass. Fortunately the car did not strike any of the people on the pavement, and the owner, who was driving, also escaped uninjured.—Yours truly,

T. C. D.

DETACHABLE WIRE v. WOOD WHEELS.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—There is some doubt and a little misconception as to our attitude respecting wood wheels in the detachable form. This appears to be based on the higher charge that we make for them. It may be urged that the wooden wheel is just as cheap or cheaper to make than the wire wheel when the quantities are the same. In our case they are not the same, the demand for the wooden wheel being very small indeed. We have, however, no reason to refuse to supply wood wheels, which, when made of sufficient weight, do not appear liable to give way except under conditions to which a motor-car should not be subjected. Perhaps if one neglects precautions against side-slip one

must not complain if a wood wheel collapses when striking a kerb. The wire wheel, as shown by our tests, which have been confirmed by long experience, will resist far more of this kind of unfair treatment, but it is to the owner whose car is driven with extreme care that the wire wheel most strongly appeals, because of the great saving in unsprung weight, which on four wheels amounts to no less than 70 lbs. It is more widely recognised every day that unsprung weight is the dominant factor in the life of a tyre, and it is chiefly for this reason that the vogue of the wire wheel increases.

This situation, however, hardly justifies us in declining to supply wooden wheels; but we have not yet heard a valid reason why we should supply at a loss an article which we believe to be inferior to the wire wheel to a customer who does not share this belief, but wishes to enjoy the benefits of our detachable system.—Yours truly,

JOHN T. PUGH.

ELECTRICITY FOR CAR LIGHTING.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—I was glad to see the reference in a recent issue of the *Motor-Car Journal* to the new system of electric car lighting which is being brought out by Messrs. Blieriot, Ltd., and I hope to take an early opportunity of looking closely into the arrangement. The continued vogue of acetylene head lights has led to so many abuses that its use in large towns is now pretty generally frowned upon by the authorities and by considerate motorists. Yet no form of tempered light has been advanced to take its place, so that a majority of the cars used at night for theatre and other work are driven with only the insufficient service of oil side lamps. These, for the most part, serve only the purpose of warning signals, and have no practical value in illuminating the road in front of the vehicle, which, though it may not be necessary for ordinary town work, is an advantage when traversing poorly-lighted streets. The powerful acetylene head lights, despite their advantage for work in the open country, are ill-suited to driving under such conditions and at times constitute a source of positive danger, both to pedestrians and drivers of other vehicles, because of the confusion wrought by their blinding glare. As applied to electric vehicles, electric lighting has proved the unquestionable serviceability of incandescent lamps for this purpose when properly made and installed. The only other questions, those of the supply of the necessary current, of its relative expense and ease of maintenance, remain to be solved, and if these points are all met in the new Phi arrangement, it should meet with a ready adoption, for there can be no question that the electric light has marked advantage over other systems, that it requires no trimming, is always ready for use, and gives a soft glow which, by properly proportioning the size of the lamp to the requirements, may be as strong or as mild as may be desired. It is as certain in a high wind, or when the car is being tossed about on a rough road, as when it is standing in the garage, is free from all risk of fire, discharges no combustible oils or gases in the event of an accident, and may be lighted at will without requiring the driver to leave his seat.—Yours truly,

T. JENKINSON.

THE PRINCIPAL CAUSES OF ROADSIDE TROUBLES.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—I was very much interested in the article in a recent issue of the *M.C.J.* on the subject of roadside dilemmas. There are undoubtedly still many would-be motorists who fancy that a motor-car is a "bunch of trouble," and who are deterred from purchasing because of that belief. But, however well founded such an idea once may have been, those who have been connected with the movement for, say, the past ten years know that motoring long since lost its sting and ceased to be a mixed pleasure. Troubles, of course, will happen in "the best regulated family," but nowadays they are the exception and not the rule as once was the case, and it is a fact that most of the present-day troubles are due to the man and not to the machine. It is a peculiarity of the average human being that while he realises that a horse requires and must receive attention and care, he is possessed of the notion that any other medium of conveyance, such, for instance, as a bicycle or a motor-car, practically will or should take care of itself. This notion is responsible for most of the vexation that occurs, while much of the remainder is due to too much attention—to tinkering, as it is styled, which is but a definition of that tendency which inspires men to not let well enough alone and to attempt to improve on the extensive and ripened experience of manufacturers.

It would, I am sure, be interesting were you to open your columns to a series of letters from motorists and also motor traders, giving their opinion as to what is nowadays, in their opinion and experience, the principal cause of roadside stoppages. Such information would not only be useful and instructive, but would, I am certain, do much to remove the wrong impression among would-be motorists that I have alluded to.—Yours truly,

BUXTONIAN.

ANTICIPATING THE SUCCESSFUL AEROPLANE.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—Some time ago, while reading "When the Sleeper Wakes," written by H. G. Wells about fourteen years ago, I was struck with the description of the flying machines used by the people of his imagination. For example, he says: "The aeroplanes flew safely only in a calm and moderate wind. . . . The starting of the mechanism was only possible from a gigantic car on the rail of a specially constructed stage." These aeroplanes were very large, and went from London to Paris in forty-five minutes. They required similar stages for landing. The aeroplanes were smaller, carrying two persons. "Their sails (planes), which were brilliantly coloured, consisted only of two pairs of lateral air floats (planes), in the same plane and of a screw behind. Their small size rendered a descent in any open space neither difficult nor disagreeable, and it was possible to attach pneumatic wheels or even the ordinary motors for terrestrial traffic to them, and so carry them to a convenient starting place. They required a special sort of swift car to throw them into the air. Its lateral supporting sails were braced and stayed with metal nerves, almost like the nerves of a bee's wing, and were made of some glassy artificial membrane. The engine was very simple in appearance . . . ; it was of the explosive type, burning a small drop of a substance called 'fomile' at each stroke. . . . Steering was accomplished by the opening or

Motoren Gesellschaft have become joint owners with us of these patents and patent rights, and that we are now prepared to grant licences under these patents, jointly with the Daimler Motoren Gesellschaft.

"The 'Mercedes' car, manufactured by the Daimler Motoren Gesellschaft, has been the model upon which the great majority of manufacturers, both English and foreign (especially foreign), have worked to in their own productions, and a number of well-known foreign firms have built up their names and reputations by producing an imitation of the Mercedes, or a car on so-called 'Mercedes lines,' and there are few cars produced to-day which do not embody one or two or several of the following original patents:—

Gate Change Speed Quadrant Patents.

May 9th, 1899, Gottlieb Daimler: No. 9805.

November 29th, 1900, Wilhelm Maybach: No. 21652.

Honeycomb Radiator Patents.

February 14th, 1901, Wilhelm Maybach: No. 3235.

December 22nd, 1902, Wilhelm Maybach: No. 3235.

Honeycomb Radiator and Vanes (Fan) in Fly-Wheel Combination.

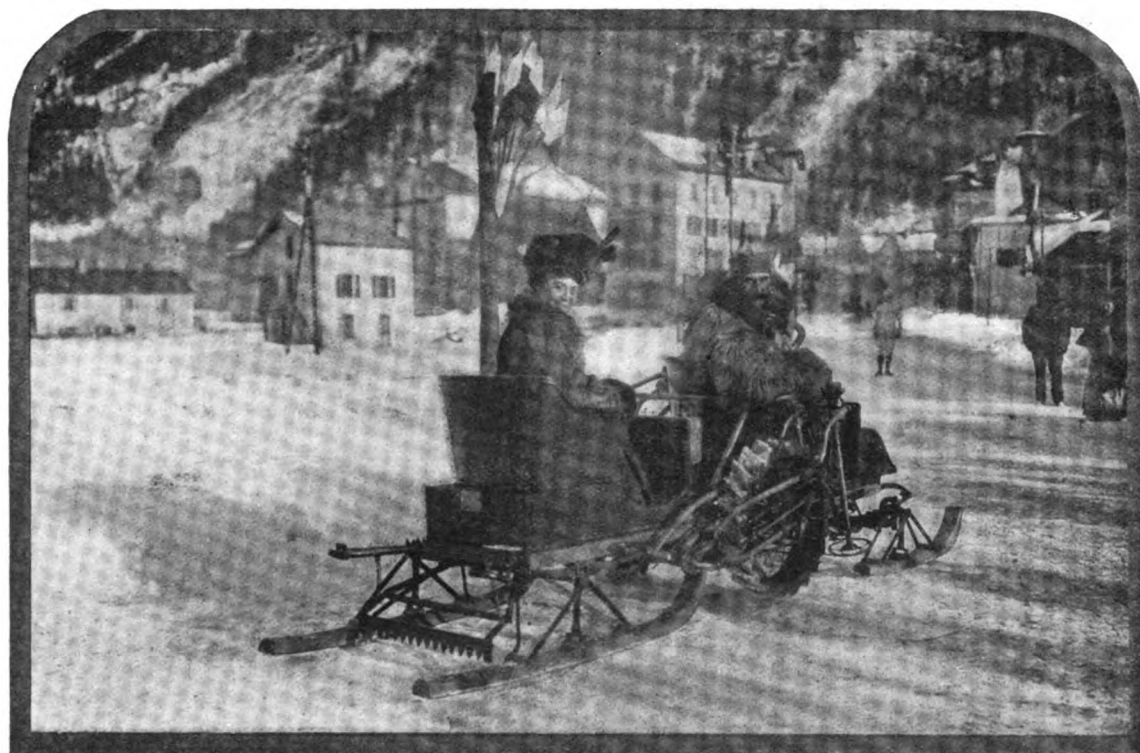
March 21st, 1902, Wilhelm Maybach: No. 6876.

Dished Axle and Differential.

April 6th, 1899, Gottlieb Daimler: No. 7270.

Cooling of Brake.

April 6th, 1899, Gottlieb Daimler: No. 7271.



The Besse Motor Sleigh.—One of the several Machines that have lately been tried at Chamonix, France; the apparatus is fitted with a 4-h.p. Austral Motor.

closing of one or two thin strips in one or the other of the otherwise rigid wings. . . . During these downward glides the propeller was inactive altogether."

In the arrangement of the planes, the starting mechanism and the pneumatically-tyred landing wheels, Mr. Wells seems to have anticipated some of the latest successful flying machines.—Yours truly,

AVIATOR.

AUTOMOBILE PATENT RIGHTS.

IN sending the following letter, which they have received from the Mercedes Daimler Motor Company, Ltd., Messrs. Jarrott and Letts, Ltd., intimate that the matter is being brought before the Society of Motor Manufacturers and Traders. The letter referred to is as follows:—

"Gentlemen,—You are no doubt aware that the British and Colonial Patents and Patent Rights known as the 'Mercedes' or 'Daimler' patents of the Daimler Motoren Gesellschaft, of Unterturkheim, Germany, for which rights our predecessors paid £40,000 in cash, have been owned by this company for many years past, but that owing to prolonged litigation between the Daimler Motoren Gesellschaft and ourselves we have been unable to deal effectively with such patent rights.

"We now beg to announce that under an agreement dated May 1st, 1908, between the Daimler Motoren Gesellschaft and ourselves, the prolonged litigation referred to has been settled, and that the Daimler

Improvements in Reversing Gears.

March 27th, 1906, Paul Daimler: No. 7337.

Front Wheel Drive.

November 8th, 1905, Daimler Motoren Gesellschaft: No. 25067.

And also Patents Nos.:—10257/98; 3023/01; 3571/04; 3572/04; 3573/04; 4956/04; 23990/04; 22947/04; 25050/05; 25076/05; 25104/05; 25051/05; 25081/05; 25103/05; 3514/06; 2360/06; 6202/06; 6685/06; 10263/06; 11407/06; 11407A/06; 7028/06; 6346/06; 14850/06; 14851/06; 20298/06; 7213/06; 25762/06; 1696/06; 1696A/06; 19269/06.

"We therefore beg to give notice to manufacturers, sellers, and users of cars embodying these patented inventions, that we are prepared to entertain applications for licences on fair and reasonable terms, but that it is our intention to take a vigorous action against those infringers, manufacturers, sellers, and users, who refuse to respect our patents and patent rights.

"The secretary will forward copies of standard licences as already accepted by leading manufacturers in England, and copies of specifications of any of the above patents on application.—Faithfully yours,

"The Mercedes Daimler Motor Company, Ltd.

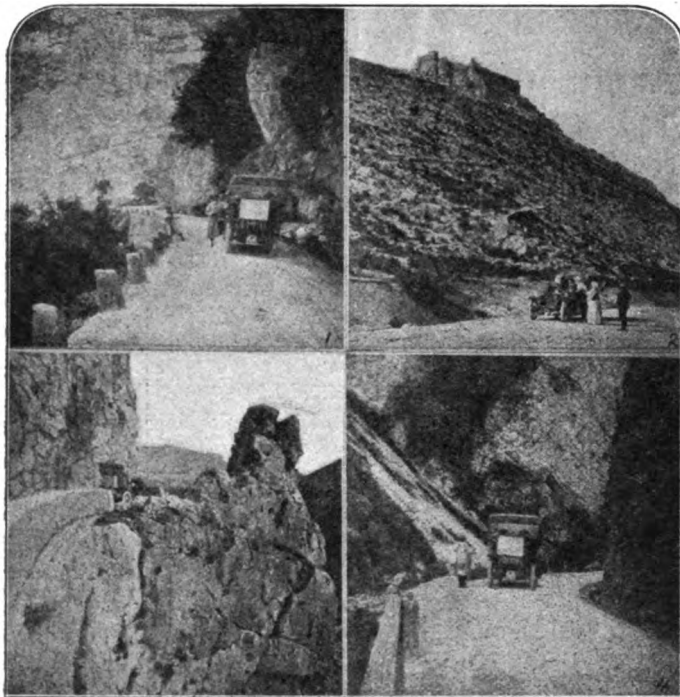
"1, Broad Street Place, Finsbury Circus, E.C."

MR. A. H. S. ATHERDEN writes recommending a motor-car instructor who has given him every satisfaction and whose merits he wishes others to know.

THE FINEST AUTOMOBILE RIDE IN THE WORLD.

THE title is true, remarks Mr. O. L. Halsey in our American contemporary, "The Automobile." There are just fourteen miles of it, but those fourteen miles yield more interest and more indelible impressions than any other fourteen miles of road extant. This is the St. Gothard Pass, in the Alps. It forms a part of the most direct route between Como and Lake Lucerne. It crosses the mountain range whose name it bears, and whose highest peak, the famous Galenstock, rises nearly thirteen thousand feet. The pass itself reaches an altitude of 10,000 feet, being anywhere from one to four thousand feet higher than the more recently constructed railway pass and tunnel underneath. Some geographical specifications seemingly would insure the pass of St. Gothard to be a famous and well-patronised motor highway. The contrary is true. The average automobilist, whether home-spun European or imported American, avoids the pass of St. Gothard. It is a road for the daring, and its charms, that are visible from every turn of the road, are well worth the venture.

We were touring Europe in our Packard "Thirty" when we came to the pass. Its grandeur and its difficulties were recounted to us. We decided in favour of the grandeur, and learned that touring Europe in a motor-car is one thing of which a ride through St. Gothard Pass is not a part, but another and bigger thing. At the entrance is Airolo, a typical cluster of chalets, plus hospice and railway station. We



Touring in Bosnia.

- 1.—In the Urbas Pass.
- 2.—The Stepanovgrad Ruins, near Buna Quelle.
- 3.—The Pass near Duare.
- 4.—A nasty corner near Bocac.

reached there late in the afternoon, and learned that automobiles may venture on St. Gothard Pass only in the evening and early morning. To be exact, they are allowed on the pass between five and seven p.m. and six and eight a.m. The better part of the permitted two hours is required to make the journey.

We went that evening. With a strange apprehension that was almost timidity we looked up from beautiful Airolo into the snow-coated mountain peaks that hid all but the first few turns of the wonderful pass. Then we started from summer into winter; from a temperature of 82 degrees to a temperature of 10 degrees; from pleasant, comfortable touring into difficult, uncertain, and dangerous mountain scaling; from a prettily set village into stern heights where mere prettiness would be an insult to the view's magnificent proportions indescriptive in words. When this pass was built for the moving of armies, no other purpose was taken into consideration. Seldom is it wide enough to allow the safe passage of two vehicles. In many places one vehicle has a narrow and precarious footing on the mountain-side. For miles it is possible to look over the side of the car, down perpendicular rock walls, to snake-like torrents of melted snow one or two thousand feet below. There is no wall on the outer edge of the pass, the greatest precaution for safety being a slight kerb, five or six inches high. Sometimes the road slants downwardly toward the outside.

The prompt ascent after passing the guard-house necessitates learning a new kind of motor driving. The steep grade is a succession of

sharp, narrow turns. Some of these angles were so acute that it was impossible to turn them without stopping and backing the car. As we progressed we learned to negotiate these turns somewhat more easily by swinging just at the right point and just inside of a corner where the pass ended and a vertical precipice began. All the time it was steady, hard climbing on second speed. The motor settled down to an unquivering gait, and there was no break in the even progress except an occasional acceleration at the acute turns where it was necessary to increase speed in order to make them without changing gear.

We were awed by the dangerous character of the road; by the natural respect which the mountains themselves commanded, and by the occasional glimpse of the ubiquitous Swiss bayonet, thrust over a stone wall or a pile of rocks. In the St. Gothard Pass you are always between two evils. You must not stay in the pass more than your allotted two hours, and you must not exceed certain speeds to get out of it in that time. However, you are not angry at restrictions. The road is dangerous enough when you are the only traveller on it. It is no place for meeting other automobiles. The man behind the bayonet never speaks, and you do not answer. Sign language is sufficient. We, in the climbing car, did not even talk to one another. There are some places where conversation is profanation. This is one of the places.

The echoing blast of an Alpine horn put us in a quiver. It meant the approach of a skidding stage coach descending with wheels locked. We took no chances in passing vehicles on that road. Fortunately there is little other traffic than the mail coaches, a few local carts travelling short distances, and, in the lower altitudes, herds of sheep. Once we shot down a sharp and unexpected decline to find ourselves headed for a small black hole in the face of an immense expanse of rock. There was just room to steer the car into it clear of the walls. Daylight was snapped out in the infinite blackness. We were scared, but we did not light the lamps. For what seemed a day, and probably was a quarter of an hour, we drove through this winding tunnel, guided only by the reverberation of the trilling motor against the rock. When at last we left the streak of night, we found the winding shelf illuminated by the mellow lights of evening. Again we climbed, climbed, and climbed up the mountain wall. It was cold, and we huddled together in the car. We ran through snow, blown in icy sheets against our faces. Looking upward, the pass was faintly and more faintly marked at each successive turn it took along the mountain. It seemed an unending journey to the peak above, and when that goal was reached we saw again the zig-zag pathway to the next.

The wonderful background of lurid fires where the sun sank behind the glistening snow caps; the devious road disappearing in the subdued colours of cloud-toned twilight; the great solitude—all of it was awesome, fascinating, overwhelming. Tensely silent, we rode to the highest point. There the strain was broken by the marvellous beauty of the panorama spread at our feet. We stopped and clambered out of the car for a last look over the valleys and peaks, snow drifts and glaciers, rivers and villages, passes and tunnels of this Alpine region as pictured from the turrets of Galenstock. For an hour we had not spoken. We were chilled to the bone. There had been no sound except the ceaseless purring of the motor. Our farewell glance upon the scene was a lingering one. The winding four-mile descent to Andermatt was begun reluctantly. Once on the way, however, we slid and scrambled down the shelf as fast as we could without going over its side. That was the hardest job of steering I ever have done. It was a case of 100 per cent. accuracy, because there was no allowance at any place along the twisting road for the mistake of an inch.

Afterward we continued our tour through Europe (some 6,000 miles altogether), but that, to me, is always another story. Whenever I think of those fourteen miles on St. Gothard Pass I immediately forget all of the other motoring which I have done in deep appreciation of the wonders of this finest of all motor rides there are in the whole wide world.

"POLICE CONTROLS."

THE police have a measured furlong in the Coombe Lane, at Wimbledon, as well as the regular traps in Parkside and in the Morden Road.

THE police in the Leyton district have measured a furlong on the High Road, along which the drivers of motor-buses are being timed almost every day. Drivers of cars, too, should be wary, or they will be trapped.

FROM the Columbia Lubricating Company, of New York, comes a little pamphlet which indicates that the concern makes a speciality of motor lubricating oil, which is being well appreciated by leading motorists on both sides of the Atlantic.

MR. J. WINTLE, who has been with the Daimler Motor Company, Ltd., for the past seven and a half years, the latter period of which he has held an important position in the sales department at Coventry, has resigned his position to join the Sheffield-Simplex Motor Works, Ltd., to take up a high appointment in their sales department.

IN consequence of the increased quantities of E.I.C. magnetos now being supplied by the Electric Ignition Company, Ltd., of Birmingham, the company have been able to considerably lower the works costs. They have consequently decided to reduce the retail price for four-cylinder machines by 25 per cent. All E.I.C. magnetos are guaranteed for two years.

CLUBS AND ASSOCIATIONS.

THE AUTO-CYCLE UNION.

THE sixth annual dinner of the Auto-Cycle Union was held at the Waldorf Hotel, Aldwych, W.C., on Saturday last. H.S.H. Prince Francis of Teck, chairman of the Royal Automobile Club, presided, and among those present were Mr. Robert Todd, chairman of the Auto-Cycle Union; Col. H. C. L. Holden, Sir R. K. Arbuthnot, R.N., Messrs. E. A. Lamb, Mervyn O'Gorman, Lyons-Sampson, Julian W. Orde, Stenson Cooke, A. V. Ebbelwhite, A. J. Wilson, C. A. Smith, treasurer of the Union; and F. Straight, secretary.

After the loyal toasts, the Chairman, in proposing "The Auto-Cycle Union," touched on the history of the motor-cycle, and said that if one had mentioned to the rider of the old boneshaker that the day would come when an appliance could be fitted to the bicycle whereby the rider, without effort, would be carried up hill and down dale, the idea would have been pooh-poohed. Yet this had come to pass, and there were now 55,000 auto-cycles on the road. He was pleased to note that our exports had surpassed the imports, which was a tribute to the work of the British manufacturer. He characterised motor-cycling as a really healthy pastime, and one to be encouraged. Should he call the motor-cycle the younger brother of the motor-car? Speaking as a younger brother, he felt it suffered under a disadvantage, as younger brothers did, that whenever, as rarely chanced, a motor-cycle encountered a motor-car, it had to go to the wall—or over it. The Auto-Cycle Union helped its members greatly in matters of legal importance, and it strove effectively to check undesirable methods of driving. They were repressing inconsiderate drivers, even as the Royal Automobile Club was doing. During its short existence the Auto-Cycle Union had achieved a record to be proud of. It was united in the true sense of that term and was doing *bona-fide* good work, hence its future would be brighter even than its past. Last year there were 371 individual members of the Union, and, with the affiliated clubs, there was an aggregate of 2,198.

In acknowledging the toast, Mr. Todd, the chairman of the Union, observed that the presence of their chairman that night furnished yet another proof of his whole-hearted and practical interest in all forms of automobilism. He was proud to be able to announce that that afternoon three more provincial auto-cycle clubs had joined the Union, and also that the Union had discussed at its council meeting a proposal to organise a body or bodies of motor-cyclists to be at the disposal of the military authorities in time of need. It had decided to further consider that scheme; and he sincerely trusted that the War Office would welcome it. As to the sporting phase of the movement, despite the fact that it seemed to be something of a heresy to speak of racing on the high road at the present time, he sincerely hoped that there would be a Tourist Trophy Auto-cycle Race in the Isle of Man this year. The motor-cycle would also be in evidence at the Easter Brooklands Race Meeting.

"The R.A.C. and Affiliated Clubs" was proposed by Mr. Mervyn O'Gorman, who said that the motor-cycle was at the root of the genealogical tree of motoring, the late Gottlieb Daimler's first machine being a three-wheeler. The original competition rules for motor-cycling were also a strong element in the competition rules of motor racing, not only in England but over the whole world.

Mr. J. W. Orde, secretary of the R.A.C., who responded, spoke of the work which the Union did and the necessity for united action. He remarked that he sincerely hoped the A.C.U. would not let the Tourist Trophy race drop, and he could assure them of a welcome by the Manx people. The toast of "The Chairman" was given by Colonel H. C. L. Holden.

In addition to the presentation of the trophies won during the past season, and a collection for the widow of Police-constable Tyler, an excellent musical programme was also rendered during the evening, which, thanks to the efforts of the secretary, Mr. Straight, passed off most successfully.

Mr. Robert Todd presided over a council meeting of the Auto-cycle Union at the Waldorf Hotel, London, on Saturday afternoon. There were about forty delegates. The meeting lasted a little over two hours, most of the time being taken up with discussion on the local centre scheme. The provisional rules drafted by the committee of the union were subjected to many propositions of alteration and amendment, but none of them was of great importance, and, in spite of a speech by the delegate from Cambridge University M.C.C. for its rejection, the amended scheme was adopted.

It was proposed by Mr. H. C. Pickering, of the Worcestershire M.C.C.,—"That the Auto-cycle Union should consider the advisability of formulating a scheme for the placing at the disposal of the military authorities a large number of motor-cyclists, for use in the event of a great national danger." The proposition was carried.

A speed limit inquiry has been held with regard to an application for a ten-mile limit up Stanmore Hill. The A.C.U., considering that motor-cyclists could not go up the hill at such a low speed, instructed a member of its committee to give evidence to that effect.

BROOKLANDS.

THE programme which has been issued in connection with the Brooklands Automobile Racing Club's Easter Meet on April 10th and 12th contains some supplementary regulations, which we set forth somewhat fully as likely to be of interest to all who follow the sporting events during the year.

Several new features have been introduced in these, and a fine of \$5 will be inflicted on those entrants whose vehicles fail to take part in the races for which they are entered, unless prior notification of likely absence is made to the clerk of the course.

"Weight" is the minimum weight of the vehicle ready for the race, and includes the driver, mechanic, fuel, tools, and all appliances. In "weighing in" an allowance not exceeding 5 lb. per mile of the race may be claimed for fuel, lubricants, and water consumed.

The metal disc on which the number of the vehicle appears, and which is located behind the driver's seat, is to be provided and fixed by the entrant, and it is also provided that every driver or mechanic taking part in any race shall be a male person unless the race proposition expressly states otherwise.

An important regulation is that with regard to pulling up at the completion of a race. Every driver is expected to apply his brakes and shut off power immediately on passing the Finishing Line. He will then be required to bear towards the near edge of the track, endeavouring to reduce his speed to between twenty and thirty miles per hour prior to reaching the left hand bend connecting the Finishing Straight with the main track. A broad black line, commencing in the last fifty yards of the pull-up leading into the main track is painted on the concrete and known as the Limit Line. This is not to be crossed by drivers when pulling up. The driver having reached the main track is to continue to decrease speed until crossing another black line, known as the stopping line. Any driver coming to a stand prior to having passed the stopping line will be disqualified. After passing this drivers will turn in at the gate and so leave the track.

NOTTINGHAMSHIRE.

THE ninth annual meeting of the Nottinghamshire A.C. was held at the Victoria Station Hotel, Nottingham, on the 28th ult. Mr. Charles Hardy presided and expressed regret at the coming severance of his close association with the club. He proposed Lieut. Col. R. L. Birken as his successor. This was seconded by Mr. A. N. Lee and carried with animation. Mr. Booth Granger presented his annual report, recording the chief events of the year and mentioning that twenty-nine members had been elected, while resignation and death accounted for the loss of twenty-nine. The total membership is now 203. The report and accounts having been adopted the retiring vice-presidents were re-elected, Mr. Charles Hardy and Mr. C. Cowes being added to the list. The ballot for ten members of the committee resulted in the election of Messrs. J. P. Smith, P. L. Huskinson, R. L. Jones, H. D. Bayley, M. R. Browne, W. D. Foster, A. N. Lee, R. A. Young, H. Bircumshaw, and H. Belcher.

Messrs. C. Perry, G. E. Butcher, J. H. Southorn, and A. Osborne were re-appointed hon. timekeepers, Messrs. R. Hutchinson, jun., and H. H. Bowden hon. auditors, and C. E. W. Lucas hon. solicitor. The latter, in reply, said that it spoke a good deal that during the last two years there had not been a single case concerning any member of the club.

A discussion ensued upon a suggestion to reduce the subscription, and ultimately it was agreed to request the committee to consider the matter.

THE HARTLEPOOLS.

INTEREST in the Hartlepoons A.C. is growing apace. The annual dinner was held last week under very favourable auspices, Mr. Geo. Jones, J.P. (president) being in the chair. Amongst those present were the Mayor of West Hartlepool (Coun. Johnson), Major Tomkins, and Messrs. J. Nattras and Toy (Stockton A.C.).

In submitting "The Club" His Worship the Mayor, who was enthusiastically "tootled" with motor-horns, said the club deserved to prosper, because its members were such a good-hearted lot of people. Motors, he proceeded, had come to stay, and they would travel over the valleys and plains until they were perhaps displaced by aeroplanes.

Mr. W. S. Merryweather, J.P., spoke of the dangers of travelling too rapidly round corners, and contended that if motorists gave more attention to things like that motoring would become more popular.

Major Tomkins (chairman of the Stockton A.C.) said the Hartlepoons motorists had a reputation for carefulness in driving. Sometimes, however, they were not particular about railway gates, but they always managed to get through them.

Mr. C. Smith (chairman of the club) said that during the past year the members had been endeavouring in some way to combat the prejudice against motorists and motor-cars. The prejudice was no doubt caused in many instances by reckless driving. They had formed a driving committee, composed of one or two motor-cyclists, some of their own committee, and last, but not least, their police force. Through the North Eastern Association they were associates of the Royal A.C. and also affiliated members of the M.U. Referring to the Driving Committee, he said it was their duty to report any case of inconsiderate driving. If the charge was proved the offender was either expelled from the club or severely reprimanded. That would tend to show, he remarked in conclusion, that the club were opposed to reckless driving either by the members or other motorists in the district, and would do more good than the old-fashioned police-trap.

The secretary (Mr. H. E. Pyman) reported that the club had nearly forty members, and was in every way in a sound position.

COVENTRY MOTOR CLUB.

THE Coventry Motor Club are organising a petition with a view to safeguarding all road users, especially at night, with regard to cattle on the road. It seems quite unreasonable, they say, that vehicles under control, such as motor-cars, cycles, and carriages, should carry lights, while herds of cattle should be driven in darkness, to the danger not only of other road users, but also of the cattle.

BEDFORDSHIRE.

ON Monday the Bedfordshire A.C. held their annual dinner at Luton, when between sixty and seventy took part in a pleasant gathering. There was a good attendance of public men in the county and the speeches bore tribute to the increasing care with which cars are being driven.

YORKSHIRE CHAUFFEURS.

THE recently-formed Yorkshire Chauffeurs' Association has held another successful meeting at the Marquis of Granby Hotel, Lowerhead Road, Leeds, when representatives from Morley, Bradford, and Pontefract were elected members of the committee. Mr. E. Ellett, the hon. secretary, was in the chair, and explained that some time in June a competition for members would probably be organised, which should not only prove popular with the public, but also give them some assurance of the ability to drive shown by members of the Yorkshire Chauffeurs' Association.

ESSEX MOTOR BOAT CLUB.

AT a concert promoted by the Essex Motor Boat Club at the Nore Yacht Club House, Southend, a few days ago, the Vice-Commodore, Mr. W. G. Tabet, presided, and the Mayor of Southend, who is the Commodore of the Nore Yacht Club, referred to the advantage that was gained by the latter in allowing the Essex Motor Boat Club to have its headquarters on their premises.

SCOTTISH.

SIR J. H. A. MACDONALD, Lord Justice-Clerk of Scotland and president of the Scottish A.C., took the chair at the annual dinner in Glasgow on Tuesday night. Among the three hundred members and guests who attended were Prince Francis of Teck, Lord Dunedin, the Lord Provost of Glasgow, the Moderator of the Church of Scotland, Sir Samuel Chisholm, Messrs. Robert Balfour, M.P., H. A. Watt, M.P., John Adam, J. Orde, W. McKillop, M.P., J. R. Nisbet, Colonel Bennett, and R. J. Smith (secretary).

Lord Dunedin proposed the toast of "Automobilism," remarking that in the old days probably the function of the Club was to introduce a budding pastime to a large public which did not know much about it; he now regarded the Club to be an intermediary between automobilists on the one hand and the general public and the authorities on the other. There were two sides to the question. No man ought ever to go out for a drive without reflecting that he might be a nuisance. After all, one had a great deal of sympathy with the local authorities in the matter of roads, for there was no doubt that the roads were being subjected through automobilism to an amount of wear and tear that they were never subjected to before. Speaking generally, he did not suppose that any of them would mind an increased payment to help the roads.

Prince Francis of Teck, in replying to the toast, expressed the pleasure it gave him to be present, because he knew what yeoman service the Scottish Automobile Club had accomplished in the past for the good of automobilism. Automobilists claimed to stand in a very firm and solid position. The affiliation scheme had produced a body of gentlemen 14,000 strong who were thoroughly versed and cognisant of the movement, united under one head and working through the various districts for the great advance of the movement, and for its greater good. Whereas in 1905 the registered cars numbered somewhere about 65,000, now they numbered 157,000. The export of cars, valued at £3,000,000 sterling, nearly equalled the imports. They had 55,000 motor-cycles running on the road, and the export trade amounted to 57,000 machines. It therefore behoved them to reflect that they played a very important part in the trade life of the country. Some few months ago he regretted to think they must admit that the automobile was not the most popular creature that crept God's earth. That unpopularity was decreasing, and he thought with care and with due cognisance they might in a short period be able to place themselves in the position once more of being popular, because he thought it had come home to all those who were driving that unwholesome recklessness with regard to other users of the King's highway would not be allowed by all right thinking people. It was all very well on the straight roads of France or Germany, where they could see twelve miles ahead, but here there was a limit and there were corners.

Sir J. H. Macdonald, President of the Club, also replied, urging that automobilists should compile statistics disproving that the motor-car imperilled the safety of the community. Most of the accidents were due to persons who took no reasonable care of their own safety.

SCOTTISH MOTOR TRADE ASSOCIATION.

THE dinner held annually in connection with the Scottish Motor Trade Association, and in conjunction with the Motor Exhibition in the Waverley Market, Edinburgh, took place in the North British Station Hotel, Edinburgh.

Mr. Thomas Shaw, Dundee, the president of the Association, was in the chair. The company numbered 250, and included several gentlemen

prominently associated with the motor organisations and the motor industry. Messrs. W. L. Sleight, Edinburgh, and J. H. Paterson, Aberdeen, acted as croupiers.

Sir John Macdonald, proposing the toast of the evening, the Scottish Motor Trade Association, said he was beginning to feel rather a veteran in the cause of motoring. After recalling some of the incidents of the thousand miles reliability trial of 1900, Sir John said nobody who took part in that event, only nine years ago, could have believed that any such meeting as this would take place at this time. In 1900 there was not a single agent dealing with cars or a manufacturer making them in that city. As regards their Show, he was quite convinced that if there were any gentlemen who had thought it would be as well that there should be no exhibition except that in London, they were now convinced that they were in error. If pressure had been put on to stop the Edinburgh show it could not, he was sure, have been stopped, and pressure would not have been favourable to the exhibition at Olympia.

THE Mansions Motor Garage Company has been added to the R.A.C.'s list of officially appointed motor schools.

BOTH the Bury and West Suffolk and the Halifax Automobile Clubs have resolved to become associated with the Royal A.C.

MR. ARTHUR CALEY has been elected president of the Lancashire A.C.

THE Roads Improvement Association, Ltd., have asked Col. R. E. Crompton and Mr. Rees Jeffreys to write papers on their behalf for the forthcoming road conference to be held in London by the County Councils' Association on April 28th and 29th and May 1st.

LIEUT.-COL. W. A. JUPP has been appointed secretary of the Motor Yacht Club and will live on board the "Enchantress." A house dinner is being held on the boat to-day (Saturday).

MAJOR H. S. STREATFIELD, J.P., will preside at the annual dinner of the North Eastern A.A. at Newcastle on the 5th inst.

COMPANY NEWS.

In the case of New Companies the file number is given at the end of the particulars.

WITH a capital of £30,000 in £1 shares and offices at Cumberland Park, Willesden Junction, London, N.W., Iris Cars, Ltd., has been registered.

THE Long Acre Autocar Company, Ltd., has been registered with a capital of £3,000 in £1 shares.

HUMBER, LTD.—The shareholders of Humber, Ltd., at the adjourned annual meeting at Coventry on Monday, approved the reconstruction scheme submitted by the investigation committee, of which Lord Russell was chairman. Lord Russell said the committee were unanimous that the company's affairs were by no means in so bad a position as necessity for reconstruction appeared to indicate. The amount produced by the new scheme would be £120,000, which would be sufficient to set the company firmly on its legs, and put it in a good position. Shareholders had an opportunity of keeping alive a magnificent property and they would have value for money invested. Mr. Edward Powell, chairman of directors, who presided, strongly advised the shareholders to keep up this magnificent business, although under the present scheme he retired from the board altogether. He gathered that the policy of the new board would be in some respects such as he would not be in accord with, and it was necessary that there should be harmony. Some months ago he intimated to his colleagues that for personal reasons he intended retiring from the managing directorship. The business amply justified the call for the additional capital asked for, and it only needed energetic and capable management to secure highly satisfactory results. After a short discussion the committee's scheme was approved.

DUNLOP PNEUMATIC TYRE.—A meeting of the Dunlop Pneumatic Tyre Company was held on Monday to consider "agreements granting to a new company, to be called the Dunlop Rubber Company (Far East) (Ltd.), the exclusive right to manufacture in or import into Japan and other parts of Asia east of Burma cycle and motor tyres and rubber goods, under the name of 'Dunlop' or other names used by this company, and to take shares in such company when formed." The resolution was carried.

BUSINESS NEWS.

MESSRS. J. KEELE, LTD., have been appointed London agents for the Rota detachable wheels of the Coventry Detachable Wheel Company, Ltd.

FROM the Nathan Novelty Manufacturing Company, of Reade Street, New York, comes a copy of their catalogue of motor accessories, which include tyre trunks, hood covers, storm aprons, lamp covers, tool rolls, &c.

WE learn from Messrs. Clement-Talbot, Ltd., that the Talbot cars on view at the Edinburgh Show last week were of 12-h.p., 15-h.p. and 25-h.p.

THE County Chemical Company, Ltd., are opening a new carbide store at Rosebery Place, Kingsland, N.E.

STERNOIL was used by H. V. Colver in making the six hours' motor cycle record on the Canning Town Track last week. He covered 270 miles 1,170 yards.

MESSRS. SAMUEL BROTHERS, LTD., the well-known tailors of Ludgate Hill, London, E.C., are introducing a new style of motoring gloves fashioned on the lines of fingerless mittens.

AUTOMOBILE ACCIDENTS.

RETURNS have been compiled by the Automobile Association of accidents in which motor-cars were concerned during the last few months. The appended details cover the period between November 14th, 1908, and January 23rd, 1909. The figures show that out of a total of thirty-eight fatalities from accidents in which the motor vehicle was more or less directly concerned during ten weeks, in no fewer than twenty-eight cases the drivers of the cars involved in the accidents have been completely exonerated by juries. In five cases no details are to hand as to the result of coroners' enquiries, and in only three cases have the drivers been committed for trial.

The records of accidents not attended by fatal consequences are also of great interest. It is well to point out that the injuries to members of the public for the week ending December 20th include two cases in which pedestrians were walking in the road at night, and one case in which a motor-car was overturned, three persons being injured. Included in the figures for the week ending January 2nd are two persons injured while travelling in a skidding motor-omnibus; eight persons were reported as injured in similar manner during the week to January 10th, and four persons were injured from the same cause during the week January 23rd.

FATALITIES.

Period November 14th to January 23rd (ten weeks).

| Week Ending. | Fatalities to Motorists. | Fatalities to Public. | Results—where known—of inquests and Trials of Drivers |
|--------------|--------------------------|-----------------------|---|
| Nov. 21 | 0 | 4 | All drivers exonerated and verdicts of accidental death returned. |
| Nov. 28 | 1 | 8 | Six verdicts of accidental death and drivers exonerated from blame. One driver committed for trial. One verdict not reported. |
| Dec. 5 | 1 | 0 | Skidding car, motorist thrown out and killed. |
| Dec. 12 | 1 | 3 | Two drivers completely exonerated, one simple verdict of accidental death. One verdict not reported. |
| Dec. 19 | 0 | 1 | Verdict of accidental death and exoneration of driver. |
| Dec. 26 | 0 | 6 | Five verdicts of accidental death, with, in two cases, complete exoneration of drivers reported. One verdict not reported in press. |
| Jan. 2 | 1 | 5 | Three drivers exonerated from blame. Two drivers committed for trial. |
| Jan. 9 | 0 | 3 | All drivers exonerated from blame by juries. |
| Jan. 16 | 0 | 3 | All drivers exonerated from blame by juries. |
| Jan. 23 | 0 | 1 | Boy killed by motor trolley. Verdict not yet reported. |
| Total. | 4 | 34 | |

ACCIDENTS.

Period November 14th, 1908, to January 23rd, 1909 (ten weeks).

| Week Ending. | No. of Accidents. | Accidents resulting in no Injuries. | Injuries to Motorists. | Injuries to Public. |
|--------------|-------------------|-------------------------------------|------------------------|---------------------|
| Nov. 21 | 11 | 0 | 6 | 8 |
| Nov. 28 | 17 | 5 | 8 | 12 |
| Dec. 5 | 11 | 6 | 0 | 5 |
| Dec. 12 | 9 | 3 | 1 | 5 |
| Dec. 19 | 18 | 4 | 5 | 12 |
| Dec. 26 | 20 | 5 | 14 | 11 |
| Jan. 2 | 11 | 6 | 2 | 4 |
| Jan. 9 | 15 | 4 | 6 | 12 |
| Jan. 16 | 14 | 4 | 4 | 14 |
| Jan. 23 | 7 | 3 | 3 | 5 |
| Totals | 133 | 40 | 49 | 88 |

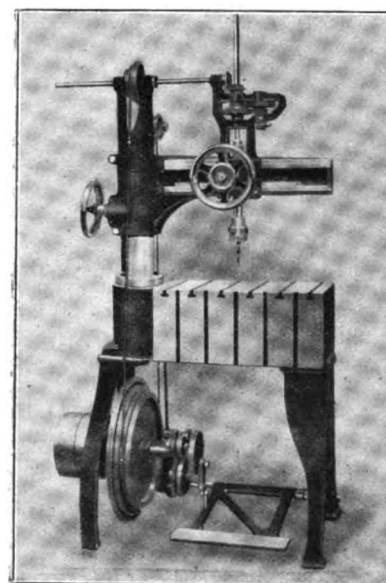
THE danger incurred by the practice of one motor-car being employed to tow another was illustrated at the coroner's inquiry into the death of Robert Lovell, 45, a motor fitter, of Clapham Road, S. W. According to the evidence, Lovell was in the motor-car which was being towed. The first motor-car turned across the tramlines to enter a garage, but stuck at the entrance, leaving the second motor-car partly on the tramway. A tram-car dashed into it, and Lovell was thrown under it and injured, subsequently dying in St. Thomas's Hospital. The Rev. Herbert Shepherd, who was in the tramcar and saw the accident, said that the vehicle was being driven very slowly; and the driver also deposed that the two motor-cars came right across the track and gave him no time to pull up. Other evidence was given of a somewhat contradictory character, and finally the jury returned a verdict of "Accidental death."

AT Runcom on Monday evening a motor-car belonging to Mr. Lloyd Jones, of Liverpool, fell into the Manchester Ship Canal. The car

brushed aside the protecting chain of the transporter bridge, and, as the transporter car was not in dock, leapt over the edge and, turning a somersault, dropped on its side, into about three feet of water. The driver, Frank Pilling, fell underneath the car. Fortunately, the tide was in, or the shore would have been dry. The occupants were the owner, who escaped with a shaking and wetting, and Mr. Bolton, of Liverpool, who was severely bruised and is suffering from shock. The driver had his head cut and his ribs badly bruised. He explains that he did not know the district, and seeing the light of the transporter car, which was approaching the side, he thought he was on the right road.

A NEW DRILLING MACHINE.

MESSRS. DRUMMOND BROS., LTD., of Ryde's Hill, Guildford, have, as is well known, specialised on machines and tools for automobile makers and repairers. They have brought out several excellent devices for increasing the efficiency of motor-car plant, and in making a study of the practical requirements of those who are interested in the automobile industry the firm have done well. One of their newest appliances is the Sensitive Radial Drilling Machine, shown in the accompanying illustration. This has been designed to fulfil the requirements of motor repairers. At the same time, it will also prove serviceable for general shop use. The large bed is of the heavy box form, while the provision of side slotted wings makes the drilling of large and awkward pieces easy. It is mounted on heavy standards planed to fit planed surfaces on the bed, and the heavy fly-wheel is



mounted on anti-friction rollers, complete with treadle, and fast and loose pulley on the fly-wheel spindle for the power drive. The radial arm is of extra stiff construction, and is raised or lowered by a new patented form of steel spiral working into a steel cut rack. It can be swung at any angle between 120 deg. and locked in position, and carries a back-gear travelling head, moved along the arm by a steel cut rack, steel pinion, and polished hand wheel. The steel spindle, running in a gun-metal bushed steel raising and lowering sleeve, is actuated by the hand wheel. It is fitted with a Westcott's Little Giant triple grip drill chuck.

The tool can be driven by either foot or power. Hitherto there have been difficulties attending the design of foot-driven drilling machines, owing to the great exertion required to drive. In the new machine which Messrs. Drummond, Ltd., are placing upon the market 1-in. holes can be drilled at a speed of about six minutes per inch in cast iron without previously using a small drill. Considerably larger holes than 1-in. can easily be machined with a pin iron, and for smaller drills this new Sensitive Radial Drilling Machine will do extremely fast work, the treadle work being exceedingly light for such operations.

Messrs. Drummond Bros., Ltd., claim that the reason for the increased range and capacity of their appliance consists in their new patented form of simple direct drive, with a very light belt at high speed. This drive goes direct to the bevel wheels, which have ball thrusts, and the back-gearing between them and the spindle for heavy work. Another point of advantage is in the anti-friction roller drive to the fly-wheel, with direct simple connection to the treadle. Structural points of importance are in the rigidity, stability, and weight of the standards and bed of the machine, the merits of which should lead to its adoption in many of the leading motor repair shops of the country.

CASES AGAINST MOTORISTS.

WARNING MOTORISTS OF TRAPS.

On the 28th ult. Mr. E. J. Robertson, living at Westhill, Wandsworth, answered at the South Western (London) police court to a summons charging him with unlawfully obstructing Constables Welton and Langley in the execution of their duty. Mr. Muskett (Messrs. Wontner) prosecuted on behalf of the Police Commissioner, and Earl Russell defended in the interests of the Motor Union.

The proceedings, said Mr. Muskett, had been taken under section 2 of the Prevention of Crimes Amendment Act, which made it unlawful for anyone to resist or obstruct the police in their duty. On December 26th three police officers were specially employed in Portsmouth Road, Putney, to test the speed of motor-cars on measured furlongs. The defendant rode up on a bicycle, and, having dismounted, kept the constables under close observation. Two motor-cyclists were observed some distance away, and as they entered the measured furlong at a speed estimated by Constable Welton at thirty miles an hour, the defendant shouted to them, "Stop, stop; you are in a trap." The riders slowed down and passed out of the furlong at a speed which would have been useless to place under test. The defendant then rode out of the "control," and gave warning to the drivers of at least twelve motor-cars, all approaching the furlong at a great speed. The officers, finding their functions useless, shifted their observation. The defendant followed, however, and signalled to other cars in a similar fashion. The officers were consequently unable to carry out their duties. The defendant, when taxed with obstructing the officers, admitted shouting, but denied doing so for the purposes suggested. This was not an isolated instance, continued Mr. Muskett, for the same kind of obstruction was being carried on throughout the country by employees of motor associations, though he was bound to say that, so far as he could ascertain, the defendant himself was not so engaged.

Constable Welton gave evidence as to the conduct of the defendant, and the further investigation was adjourned for a week.

EXCEEDING LEGAL LIMIT.

Mr. Edward Manser, of Sanderstead, was summoned at the Wimbledon Police Court for exceeding the legal limit in the Coombe Lane, Wimbledon. A lady who was in the car at the time said she was watching the speedometer practically the whole of the journey and over the measured furlong it recorded only eighteen miles an hour. Ultimately the Bench were divided in their views and the summons was dismissed.

ALLEGED DANGEROUS DRIVING.

At Chelmsford, Basil Rayner has been fined £5 and costs for dangerously driving a motor-car in Broomfield Road in that town. It was alleged that he had driven at a speed of thirty miles an hour from one side of the road to the other. His defence was that he had driven on the wrong side of the road in order to avoid splashing foot passengers on the pathway. A denial of the speed alleged by the police was also made.

On the 28th ult., at Bradford Brook Butterfield, a motor-car driver was summoned for driving his vehicle to the danger of the public. He collided with a wagon, the impact being so severe as to throw himself into the road, while his passengers were in such a condition as the result of their injuries that they were unable to attend the court. The Bench said that the case was one of the most serious they had had before them and imposed a fine of £10 and costs, or, as an alternative, nine months' imprisonment.

MOTOR-CAR AS AN OBSTRUCTION.

At the Wilmslow Sessions Cyril Tatham, of Wilmslow Park, has been summoned for causing an obstruction on the highway. Sergeant Leigh said he was in the Hough district, when he found a motor-car unattended and across the road, the whole of the highway, he said, being blocked

with the exception of about six feet. He watched the car for fifty minutes, and saw several vehicles come up. In one case a horse would not pass, and vehicles had to go on to the grass in order to pass. The defendant then drove up in a motor-car, and said he had had to leave his car because he had run short of petrol. The Bench fined him 10s. and costs.

ROAD REPORTS.

HAMPSHIRE—Among the county roads under repair are those on Hartford Bridge Flats; between Otterbourne and Chandler's Ford, on the Winchester-Southampton Road; and on the Botley and Bishop's Waltham main road near the station at the former place.

RYDE (I.O.W.)—Metal has lately been spread on the following roads:—Newport road to Osborne College, Newport road to Ryde, Newport to Sandown road, via Arreton and Apse Heath. The total length of metal to be spread in the Bembridge district is 550 yards, and about 200 yards in the Godshill district. It is intended to repair the road from Godshill to Whitwell and Inton, also Bembridge Village and Taverland. These repairs will be in progress during February and March, but the roller will be used directly upon the metal, so that, unless motorists approach while the work is in progress, little inconvenience will be experienced.

DUBLIN—The County Surveyor of Dublin recently asked the North Dublin District Council to allocate the sum of £11,200 for the maintenance of the roads, &c., during the current year, this being an advance of nearly £800 on last year's estimate, the necessity for which was said to be increased motor traffic. After discussion, however, the amount was fixed at the same figure as in 1908.

GROOMS BECOMING CHAUFFEURS.

In Putney there is a Coachmen and Grooms' Club, which held its seventeenth annual dinner last week, at the Railway Hotel, Putney. From a membership of 130 there was an attendance of ninety-five. The toast of the club was proposed by Mr. Stamper, who remarked that since he first joined the club many changes had taken place. He hardly knew some of his old friends in a pair of motor goggles and motor cap. But they were still the same old friends, and they were glad to have them. And if motor-cars were coming in they must have the motor men.

Mr. Walters, in responding to the toast, said that as one who had been connected with the club for a good many years he also saw the changes indicated by the chairman. When he first joined the club there were forty-five members; two years ago they numbered 150. Since then their numbers had dwindled to 130. That was on account of the increasing number of motor men. Still, he was pleased to say several motor men were connected with the club. He had urged upon the members the necessity of devoting their attention to the motor trade, and if they did not the club would become a thing of the past.

MOTORISTS ORGANISING AT NEWARK.

MEETINGS of local motorists have been held at Newark, when it was agreed that a local motoring organisation was much needed. It was further resolved that it should take the form of a branch of the Motor Union, to be called "The Newark and District Centre of the Motor Union of Great Britain and Ireland." A representative committee has been appointed to protect the interests of motorists in the district. Lord Walter Hervey is the president, the vice-presi-

dents being the Right Rev. the Lord Bishop of Southwell, Mr. L. N. Barrow, J.P., Mr. T. Craven, J.P., and Mr. T. F. Warwick. Mr. W. Mumby, J.P., is the chairman of the committee, of which Mr. J. Mather, Castlegate, Newark, is the secretary. Among the members of the committee are two County Councillors, Messrs. J. C. Fisher and C. J. Huskinson.

MANCHESTER MOTOR SHOW.

WITH reference to the Motor Show which the directors of the Manchester and District Motor Trades Association are organising at Belle Vue from the 19th to the 27th of the present month, we understand that practically the whole of the space originally intended to be let has been allotted. A considerable extension of this area is now contemplated to meet the demands of those who have not already taken space.

PUBLIC SERVICES.

ON the motor-cabs which the Urban Taxicabs, Ltd., of 20, Avonmore Road, West Kensington, are putting upon the streets of London a new device has been adopted to facilitate the passenger communicating with the driver. This consists of a sliding panel in the upper part of the window behind the driver, giving an aperture sufficient to enable the passenger within to speak to the driver on the box.

THE Provincial Motor-cab Company, Ltd., have now a number of taxi-cabs plying for hire in Birmingham. They are 18-25-h.p. Siddeley cars, and may be engaged at the usual rates. The headquarters of the company are at Five Ways Garage, Ladywood, and the local manager is Mr. Cecil Harris.

FORTHCOMING EVENTS.

FEBRUARY.

- 6th (S.).—Cambridge University M.C.C. Petrol Consumption Trial.
- 12th (F.).—Annual Dinner of the British Motor Boat Club.
- 19th (F.).—27th (S.).—Manchester Motor Show at Belle Vue, Manchester.
- 20th (S.).—First Annual Dinner of the Sutton Coldfield A.C.
- 22nd (M.).—Manchester A.C. Dinner.
- 25th (Th.).—Irish A.C. Annual Meeting.
- 26th (F.).—Hull A.C. Annual Meeting.
- 26th (F.).—Annual Meeting of the Motor Yacht Club.

MARCH.

- 1st (M.).—The Road Trials in connection with the Army Council Competition for light tractors commence.
- 18th (Th.).—Royal A.C. Annual Meeting, followed by Annual Dinner at the Covent Garden Theatre.
- 20th (S.).—27th (S.).—Cordingley's fourteenth Annual Motor-Car Exhibition and Mart and third Aero Show at the Agricultural Hall, London, N.

APRIL.

- 10th & 12th.—Easter Meeting at Brooklands.
- 24th (S.).—Auto-Cycle Union's Quarterly Trial.
- 29th-30th.—Road Conference in London of the County Councils Association.

MAY.

- 26th-June 1st.—Irish Reliability Trials.
- 31st (M.).—Whitsuntide Meet at Brooklands.

JUNE.

- 10th-18th.—Prince Henry Trophy.
- 14th-19th.—Scottish Reliability Trial.

LIGHTING-UP TIME—LONDON.

| | | |
|---------------|----------|----------|
| Feb. 6th—5.54 | 8th—5.57 | 10th—6.1 |
| 7th—5.55 | 9th—5.59 | 11th—6.3 |
| 12th—3.5 | 13th—6.7 | |

THE Motor-Car Journal.


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COMMENTS.



THE old brigade of motorists—those who journeyed forth from Whitehall Court, London, on the social excursions which the A.C.G.B.I. organised in the days when motor-cars were regarded with curiosity, will remember the jaunts over Salisbury Plain. Ten years ago—at Easter—the club had a tour, reaching Reading the first evening and Salisbury on the following evening. It was a gallant procession, led by Mr. F. H. Butler on

his 5-h.p. double-cylinder Benz dogcart, with the Hon. J. Scott Montagu, M.P., Mr. J. R. Hargreaves, Dr. Porter, and Mr. Ernest Estcourt on Daimler cars, ourselves on an Iveagh phaeton of the M.M.C. type, Dr. Acworth on a motor-tricycle, Mr. and Mrs. J. A. Koosens on their famous Lutzmann, Mr. and Mrs. Buttemer on the Benz Ideal, Mr. J. Lyons Sampson on a Benz Victoria of 5-h.p.; others on steam wagonettes and electric carriages; and the Rt. Hon. J. H. A. Macdonald, K.C.B., Mr. Roger Wallace, Mr. Worby Beaumont, Mr. Staplee Firth, the late Mr. Andrew Barr and a few others who have since become famous in the motor world. It was a notable party that assembled at Stonehenge and traversed Salisbury Plain. By a curious coincidence Mr. F. H. Butler is again associated with this great tract of country, the War Office having communicated with him and the Aero Club agreeing to allow experiments with regard to aeronautical matters to be held on War Department land. Mr. Butler is naturally gratified at this encouragement, and declares that a series of aviation trials will be held on Salisbury Plain in the summer. And so the district which has been famous in national annals since the days of the Druids, and which is so pleasantly associated with the early adventures of motorists in this country, will probably be identified with the next line of advance, the ascent of man into the air.

A well-mannered Hog.

A REAL hog was the cause of an appeal case heard in the Courts on Monday, which enabled three learned judges to disclose a great knowledge of porcine manners. On a fine afternoon in August, 1907, a motorist was driving a car on the high road from Truro to Newquay. At the same time a sow left the restricted area of a farmyard to take a walk abroad. It did so openly, in broad daylight, for all the world to see. There was no clandestine intention—just a harmless little outing which threatened no ill to any one. Arrived at the cross-roads, the pig sat down to rest awhile, although one witness averred that the animal “sat up on her haunches.” The car and the sow having arrived on the scene a horse attached to a cart came along from another direction, and took fright at the sight of the resting wanderer from the sty. To avoid a collision with the cart the motorist turned his car to one side, struck a wall and got the worst of the encounter. Then he sued the farmer who owned the pig in respect of the damage to the automobile. The case was so complicated and the decision of the judge at Bodmin Assizes so inconclusive that the defendant appealed. The appeal case was concluded on Monday, seventeen months after the sow frightened the horse that nearly collided with the car that struck

the wall that damaged the car on the highway in Cornwall. It has now been held that the farmer was not liable, upon the ground that, even assuming that the pig was improperly on the highway, the negligence of the defendant, if any, of allowing the pig to be there was not the direct cause of the damage, which was caused by the horse shying in the cart. In bringing actions it is as well to go down to the root of the matter. In this case the hog was not to blame, and, as Lord Justice Moulton observed, “the pig got up the moment the motor horn was sounded, as a well-behaved pig should do.”

Our Flying Progress.

ALTHOUGH our title is “The Motor-Car Journal,” attention may well be drawn to the sub-title on the familiar front page, “a medium for all interested in self-propelled traffic,” to which might now appropriately be added “by land, sea, or air.” We are led to this reflection by an interesting comparison which a loyal reader has made in the letter appearing in our correspondence columns. He has voiced an impression that is rightly abroad that the *M.C.J.*, taking no merely terrestrial or lowly view of its contents, has flown upwards and now chronicles the movement for aerial navigation more completely than any other journal. Even those that are specially devoted to the subject lack that comprehensive collection of news which appears in our columns week by week, and it is evident that those engaged in actual experimental work are now looking to our columns for the record of progress.

A Roll of Honour.

THE decision of the Lancashire A.C. to establish a roll of honour is a good one, and should do something to assist in the development of a proper pride in club life. Now that the avenues of organised activity on the part of motorists have been so greatly curtailed there is a difficulty in many districts in replacing the natural resignations by death, removal and the like. Anything that tends to establish a kind of local patriotism in club affairs is to be welcomed; and the proposal of Mr. Hodson, of Preston, to the Lancashire automobilists was promptly endorsed. Of course, there are vice-presidencies to offer, but such offices generally carry an amount of activity. The new distinction is similar to the freedom of municipalities, and should be as jealously guarded. There are a few to whom such distinction might be suitably offered, if it were already in existence in their clubs, and of these the names of a worthy couple in contiguous counties occur as we write, viz., Messrs. Charles Hardy (Nottinghamshire), and Godfrey Lowe (Lincolnshire).

Motor-car Imports and Exports.

THE reputation for quietness which last year obtained as regards the importation of foreign-built motor-cars and parts into this country is fully maintained in the returns now available for the first month of 1909, the total of cars, chassis and parts only amounting to £229,628 as compared with £251,287 in January, 1908. The arrivals of complete cars numbered 177, of a value of £60,316; 286 chassis estimated at £73,310 were also received, to which have to be added motor-car parts to the extent of £96,052. As regards the British export trade in motor-

cars, the returns available show that this branch is also still affected by the general depression in trade, the value of the aggregate shipments during last month only having amounted to £94,370 as contrasted with £107,152 in January last year. Altogether 166 complete cars were sent out of this country, of an estimated value of £60,942. The number of chassis exported was 18 (£5,867) while parts were responsible for a further £27,561.

Scotland and Tramcars.

MORE prompt than the Local Government Board for England, the Secretary of Scotland has already issued an amending Order to the Motor Car Act in connection with the passing of tramcars by motorists. The effect of this is to prevent the former regulation of 1904 from being so interpreted as to impose a rigid requirement on a motor-car overtaking a tramcar to keep to the right or off side of the same. The new Order provides expressly that the term carriage "shall not include a tramway car or any other vehicle which runs on affixed roads," but this of course does not relieve the driver from his liability in the common law, or under Section 1 of the Motor Car Act, 1903. It will still be the duty of drivers to exercise the utmost caution in overtaking and passing tramcars.



Rural Preparations for Automobile Tourists.

From a sketch in

Collier's Weekly.

Lights on Vehicles.

ON another page we give an interesting summary of the bye-laws and exemptions which have been sanctioned in connection with the Lights on Vehicles Act, 1907. A perusal of this list will show that motorists have yet much to do to educate the authorities to a universal recognition of their duty with regard to warnings as to the presence of other vehicles on the road. They might also take into consideration the question of lights to indicate the presence of cattle as well.

Actors on the move.

THE theatrical profession generally has always shown active interest in motoring matters, and there is scarcely an artiste of repute who has not become an ardent motorist. But for the use of the motor-car many of those now performing on the variety stage would find their evenings much more irksome than is actually the case. Now we hear of the automobile being used in a wider sphere and one which will probably cause some lamentation in the circles of Lord Claude Hamilton and other railway chairmen, who have often publicly referred to the effect that motor vehicles have had upon railway traffic. In connection with

a tour of Mr. Henry Arthur Jones's company, "Dolly Reforming Herself," which has been played for some time in London, the motor car is to be used to enable the company to travel from town to town. In the larger cities and boroughs a week's stay has often resulted in a profitable venture for theatrical companies, but there are many smaller places where the patrons of the player might be exhausted in two or three nights. In such cases the advantage of the motor-car is easily apparent, for the company will be able to give two or three performances and then travel on to the next town. A tour on such lines is already being mapped out. Not only will the actors themselves travel by motor-car, but scenery specially adapted for transport by motor vehicles is now being prepared and painted.

Joint Work.

THE joint meeting of the British Motor Boat, the Motor Yacht, the Essex Motor Boat, and the Sussex Motor Yacht Clubs, which was held in London a few days ago, suggests a course of procedure which might well be adopted from time to time by those responsible for the organisation of the motor movement on land, and, it might now be added, in the air as well. Representatives of these four bodies met to decide upon a calendar for the racing season of 1909, and to fix dates which, though still subject to the confirmation of the Racing Committees of the individual organisations, have been decided with a view to avoid that clashing which has sometimes led to the comparative failure of what would otherwise have been successful meets of motor bodies.

The Setting of Traps.

OFTEN are complaints being made in the southern counties with regard to the police being taken from their ordinary and legitimate duties in order to trap motorists on the highway. From time to time discussions by local authorities have drawn attention to the dangers of the continuance of this practice, and at last those directly responsible are considering taking action to meet the agreements. It is reported that in Sussex the question is now exercising the minds of some of the Standing Joint Committees as to whether they will have to appoint special staffs for the timing of motor vehicles and the heavy office duty arising where any considerable number of prosecutions have been undertaken. In view of the increase of traffic which is expected this spring, and the fact that the total fines have proved so remunerative to the authorities, it is just possible that something on these lines may be attempted. But why cannot the police constables of the South take a leaf out of the books of their confreres of Manchester, Salford and Cheshire, and decline to include "trapping" as part of their duty?

The Scottish Trial.

price, as follows:—

| | | |
|----|--------------------------------------|-----|
| A— | Vehicles not exceeding £200 | |
| B— | Vehicles over £200 and not over £250 | |
| C— | " " 250 | 325 |
| D— | " " 325 | 425 |
| E— | " " 425 | 525 |
| F— | " " 525 | 650 |
| G— | " " 650 | 800 |
| H— | " " 800 | |

For the Classes A and B the entrance fee will be £18 and for the other categories £25. Entries will be received after the code of conditions has been issued, and not later than April 30th. Vehicles will be required to be fitted with touring bodies standard to the make of car. A very complete and detailed specification will be insisted upon, in order to satisfy the Club that the entry is in exact conformity with the corresponding vehicle listed and sold by the entrant, and that it is standard in every respect. No

boring or lightening of frames will be permitted, and the marks for hill-climbing and fuel consumption forming bases for medal awards will be reduced from those formerly given, and special marks given for hill-climbing results in each class.

The L.G.B. and Speed Limit.

WE understand that some of the organisations which have been formed with the apparent result of harassing motorists and embittering the relations which now exist between them and the public are communicating with local authorities advocating that, in the event of local authorities applying for a reduced speed limit, application should be granted provisionally until good reason is shown that the reduced speed limit ought not to remain in force. This was communicated to the Southwick (Sussex) Urban Council a few evenings ago, and it was decided to support such a suggestion. The impartial man, however, will probably recognise a preposterous claim that is made by such a proposal. The present method of obtaining a speed limit has of course its objections, but, so far, it has worked fairly well, and the fact that so many refusals of

the Act were taken, and that convictions resulted in 91 per cent. of those cases. The deputation, Mr. Shuttleworth, in moving the report of the Main Roads and Bridges Committee at last week's meeting of the County Council, reported, were surprised to find a much fuller application of the law than they had reason to believe was the case, and that such an active attempt was being made to deal with the difficulty. If the public would realise the frequency as well as the severity of prosecutions against motorists, they would have more sympathy with a patient and long-suffering section of our people.

The Trial of Headlights.

APPARENTLY a hitch has occurred with regard to the proposed trial of head lights which is favoured by owners of cars and wanted by the Royal A.C. At the last meeting of the Expert and Technical Committee of the Club a letter was read from the Society of Motor Manufacturers and Traders, whose Accessory Committee had come to the conclusion that such a test would not be likely to benefit either the trade or the public. They felt that the conditions under which it was proposed to hold the



Motoring in Ceylon.—A 35-45-h.p. Mandalay Car travelling round Kandy Lake.

applications from local authorities have been made suggests that many of them are of a futile and unnecessary character. To grant a provisional speed limit without enquiry would simply be to encourage practically all the local councils to send applications through their county authorities without reason at all, and once imposed such restrictions would not be likely to be taken off.

91 per cent. of Convictions.

SOME time, filled with a strong sense of public duty, the Main Roads and Bridges Committee of the Lancashire County Council considered the annoyance that they felt was caused to the long-suffering public by motor-cars on the highways. So keenly did they feel upon the matter that they appointed a deputation to wait upon the Standing Joint Committee to urge the desirability of taking more frequent proceedings under the Motor Car Act. They accordingly presented such a view to the authorities—apparently, however, with little effect, for the committee have since been informed by the Chief Constable that during the three years ended September 30th, 1908, 145 cases of driving to the danger of the public, 251 cases of exceeding the speed limit of twenty miles an hour, and 244 cases for other offences under

test did not give a fair comparative result, and further they were opposed to any action which might have a tendency to establish a monopoly for any one manufacturer. We understand that a conference is to be held between the Technical Committee of the R.A.C. and those lamp makers and agents who are members of the Society on the subject.

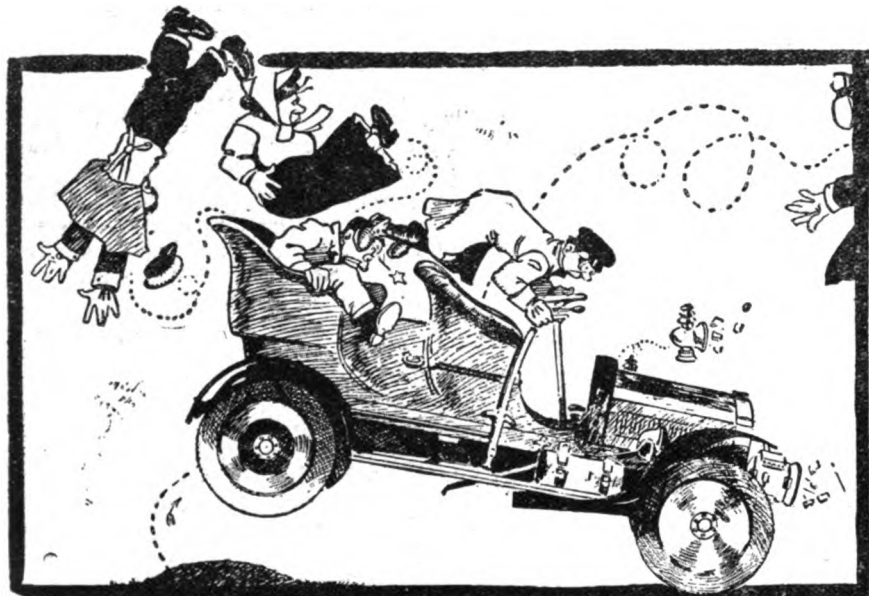
MESSRS. SMITH AND WESBY are opening a fully-equipped motor garage in grounds adjoining the King's Head Hotel and Railway Station at Saxmundham. For the past few years they have been engaged in repair work for Messrs Mann and Egerton, of Norwich, and intend to give special attention to breakdown cases. Cars for hire and fully qualified drivers will also be available for visitors to the district.

FROM Eyquem's Patents, of 31, Duke Street, E.C., come particulars of the several patterns of sparking plugs they are marketing. The firm have also taken up the sale of the "Silicia" accumulators for ignition purposes, which are claimed to have many advantages. Other specialities of the firm include the "Fast-neezie" motor corset, a useful device for temporarily protecting the inner tube of a tyre should a burst occur in the outer cover.

HOW THEY DO IT IN AMERICA.

BY CHAS. Y. KNIGHT.

THE American motorist, accustomed as he is to the most drastic treatment at the hands of the police, naturally looks upon his English cousin as having quite an easy time. But the American motorist does not always submit tamely



What happened when the Glencoe Bumps were first introduced.

to the minions of the law. One reason for this is the fact that various rural communities have seen fit to employ for constable work youths who could not earn a penny in an honest vocation. Naturally motorists resented being held up by the scum of society, and in turn the rural communities objected to having their toy policemen treated with contempt.

In one instance, in a suburb north of the city of Chicago, one of these "toy" policemen, failing to stop a motorist through the raising of an un-uniformed arm, punctured a rear tyre with a bullet from an official revolver, and incidentally narrowly missed shooting a lady in the tonneau of the car. The rural community exonerated the "toy" policeman, but the motorist did not. In a few days a car loaded with several burly young men passed through the same village at a speed in excess of the legal limit. Mr. "Toy" Policeman raised his arm in command to stop, which was done. Then, as is customary, he stepped upon the running board of the "captured" car and ordered his captives to the police station. Here is where the worm turned, and the persecuted turned upon the persecutor. Mr. "Toy" Policeman was quickly thrown into the tonneau, the car accelerated and steered for the open country, where Mr. "Policeman" was dropped "twenty-five miles from nowhere."

The next move upon the part of the Rural Community was to give the "toy" policeman aid of most substantial character. "The Glencoe Bumps"—now famous in American motor literature—were constructed. They comprised footpaths across the main road, built of brick, rising about four inches from the ground in the centre, being cambered to the outer edges. The first illustration gives an idea of what happened to the first motorist who attempted to cross these paths at above eight miles

an hour. Many springs were broken, and passengers thrown from the car, the first week.

Then the motorists got wise. They consulted spring specialists and had their cars equipped with supplementary springs which were guaranteed to take these bumps at a speed of thirty-five miles per hour. The second illustration (which, like the other, is reproduced from the "Daimler Bulletin") shows a car approaching one of these bumps at this speed. Needless to say, the feat was successfully accomplished, and the motorists scored once more.

If English motorists consider themselves badly treated by the authorities, they should investigate some samples of American rural justice. Four mile limits through villages of a hundred souls are not uncommon, and when the country constables go out for victims, four miles an hour means four miles an hour and not five or even four and a half; and, as far as the motorist's evidence is concerned, it is wholly a waste of breath. He does better to plead guilty to the heinous crime, confess himself to be a wicked criminal, throw himself upon the mercy of the court and plead for liberty.

Contradicting the evidence of the police is regarded by the rural judge as a defiance of the properly constituted authorities, and penalties are inflicted accordingly.

In America, as in England, however, the problem will settle itself in time; when the people as a whole recognise the fact that mechanical locomotion is a settled fact the majority will embrace instead of repel it, and reason and justice in place of prejudice and persecution will prevail. While it may not seem possible, it is nevertheless a fact that the English motorist enjoys great liberty as compared with his American cousin in the matter of speed, and one can hardly imagine a community in England wilfully obstructing a main road with dangerous raised cross-walks throughout the entire length of the village.

PROPERTY owners, builders, and estate agents in Kent are reaping the benefit of progressive road treatment and fairer



Taking the Glencoe Bumps at Thirty-five Miles per Hour.

police methods which prevail in the county. In the favoured outlying residential districts it is a difficult matter to secure a modern residence, and those with a garage attached are snatched up as soon as vacated. A Kent firm of estate agents informed a correspondent that during the past month they had disposed of house property to motor owners now residing at Kingston, Barnes and Richmond, and such instances can no doubt be multiplied.

GOSSIP FROM PARIS.

Wilbur Wright at Pau.

Wilbur Wright has set to work again; his flights at Port Long attract every day large crowds of the cosmopolitan visitors who throng Pau at this season of the year. He acts as methodically in training his pupils as he did in training himself when he arrived in France to commence flying after an interruption of his experiments during three years and more. If the King of the Aviators wanted practice to recover his marvellous skill, it is not astonishing that his pupils, even with his coaching, should not get on the machine and fly right away over the tops of trees and houses. One of the most experienced French aviators said to me last week the world should not be surprised if Wright's pupils came to the ground more than once before gaining mastery of the aeroplane. Making the comparison between Wright's machine and the French aeroplanes of the biplane types used till now by Farman, Delagrangé, Antoinette, Moore-Brabazon, &c., he said the latter are the tricycles of the air and the former the bicycle. Any man, if he is only careful, can get on a tricycle and ride it without much danger, but he must have a considerable amount of practice before he can feel safe on a bicycle. When one has thoroughly mastered the art of balancing one's self on a bicycle the movements become so natural that they are made almost unconsciously and the rider in the end feels as at home on it as he does on foot. It will probably be the same with the Wright aeroplane, but beware of the preliminary falls! That is why my French friend does not think either Comte Lambert or M. Clemenceau will be able to compete successfully for the Monaco prize. "No," he added, by way of conclusion, "it is true the Wright Brothers' machine is, in my opinion, the only one in France with which the conditions of the Monaco competition could be fulfilled. But I do not believe a fortnight's training will, as he seems to think, enable M. Clemenceau to accomplish the feat."

An Aeroplane Competition at Rheims.

The Aviation Grand Prix is to be held in August or the beginning of September on the Plain of Betheny, near Rheims, where the grand review of 150,000 French soldiers was passed by the Czar in 1901. The spot is well chosen, as the vast expanse of flat land will enable the spectators to keep the aeroplanes in sight along the whole circuit of over six miles. It is also well selected on account of its geographical position near Paris, Belgium, Switzerland, and Germany. The programme of the week's fetes will not be published till after it has been approved by the Commission Aérienne Mixte at its meeting on the 17th inst. The money prize of the Grand Prix is £4,000, but the exact nature of the performance required to win it is not yet officially known. There will be numerous other prizes for achievements of minor importance. This great international event, which will certainly attract enormous crowds, especially if the weather is propitious, is the outcome of Henry Farman's daring cross-country flight from Bouy to Rheims. The feat raised such enthusiasm among the inhabitants of the whole district that a local committee, with the Marquis de Polignac as president and M. Roul de Bary, Mayor of Rheims, as vice-president, was soon formed to organise a great aviation fete. In a couple of weeks the subscriptions for it amounted to £6,000. In presence of that fact and of the undeniable advantages offered by the vast expanses of the Chalons Camp, and of the comparatively flat land round Rheims, the C.A.M. unhesitatingly took the enterprise under its patronage. A member of that committee told me he expected a good many foreign aviators would compete, and in reply to my questions concerning the nature of the competitions he said that, though nothing was definitely settled, he believed the Grand Prix would consist of a cross-country flight.

The Farman Aeroplane Factory.

Henry Farman has, in partnership with his brother, D. Farman, started manufacturing aeroplanes. On the premises the Farman Brothers have hired at Asnières there are already the incomplete skeletons of several new machines, and at their offices in Paris draughtsmen, under the direction of Henry Farman, are busily preparing the drawings of five other aeroplanes for which

orders have been received. However, far from abandoning his experimental work, the first three machines which will leave the improvised factory are destined to enable Henry Farman to continue it at the Camp de Chalons, where he has constructed three sheds to receive them. Two of those new machines are to be cellular biplanes with bearing surfaces measuring fifty square metres. The horizontal rudder will be placed in front at a considerably greater distance from the centre of gravity than that of his old aeroplane, and the steering gear in the small hind planes will be different from anything yet seen. An arrangement of "ailerons" will improve the lateral stability of these two machines. Each of them will be driven by a 50-h.p. motor acting on twin propellers working at about 400 revolutions a minute. The weight of the machines will be close on half a ton. The first of them will be completed by the first week in March. The third aeroplane is to be much smaller. It will not weigh more than 770 lbs. and will have a bearing surface of only thirty square metres. The machine will differ materially from the two larger aeroplanes and be provided with a quite new means of twisting the wings. For this machine Henry Farman will employ only one propeller, which will be driven by a 30-h.p. motor at a speed of 1,100 revolutions a minute. The inventor believes it will prove a very practical type of biplane, suitable for touring, because, in case of the aviator using it being forced by stress of weather to stop at a distance from his shed, it will be easily taken to pieces in ten minutes or



The Kapferer Aeroplane.

a quarter of an hour. Then the separate parts could be housed without difficulty in any shed or coach house.

Invasion by Airship.

Serious preparations are being made for the peaceable invasion of England by the air. Till now M. Clement and other owners of steerable balloons have been prevented from crossing the Channel on their airships by nothing but the want of a shelter on British soil. That difficulty will ere long be surmounted, as several people are negotiating for the erection of balloon sheds at various places on the English coast and also inland in the vicinity of London. Among them is M. Duhamel, the founder of the Aero Club Internationale de la Manche, of Havre, of which the object is, according to the articles of association, "to cement the amicable and commercial relations of France and England by the solution of the problem of the crossing of the Channel by steerable balloons and aeroplanes." One of the first ports for aerial vessels this association is seeking to create will be on the Isle of Wight, but negotiations have also been opened up with the authorities of Folkestone, Rye, Littlehampton, Hythe, Deal, Eastbourne and other places. Of course Havre is to be the headquarters of the enterprise, which aims at establishing a regular steerable balloon and aeroplane service for passengers if not for merchandise between Boulogne-sur-Mer and Folkestone or the vicinity. M. Duhamel regards the feasibility of the enterprise as "morally certain." Though it is pretty sure the Channel will be crossed more than once by steerable balloons and aeroplanes before the world is twelve months older, I am afraid the regularity of the service by aerial vessels would be interfered with by storms. MARNEY.

A PETROL MOTOR FIRE ENGINE FOR WILLESDEN.

THE latest town in the Metropolitan area to adopt motor fire apparatus is Willesden, where there has lately arrived a new self-propelled first-aid machine, comprising a chemical fire engine, hose tender and fire escape, built by Messrs. Merryweather and Sons, Greenwich. The motor is an extremely powerful one of 55-h.p., and the transmission is through a three-speed gear-box and side chains to the rear road wheels. The chemical cylinder holds 60 gallons, and delivers through 180 feet of rubber hose coiled on a hydraulic reel, arranged so that a jet can be discharged with the whole or any portion of the hose in coil. The fire escape, which can be detached in a few seconds, is of the "sliding carriage" pattern, and extends to a total height of 50 feet. The ladders are fitted with the steel tubular bow string girder truss, which adds greatly to their strength and rigidity without material increase in weight. A capacious box, fitted towards the rear of the vehicle, enables a large quantity of hose and fire brigade gear to be carried, and two hand "Kemiks" are provided for dealing with small outbreaks. The machine travelled by road from Greenwich to Willesden, the journey being accomplished in the smart time of forty minutes. It is capable of taking all the hills in the Willesden district on the top speed.

The new acquisition was not permitted to repose in the fire station very long before receiving its first call, and within a few days of its arrival the firemen effected a very smart performance in extinguishing a fire in the High Road, Kilburn, their efforts on this occasion meeting with very flattering comments from the District Council. A few days later, also, there was a call from Cricklewood. The motor covered the distance to the fire (a matter of two miles), the flames were extinguished by the two small hand "Kemiks," and a "stop" recorded in eleven minutes.

The accompanying illustration is from a photograph taken outside the Willesden Fire Station on the day of the motor's arrival, and shows the machine with a contingent of the fire brigade on board, and Superintendent Edwards, the energetic chief officer, at the steering wheel. As an evidence of the policy which the Willesden authorities have definitely decided to adopt, we understand that the new fire station which is shortly to be erected will be built without stables.

It is proposed to establish an aeroplane trial ground at Pen-en-Toul, near Vannes, France, Count Dillon having offered a large area of land for the purpose.

A GRAND aeronautical fête is to be held at Rheims, France, from August 22nd to September 13th next. The funds already amount to over £6,000.

SIGNBOARDS FOR AVIATORS.

THE increase in aerial traffic which may be expected in the near future has suggested to Herr von Frankenberg, of the German Aero Club, the advisability of arranging a system of signboards which will enable aeronauts to recognise their whereabouts without difficulty. His original proposal, which was to display the names of the place, province, and country in fifty positions in large white letters on a black ground, having been recognised to be impracticable, he has now worked out a scheme whereby Germany is divided up into ninety districts, each distinguished by a number, beginning with Berlin as No. 1. To each of the first twenty-five townships in the districts is allotted a letter of the alphabet; all smaller places are designated by combinations of two letters. Frontier places are to be distinguished in addition by coloured lines drawn above or below the numbers. Nothing seems yet to have been settled as to how

these signs are to be illuminated at night, or who is to pay for their upkeep. In France, M. Courtin-Rossignol, the Mayor of Orleans, has also taken the initiative of a somewhat similar measure. After unofficial negotiations, or, more correctly speaking, conversations with the recently created Aero Club of the town, and with the Juvisy Aviation Company, he is seriously contemplating marking out the best aerial route from Juvisy to Orleans. It is suggested that the best means to enable aviators to shape their course would be to erect high flagstaves at a distance of about two miles from one another. Each of them would bear two arrows, the one indicating the direction of Orleans, and the other the way to Juvisy. The route would traverse that part of the country on which the most convenient places for landing could be found in the case of the aviator being compelled, by accident or stress of weather, to come to the ground. The distance as the crow flies is about seventy-five miles, but the exact course

of this projected aerial highway is not yet fixed.

MR. OCTAVE CHANUTE, the "father of aviation in America," recently gave a lecture at the City Club in Chicago on "The Development and Practical Possibilities of Flying Machines."

SOME successful trials are reported to have been made at Mayence, Germany, with an aeroplane designed by Herr Hans Jorch. The apparatus is a two-decker, and the supporting surfaces are all slightly concave. A hollow body is fitted in the centre of the machine; behind, on both sides, there are curved wings, but the customary tail is lacking. The greatest length is 44 feet, and the greatest breadth 53 feet. It is claimed for the design that it will maintain its lateral equipoise automatically like a bird. The propelling power will be provided by two four-cylinder motors, each of from 35 to 40-h.p., and there will be two propellers.



The Willesden Motor Chemical Fire Engine and Escape.

AERONAUTICAL NOTES.

THE Upper Austrian Aero Union is the name of a new society which has just been formed at Linz.

LES AEROMOTEURS BELGES is the title of a company which has just been formed at Soignies with a capital of £8,000.

A NEW flying machine has lately been devised and patented by Mr. C. J. Davies, of Milford Haven. The machine is provided with supporting planes, and is propelled and raised by a screw propeller at the front of the machine and by vibrating wings.

It is now announced that M. Legagneux, and not Mr. Henry Farman, will visit Vienna to instruct the Syndicate which has purchased the Farman aeroplane in the method of operating the same. M. Legagneux is now at Chalons practising with the machine.

SEVERAL new and novel flying machines are in course of construction in the Lyons district. M. V. Mieusset, jun., is building a helicopter, which will be fitted with a 35-h.p. engine and three propellers. M. Monin is also constructing what he terms a gyroptere; this will comprise two large sustaining propellers of different diameters and rotating in opposite directions; the motive power will be supplied by an engine of 25-h.p.

MR. OLIVER K. CHANCE, of Minneapolis, U.S.A., is building a combination balloon, helicopter and aeroplane. According to the design a small saucer-shaped envelope filled with hydrogen supports some of the weight and aids in landing. A vertical mast extends through the centre of the bag, at the upper extremity of which is a propeller having a vertical axis. Below the bag is a framework containing the motor and three other propellers, whose axes are horizontal, which propel the apparatus forward, guided by a vertical rudder. There are also two rudders in front. The whole apparatus is heavier than the air it displaces.

It had to come sooner or later, and the wonder is that it has been so long delayed. We refer to the discovery of the "aeroplane face." This adornment has been discerned by a Frenchman, Professor de Prallo, who is described as a well-known phrenologist. The Professor points out the somewhat strange features of the new countenance, contrasting them with the peculiarities of the "bicycle face" and the "automobile face," but says that the aeroplane physiognomy differs from the others in all particulars. "It is noticeable in the Wright Brothers, Leon Delagrangé, Santos Dumont, and all other 'human birds,' except Farman, that their eyes are not exactly in front but more at an angle than normal, caused by 'the anxious sidelong glance' of the aviator."

SOME further details of the scheme for covering Germany with a system of airship services are now available. The engineers of the German Aero Station Company, which has been organised to carry out the plan, are stated to have already worked out designs for the halting places, which will each require an area of between seven and eight acres. At each station there will be three airship sheds, each 150 yards long, 15 yards broad, and 20 yards high, with special arrangements for ascending and landing. The Company is reported to have already selected suitable plots of ground in numerous towns, and, according to a statement issued, the establishment of a regular airship service between twenty-nine German towns may now be regarded as a certainty.

MR. ANDREW FLETCHER, of Saltoun, is reported to have placed an order for a Voisin aeroplane.

AN Algerian correspondent informs us that M. Ducos de Kouba, of that town, has ordered an aeroplane, with which he hopes shortly to make some experiments.

ON Thursday Mr. F. W. Lanchester was announced to give a paper on "Mechanical Flight" to the members of the Midland A.C. at the Grand Hotel, Birmingham.

FROM Marseilles comes the news that a new flying machine of the "helicoptere" type is being built by M. Ouyviere. The machine will be fitted with a motor of 80-h.p. and will weigh complete nearly 8 cwts.

THE Aero Club de Vichy is the name of a new association which has just been formed at Vichy. It has been practically decided to establish an aeroplane trial ground in the neighbourhood of this popular French inland resort.

ALTHOUGH not so much is heard of what is being done as regards aeroplane experiments in Germany as in France, there are quite a number of enthusiasts quietly at work in developing

their own particular ideas with regard to flying machines of the heavier than air type. At Magdeburg, Herr Grade is experimenting with a triplane weighing complete about three cwts. and having a supporting surface of 25 square metres. The motive power is supplied by a 36-h.p. six-cylinder engine which is stated to weigh only 3.3 lbs. per horse power. Professors Junkers and Reissner, of the Technical High School of Aix-la-Chapelle, have also built an experimental aeroplane, with which some trials are shortly to be carried out.

GREAT interest has been aroused in scientific circles in New York by the performance of Mr. M. O. Anthony, an electrical engineer, who successfully guided a small dirigible airship by means of wireless electricity. The experiment was conducted in a lofty ballroom, in the presence of a small company of guests. Mr. Anthony sat some distance from the balloon, and for upwards of two hours propelled it in all directions with dots and dashes flashed on the transmitting instrument and caught by the receivers fixed above the ballroom. Mr. Anthony is now building a full-size machine, for which he has taken out patents. He claims he has no longer any doubt as to his ability to supply the U.S. War

Department with airships which can be operated by wireless telegraphy at a distance of many miles.

THE supporting plane testing device at the works of Messrs. Voisin Freres, at Billancourt, near Paris, referred to in a recent issue, is actually a kind of balance, and consists of a huge wooden box, square in section, with sides of about 5 ft. in width, and it is open at both ends. At the bottom an electric fan renders it possible to produce a current of air at any required velocity through the opening. The surface or the combination of surfaces it is desired to test is then placed in front of the box to ascertain its sustaining power. The surfaces are supported by arms projecting from two frames, arranged on either side of the box, and which rests on floats in cylindrical vessels filled with water, constituting a scale beam. In carrying out the experiments, the surface to be tested being brought into position, the frame is caused, by weighting it, to assume a horizontal position, and then the blower is set to work. This forces the frame to twist round to a certain angle, and, from the amount of weight found necessary to restore it to the horizontal position, it is possible by a simple calculation to estimate the sustaining power of the whole surface.



When Aeroplanes replace Motor-Cars.—From a Sketch in the "Daily Mirror."

Aeronautical Notes—continued.

OUR Correspondence column has an interesting warning with regard to "the aerial companies which are almost certain to be launched in the future." The writer of the letter, Mr. H. V. Roe, of Manchester, is a brother of Mr. A. V. Roe, whose experiments are well known in this country.

A NEW aeroplane is about to be experimented with at Issy-les-Moulineaux by M. Lejeune. The apparatus, which was built by Messrs. Pischof and Koechlin, of Billancourt, has a bearing surface of 25 square metres, and is fitted with a Buchet three-cylinder engine of only 10-12-h.p.; the total weight of the machine is 385 lbs.

UNDER the auspices of the Aero Club of Belgium, a Nationale Aerial League is being formed, with headquarters in Brussels. Some friction appears to have arisen between the Belgian Aero and the Automobile Clubs, as to their respective official positions in the aeronautical world. The Aero Club claims the exclusive right to control all contests for the ensuing year, but the Automobile Club also contemplates organising aeroplane trials.

AT Ouistreham, near Caen, France, M. G. de Puisieux is making some experiments with a combination bicycle and flying machine. He is already stated to have lifted himself on the machine from the ground and flown a distance of nearly twenty yards. In connection with this subject it may be of interest to mention that one of the "turns" at the Coliseum, London, just now is M. Noiset on his flying bicycle, which, according to the announcements, "is a wonderful and startling novelty."

SOME discussion has arisen with regard to the comparison of the Aerial League of Great Britain with the Navy League—the one to advocate the command of the air for national purposes just as the other is advancing the claims of a strong navy for defensive reasons. Dr. A. Wallace, O.M., writes protesting against the assumption that the first and important use of aeroplanes and other flying machines and dirigible balloons will be to drop explosives or use other implements of destruction, in case of war, or as the first act of war.

M. HENRI FOURNIER is the latest French motorist to take up experiments with aeroplanes. He has had built a Voisin machine of the bi-plane type with which he hopes to compete at Monaco. The apparatus is being fitted with an Itala 50-h.p. engine of the standard automobile type except that it has been lightened as much as possible. The motor will drive the propeller through a reducing gear at a speed of from eleven hundred to twelve hundred revolutions per minute. Much interest is being shown in M. Fournier's departure, as, seeing that he weighs about fifteen stone, he must be classed amongst the heavy weights.

THOUGH there is no report of Mr. Wright going to Monaco to compete for the large money prizes offered there, M. Michel Clemenceau, who is interested in the selling of Wright aeroplanes in France, announces that he is forming a society at Cannes for the establishment of an aviation camp for two or three aeroplanes of the Wright type, which will be tuned up with a view to their competing. These will probably be steered by Count de Lambert and M. Michel Clemenceau. Early in March they hope to be able to compete at Monaco, as by that time the floating devices required by the regulations will have been fitted to the vessels. These "floaters" will take the form of cylinders of rubber-treated silk, filled with compressed air or gas.

MR. WILBUR WRIGHT and Mr. Orville Wright have promised to visit London at the end of next month. The visit will be made at the invitation of the Aeronautical Society of Great Britain, and at a special meeting of the society the brothers will each be presented with a gold medal in recognition of what they have accomplished for the science of aeronautics. It is expected that during their visit they will inspect the experimental ground of the society at Dagenham, Essex. Aeroplane sheds are in course of erection, and it is hoped to have an opening meeting in the middle of March, just before the opening of the Aeronautical Display in connection with the Motor Show at the Agricultural Hall, London. Among the new members of the society are Mrs. G. Bernard Shaw, Mrs. Edwin Mackintosh, Count G. N. Plunkett, Sir Charles Seely, and Colonel H. E. Tyler.

A NEW petrol motor for aeronautical purposes has recently been completed by M. J. Miesse, Brussels, the builder of the Miesse petrol cars. The engine comprises twelve cylinders, 110 mm. bore by 120 mm. stroke. At a speed of fifteen hundred revolutions per minute 120-h.p. is stated to be developed. The weight is given as only two hundred and three pounds or under 1.7 lbs. per horse power.

SOME time ago the Municipal Council of Paris gave a sum of £600 and the General Council of the Seine one of £200 to the French Ligue Nationale Aérienne as prizes for a competition of aeroplanes, to be held in the department of the Seine during the present year. The Technical Committee of the Ligue has now decided that the competition shall be held either at Issy-les-Moulineaux or at Vincennes, and shall be over a distance of ten kilometres, this having to be covered in less than fifteen minutes without touching the ground. The times and distances will be measured from the moment the apparatus is first in full flight. Each competitor will have the right to ascend several times, but on each occasion with a different aeroplane. Four prizes are being offered of respectively £400, £200, £140 and £60.

A NEW type of airship, capable of carrying 100 passengers, is, according to the "New York World," being constructed in the Lewis Nixon shipyard on Staten Island, U.S.A., to the designs of Mr. E. J. Pennington, who will be remembered by many in this country in connection with the automobile movement in the early days of the 1896 Act. A company has been formed to exploit the airship, and among the shareholders are a number of well-known capitalists. The principal innovation in the new airship is stated to be the elimination of gas bags and the substitution of a steel cigar-shaped buoyancy chamber, 700 ft. long, with a maximum diameter of 80 ft., and divided into a number of compartments. The vessel will be equipped with no less than eleven propellers; the main one is in front, five smaller ones being ranged on each side of the gas chamber.

BELIEVING that the progress made in aerial flight has already advanced to a level commensurate with the achievements attained 100 years ago by Robert Fulton with his first steamboat, the "New York World" announces that it will give a prize of £2,000 to the winner of an international airship Derby, to take place in October next, along the stretch of the Hudson made famous by Fulton when he startled the world by his first success in navigating the water with a steam-propelled craft. The competition, which will be held under the auspices of the Aero Club of America, will take place in connection with the Hudson-Fulton celebration. Our American contemporary, "Aeronautics," is also offering four prizes of the value of £10 each to the first four pilots who fly 500 metres in the presence of responsible witnesses. Only aviators who have not yet flown so far as this are eligible to compete.

WILBUR WRIGHT made his first flight at his new trial ground at Port Long, near Pau, on Wednesday last week; everything worked splendidly, and the aviator gave a fine display of his wonderful control over the machine, twisting and turning in every direction for about six minutes. After a short interval he made another ascent, keeping much higher in the air, and circling at a terrific speed right over the crowd of spectators. The machine is now fitted with a new engine, one result of which is that Wright is able to fly at a speed of about forty-three miles, or about three miles an hour faster than he achieved at Le Mans. On Friday M. Tissandier received his first lesson on the machine, he holding the lever while Wright took charge of the rudder. For some reason, however, the aeroplane did not leave the rail at a sufficient speed, and the rudder, coming in contact with the end section, was slightly damaged. The aeroplane was accordingly quickly brought to the ground, but without any mishap. In fact, the machine was out again on Saturday, when Wright flew some miles beyond the limits of the practice ground along the Pau-Bordeaux road. Afterwards with M. Tissandier on board he remained in the air for twenty-eight minutes. On Monday, before a large crowd of spectators, Wright made three further flights. After a first ascent alone he took up M. Tissandier, and during the twenty-eight minutes flew far away from the aviation ground. He afterwards made a third flight with Captain Gerardville.

CONTINENTAL NOTES.

A Light Car Trial in the South of France.

The Automobile Club of Nice is organising a reliability trial of light cars, tri-cars, and motor-cycles for April 19th, 20th, and 21st next. The only restriction with regard to the cars is that they must weigh less than 550 lbs. and carry two persons. The first day will be devoted to a twenty kilometre run over a hilly route; the second to a journey from Nice to Castellane and back *via* Puget-Théniers, a distance of 215 kilometres, and the third day to tests of flexibility and capacity to start easily on hills.

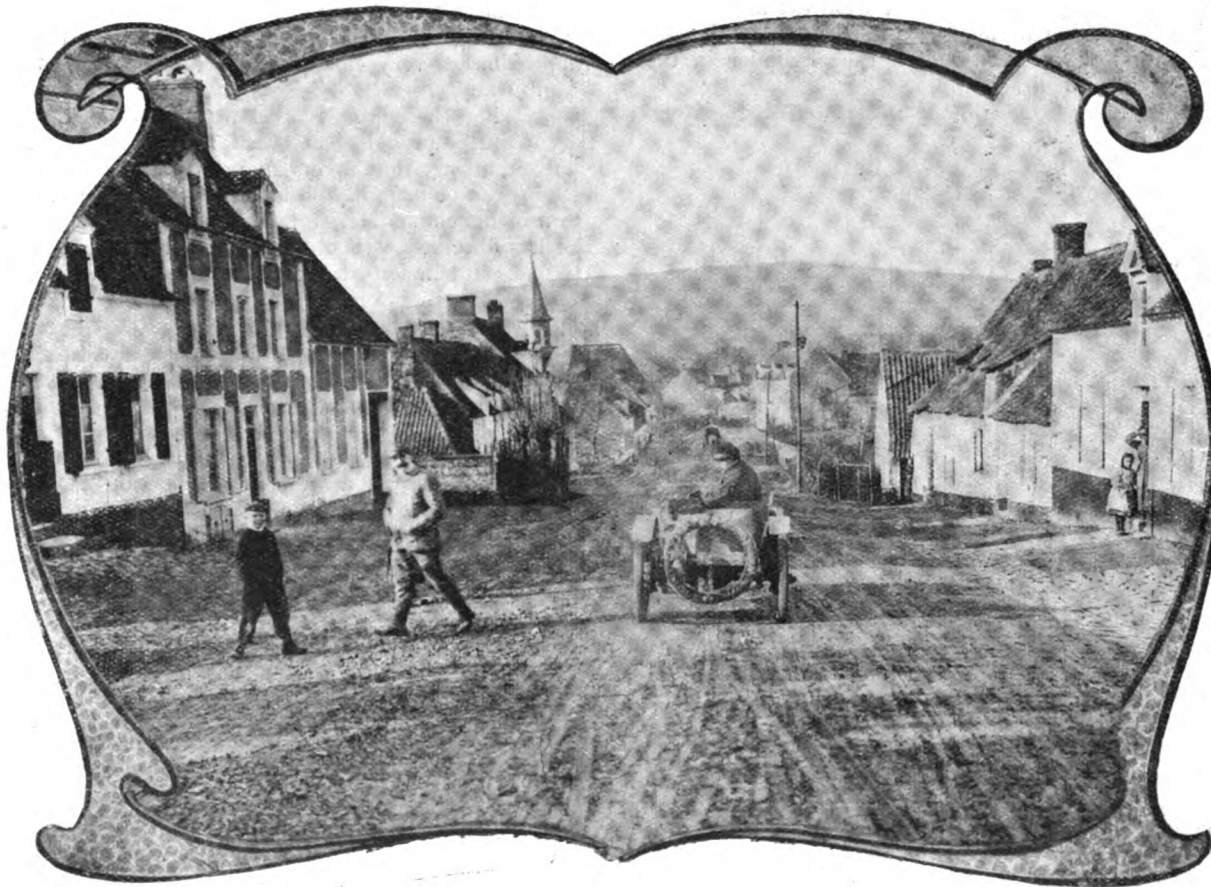
Motor-cabs in Berlin.

In connection with the regulation referred to in our last issue as having been issued by the police authorities of Berlin to the effect that no more licences for petrol motor-cabs will be granted, a meeting of motor-cab owners and representatives of firms inter-

Desvres. Saint Martin is within a mile of Boulogne, and the first side of the triangle crosses the forest of Boulogne. The road is undulating, but has a completely straight stretch of over six miles. From Alincethun to Desvres the route is both winding and undulating, but it is after passing Desvres that the cars will be put to the severest test. There is a hill with a gradient of 12 per cent., followed by a long undulating stretch preceding the famous Bainethun hill, a mile long, with a gradient of 9 per cent. As a slight compensation the drivers of the racing cars will find a mile and a quarter of perfectly straight road for the arrival back at Saint Martin. The entry list will remain open until May 31st next, the fee being £20 for one, £32 for two, and £40 for three cars.

Miscellaneous Items.

Two new Mercedes 55-h.p. landaulets have just been added to the automobile stud of the Kaiser.—There are now 380 motor-



A View on the Boulogne Circuit on which the Coupe des Voiturettes Contest is to be held.—The Village of Bainethun.

ested in supplying vehicles, as also accessories and supplies therefor, has just been held in the German capital, when it was resolved to petition the authorities to withdraw the regulation.

The Coupe des Voiturettes.

The Coupe des Voiturettes race organised by the "Auto" is to be contested over the Boulogne-sur-Mer circuit on June 20th. The entry list has just been opened, and it is already reported that it will comprise not less than fifteen English cars, including three each Humber, Vulcan, and Adams, two or three Stars, and one or two B.S.A. vehicles. Belgium, Germany, Switzerland, and Italy, and probably the United States, will be represented, so that it is certain there will be quite as many foreign cars as French. The "Auto" received no fewer than fifty-six proposals of circuits! So many of them offered almost equal advantages that it was no easy matter to choose between them. The Boulogne course, measuring twenty-five miles, was selected chiefly on account of its proximity to England. It forms a triangle, of which the apices are Saint Martin (La Fourche), Alincethun, and

cars registered in the city of Moscow.—Sr. Jose d'Aguiar has just made the journey from Lisbon to Paris, a distance of 403 miles, on an 8-h.p. single-cylinder car, in twenty-eight hours.

Les Vieilles Voitures.

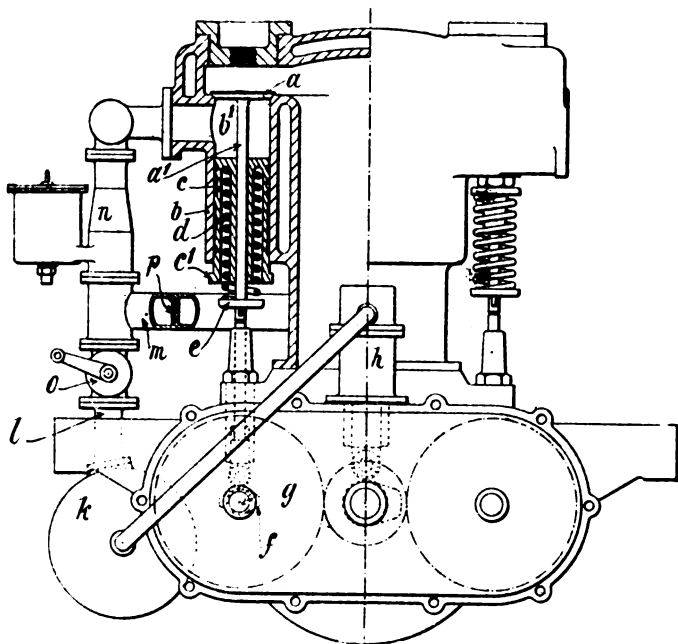
Utilisation, non pas des vieux moteurs, mais des vieux "tacots." Un avisé Dijonnais fit l'acquisition, il y a quelque temps, d'une vieille voiture. Il remplaça la carrosserie arrière par une sorte de comptoir décoré de couleurs voyantes, puis, ayant réussi à mettre le moteur en marche, s'en fut sur une des places de Dijon vendre des glaces. "Glaces à la vanille! Glaces à la framboise!" s'écriait l'industriel marchand. Mais il n'eut guère besoin de s'égosiller, car la foule avait été attirée par la nouveauté de l'équipage. Est-il besoin d'ajouter que notre marchand de glaces fit de fructueuses affaires?

THE Eclipse Motor Company, of 86, High Road, Lee, S.E., have recently opened a garage, with separate lock-ups, pit, and the usual facilities, at 108, High Road, Lee, S.E.

THE GORE SELF-STARTING AND REVERSING PETROL ENGINE.

WE are able this week to give some particulars of an extremely interesting multi-cylinder petrol engine which has recently been devised and patented by Mr. Alexander Gore, of 21, New Bongate, Jedburgh, the special features of which are that not only can the direction of running be reversed, thus rendering a reversing gear, in the case of a motor-boat, unnecessary, but that the engine can be automatically set into operation. As will be seen from the part sectional elevation given herewith, the engine is provided with a small plunger pump *h* driven by a cam on the end of the crank shaft, and which forces air under pressure into the reservoir *k*. The latter is connected with the air inlet to the carburettor *n* by a pipe *l*, in which is a stop valve *o*. The air supply pipe *m* to the carburettor is fitted with a non-return valve *p*, so arranged as to allow air to pass into the carburettor from the atmosphere when the engine is working normally. The carburettor is connected with the inlet valve pocket *b'* of each cylinder in the ordinary way by means of suitable pipes.

The mechanically-operated inlet valves are of the usual



construction, and bear on seats formed in the valve chambers; they are retained on the seatings by springs *d* acting on the stems of the valves through the usual cup and cottar *e*. The stems of the valves, instead of sliding in the guides *b*, work in sleeves or pistons *c*, the latter being also arranged to slide in the guides. The sleeves *c* are each provided with four piston rings and with flanges *c'*, which operate as a stop by engaging the under face of the guides *b* to limit the upward movement of the sleeves.

The operation of starting the engine is as follows:—The stop valve *o* is momentarily opened, which allows compressed air to pass from the reservoir through the carburettor, where it takes up sufficient petrol vapour to form an explosive mixture, into the induction pipes and passages and thence into the cylinder, the inlet valve of which is open, and into the inlet valve pockets of the other three cylinders. The charge which passes through the open inlet valve pushes down the piston of that cylinder, so setting the engine in operation, if the ignition has previously been switched on. Owing to the peculiar method of mounting the inlet valves the pressure of the compressed air in the inlet valve pockets of the other cylinders cannot open the valves, as the pressure tending to lift the valves re-acts on the sleeves or pistons, so that the pressure on the valves is opposed by that

acting through the guide sleeves to keep the valves on their seats. In other words, the inlet valves are balanced, and therefore, notwithstanding the pressure of the compressed air in the valve pockets, the valves can only be opened by the cams *F* in the usual manner. After the piston of the cylinder, which had its inlet valve opened at the time the engine was started, reaches the forward end of its stroke, the inlet valve of one of the other cylinders opens and the compressed air rushes into the cylinder and drives its piston forward, and so on until the compressed charge in one of the cylinders is fired, which may, in some cases, be a charge left in when the engine was last stopped. When the motor is once in operation the compressed air valve *o* is closed, when the necessary air for the carburettor is drawn through the check valve *p*.

The other feature of the engine, that of its capability of running in either direction, is obtained by the mounting of two sets of cams for each of the inlet and exhaust valves and of so arranging the cam shafts that they can be moved laterally by means of suitable levers.

Among the claims made for the new motor are that it approximates very closely to a steam engine without the addition of any special valve gear; that there are no extra moving parts when the engine is working, except the air pump, for which a cut out is provided, and that by opening the compressed air valve *o* at any time a very material increase in the power of the engine can be instantly obtained for emergencies. In substantiation of his claims Mr. Gore sends us some details of the results he has obtained with a five-cylinder engine, 5 in. bore by 6 in. stroke, built in accordance with his design and fitted into a motor-boat, using neither clutch, gear-box, or flywheel. Working under atmospheric and forced induction the best results have been obtained with a receiver pressure of 300 lbs., reduced to 50 lbs. at the carburettor. The fuel consumption under atmospheric induction was 0.75 pint per h.p.; ditto, under forced induction, 0.52 pint per h.p.; the power absorbed by the compressor was 12-h.p. when working under forced induction. The actual power obtained at atmospheric induction at 1,000 revs. per minute with a compression pressure of 70 lbs. per square inch and an explosion pressure of 260 lbs. was 61.9-h.p. With forced induction and a receiver pressure of 300 lbs., reduced to 50 lbs. at the carburettor, 105 lbs. compression and an explosion pressure of 390 lbs. per square inch, the engine developed 127.85-h.p. at 1,000 revolutions per minute. Of this, 92.85-h.p. was due to the power stroke under forced induction, and about 35-h.p. to the induction stroke, which is, Mr. Gore points out, a power stroke at 50 lbs. per square inch. During the tests the cylinders were connected to a registering pressure gauge graduated to 1,500 lbs., using non-return valves to keep the gauge steady; eleven different propellers were used for absorbing the power, and the carburettor was an ordinary non-return valve type with adjustable feed.

MR. ALEXANDER WINTON, of the Winton Motor Carriage Company, of the United States, who was one of the American team in the Gordon Bennett race in Ireland, has suggested a new plan for automobile contests. According to this the maker would pay a 2,000 dol. entrance fee, securing the right to have cars of his make entered by owners of such cars willing to compete. The cars taking part would have to have previously run 3,000 miles in actual service, and the pooled entrance fees would be divided among the contestants.

THE Bridgwater Motor Company, Ltd., which has been associated with the industry from its early days, have issued an illustrated catalogue of their motor sundries, which should be of considerable use to the motorists of Somerset and the West of England who obtain supplies from this old-established house. Most of the accessories, which have been recently described and illustrated in our columns, can be obtained from the Bridgwater Motor Company, and in these cold days special mention may be made of the "Cosie" foot gloves of soft black or brown leather and wool lined, which are proving a comforting convenience to those who drive.

THE SOCIAL WHIRL.

NEW associates of the R.A.C. include Sir Walter Scott, Bart., Sir W. Cameron Gull, Bart., the Hon. W. H. Lascelles, and the Rev. W. Conybeare Bruce, M.A., the Archdeacon of Monmouth. The occupations of the last sixty candidates elected were extremely various, including the Principal of an art school, the proprietor of a poultry and fruit farm, a doctor of dental surgery, and an Oriental art dealer—as well as a score to whom the word “none” was officially applied.

CONGRATULATIONS to Dr. F. J. Furnival, one of the most famous octogenarians of the present time, on his eighty-fifth birthday. On Sundays he is generally to be found on the Thames with his Girls’ Sculling Club and on week-days he is generally in the British Museum. Many of his evenings are spent in the pleasant common room of the Working Men’s College which he helped Maurice, Tom Hughes, and others to found in 1854. For recreation he has since 1858 been engaged in pursuing words for the English Oxford Dictionary, of which he is the only original worker left. Dr. Furnival has compiled a list of motor terms and technical words which have lately come into use, and takes as much interest in ferreting out their meaning as in the Shakespearean studies which fascinated him in early days.

SIR JAMES CRICHTON-BROWNE, the president of the Sanitary Inspectors’ Association, was in the chair at the annual dinner of that organisation, held at the Gaiety Restaurant, London, on Saturday, and in his address urged that the advance of aeronautical inventions might involve an entirely new system of sanitary regulation. He pictured the time when taxi-balloons and twopenny aeroplanes arriving from the Continent every ten minutes would render us liable to invasion by hosts of undesirable alien microbes and to the introduction of all sorts of infectious diseases. The visible dust raised by motor-cars kept the nation sneezing, coughing and sniffing, and when these had subsided clouds of invisible dust hovered about.

MR. FRED KARNO, manager of the well-known music-hall companies of this name, drives a 40-h.p. Westinghouse. Mr. Grimani, their scenic artist, owns a 10-12-h.p. Lagonda tri car. Mr. Karno’s residence is at Loughborough, S.E., and the garage accommodates his own car and also the two powerful motor-buses owned and used by his London companies for travelling to and from the various halls at which he is engaged.

THE Rev. Dr. Darlington, president of the St. Mark’s Tramway Brotherhood, asks me to invite chauffeurs of motor-cabs to join with the tramway men in their Church Parade at St. Mark’s Church, Kennington, S.E., on the 21st, when a sermon will be preached by the Archbishop of Canterbury.

LAST week we had an interesting picture of a hunting party in the Rocky Mountains, in which a couple of motor-cars figured. Mr. Frederic Coleman has promptly recognised these as White steam cars. This certainly is a type of vehicle frequently met with in such locations in the United States, where its merits have had full appreciation from the President downwards.

THE Lincolnshire A.C. is now looking for a successor to Dr. Godfrey Lowe, who has given the club its present strong position among such organisations. The club has always done much on the social side, and has had the advantage of being associated with a county in which are many gentlemen’s seats as well as many gentlemen willing to allow their grounds to be invaded by cars. During last year the club was received at Grimsthorpe Park by permission of the Earl of Ancaster; at Syston Park by Sir John Thorold, Bart.; at Revesby Abbey by the Hon. R. Stanhope; at Monks Manor, Lincoln, by Col. J. S. Ruston; by the officers of two battalions of the Lincolnshire Regiment at Skegness; by Dr. Husband at Crowland, and by the Grimsby members at Cleethorpes.

LOLLIUS.

HERE AND THERE.

DURING the past three months fines totalling £600 have been imposed on motorists at the Kingston Police Court.

MESSRS. WILSON BROS., of Bedford, have introduced the motor taxi-cab into the town, and have also several motor-cars for hire after balls, dances, &c.

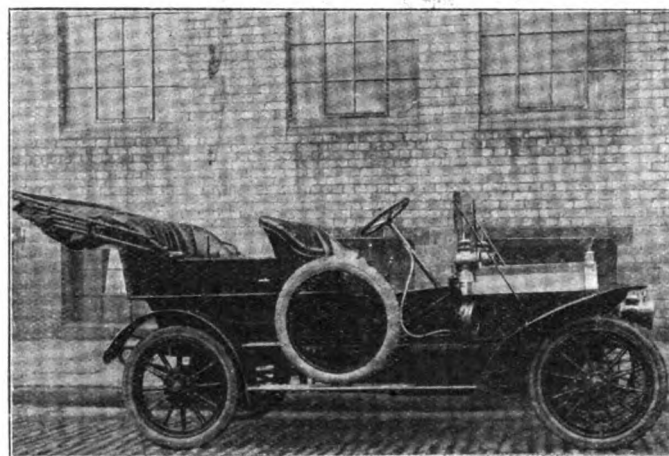
MR. ROBERT W. COAN is the president of the King’s Cross Philanthropic Society, and will take the chair at their concert at the Holborn Town Hall on the 24th inst.

AMONG the orders lately secured for six-cylinder cars by the Lanchester Motor Company, Ltd., is one from the Thakur Sahib of Rajkote and one from the Nawab of Rampur.

THE Public Health Committee of Edinburgh has decided to purchase another motor ambulance, and also to erect a garage with accommodation for four vehicles at the City Hospital.

MESSRS. STARK AND MURRAY have a motor-repair works and a garage for storing cars in Tower Street, Selkirk, where they are also able to stock petrol, &c., for motorists in that part of the world.

THE accompanying illustration depicts the new 16-h.p. Desmond car which has just been put on the market by the Desmond Motor Company, of Jordan Street, Liverpool. The vehicle is on up-to-date lines throughout, the engine being fitted with magneto ignition. The transmission is through a well-designed



three-speed gear-box and cardan shaft to a live axle. The Desmond Company are also building a 9-h.p. and a 12-h.p. car, both fitted with two-cylinder engines. They are being put on the market at prices which bring them well within the reach of motorists of moderate means.

MR. HUNTLEY WALKER, of Hayes, Kent, has written a letter to the Bromley (Kent) Urban Council offering to contribute towards the cost of a motor fire engine. Failing that he offers to present them with a horse.

THE Spalding Urban District Council has received its circular letter from the Road Union with regard to the Local Government Board breaking away from precedent in connection with the enquiries preceding the imposition of ten-mile limits, and, upon the recommendation of its Highway Committee, has resolved to do nothing in the matter.

It is reported that fifty petitions are being circulated throughout Prince Edward Island asking for the repeal of the Anti-Automobile Act. Not only are these petitions being largely signed by all classes of the community, but a special effort is being made to reach the farmers, and they are stated to be signing them in large numbers.

PROFESSOR B. HOPKINSON, of Cambridge, read a paper on the Effect of Size and Speed upon the Performance of an Internal Combustion Engine before the Incorporated Institution of Automobile Engineers on Wednesday. Professor Dugald Clerk presided. It was largely based on experiments with Siddeley and Daimler engines, the results being compared with similar researches with a Crossley gas engine.

Here and There—continued.

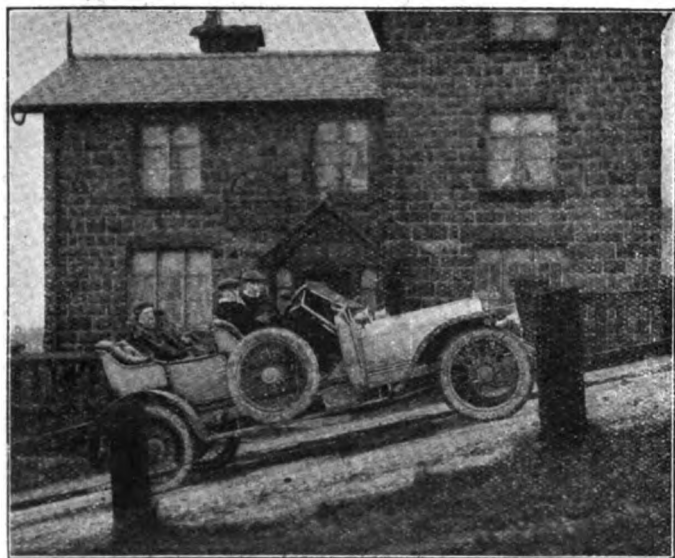
At the end of December, 1908, there were 8,790 horse-cabs and 2,923 motor-cabs in service in Paris, as compared with 9,608 and 1,465 respectively at the end of 1907.

MESSRS. PAGE BROTHERS have lately extended their motor garage and repairing establishment in Acre Lane, Brixton, S.W. The garage is open day and night, while all classes of repair work can be undertaken.

MR. T. HERSEY has a garage and motor-car hire business at Epsom, which is well known to all who travel that way. With the coming of the spring he hopes to continue the service to motorists he has rendered for some years past.

THE Coventry Motor Fittings Company, of Far Gosford Street, Coventry, have issued a new price list for 1909, which gives particulars of their latest types of lubricators, petrol fillers, exhaust silencers, fans, radiators, bonnets and other component parts.

MESSRS. A. WARRINGTON AND CO. have a good motor garage in the Grange Road, Birkenhead. This is fitted with an inspection pit, together with the Harvey Frost vulcanizing plant and everything else required for the efficient repair and overhaul of motor vehicles.



A Sheffield-Simplex Gear-box-less Car on Mow Cop, near Congleton.
The above illustration shows a Sheffield-Simplex Gear-box-less car ascending one of the steepest roads in the country, viz., Mow Cop, near Congleton, Cheshire, in which there is a gradient for a distance of approximately fifty yards of 1 in 31. Mr. W. S. Engall, who is seen at the wheel, is accompanied by Messrs. Hollingdrake and Hodgkinson, of the Hollingdrake Automobile Company. The gradient, we may say, is specified accurately, careful measurements having been taken.

THE Vulcan Engineering Company, of Barnes, S.W., is now known as the Elphick Engineering Company—an amalgamation having been effected. The repair of vehicles, charging of accumulators, and vulcanizing of tyres is done on the premises, which, so far as the garage portion is concerned, are open all night.

MR. JOSEPH BRAMAH has acquired the business of Messrs. C. Harlow and Co., of Cadena Works, Hillsborough, which will in future be carried on by him at the City Radiator Works, Chapel Walk, Sheffield. Mr. Bramah has had many years' practical experience in the production of radiators, tanks, wings and other parts of motor-cars, and has good facilities for the prompt execution of orders for such work.

FROM the Reo Motor Company we have received an interesting pamphlet entitled "A Reo around the World," a perusal of which does much to show how rapidly the Reo cars have sprung into prominence in practically every country of the world. A feature of the booklet is the large number of snapshots of these vehicles taken in Java, Chili, Guatemala, Mexico, Sumatra, Peru, New Zealand, Russia, &c.; in fact, it may be said that there is now hardly a civilised country in which the Reo has not made itself evident.

THE Horley Motor and Engineering Company, Ltd., of Horley, Surrey, are introducing a new type of honeycomb radiator which comprises some useful features, and a fuller reference to which we hope to make in a later issue.

THE three British automobile papers from which the Science Abstracts of the Institution of Electrical Engineers were taken in 1908 were, according to an official list just issued, the *M.C.J.*, the *R.A.C. Journal* and our contemporary in St. Martin's Lane W.C.

MESSRS. MACBETHS, the well-known clothiers, of Bold Street, Liverpool, are just now showing a splendid range of motor clothing. They are also agents for Messrs. Burberry, of London, whilst they make a special feature of their patent reversible rain-proof coat.

MESSRS. T. W. THOMPSON AND CO., of Greenwich, whose charging and electric lighting plants, dynamos, &c., are well known, are now making a range of small horizontal gas and petrol engines adapted for a variety of purposes. At the time of our visit, last week, we noted a charging outfit being packed for shipment to a motor company at Auckland, New Zealand.

THE "Panne" or breakdown competition organised by the Birmingham Motor-Cycle Club, referred to in our last issue, was won by Mr. E. C. Evans. In one machine fitted with accumulator ignition the plug switch was not making proper contact, while the other, which was provided with a two-cylinder engine with magneto ignition, had a short circuit in the switch wire and the high tension leads of the cylinders reversed. Mr. Evans succeeded in tracing the three faults and putting the machines in order in the short space of eleven and a half minutes.

ONE of the chief attractions of the forthcoming motor-car exhibition in Manchester will be the "F. L." car exhibited by Messrs. R. M. Wright and Co., Newland, Lincoln. Although of French manufacture, and so far unknown on the English market, we may say that the manufacturers of the new car enjoy the highest possible reputation in France in the construction of automobiles, and the well-known Lincoln firm are to be congratulated upon securing the sole rights for the United Kingdom. The vehicle is fitted with a 12-16-h.p. four-cylinder engine, 80 mm. bore by 100 mm. stroke. The lubrication is pressure fed by means of a gear-driven pump; the thermo-syphon system of water cooling is adopted. The transmission is through a three-speed gear-box and cardan shaft, the latter being encased in a tube rotating on ball bearings. The steering gear is of a special design, a four-point segment being used. The ease of dismantling is an important feature, and in the "F.L." car, by the introduction of several new devices, the work is reduced to a minimum, thus resulting in great economy in connection with the repairs generally.

MESSRS. ARCHIBALD CONSTABLE AND CO., Orange Street, Leicester Square, W.C., have just issued Vol. IV. of the "Technical Dictionary in Six Languages." It deals with the subject of internal combustion engines, and has been compiled by Karl Schikore; the volume forms one of the excellent "Deinhardt-Schlomann series" of technical dictionaries, of which we cannot speak too highly. In fact, the series stands alone, not only in respect of its polyglot character, dealing as it does with German, English, French, Russian, Italian, and Spanish, but also with regard to the arrangement of its contents. Wherever possible the definitions are accompanied by a self-explanatory thumb-nail sketch. The words are grouped in order of subject, and a full alphabetical index is provided, by means of which the position of any term can be found at once. In the volume under review, which should prove indispensable to all concerned with the development of internal combustion motors, whether of the gas or petrol type, gases and oils, the theory of internal combustion engines, materials and their manipulation, the construction, equipment, and erection of engines, complete plants, working and testing, and economics are dealt with in separate sections. We note that Herr K. Deinhardt has retired from the joint editorship of the series; the remaining volumes, of which some seven or eight are projected, including one on automobiles, will be edited by Herr Alfred Schlomann, of Munich, alone. No expense has been spared in the compilation of the dictionary, in order not only to make it complete, but also accurate, rendering it an invaluable reference book.

Correspondence.

[Letters to the Editor should be addressed to the offices, 27-33, Charing Cross Road, London, W.C.]

THE FUTURE OF THE AIRSHIP.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—An article recently appeared in the "Engineering News" (New York) on this subject. One does not like to challenge so great an authority, but really when they state that the flying machine is the most vulnerable of military apparatus, and offers an ideal mark to the bullets of the enemy, they show a lack of knowledge of both flying machines and warfare.

There is no knowing what the future may bring, but no one well acquainted with the subject would at present suggest armour-plating an airship or aeroplane, for they would know that it was unnecessary. The captive balloon at Ladysmith was one of the safest spots during the siege, for the simple reason that it was almost impossible to gauge its height and distance, and, in addition, it was continually changing its position. There is no doubt that an aeroplane will prove of the greatest service in a campaign for carrying despatches, reconnoitring and many other duties.

At the same time people are well advised to be very wary and cautious of the aerial companies which are almost certain to be launched in the near future; but it is only fair to make it clear that the advice does not so much cast doubts upon the possibilities of aerial navigation as on our

well-known chalky districts, which are drawn through the carburettors. These substances as a rule being hard and dense are more difficult to remove, hence to get rid of them we strongly advise the use of "Decarbonizer" two or three times in succession to properly remove these incrustations. Our chemical decarbonizer will undoubtedly soften all carbon and foreign substances, and if the mixture thereafter applied is right all these substances will gradually work out of the engine when the car is being used in the regular way on the roads.

Now to obtain the best and most lasting results to all cars we advise the regular use of "Decarbonizer" as much for preventing the formation of carbon as for removing it, and the regular use of same every seven, ten, or even fourteen days will keep the engine in such a condition that it will never have to be scraped, a large annual outlay, to keep the car in prime condition, being thus saved; moreover, another great advantage must not be lost sight of, viz., the decarbonizing methods can always be used whenever the engine shows signs of lagging or the same is not acting right, generally caused when one cylinder is not doing its work properly. If a small dose (say three or four ounces) of our "Decarbonizer" is administered anywhere on the roadside and the journey continued, after half or one hour's run the faulty cylinder will be found to work to perfection, and as good as the others—an advantage which cannot be secured by any other known methods.



TOURING IN ALGERIA AND TUNIS.

Pushing a Car out of the Sand.

The Old and New Methods of Travel.

commercial laws, which enable unscrupulous financiers to float bogus companies with impunity.—Yours truly,

H. V. ROE.

THE M.C.J. AND AERONAUTICS.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—Cannot you introduce into your title something to indicate the attention with which you are recording the development of aeronautics? Several weeks I have suspected that you had left your contemporaries behind in the matter of news, just as you have long gone ahead of the other motor papers with regard to matters relating to aerial navigation. But last week I was curious enough to count the items of news in your columns and those in another journal specifically identified with the movement. The result was to find that you gave 20 per cent. more news than the other; for which information many thanks.—Yours truly,

B. H. T.

CARBON DEPOSITS IN PETROL MOTORS.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—We have read your article upon this subject in the last issue of the M.C.J. with interest, perhaps the more so because we are the makers of "Shippey's Chemical Decarbonizer." We should therefore like to say from our experience we find that all cars which accumulate carbon deposits and resinous matters also accumulate other substances, such as calcium, fine sand; also chalk dust in cars working in certain

To properly "Decarbonize" an engine none of the working conditions of the car should be changed except that the oil supply should be simply shut off for a few minutes to make the carbon comparatively dry, so that the chemical compound can soak into same and thus better do its work; this temporary stoppage of the oil supply should, however, never extend over more than five to eight minutes at the outside, and we would say it is best to carry out decarbonizing operations when the engine is well warmed up, because then the "Decarbonizer" more readily mixes with the carbon products, and also allows it to penetrate into the crevices, which on a cold engine it would not do. Water should never be removed when using the compound, as by doing this it creates a condition which tends and is also instrumental in making more carbon.

Many engineers labour under the delusion that it is oil that causes carbon; it is possible that some of the cheaper oils may to some extent aid in the formation of carbon, but we have always maintained that the main cause is by using an imperfect mixture of gas, and we think this can be best illustrated by referring to a Welsbach gas mantle. You will note that when the air supply is insufficient to the amount of gas, flowing carbon is at once formed upon the mantle, and by reducing the gas supply or increasing the air supply the deposited carbon can be burned off, and this same case confronts one and is analogous to the working of a motor-car. We maintain this fact because we know of several vehicles on which our decarbonizer was used, and no doubt with good effect, but where the mixture after using the decarbonizer was so rich that a fresh deposit of carbon was formed nearly as fast as the preparation removed it. The best time to decarbonize and make a good cleaning of the engine is after the car has been run, say, fifteen or twenty minutes on the roads, which plan gets the motor in prime condition for carrying out the objects in view.

We are aware that many engineers use paraffin, and in some cases

get certain results, but, as many of the cheaper oils contain no elements that will affect or attack carbon except sulphuric acid, this, if regularly used, will necessitate that the engine be scraped every six months because of the pitting that follows. Hence we claim many advantages for the use of our improved "Chemical Decarbonizing Compounds," and if they are regularly used according to our printed directions we are able to guarantee the following results, viz., more engine power, increased speed of same, no lagging of same engine, better hill-climbing results, longer life of engine, clean piston rings, clean valves, less wear and tear of tyres, and above all the engine being in good working order. "A longer mileage run is obtained from each gallon of petrol used," thus greatly reducing the working cost of motor-cars.

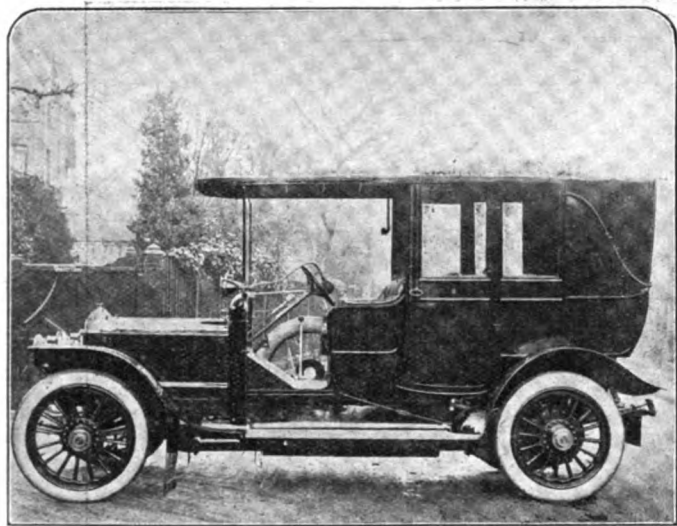
This new chemical decarbonizer was only publicly introduced by us at nearly the end of last season, but it has met with universal success, and having been instrumental in supplying sufficient to treat over 500 cars of various types, and from information obtained from users, we are able to give most valuable hints as to the best method of cleaning engines of all leading systems, which information we may say is at all times available to your numerous readers. Knowing the importance of this subject this must be our excuse for intruding on so much of your valuable space to clearly explain our general views on the subject.—Yours truly,

SHIPPEY BROTHERS.

A POINT REGARDING COMPRESSION.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—The question is often asked, "Are new pistons necessary after worn cylinders have been trued up by grinding?" No doubt the query is due to the fact that it is becoming known how little metal need be



The 48-h.p. Daimler recently supplied to Sir Berkeley Sheffield, Bart. The car is fitted with a landaulet body of the "Coventry" type, painted dark blue, with black mouldings and yellow lines. The upholstery is in blue leather throughout. A feature of this car is the detachable wheels, which consist of artillery wheels fitted to Rudge-Whitworth detachable hubs.

removed by the process mentioned. Still, granted that it is possible to take only just sufficient out of the bore to equalise it throughout, we think you will agree with us that both new rings and a new piston are a *sine qua non* if a sound job is to be ensured.

Would you kindly point out to your readers that quite small pistons should have a clearance of .004 in., and larger ones in a proportion as their diameter increases? Now, as there is always more clearance than this when cylinders are sent to be ground, it is obvious that after this operation there must be more clearance than is advisable. It is distinctly bad practice to rely solely on a new set of rings; the pistons as well should be a proper working fit. To bolster up a sloppy piston with a set of extra stiff rings is but a makeshift, and causes loss of power by the unnecessary friction.—Yours truly,

A. E. G. CRAIG.

General Manager, Acer, Ltd.

THE WAR OFFICE TRIALS.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—With reference to the War Department Competition for Light Tractors, I am to inform you that the list of entries may be published one week before the date of commencement of the Competition, viz., on Friday, February 19th, 1909.

Passes for admission to the Competition Depot can be had on application to the Secretary, Mechanical Transport Committee, War Office, Whitehall, S.W. Such passes will be required for Press representatives, competitors, drivers, and their assistants. The Press will be allowed to use such information as may be posted daily by the Mechanical

Transport Committee on a notice board, outside the committee room near the competition enclosure. This will include a detail of each day's results, as well as the programme, weights of the tractors, instructions to observers, routes, &c.

The only matter that will be withheld from publication will be the reasons and opinions of the Mechanical Transport Committee, from which the result will be arrived at.

I should be much obliged if you would make this communication public.—Yours truly,

W. BAGNALL-WILD.

Captain, Royal Engineers, Secretary Mechanical Transport Committee.

SOME SUGGESTIONS RE GARAGES.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—As a motorist of long standing I have often thought I would like to air my views on the subject of garage and garage owners. The equipment of a motor garage is a matter which would appear to require but a comparatively small outlay, either of cash or brains, outside such details as relate to the equipment of the repair shop and the provision for the safe keeping and handling of petrol. At the same time the sharp rivalry which now exists everywhere, even in many small towns, between the proprietors of neighbouring establishments makes it imperative that efforts should be made to cater for motorists in every possible way.

Apart from arrangements for washing, replenishing the petrol and water tanks, no small return may be gained on a relatively insignificant outlay in sundry labour-saving appliances for the use of employees. Thus, the provision of a fairly lengthy system of air piping connected with a compressed air tank or air compressor, so that flat tyres may be inflated without the necessity of moving the car at all, or not more than a few feet at most, may save the tyre of a customer's car from standing on the rim for a period of days, or even weeks. Similarly, convenient charging appliances for ignition batteries may mean the frequent replenishment of cells which otherwise might go too long without attention. The provision of an ample number of sockets for connecting portable inspection lamps is another little matter which involves an inconsiderable outlay in proportion to the convenience it brings.

Still another convenience which might be installed at slight cost, and which would be particularly appreciated in garages where any number of closed cars are handled, is a vacuum outfit for cleaning the interiors of the vehicles. Such an outfit, piped to a point on or near the wash, for example, might be made the means of drawing not a little desirable business to a garage which otherwise might be diverted elsewhere.—Yours truly,

W. FLOCKTON.

SOME PRACTICAL HINTS ON THE COST OF MOTORING.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—Motoring, on the supposition that it is expensive, has, to a certain extent, been classed as a sport for kings alone, many believing that only those who are particularly well blessed with this world's goods should own a car. It is an admitted fact that large sums of money are yearly spent by those who own high-powered cars, and to a large extent it is the report of the first cost and after upkeep of such vehicles that frightens many would-be motorists from owning a car either for pleasure or in combination with business.

The automobile has now become such a universal medium both for recreation and business that any wrong impressions which have gained ground should as far as possible be dispelled. The late Lord Beaconsfield said that "the luxuries of one generation became the necessities of another," a statement which may well be applied to the new form of locomotion.

When buying a car a purchaser should first ask himself how much money he has at his disposal to spend upon its upkeep. Owing to the very wide difference both in power and price it is by no means a restricted area. It is folly to buy a high-powered fast-running car, either new or second-hand, because it can be obtained a bargain, if when secured there is not the wherewithal to keep it going. The difference in the expenses between a machine of great horse-power and one of considerably lesser power is much greater than the general public are aware, and yet the possibilities of the latter are numerous.

The fascination of fast travelling and the exhilarating effect therefrom can alone be appreciated by those who have experienced such sensations. Starting on a journey northwards the ever-changing country grows upon one, first threading the needle of traffic out of London, then the Great North Road, over which the fast car is moving in frantic haste, which has for spectators old and stately trees that looked down from above upon our ancestors in what is often spoken of as "The good old times," but what we now regard as the slow-going stage coach period. Our trusty car, like an Eolian harp that attunes itself to every passing breeze, ascended each incline without an effort. After a halt to refresh the inner man at Doncaster, we sped on across the Yorkshire moors to the Border town, where we tarried for the night, to resume our journey to the breezy Highlands north of Inverness. One cannot deny but that the cost of such travelling is expensive. The object of giving the foregoing trip and the following paragraph is to show that much may be achieved on a less expenditure.

The writer was one of a party in an 80-h.p. car by one of the best makers; everything was in perfect order, and the car nearly new, when the bonnet was turned northwards in Piccadilly, but by the time we drew up at our journey's end the tyres were in such a state that repairs at a cost of fully half the original outlay would be necessary before they could again be toured with. Granted, advantage of the high power was taken and fast travelling indulged in; no undue braking, however, took place, and the owner, an expert driver, drove the whole way; the consumption of petrol was also considerable. Such an expenditure is abnormal, and very fast travelling has far too terrifying an effect on the majority of people to get any degree of comfort during the journey. Again, little can be seen to advantage of many of the beauty spots *en route*.

It is no uncommon experience for one who is absolutely fearless behind a horse to be most timid in a motor-car; this to a very large extent may be accounted for by the knowledge of and the faith one has in a horse's intelligence; it is a well-known fact that a horse will by natural instinct avoid danger, and has many times at a critical moment prevented an accident which, owing to the driver relaxing his attention for a moment, would have taken place. There is no such margin of safety with the self-moving vehicle. At the same time it cannot be denied that a driver at the wheel who is calm and collected, with sound judgment, would have more control over a motor than the driver over the horse.

The high-powered car became the rage chiefly because the makers found that a prospective buyer who was willing to give £800 to £1,000 for a vehicle could be much more easily induced to go to £1,200 to £1,500 than one who was prepared to spend £500 would increase his purchase to £700. The demand for 40-50-h.p. cars is, however, fast becoming a thing of the past, except for racing machines, which are a law unto themselves, and those of 20-30-h.p. for touring and the 10-12-h.p. for short journeys are taking their place. Having these facts in view, it will be interesting to consider the running costs and possibilities of such cars.

Taking a useful touring car seating five persons and of 25-30-h.p., the initial net first outlay need not exceed £375. In calculating the running costs distance travelled is an all-important factor; accepting 7,000 miles as a fair average annual mileage, petrol may be taken at about £35, and tyres, repairs and renewals £80, so that, with insurance and a chauffeur at 30s. per week, the total yearly upkeep should not exceed £225 per year. Such a sum and mileage would work out at approximately 7½d. per mile run. Depreciation has not been included, as it is a much-debated question and depends upon local conditions and circumstances. Some consider that a sum should annually be set on one side that would buy a new car every six years, but with fair usage an automobile should last much longer than that. If co-operation is adopted and two join in a car it will be seen that it is a reasonable and healthy way of travelling, and there are few such pastimes that can be obtained at so reasonable a cost.

Passing on to a smaller car, with which much touring may be done, and now so extensively used by doctors and others, the upkeep is considerably less. The writer has in his mind's eye a two-cylinder car of 10-12-h.p. of a well-known make; it ran in the year 7,500 miles, during which time it cost:—

| | £ | s. | d. |
|----------------------------|-----|----|----|
| Petrol | 25 | 0 | 0 |
| Tyres | 25 | 10 | 0 |
| Garage | 15 | 0 | 0 |
| Repairs and Licence | 15 | 0 | 0 |
| Insurance | 7 | 0 | 0 |
| Sundries | 5 | 0 | 0 |
| | £92 | 10 | 0 |

or, with a chauffeur recruited from the handy-man class, after a little training, at 25s. per week, the total cost would not exceed £158 per annum.

The expenditure on a horse and carriage, putting fodder at 14s. per week, would not be less than £125 for a much less mileage—in fact, it would require two horses to cover so much ground; it is generally admitted that 100 miles in the seven days is the limit of a horse's endurance. Such being the case, the equine total must be increased to an annual expenditure of £168.

In conclusion, it may be said, and without fear of contradiction, that a car that cost £800, three or four years ago, can now be bought for £400, with all the improvements and experiences gained during such times thrown in, which has not only enabled a better article to be made with less fear of breakdowns, but one that is much more economical in petrol consumption, thus reducing the yearly outlay.

The relationship of a motor-car to the horse may be compared to that in which the railway of fifty years ago stood to the stage coach, and the rising generation will look upon anti-motorists of the existing period in the same light that the adult of to-day looks back upon the anti-railway fanatic of half-a-century back.—Yours truly,

E. T. H.

MERCEDES DAIMLER PATENTS.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—With reference to the correspondence on this subject, we notice the letter in a recent issue of your paper from Messrs. Charles Jarrott and Letts, Ltd., referring to the patents jointly owned by this company and the Daimler Motoren Gesellschaft. In their letter they refer to us as a company "calling itself the Mercedes Daimler Motor Company, Ltd.," and anyone reading their letter would imagine that this firm had never heard of this company before, nor of our Mercedes Daimler patents. It will no doubt surprise your readers to know that this company is not unknown to them, they having been in negotiation with us with a view to obtaining a licence under these very patents, with a minimum royalty of £1,000 per annum, and actually paid to us the sum of £150 for an extension of time and option, and they surely would not have paid this sum unless they had satisfied themselves as to the seriousness of their position. The insincerity of their attitude is obvious, for in one of their own circulars, which we have before us, in no less than four places they improperly use the word "Mercedes," and say "that their car is modelled after the Mercedes." In regard to the radius rods, they say "they are in the fashion of the Mercedes." In regard to the gear-box, they say "it is admittedly modelled after the Mercedes, and follows closely on the well-known Mercedes lines." In regard to the steering mechanism, they say "it is the Mercedes type." In regard to the radiator, they say "this is similar to the Mercedes."

In this matter the word "Mercedes" has gained, as you know, a very great reputation, at an altogether unparalleled cost in endless experiments and discoveries; it is, moreover, a registered trade mark, so you will see it cannot be fair to attempt to build up a trade on other people's reputation without paying for it. We would, therefore, suggest that, before anybody acts in the way proposed by your correspondents, it would be desirable for them to take some independent authorities' advice as to the validity of our patents, as it is an absolutely dishonest act for anyone to trade and use these patents, which we have purchased



Bonne Voiture, Bon Voyage, Bon Accueil.

Reproduced from one of the handsome full-page illustrations in the catalogue just issued by the Peugeot Company.

and on which large sums of money have been spent, without paying us a fair and reasonable royalty in accordance with the laws of this country; and we must take great exception to the effort to create prejudice to the lawful acts of the Daimler Motoren Gesellschaft and ourselves, in upholding the rights of our properties.—Yours truly,

J. HIGGETT.

(For the Mercedes Daimler Motor Company, Ltd.)

A CORRESPONDENT writes a warning against a man carrying bill-heads with a north of London address, who is calling on motorists suggesting the repair of accumulators, which he takes away with him.

THE Assistant Secretary of the Aeronautical Society of Great Britain, of 53, Victoria Street, Westminster, S.W., asks us to mention that they are anxious to receive from manufacturers of aeronautical motors, now or about to be put on the market, particulars of the same for the information of members.

A REFINEMENT of the "W. and G." taxi-cabs, so successfully put on the streets by Messrs. W. and G. Du Cros, Ltd., of the Panhard-Levassor works, Acton Vale, W., is a direction indicator, worked by an endless chain. This device enables the occupant of the motor-cab to instruct the driver to turn left or right, slow down, stop, quicken up, in fact to do anything the passenger wishes. The new indicators are so neatly and solidly constructed that they will probably be speedily in demand for use in privately owned cars.

CLUBS AND ASSOCIATIONS.

ROYAL.

THE General Committee of the R.A.C. held their February meeting last week, when thirteen clubs were represented. They approved of the appointment of a travelling inspector to assist the associated clubs in suppressing inconsiderate driving and also to help in connection with the appointment of hotels and repairers.

Five representatives were appointed to attend the Conference to be held at the Inns of Court Hotel, London, on the 19th inst. to discuss "the best means to be adopted to bring about a better understanding between cyclists and motorists."

The Organising Committee has appointed a sub-committee, consisting of Capt. H. H. Deasy, Mr. Robert Todd, and Mr. Victor Hart, to consider the arrangement of special facilities with regard to motor-car insurance. It is hoped that they will make a report at the March meeting.

AUTOMOBILE ASSOCIATION.

ON Friday, the 5th inst., the Northern section of the Automobile Association held its annual dinner at the Midland Hotel, Manchester, when a large company faced Colonel W. J. Bosworth, who presided.

This was the second annual event at Manchester, and the Colonel mentioned that the membership of the Automobile Association had during the year increased from 4,000 to 8,500, considerably more than doubling itself. The membership of the Northern branch, which included the City of Manchester, had grown even in more rapid proportion—namely, from 400 to 1,767. He was satisfied that the association would continue to gain strength in the North of England, especially while the local committee contained such men as Councillor Kay, Messrs. H. Hollingdrake, Newton, Dobson, Wade, and Thomson. The presence of the Mayor of Salford, the Mayor of Wigan, and the chief constables



A Reminiscence of the A.C.A. Grand Prize Race in Savannah.—A Group of Drivers at the Dinner given in honour of Louis Wagner, Winner of the Race.

Seated.—From left to right—Nazarro (Fiat), third at Savannah; Wagner (Fiat), winner; Hemery (Benz), second.

Standing.—From left to right—Piacenza (Itala); Cagno (Itala); Robertson (Locomobile), Vanderbilt Cup winner, 1908; De Palma (Fiat), fastest lap at Savannah; Duray (Lorraine-Dietrich); Seymour (Simplex); Szias (Renault); Hanriot (Benz); Rigal (Bayard-Clement); Hautvast (Bayard-Clement).

of both Manchester and Salford was alluded to, Colonel Bosworth taking occasion to remark that the relations of the association with the police were now of the most cordial character. The badge was now a prominent feature on cars on the roads throughout the country, and it was evident that the Automobile Association was continuing to fulfil a most useful purpose.

Councillor Kay responded to the toast of the Automobile Association (Northern section) and said that the organisation had proved invaluable to motorists throughout the North of England. It had a good effect upon the police as well as upon motorists, and it was an excellent sign that scouts were now taking the place of constables in many districts. The Chief Constable of Cheshire, for instance, had admitted that the Automobile Association scouts were extremely useful in warning motorists of the dangers of the road; in fact, he had come to the conclusion that they were even better than policemen, who simply stood like dummies while the scouts did wave their arms about and did something.

Mr. H. Hollingdrake having proposed the toast of "The Press," a musical programme was rendered. This was broken into at one point in order that the Chief Constables of Manchester (Mr. R. Peacock) and Salford (Mr. Godfrey) should be installed as honorary members of the Automobile Association. Their healths having been drunk, both responded, the speech of each according well with the tone of the meeting. One drew from Colonel Bosworth the assurance that he intended to take

out his licence in Manchester, and Mr. Peacock, in the course of his reply, said that in his district they were only concerned with summonses for driving to the danger of the public, never for merely exceeding the legal limit, a regulation which he would abolish. It was against his policy to attempt to entrap motorists on small technicalities. This policy was endorsed by Mr. Godfrey, the Chief Constable of Salford, who added that whilst he intended to pursue an active course against those who drove to the public danger, he had at the same time the dangerous areas in his own district marked out, so that the safety of those who drive had been well considered.

LINCOLNSHIRE.

THE annual general meeting of the Lincolnshire A.C. was held at the Guildhall, Lincoln, on Friday, the 5th inst., when the president, Sir Hickman B. Bacon, Bart., presided. The annual report made reference to affiliation with the M.U. and expressed regret at the tendency of local district councils to hurl general charges of reckless driving against motorists. Mention was also made of the scheme for the registration of owners of motor-cars willing to render assistance at the mobilisation of the Territorial force in case of invasion. During the year forty-two new members had been elected, the number now being 244. The balance in hand was £113.

Major J. A. Cole proposed the adoption of the report and accounts, which was seconded by Dr. W. J. Gilpin and carried unanimously. Sir Hickman Bacon was re-elected president and Sir Berkeley Sheffield, M.P., and Mr. Arthur Shuttleworth were elected vice-presidents of the club. The election of the committee resulted as follows:—Lindsey Division, Mr. T. G. Tickler and Major Fowler; Holland Division, Dr. Mason and Capt. Gleed; Kesteven Division, Mr. G. Godson and Mr. W. A. Tomlinson; independent, Dr. Cragg, Dr. Gilpin, Dr. Godfrey Lowe, Capt. H. E. Newsum, Mr. W. R. Pennell, and Mr. W. Ives. Mr. A. A. Padley was re-elected hon. solicitor, Mr. Simpson hon. treasurer, and Mr. C. W. Page auditor. Regret was expressed at the resignation of the hon. secretary, Dr. Godfrey Lowe, from the position he had filled during the last few years, and a suggestion was made that the committee should find some way to show their appreciation of the work he had done for the movement. Dr. Lowe mentioned that during his time of office the membership had practically doubled. When elected hon. secretary he had hoped to become an automobilist, but had not yet arrived at the dignity of owning a car and he felt that his position was rather anomalous. His work in connection with the Territorial force was making great demands upon him, and although he would continue to act until a successor was appointed, he regretted that his decision was really final. A vote of thanks to the Mayor for the use of the Town Hall was moved by Major Cole and carried with enthusiasm, as was also a similar vote to the president.

NORTH-EASTERN.

AT the annual meeting of the North-Eastern Automobile Association a slight decrease in the number of members was reported, the present totals being:—Individual members, 343; affiliated through the district clubs, 237; total, 580. Mention was made of the special attention which had been given to the action of the police at Morpeth and Alnwick, and also to the arrangements of the surveyor to the Northumberland County Council to place special warning notices marked "Drive Slow" at many places in his area. The attention of the members was drawn to the regrettable increase of feeling hostile to automobilism in the northern counties, which has led to greater vitality in the agitation for the institution of speed limits; hence the expression of the hope by the committee that motorists generally in the North of England will by careful driving do something to mitigate the irritation that has been caused.

NORTHAMPTONSHIRE.

A MEETING of the committee of the Northamptonshire A.C. was held at the George Hotel, Northampton, last week, when the Rev. Steggins Pratt was in the chair. The hon. secretary, Mr. S. H. Harris, read a letter from Colonel C. E. Foster, which was discussed, and it was proposed by Mr. A. Webb, and seconded by Mr. Humphrey Bennett, "That anyone directly connected with the motor trade should not be eligible for any official position in the club beyond that of an ordinary member." This was carried unanimously. It was decided to recommend an alteration of rule to this effect. Mr. C. W. Bartholomew presented the club with a survey atlas of England and Wales, and it was decided that it should be kept at the George Hotel, where the members of the club could refer to it on application to the proprietor. The chairman and committee, on behalf of the club, thanked Mr. Bartholomew for his very useful present. Rules were submitted by the sub-committee for speed trials and other club events. They were adopted in the following form:—1.—That a small entrance fee be charged for all events. 2.—That every car participating in any club event shall be owned by a member, and must be driven by the owner, except by special permission of the committee. In all gymkhana events the car must be driven by the owner. 3.—No car exhibiting a trade number will be permitted to compete in any club event. 4.—Cars entering for any speed trials must be ordinary touring cars, and must not exceed 60-h.p. based on the R.A.C. rating. 5.—That no competitor be allowed to make trial runs over the course on the day of the event. 6.—The decision of the judges to be final.

In accordance with rule, the following members retired from the committee: Mr. J. C. Hipwell, Dr. A. A. Hope, Dr. Lewis, Mr. T. Horton, and Mr. C. Phipps. They were re-elected, with Colonel C. H. Eyre Coote. Sir Thomas Hesketh was nominated as president for the ensuing year, and the following were nominated vice-presidents: Lord Lilford, Lord Annaly, Major P. E. T. Hibbert, Major Leslie Renton, and Mr. Harry Manfield.

The attention of the committee having been drawn to the stopping place of the electric trams in Mercer's Row, they viewed the spot, and, after watching the cars arrive and stop, came to the conclusion that the system of stopping the cars in practically the narrowest part of Mercer's Row is fraught with much danger, and that there is every likelihood of a serious accident occurring sooner or later. The hon. sec. was directed to communicate with the Town Clerk, expressing the view of the committee, and suggesting that, for the safety of the public, arrangements should be made in the future for the cars to stop in the wider part of the street, viz., opposite the stopping place sanctioned by the Board of Trade.

LANCASHIRE.

MR. A. CAYLEY, J.P., has been elected president of the Lancashire A.C. and Mr. A. Birtwistle has been re-elected hon. secretary. The new committee consists of the following gentlemen: Messrs. E. S. Berry (Leyland), A. Birtwistle (Blackburn), W. Birtwistle (Blackburn), J. Briggs-Bury (Poulton), W. Dryden (Preston), Dr. J. Fox (Accrington), A. L. Marsh (Blackburn), H. Lonsdale (Accrington), J. D. Lonsdale (Blackpool), C. E. Kenyon (Clayton-le-Dale), J. Hodson (Preston), Dr. Stephenson (Blackburn), R. Mangnall (Darwen), G. D. Walmsley (Blackburn), G. H. Redmond (Leyland), E. A. Riley (Haslingden), C. E. Sharrock (Lea Gate), H. H. Stottard (Manchester), W. Smith, jun. (Accrington), and J. Iddon (Leyland).

BEDFORDSHIRE.

As we briefly recorded last week, the annual dinner of the Bedfordshire A.C.C. was held at the Town Hall, Luton, on the 1st inst. Mr. W. H. Allen was in the chair, and among those present were the Mayor (Mr. H. Arnold), Dr. Ashhurst, Messrs. G. L. Hart, W. A. Sale, G. A. Phipps, G. J. Whyley, E. W. Hart, H. G. Burford, J. Coveney, G. Lewin and C. E. Whittaker.

The Chairman gave the toast of "The King," and then proposed "The Mayor and Corporation of Luton." Referring to the advantages which the town in particular and the county in general offer to manufacturers the Mayor referred to the new industries which had lately come into the town, including the Vauxhall Motor Company and the Commercial Cars, Ltd.

Mr. W. W. Marks proposed "The Club," and referred to the fact that in Bedfordshire there were 678 motor-cycles and 297 motor-cars registered. The total was 975, and the number of drivers' licences issued was 849. He suspected that a number of gentlemen had been driven to take out licences in the county where they were decently treated, hence the reason for the number of motor-cars registered in the county being in excess of drivers' licences.

Response was made by Mr. Allen, who mentioned that he was one of the first to introduce motor-cars into the district. He declared that the success of the club was entirely due to the secretary. To the toast of "The officials," proposed by the Rev. W. P. Beckett, Mr. G. J. Whyley responded, and referred to the history of the organisation, which dated as far back as 1905, the real success, however, coming in 1907.

Before the dinner the annual general meeting was held in the Mayor's Parlour at the Town Hall, when the accounts showed a balance at the bank of £51, the members' subscriptions amounting to £119. Lord Ampthill was re-elected president. The re-election of vice-presidents, viz: Messrs. Percy Barlow, M.P., W. A. Attenborough, Guy Pym, and Sir Julius Wernher, was proposed by Dr. Bower, and seconded by Mr. Rupert Allen. Mr. Herbert Cotchin's name was added to the committee, who were re-elected as follows: Messrs. W. H. Allen (chairman), E. Colby Sharpin (vice-chairman), A. H. Adams, Rupert S. Allen, A. B. Brackenbury, E. W. Hart, R. J. Hope, W. B. Jessopp, W. K. Parbury, Oliver Smithson, C. Ernest Wells, the Rev. C. B. Hulton, and Dr. D. Bower.

HEREFORDSHIRE.

MR. A. W. FOSTER presided at the annual meeting of the Herefordshire A.C., held at the Mitre Hotel, Hereford, on the 3rd inst. The secretary, Mr. W. Townsend, said they had a fairly good balance in hand and the accounts were agreed to. With regard to the trophy presented by the citizens of Hereford for the hill-climbing trial which had been abandoned, it was resolved that the Town Council should be asked to keep the cup with the Corporation Plate until such time as the club should wish to use it for a competition.

CARDIFF.

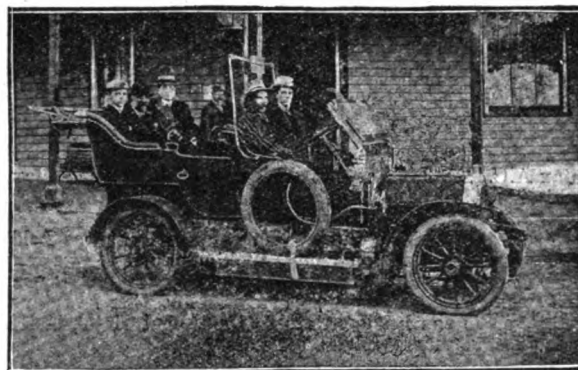
THE Cardiff Motor Club held its annual dinner at the Queen's Hotel, Cardiff, last week, when the president, Lord Ninian Stuart, presided, supported by the Lord Mayor and many local influential gentlemen. The President submitted the toast of "The City and Trade of Cardiff," to which the Lord Mayor responded. The toast of "Motoring" was proposed by Mr. Herbert Lewis, Mr. F. C. Schackel responding. He said the Cardiff and Glamorgan County police were very tactful and fair in their dealings with motorists, the prejudice against whom was fast dying out. Councillor

J. W. Curtis, J.P., gave "The Motor Union," on behalf of which Mr. Rees Jeffreys responded, congratulating the Cardiff Club on the possession of an excellent secretary in Mr. H. B. Jotham, and declaring that there was no justification for any suggested increase of taxation on motorists. Among other speakers was Mr. J. Thompson Willows, the secretary of the South Wales and Monmouthshire A.C., who responded for the visitors.

NORTH MIDDLESEX.

THE annual general meeting of the club was held at the headquarters, Great Northern Hotel, King's Cross, on the 29th January, Mr. A. Hassal being in the chair. The reports of the hon. treasurer and the hon. secretary for the year 1908 were adopted. The secretary's report, which reviewed the events and work of the year, included mention of the alteration in the club's title (from the North London A.C.) and the consequent extension of its sphere of activities. In January of last year the headquarters had been transferred to the Great Northern Hotel, King's Cross, where members were provided with a pleasant rendezvous. At a special general meeting of the club held in October last it had been resolved to become associated with the R.A.C. and so become the North Middlesex branch of the Royal Automobile Club.

In recognition of his services to the club Mr. A. Hassal was elected to the office of vice-president. The president (Col. Henry F. Bowles, J.P.) and the vice-presidents were unanimously re-elected. The following officers were also elected for the ensuing year. Committee: Messrs. A. Alexandra, C. Cannon, E. H. Clements, Comley, C. Cutler, A. C. Denham, E. Gamage, Gibson, Max Graddon, C. F. Gray, H. Johnson, S. J. Kent, Lendrum, F. W. Lewis, A. Robertson, H. Stonehouse, Dr. Fulton Turner, W. A. Vincent. Hon. treasurer, Mr. A. D. Kindon; hon. solicitor: Mr. Percy Short; hon. auditors, Messrs. B. S. Douthwaite and Harman; hon. press secretaries, Messrs. J. Cogdale and H. Wilkins Norman (the latter being also elected an honorary member of the club); hon. secretary, Mr. J. Thomas Barber, Medina, Hardwicke Road, Palmers Green, N.



A Humber Car in Tasmania.

Not only at home but also abroad is the motor-car now pressed into service for commercial purposes. Messrs. Humber, Ltd., have just received from Mr. W. Thompson, of St. Helena, Tasmania, an interesting picture post-card, which we reproduce above, depicting a 15-h.p. Humber car just about to start on a hundred mile run with four commercials aboard. Mr. Thompson, who is at the wheel, points out that this car has to negotiate the steepest hills in the district, which are considered to be the worst to be found in Tasmania.

LIVERPOOL MOTOR DRIVERS' ASSOCIATION.

AT the Star and Garter Hotel, on Sunday, a large meeting of members of the Liverpool Motor Drivers' Association assembled with a view to finally settling the rules in connection with the formation of this body. Mr. Edward Gormley, the appointed chairman, was present. It was pointed out that members would be entitled to the free use of the club room, which would include billiards, cards, and the usual refreshments, death claims, superannuation, sick benefits and free legal assistance. There were present at the meeting 162 members. The meeting was further adjourned until the 20th inst.

CYCLE AND MOTOR TRADES BENEVOLENT FUND.

MR. W. H. HARVEY was in the chair at the last monthly meeting of the Executive Committee, when a bank balance of £693 was reported. Mr. C. D. Pole, of Messrs. Singer and Co., was elected to a governorship by virtue of having introduced twenty-five new subscribers, he being the first to thus qualify.

The next monthly meeting of the Executive Committee will take place on the 2nd prox.

IRISH.

FOR some time past the committee of the Irish A.C. have had under consideration the question of appointing a club engineer. They have now appointed Mr. H. Croxon, resident engineer in Dublin to the Car and General Insurance Corporation. His services will only be available to members of the club, and those who from time to time may desire advice.

upon the condition of cars can have them examined by him at a reasonable scale of charges, particulars of which can be obtained from the club secretary, at 34, Dawson Street, Dublin.

SCOTTISH.

ON Monday afternoon, 8th inst., the Right Hon. John Sinclair, M.P., the Secretary for Scotland, with whom was Mr. J. M. Dodds, Under Secretary, received a deputation from the Scottish Automobile Club on the subject of the regulations under the Motor Car Acts, 1896 and 1903, relative to motor-cars passing tramway cars on overtaking them. After the whole matter had been fully discussed Mr. Sinclair promised to give the views of the deputation the fullest consideration.

Following upon this the Secretary for Scotland issued that evening an Amending Order (applicable to Scotland.) This is referred to on another page.

BROMLEY AND DISTRICT MOTOR DRIVERS AND MECHANICS' CLUB.

MR. D. T. ALLEN, whose motoring experience extends back to the early Benz and Peugeot, presided at the first meeting of the newly-formed Bromley and District Motor Drivers' and Mechanics' Club at its new headquarters last week. The meeting was very well attended by owners and also driver- and mechanics, and in his address Mr. Allen remarked that it was the first club of its kind in the country. It has already forty members. The committee would keep a register of drivers.

After the election of officers, Mr. H. D. Smith, assistant engineer to the R.A.C., gave a lecture on the care of the car, and remarked that the comfort of the passengers would be increased if drivers drove round corners at a much slower speed than usual, by slowing up by the action of the engine instead of the brake, and by taking wider sweeps off the straight when avoiding other traffic.

The headquarters of the club are in a hall at Mason's Hill, on the South Hill Estate, and the room will be open each night of the week. Mr. Herbert Levens is the hon. treasurer, Mr. H. E. Mills the hon. secretary, and the committee consists of Messrs. E. Laws, Brittain, G. Kemp, F. Springett, J. Steer, B. Alliston, C. Ryder, Goldsworthy, Shannon and G. Hartridge.

MR. A. RICHARDS, Sunny View, High Street, Bolton, is the hon. sec. of the Bolton and District Motor Cycle Club, which has just removed its headquarters to the Pack Horse Hotel, Bolton.

MR. N. M. ROGERSON having tendered his resignation as secretary of the Halifax A.C., Dr. J. Crossley Wright, 4, Park Road, Halifax, has been elected in his place, with Dr. E. N. S. Hughes, Dane Court, Halifax, as treasurer.

THE annual meeting of the Surrey Motor Cycle Club was held last week at the headquarters, Albion Hotel, Woking, when it was reported that the membership was forty-seven. Mr. Stanley Christopherson was elected president, Mr. R. Ranger captain, and Mr. Cox secretary. It was resolved to move the headquarters to the Angel Hotel, Guildford, which was considered a more central location.

PUBLIC SERVICES.

THE London Electrobus Company have extended their Liverpool Street to Victoria route to Earl's Court, through the following thoroughfares:—Ebury Street, Sloane Square, Sloane Street, Brompton Road, Cromwell Road, Earl's Court.

ACCORDING to Sir Henry Oakley, in his address to the shareholders of the Central London Railway Company last week, there are 647 motor-omnibuses passing over practically the whole of their line from Lancaster Gate to the City as well as 150 horse-buses. At the British Museum the competition is even more keen, there being no fewer than 707 motor-omnibuses and 1,103 horse-buses stopping and picking up passengers in the vicinity of the station at that point.

THE Fife Motor Transit Company have put on a service of motor-buses between Crossgates, Lochgelly, Glencraig and Kelty, with Cowdenbeath as headquarters.

ON Monday a deputation of cab-drivers waited upon Mr. Herbert Gladstone, the Home Secretary, and urged the following points:—Motor-cab licences are revoked without sufficient consideration. Hardship is inflicted by the revocation of licences for exceeding speed limit in park, and for other trivial offences. Cabmen are refused licences for offences of the past which have nothing to do with ability in driving motor-cabs. Mr. Gladstone should differentiate in the matter of fines between licensed hackney motors and private hackney motors. The reply of the Home Secretary was in the main sympathetic, but he alluded to the adverse feeling which had been excited in the public mind by the speed limit being so often exceeded, whilst agreeing that the men were entitled to have their individual cases examined and to be protected against unfair decisions if any took place.

FROM the Bleriot depot in Long Acre comes an interesting circular descriptive of their patent No-Glare motor lamps, which were recently illustrated and described in our columns. The new Bleriot lamp gives a good light, whilst the elimination of the dazzling effect of the ordinary lamp is well in accord with the resolution of the Committee of the Royal A.C. which was recently adopted on the subject.

CASES AGAINST MOTORISTS.

A 75 PER CENT. REDUCTION.

At Mortlake, on the 3rd inst., Harry Simmons, of 4, Albert Grove, North Acton, was fined £4 and costs for exceeding the speed limit on the public highway at Barnes Common on January 19th. Abbott Sillett, of Crossdeep, Twickenham, denied a similar charge. The police evidence showed that he drove at the rate of over twenty-seven miles an hour, and for the defence Colonel Sutherland, defendant's employer, and Mr. Crowder, who were in the car at the time, were called, and gave evidence to the effect that, according to the speedometer, the car did exceed nineteen miles an hour. After consulting in private the chairman announced that the Bench were of opinion that the speed had been exceeded, as they had tested the two chronographs and found them accurate. They thought there had been no intention to break the law, and that possibly the speedometer had got out of order. They, therefore, reduced the fine, which would have been £4, to £1 and costs.

DANGEROUS DRIVING.

At Acceck's Green, Birmingham, Charles Bradbury has been fined £10 and costs for driving a motor-car at a speed dangerous to the public.

EXCEEDING THE SPEED LIMIT.

At Spittlegate (Grantham) Phillip Howard Walker, of Ben Rhydding, was summoned for driving a motor-car on the Great North Road at a speed in excess of twenty miles an hour, on December 23rd last, and also for failing to produce his licence when requested. The defendant pleaded guilty. The magistrates imposed a fine of £5 including costs.—The Defendant: May I testify to the civility of the police constable?—Major Longstaffe: We are very glad to hear it.

At Kingston Police Court, Alfred Statuly, Upper Norwood, was summoned for exceeding the speed limit at Esher.—The pace was stated by P.-s. Stringer as thirty-two miles an hour. Defendant said the speedometer registered only twenty miles, but upon being subsequently tested it was found to be wrong. The Chairman said that as he had been straightforward the fine would be only £2 and 9s. 6d. costs.

ON Monday, at the Bromley, Kent (Police Court) a motorist was fined 30s. and costs for exceeding the ten mile limit and three others mulcted similar sums for travelling beyond the ordinary speed limit in the district.

COSTS ONLY.

At Greenwich, on Tuesday, a motorist was summoned for exceeding the legal limit at Shooter's Hill Road. A penalty of 20s. and 2s. costs was imposed, but, after a consulting surgeon of Harley Street had explained that he was being driven to an urgent case at the time, the magistrate ordered payment of costs only.

COMPANY NEWS.

In the case of New Companies the file number is given at the end of the particulars.

THE MOTOR REPAIRS AND ACCESSORIES SYNDICATE (LTD.), has been registered with a capital of £5,000, in 98 preferred participating ordinary shares of £50 each and 100 deferred shares of £1 each. The offices are at 86, Cannon Street, E.C.

THE Automobile Consultants, Limited, has been registered with a capital of £200.

THE Midland Motor Wheel Company, Ltd., has been registered with a capital of £500 and offices at 87, Gosford Street, Coventry.

THE capital of the Kensington Taxi Company, Ltd., which has recently been registered, is £1,500.

THE Long Acre Autocar Company, Ltd., of 117, Long Acre, London, W.C., has been registered with a capital of £10,000—not £3,000, as has been published.

MESSRS. BENNETTS (Nottingham), have been registered with a capital of £2,000, to take over the business of motor and general engineers carried on by Mr. H. A. Bennett and Mr. R. Watts at Talbot Street, Nottingham, as H. A. Bennett and Co. Private.

"POLICE CONTROLS."

AMONG the police week-end traps reported to us is that in operation every Sunday morning in the ten miles per hour limit in Clarence Street, Kingston, leading to Kingston Bridge. Almost every week motorists are caught travelling at more than ten miles an hour, and, although they are invariably able to prove that no other traffic was about, fines of £2 or £3 are generally inflicted at the Police Court.

ON the Canterbury road there is a measured furlong in daily operation from the Park Lane, at Shooter's Hill, to the Fox. Care should also be taken on the London side of Shooter's Hill.

A MEASURED furlong is in operation at Hanwell, on the Uxbridge Road, and another danger zone is found near Edgware.

THE police "control" which extends over a measured furlong of the Baywater Road, London, is, we are informed, worked night and day.

MESSRS. M'DONALD AND SON, of Edinburgh, have just held a large sale of motor cars at their Great Eastern Motor Mart, Annandale Street, Edinburgh, when satisfactory prices were obtained.

LIGHTS ON VEHICLES ACT, 1907.

AN official *communiqué* which we have received from the Home Office informs us that bye-laws imposing obligations in addition to those imposed by the Lights on Vehicles Act, 1907, have now been made as follows:—

1. Byelaws requiring that an additional lamp attached on the left side, and showing a white light to the front, shall be carried.
 - (a) By all vehicles:
 - County Councils of Glamorganshire, Monmouthshire, and Staffordshire;
 - Town Councils of Dudley, Hanley, Merthyr Tydfil, Newcastle-upon-Tyne, and Stafford.
 - (b) By stage carriages (not being tram cars or tram carriages):
 - Town Council of Hastings.
2. Byelaws requiring that a lamp or lamps showing a red light to the rear shall be carried:—
 - (a) by all vehicles:
 - County Council of West Riding of Yorkshire;
 - City Council of Leeds; Town Councils of Newcastle-upon-Tyne and Reigate.
 - (b) by covered vans:
 - County Councils of Glamorganshire and Monmouthshire;
 - Town Council of Merthyr Tydfil.
 - (c) by any vehicle or load on wheels drawn by another vehicle;
 - County Councils of Gloucestershire, Monmouthshire, Warwickshire, and Worcestershire.
 - (d) by vehicles used for the purpose of carrying loads projecting to the rear:
 - Town Council of Hastings.
 - (e) by heavy and slow going vehicles:
 - Town Council of Salford.
3. Byelaws requiring certain vehicles drawn or propelled by hand (to which the Act does not apply) to carry a lamp showing a white light to the front:
 - Town Council of Hastings.

Orders under section 4 of the Act exempting from the operation of the Act throughout their respective counties vehicles carrying in the course of harvesting operations any farm produce to stack or barn during certain months of the year, have been made by county councils as follows:—

- Berkshire from June to October (inclusive).
 - Buckinghamshire during August and September.
 - Cambridgeshire during July, August and September.
 - Carmarthenshire from June to September (inclusive).
 - Cheshire during August, September and October.
 - Cornwall from June to October (inclusive).
 - Devon from July to October (inclusive).
 - Dorset from June to September (inclusive).
 - Durham from September to November (inclusive).
 - Essex, Gloucestershire and Hertfordshire from June to September (inclusive).
 - Huntingdonshire from July to November (inclusive).
 - Isle of Ely during August and September.
 - Kesteven (Lincoln) from July to November (inclusive).
 - Lancashire from June to October (inclusive).
 - Leicestershire from June 20th to October 31st.
 - Lindsey (Lincoln) from July to November (inclusive).
 - Montgomeryshire from June to October (inclusive).
 - Monmouthshire from June to September (inclusive).
 - Norfolk during July, August, September.
 - Northamptonshire from June to November (inclusive).
 - Northumberland during August, September, October.
 - Nottinghamshire from June to October (inclusive).
 - Oxfordshire from June to September (inclusive).
 - Peterborough, Soke of, from July to October (inclusive).
 - Radnorshire from July to November (inclusive).
 - Somersetshire from June to October (inclusive).
 - Southampton from 15th May to 15th October (not inclusive).
 - Staffordshire.
 - Suffolk East } from June to September (inclusive).
 - Suffolk West }
 - Sussex West, during July, August, September.
 - Westmorland during July, August, September, and first two weeks in October.
 - Wiltshire } from June to September (inclusive).
 - Worcestershire }
 - Yorkshire, East Riding, during August, September, October.
 - Yorkshire, North Riding, from June 15th to October 15th (inclusive).
 - Yorkshire, West Riding, during July, August, September.
- The Herefordshire County Council have made an Order exempting from June to September (inclusive) vehicles actually laden with and carrying to stack or barn in the course of harvesting any farm produce (not being roots or other non-inflammable produce) and proceeding at a walking pace.

Orders of exemption from the operation of the Act have been made under section 3 as follows:—

- Any vehicles being within the boundaries of the Mersey Dock Estate:
 - The Mersey Docks and Harbour Board.

- (a) Vehicles carrying cotton, and (b) all vehicles constructed and used for the carriage of goods while in certain parts of the City or Borough:

The Liverpool City Council and Bootle Town Council.

All vehicles constructed and used for the carriage of goods while in certain parts of the borough.

The Birkenhead Town Council.

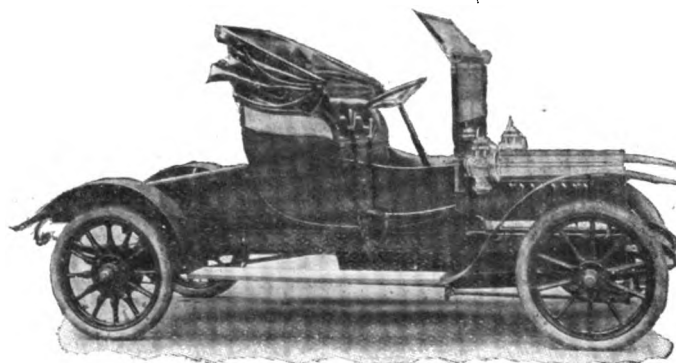
ROAD REPORTS.

EAST SUSSEX.—Captain Sergison, a member of the East Sussex County Council, on Tuesday made the announcement that the county main roads this year would cost £4,000 extra to make good the damage done by heavy motor vehicles and steam engines. He considered it inexplicable that the Local Government Board should place obstacles on speed limits being obtained.

HERTFORDSHIRE.—The Local Government Board have made an order regulating the speed of motor-cars to ten miles an hour on a section of the main road from St. Albans to Dunstable at Markyate, Redbourn, and Harpenden Rural.

NEWBURY.—A proposal has been made at Newbury and sanctioned by the Local Government Board to demolish the Town Hall, which stands in the centre of the town, with only narrow roadways around it. Although local architects are denouncing this as an act of vandalism, the fact that 118 motor-cars passed around it in twenty minutes on the occasion of the last Newbury races seems to point to the need for widening the central artery of the town.

WIMBLEDON.—Negotiations are in progress between the R.A.C. on the one hand and the Wimbledon Town Council on the other, with regard to the proposal to limit the speed of motor-cars to ten miles an hour in the principal thoroughfares. The Club had intimated that should the application be limited to Hill Road, Broadway, and that part of Merton Road lying west of Stanley Road, the Club will not oppose an



A Smart Mors 13-15 h.p. Car.

The above illustration depicts a Mors car with Victoria leather hood and glass screen and folding rear emergency seat. This type of vehicle has been recently sold to a number of doctors—amongst others Dr. Heyworth, of Belper, and Dr. Marriott, of Aldeburgh—the one shown in the photograph being for Mr. Chubb.

order being made. On the other side, the Town Clerk has communicated to the Local Government Board practically accepting the suggestions of the Club, so that the expense of an enquiry may be saved to the rate-payers.

SURREY.—Motorists have often regretted the absence of a light at the junction of the Godstone and Brighton roads. They will be gratified to learn that the Beddington Parish Council has now decided to erect a lamp there as soon as a proper site can be arranged.

DARTFORD.—The Dartford Urban Council are about to erect illuminated warning signs at the top of both steep descents into Dartford.

HARTFORD BRIDGE FLATS.—We are informed by the Automobile Association that a gas main is being laid across Hartford Bridge Flats, and that the gas company have fixed a lamp post at the cross roads to Yateley. This is illuminated all night for the benefit of motorists and other users of the roads.

SLOUGH.—The road between Slough and Maidenhead, and also a part of the High Street of Slough itself, are under repair.

HERTFORD.—The Council Council of Hertford have made application to the Local Government Board for the institution of a ten mile an hour speed limit for motor-cars on the main road from St. Albans to London, within the parish of Aldenham.

FROM the Palmer Tyre Company, Ltd., comes a copy of a pamphlet they have just issued entitled "Are your Wheels in Line?" The alignment of the road wheels of a motor-car is a point to which attention should be given, as should it not be perfect the life of the tyres is considerably reduced. The booklet before us illustrates and describes a simple means whereby motorists can easily test the alignment of the wheels of their car. A copy of the pamphlet will be sent on application to the firm.

FORTHCOMING EVENTS.

FEBRUARY.

19th (F.)-27th (S.).—Manchester Motor Show at Belle Vue, Manchester.
 20th (S.).—First Annual Dinner of the Sutton Coldfield A.C.
 22nd (M.).—Manchester A.C. Dinner.
 25th (Th.).—Irish A.C. Annual Meeting.
 26th (F.).—Hull A.C. Annual Meeting.
 Annual Meeting of the Motor Yacht Club.

MARCH.

1st (M.).—The Road Trials in connection with the Army Council Competition for light tractors commence.
 18th (Th.).—Royal A.C. Annual Meeting, followed by Annual Dinner at the Covent Garden Theatre.
 20th (S.)-27th (S.).—Cordingley's fourteenth Annual Motor-Car Exhibition and Mart and third Aero Show at the Agricultural Hall, London, N.

APRIL.

10th & 12th.—Easter Meeting at Brooklands.
 24th (S.).—Auto-Cycle Union's Quarterly Trial.
 29th-30th.—Road Conference in London of the County Councils Association.

MAY.

26th-June 1st.—Irish Reliability Trials.
 31st (M.).—Whitsuntide Meet at Brooklands.

JUNE.

10th-18th.—Prince Henry Trophy.
 14th-19th.—Scottish Reliability Trial.

LIGHTING-UP TIME—LONDON.

| | | | | | | |
|---------------|-----|-----------|-----|-----------|-----|-----------|
| Feb. 13th-6.7 | ... | 15th-6.9 | ... | 17th-6.11 | ... | 19th-6.13 |
| 14th-6.8 | ... | 16th-6.10 | ... | 18th-6.12 | ... | 20th-6.14 |

A DAIMLER DINNER.

THE second annual dinner of the London repair depot of the Daimler Motor Company (1904), Ltd., was held a few evenings ago, with Mr. Sharp in the chair. A musical programme contributed to the pleasure of the guests, and among the speakers was Mr. Noble, who, on behalf of the staff, expressed their pleasure at again seeing Mr. Sharp in the chair. The chairman then called upon Mr. T. Brown to propose the toast of "The Workmen," Mr. H. Merrifield responding. Major Fernie proposed the health of "The Guests," and gave some of his experiences with the new Knight engine. He said he had driven his car, which was a 1908 chassis, with the new 1909 engine, over 3,000 miles without the slightest hitch. Mr. Claude Lorraine, Mr. Eadie, and Mr. Price also spoke, and a most pleasant evening was spent, the thanks of all participants being due to Mr. Frank Taylor, who acted as hon. secretary to the Dinner Committee.

WOVEN GLASS ACCUMULATORS.

IN the Chancery Division, before Mr. Justice Joyce, on the 5th inst., an injunction was granted on behalf of Van Raden and Company, Ltd., of Coventry, against Mr. H. W. Van Raden, restraining him from using or permitting his name to be used in connection with the business of the Woven Glass Accumulator Company if and so long as such company carried on business under that name or under any name of which the words "Woven Glass Accumulator" formed part, or in connection with any other business for the sale of woven glass accumulators. The injunction was granted by consent of the defendant's counsel, on the plaintiffs making certain concessions as to costs, and it was agreed that it should be perpetual.

AUTOMOBILE ACCIDENTS.

MR. BASH KING, a Worthing hockey player, was proceeding home on a motor-bicycle through Broadwater on Monday, when a collision occurred between his cycle and a motor-car. He was precipitated headlong through the glass screen of the car on to the rear seat, among the occupants. He lost consciousness, but subsequently was able to be conveyed home in another car.

ON Monday afternoon a hind tyre of his car, which Mr. B. Marley, of Ford Croft, Eversley, Bants, was driving, burst near Broadbridge Heath, on the Guildford road, in the direction of Horsham. The car left the road and went into the ditch, the passengers being thrown out, Mrs. Marley having her collar bone dislocated. Mr. T. Rice, of Messrs. Rice Bros., of Horsham, was able to send another car to the assistance of the unfortunate motorists and to tow the vehicle to his works for repair.

A CORONER'S jury at Hampstead, inquiring into the death of a child who died from the results of injuries received by being knocked down by a motor-car in Heath Street, has expressed the opinion that the Hampstead Borough Council should take steps to secure the imposition of a speed limit of 5 m.p.h. for motor vehicles in that thoroughfare.

BUSINESS NEWS.

FROM the Atlas Motor Car Company, of Springfield, Mass., U.S.A., we have received a copy of the 1909 catalogue of Atlas cars. Two models of respectively 20-h.p. and 30-h.p. are being turned out, the chassis being adapted to receive any standard type of body. The feature of the Atlas cars is found in the engine, which is of the two-cycle type, and which is stated to give excellent results in practice.

THE "W. and G." fire-extinguisher, as used on the motor-cabs run by W. and G. Du Cros, Ltd., from their Panhard-Levassor works at Acton Vale, W., is now being constructed entirely at the works, and is becoming very popular throughout the motor-cab trade.

THE agents for the Star cars in Melbourne, Victoria, are the Acme Motor and Engineering Company, and not the Herne Company, as mentioned in our last issue.

WE learn from the Daimler Motor Company, Ltd., that Mr. F. W. Lanchester has been appointed consulting engineer and technical adviser to the company, and during the course of the next few months he will commence to actively interest himself with the many engineering matters which the company has under consideration. In addition to the manufacture of pleasure motor carriages, the company's field of engineering activity already embraces work in connection with road trains, commercial vehicles, omnibuses, agricultural motors, &c., and as the new Daimler motor opens up possibilities of development in directions in which the internal combustion engine has not fully asserted itself, the scope of the company's business is certain of still further expansion. The new appointment does not involve Mr. Lanchester's severance from the Lanchester Motor Company, Ltd., for whom he will continue to act in an advisory capacity.

THE West Wales Motor Car and Engineering Company, of Melbourne Place, St. Helens Road, Swansea, have been appointed agents for the Ariel cars in Swansea and neighbourhood. The agency for Cardiff and district for the same cars is Hill's Garage, Westgate Street, Cardiff.

IN the quarter ended December 31st, 1908, there were 357 accidents in the City of London, of which six were fatal, two being caused by motor vehicles and four by horse vehicles. Of the street accidents in the "one square mile area" last year 111 were caused by automobiles and 240 by horse conveyances.

THE Sylverlyte Electric Lamp Company, Ltd., of 11, Poland Street, London, W., have sent us a copy of the new catalogue of the "Sylverlyte" electric headlight for motor-cars they are introducing, a reference to which was made in a recent issue. It is claimed for the new lamp that it is the only form which will penetrate thick fog, actual tests having shown that with a 12-c.p. lamp a thick fog was pierced and objects at a distance of twenty yards shown up.

IN addition to their standard 45-h.p. six-cylinder cars, the Sheffield Simplex Motor Works, Ltd., are, we hear, bringing out two new models. The first is a light four-cylinder car which will have a 12-16-h.p. engine (17.9 R.A.C. rating), 85 mm. bore by 130 mm. stroke. Thermo-syphon cooling will be employed, with a radiator and bonnet on Renault lines. The second new car will be a light six-cylinder of 20-24-h.p. (26.8 R.A.C. rating). Both vehicles will be made in two lengths of chassis.

TO CORRESPONDENTS.

All communications intended for insertion in this Journal or relating to Editorial matters should be addressed to THE EDITORIAL DEPARTMENT, MOTOR-CAR JOURNAL, 27-33, Charing Cross Road, London, W.C., and must be written on one side of the paper only. Letters must in all cases be accompanied by the name and address of the writer, as no notice will be taken of anonymous communications.

To insure insertion communications and contributions must be in the Editor's hands by Tuesday forenoon of the week in which the same are intended to appear. Disappointment may be caused by non-compliance with this rule, and to avoid this earlier receipt, if possible, is necessary.

Photographers, both professional and amateur, are invited to send photographs of current events or of motoring scenes and incidents. The fee, if any, required for reproduction should be stated in each case, otherwise no liability will be accepted.

The Editors cannot undertake to return MSS. or drawings, although every effort will be made to do so in the case of rejected communications. Where such are regarded as of value, correspondents are requested to retain copies.

The Editors do not hold themselves responsible for the opinions expressed by their correspondents, or for statements and facts which do not appear in the editorial columns.

The Editors and Publishers beg also to state that they will accept no responsibility for unsolicited contributions, even if used, unless payment for same is directly specified in forwarding, and the terms arranged before publication.

THE Motor-Car Journal.

VOL. X.]

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COMMENTS.



A NEW competition, part of the plan for popularising Brooklands, is about to be inaugurated by Major Lindsay Lloyd on the track at Weybridge. This will be limited to motor-cars of not more than 50-h.p. by R.A.C. rating, and will be a competition for the fastest flying lap under handicap accomplished during the month.

The handicaps for next month and in future months for cars which have not previously competed will be exhibited at the Brooklands course. For future months, vehicles which have previously competed will be handicapped according to their performances in this competition, so long as they compete in the same trim as they did previously. Cars will, before competing, be brought up to a weight representing the average weight of a touring car of similar horse-power with the full number of passengers on board. Time-keepers and other officials will be in attendance on Saturday and Sunday afternoons in each week for the purpose of timing cars which wish to enter for this competition, and on these days no previous notice will be necessary.

The A. A. Accident Census.

FOLLOWING its recent practice of compiling returns concerning accidents attributed to motor vehicles, the Automobile Association now sends us the results for thirteen weeks' observation which ended on Saturday last, these including the sad accident at Staines on that day. The record shows that during the three months fifty persons were killed in Great Britain, the car being responsible for thirty-three fatalities, motor-omnibuses for eight, taxi-cabs for four, motor lorries for three, and traction engines and motor fire engines one each. It must also be remarked that six of the victims were motorists themselves. With regard to these fatalities the figures show that no fewer than thirty-five verdicts of "Accidental death" were recorded, and that in twenty-three of these cases complete exoneration of the driver has also been included in the Press reports of these accidents. Three drivers have been committed for trial for charges of manslaughter, and two have been cautioned by juries. Having regard to the number of motor vehicles which are now upon the road, it cannot be alleged that such figures as these indicate the gross carelessness and recklessness with which many anti-motorists would charge those who drive cars.

English Cars across the Border.

ALTHOUGH little has been heard of the matter, it is interesting to learn that the Scottish Office has been instituting a rather extensive inquiry into the motor-car traffic and the maintenance of roads in the Highlands. This was occasioned by the references which were made last year from time to time as to the damage done not by local residents so much as by motorists who came from south of the Tweed. The Nairn County Road Committee have gone thoroughly into the matter and a day or two ago their replies to the inquiries of the authorities were made known. They referred to a record taken in August last on fifteen consecutive days dealing with the motor-cars passing

through the county by the main through route. The number recorded was 1,222, the individual cars numbering 242. Of these 5.39 per cent. were registered in the county of Nairn, 42.15 per cent. in Scotland elsewhere than in Nairnshire, and 51.26 per cent. in England. Throughout the whole season between June and October there was a large increase, and it was calculated that about 95 per cent. of the motorists were residents elsewhere than in the county, and did not contribute to the upkeep of the roads over which they travelled. Surely such authentic examples as this should assist the movement in favour of a central road authority.

Motor Cycle Races.

IN order to encourage the racing side of motor-cycling the British Motor Cycle Racing Club has been formed, to enter into an arrangement with the Brooklands Racing Club Executive for assistance in the holding of race meetings on the track at Weybridge. Facilities for practice will also be given, and there will be monthly club meetings, at which all classes of riders will have competitions and at which races for the existing types of machines suitable for road work will be held. Mr. A. G. Reynolds is the hon. secretary (*pro tem.*) and application will be made for affiliation to the Auto Cycle Union in due course. Doubtless the club will have the support of a large number of motor-cyclists, particularly of those who have in previous years been attached to the sporting side of the ordinary cycle.

Teaching Anti-Motorists.

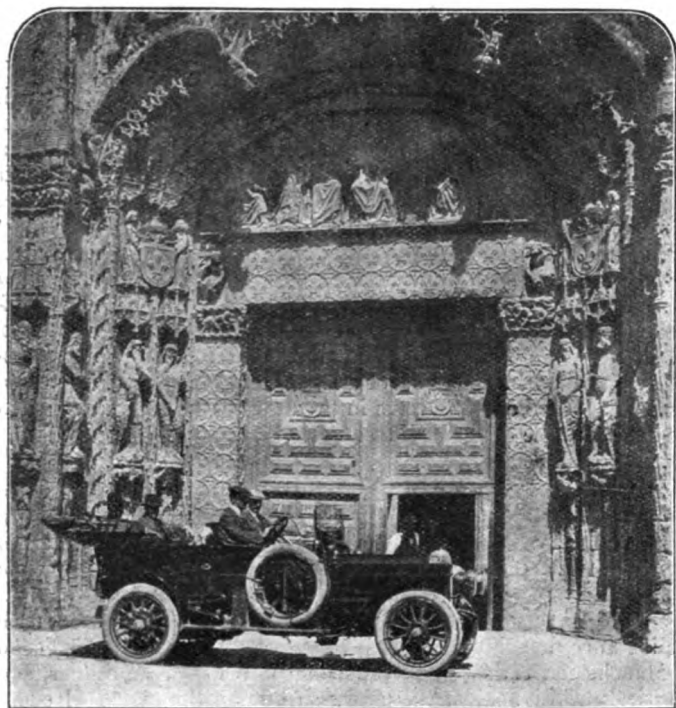
OFTEN on this side of the Irish Sea has the suggestion been made that motorists might teach those who oppose their progress by practically boycotting those towns in which antipathy finds local encouragement. Col. W. J. Bosworth, for instance, has intimated his intention of taking out his licence in Manchester, rather than in the county in which he resides, as a practical protest against the local condition of things. In Ireland, where feeling sometimes rises to a very great height, an interesting decision has been come to in connection with the forthcoming Reliability Trials of the Irish Automobile Club. The authorities of County Waterford are applying to Dublin Castle for a speed limit of five miles an hour in all towns and villages, and for one of ten miles an hour on the open country roads. As a protest against this the Irish Club has decided to omit Waterford from the itinerary of the forthcoming event, and further to urge its members who are not resident in the county to avoid travelling within that area as far as possible. Thereupon the authorities of Galway, in the west, have openly invited the Club to include their town within the route; and this suggestion has been graciously acted upon, while the invitation of the local authorities in County Kerry for the competitors to make a prolonged stay at Killarney has led the Club to arrange that the trial shall have its headquarters for three nights in the vicinity of the Lakes. This gives point to the suggestion that where the local authorities are sufficiently wide awake to their own interest to welcome motorists the compensating revenue can quickly be found to cover any alleged damage that may be done to the roads; but where a distinctly hostile attitude is assumed an opportunity is frequently at hand to teach salutary lessons and to secure in this way a recognition which argument cannot obtain. With

reference to the Irish trials we learn that the classes into which the cars engaged in the trial will be divided are as follows, namely:—

- A.—Vehicles the chassis price of which does not exceed £150.
- B.—Over £150, not exceeding £200 (two seats).
- C.—Over £150, not exceeding £250 (four seats).
- Q1.—Over £200, not exceeding £250 (two seats) if minimum of six entries received).
- D.—Over £250, not exceeding £350.
- E.—Over £350, not exceeding £450.
- F.—Over £450, not exceeding £550.
- G.—Over £550, not exceeding £700.
- H.—Over £700.

A New Competition.

THE Technical Committee of the R.A.C. having been requested to consider the basis of a new competition proposed by Mr. Mervyn O'Gorman, has resolved to carry out competitive engine tests provided forty entries are received. Regulations are to be drafted by a sub-committee for the carrying out of the tests in the maker's own works, and the study of these, even if the competition is not held, will be of service to the makers.



Tourists in Spain should on no account miss seeing the beautiful Cathedral at Valladolid—situated on the borders of Old Castile. The above illustration depicts a Daimler Car in front of the principal entrance.

Motor-cars and Mud Splashing.

MR. H. FERGUSON, of Belfast, recently carried out some interesting experiments with regard to the capacity of the motor-car to throw mud. The test was made on the Lisburn road, near Belfast, the spot selected being where the railway lines cross the road at Lambog. The roadway was swept on the evening before the trial, and in the morning water was thrown over it so as to give the necessary fluidity approximate to the conditions which normally attain in "dirty weather." A screen, 8 ft. wide by nearly 6 ft. in height, was constructed and placed on the side walk. The first test was for the car, when travelling at 15 miles per hour, to pass the screen at a distance of three yards. Under such conditions the average height of the volume of mud dispersed on the screen was one foot. Splashes occurred up to 18 inches of the screen from the ground, but very few appeared above that height. When the speed of the car was increased to twenty miles per hour the well-dispersed mud rose to a height of 3½ ft. Subsequently the car was driven at

twenty-five miles an hour, when the average height to which the mud was thrown was 4 ft. and the maximum 5 ft. 11 in. All these tests were made at a distance of three yards from the screen. The net result was to show that at twenty miles an hour the pedestrians are practically certain to be splashed, and as the speed of the vehicle increases escape becomes really impossible. These tests would suggest to motorists the advisability of slackening pace in towns and places where pedestrians are to be found on muddy roads, so as to preserve their good opinion of motorists as well as not to damage the clothing of those who happen to be within range of the mud thrown out by the vehicles.

Our Deposit System.

WE would again draw attention to the value of the Deposit system, which was inaugurated by the M.C.J. some months ago, and which has proved highly popular with those of our readers who have goods to sell as well as those on the look-out for equipment to their cars or motor-houses. The system has by its simplicity facilitated small transactions, securing both parties against loss, and also giving them an opportunity of satisfying each other with regard to the sale of motor accessories and supplies, particularly those which come into the category of second-hand.

The Roadway as a Playground.

THE terrible tragedy which occurred on Saturday last, on the highway at Staines, has sent a thrill of horror across the countryside of Middlesex, and will probably cause an outcry against motorists such as followed the unfortunate accident in Hertfordshire a few seasons ago. Motorists have frequently called attention to the dangers of allowing the roads to be used as playgrounds for children; they have, through their official organisations, urged schoolmasters and others to warn their pupils against such practices; and a campaign has been waged by the automobile Press against such games as "last across the road" and cap-throwing amusements, in which the youngsters of this generation seem to delight. Despite all this, however, the road continues to be regarded as the proper place in which children can play, heedless of the traffic that may be about, and regardless of the risks to others as well as themselves. Something more is apparently necessary, and the roadway will have to be a prohibited place so far as the recreations of young children are concerned. The police and the road authorities should join not only in issuing notices, but also in taking active steps against its being made use of in that way. In the years that are gone, when a more leisurely state of things prevailed, the grass-grown highway had attractions for the children, who could play in safety as well as in comfort. But nowadays matters are moving—have, in fact, moved—and to indulge in such games as "the last over" is to invite disaster. Parents and teachers have a solemn duty in warning children; but the police have also a duty in seeing that such warnings are properly heeded.

Educating Councillors.

AT the meeting of the Executive Committee of the County Councils Association in London last week it was resolved "That the association urge upon the President of the Local Government Board the importance of facilitating and expediting procedure as to speed limits in populous and dangerous places by county councils being permitted to hold enquiries themselves, and to make regulations for a speed limit of ten miles per hour where necessary, unless the Motor Car Act be amended so as to reduce the speed limit absolutely to ten miles per hour in such places." In view of the persistence with which this Association is endeavouring to secure a reduction of the speed limit, we would suggest that one of the central motoring organisations should arrange that its delegates should have a motor-car run for, say, twenty miles from London in order to demonstrate the unnecessary character of many of their proposals. If, for instance, some of the people who now advocate the ten mile limit as though it were the

utmost possible liberty that could be allowed the motorist, were compelled to keep for such a pace along a wide unfrequented highway in a thinly populated area, they would soon realise the error of their views. A decade ago such practical demonstrations with regard to the merits of the motor-car were great factors in restraining the ardour with which many men "armed with a little brief authority" denounced the mechanically-propelled vehicle. There is still, in a few localities, need for a revival of the object lesson method of instruction.

A Motor Museum.

FROM time to time the suggestion has been made that there should be established in a building in London, generally accessible to the public, a museum showing the advance of the British automobile industry from the time when Trevithick astonished the natives of Cornwall with his early steam car on the roads. So far, however, nothing of a really definite character has been done; hence the welcome that will be given to the idea that is now being realised on the premises of the Royal A.C. The

been too great an inclination among Mr. Snowden's colleagues to regard anything which assisted the motor movement with antipathy.

A Revival at Coventry.

THE spirit of pessimism seems to have settled upon many of the leaders of the motor industry and gloomy foreboding appears to be fashionable in many districts. But, according to a well informed correspondent, there are indications of increasing activity in the motor industry, notably in Coventry, its chief centre. At several of the large factories overtime is being worked, some of the departments being exceedingly busy, while at other works hands are fully employed. This is in consequence of the preparations that are being made for the coming season's trade, which is viewed with considerable confidence. With the general revival in trade and the gradual approach of Easter, makers will be getting busier, though, owing to the unfavourable experience of many companies in 1908, they are moving cautiously, especially as some firms have a fair amount of stock left on their hands.



Constructing the New Test Hill at the Brooklands Track. As will be seen, it is located on the hill facing the Paddock.

Club has received several offers of models of well-known cars for display in the Club House, and the Technical Committee is drafting regulations as to the dimensions, &c., that will be most suitable. An endeavour will be made to secure that all the models are of a uniform size, and in time the Club will thus become the possessor of a museum which should prove interesting to those wishing to trace the history of the automobile movement and to see how the design of cars has altered from year to year. It should not be difficult to make the suggestion retrospective and to secure, ere it is too late, models of some of the vehicles which have done service during the last decade.

A Labour M.P. and the Roads.

IN the county of Surrey, Mr. Philip Snowden, M.P., has been urging that the Government should tackle, in no niggardly fashion, the main roads of the country, and that motor-cars should be used to link up the villages with the railways, in the interests of the small holders of the rural districts. We are glad that at last a Labour member has publicly endorsed the view that motorists have long advocated, for hitherto there has

The Safety of London.

SCAREMONGERS and others who are picturing London as one of the unsafe spots in the world will be interested to know that according to the statistics up to 1907, recently issued by the London County Council, there were only 2,286 persons killed by accidents in that year, as compared with 2,834 in 1901. So that the displacement of horsed vehicles by those mechanically propelled has been followed by a diminution of danger—rather than excess.

HAIR'S MOTOR WORKS, of Victoria, have recently completed a special motor vehicle for Mr. F. C. Bird, an enterprising dairyman in Tasmania, who intends using it for conveying bulk supplies to his various distributing depots. The vehicle has a four-cylinder engine, developing 14-h.p. The milk container is one large cylinder-shaped tank, divided into three compartments, and carries sixty-two gallons of milk. The driver is snugly enclosed from the weather in a neat cabin of the canopy pattern, with glass front and back. The vehicle, which has an attractive appearance, should be the forerunner of many others.

"STEAM IS NOT DEAD YET."

BY OLIVER RIGINAL.

I HAD from quite a boy a great liking for machinery. What boy hasn't? Well, I admit I was but an ordinary, a very ordinary lad, but the mechanical tendency in my character has often since led people to wonder why I did not take it up as a profession. Whatever may have been my reasons, the fact remains that I became an M.D., but I have still my hobby, with which I spend all the moments I can spare from my wife and my professional duties. And, as a doctor, I should prescribe everyone to have a hobby outside his profession; it is a relaxation from professional duties, and relieves the mind from worrying over business. But this is not a prescription which I am going to give you, it is merely an account of a run from Town to Brighton some years ago on a steam car.

When the vehicle in question was put on the market it excited my interest keenly, as I foresaw great possibilities in its future, although in England at the time, as now, the general impression prevailed that steam cars were obsolete. "Why?" I asked myself, "because a well-known American steam car which 'had come to stay,' didn't, and was no longer on the English market?" I put this argument from me; it seemed it was just because they had not "caught on" and because the aristocracy drove petrol



"I was somewhat disgusted when at Dale Hill we all had to dismount and push the thing up, with the steam to help us—it was awful hard work."

cars, therefore petrol cars were the fashion. As the fashion did not concern me at all I determined to buy a steamer.

Consequently I found myself in town one day, the proud possessor of the vehicle, and arranged to learn all about it before returning in it to Brighton.

"Shure and it's Bias himself!" exclaimed a well-known voice, as I was strolling down to the garage the next day.

"Come down to my place for the week-end," I invited, "I'll run you down in my new steamer."

"What!" my friend exclaimed, looking horrified, "shure an' it would be a case of Psh! an' we'd both be blown to the devil!"

I did my best to assure him the danger of being blown up was entirely done away with in these new pattern cars, but he would not be persuaded, and I strolled into the garage thinking what a fool he was for missing the chance of the lovely spin I was so looking forward to.

However, later in the day I met three chums at the club and arranged to drive them down to Surbiton the following day. The next morning was somewhat frittered away in telephoning from the office to the store house and I practically did nothing; then, when we were ready to make a start, we were delayed three

hours by the mud guards not being quite finished, and when at last we did get off the pump failed. I did not say much, as I remembered my first opinion of the advantages and possibilities of steam, but I realised at that moment that to anyone who had not a practical knowledge of machinery, and could not be his own mechanic, a steam car would be more of a burden than an advantage. But for myself and brother mechanics I foresaw many a pleasant hour of grateful occupation in store, and my heart gave a leap. I almost loved that car; it was to be my playmate—my companion. I felt as I can imagine a miner does when he has dug, and dug deep, and at last has "struck ile," and my pulse quickened.

When the pump failed I found it must be taken down and the valves and plunger, &c., cleaned, and it was 3 p.m. before we finally started; but the boiler steamed very badly; we had to keep stopping to get up the pressure, and it took two hours to reach Purley. Being then dark and a nasty drizzling rain having started, which threatened a bad night, together with the fact that we had had no food since an early breakfast, which accentuated the perishing cold, I decided to give up Surbiton and put up at Purley for the night.

I assured my friends that I had done my best to reach Surbiton and was sorry that I had failed, but hoped instead they would accompany me to Brighton the next day. I was more than ever excited about the good time in store for me, but my friends looked at me in amazement.

"You seem quite cheerful about it," one of them remarked, as he tucked into a good raw beef steak.

"Why not?" I asked.

"Do you really think we should ever arrive?" asked another hesitatingly.

"There is a station quite close—you can all take the train back if you prefer to," I said quietly, "I'll stand the fares."

"No, certainly not, old chap, we'll see you through now we are here."

I didn't thank them, I was dreaming of the following days—and days when I could "have it out" with the car. I am a physician by practice, but I felt like a surgeon who was itching to have my patient's 'bleed' and perform an operation.

"Meet me, then, at 9 a.m." I said. "Sharp!" I called out as they retired. They, I believe, spent a very good night—all I remember about it was that I was up betimes in the morning and at 9 o'clock to the moment my friends found me in the garage. They came out looking rather sleepy still, but my bright face evidently aroused them, as would a bright sun shining through one's bedroom window, on a lovely summer's morning.

"Is she all spic and span?" they asked.

"She looks it, doesn't she?" I replied.

"Right oh!" was sung out, and I knew we were ready to start. With suppressed excitement I started to get up steam.

"Eh, what?" exclaimed a voice at my side.

"Did you say we were ready to start?"

"In a moment," I said—but, alas! the pump for getting up the air pressure for the petrol failed. I found it did not fit the nipple on the car and I had to make a fake.

It was some two hours later that we eventually got off amid cheers from the other three, but the steaming was worse than ever, and we couldn't average more than three miles an hour, and even this speed was only accomplished by not using the pump on the engine, but by working the hand pump when we stopped, which was about every half-mile.

In about three hours we arrived at Redhill. My readers probably know the hill into the town. I had been wondering all along the road what would happen when we reached it, and had made up my mind beforehand that I must get rid of the passengers.

"Do you mind walking up this hill?" I said calmly.

One of them was out in an instant.

"Certainly! I would rather," he replied from the road, and I remembered a recent experience of his, when the car he was in had mounted three-quarters of the way up a steep incline, when it suddenly commenced to run backwards down the hill at a terrific speed.

"Jam on the brakes!" he had shouted to the chauffeur, but the reply he heard in faraway tones was:—

"Please sir, the brakes won't 'hact'!" and the result was six weeks laid up—and my friend didn't want to repeat the dose. He didn't believe in the "Mixture to be taken as before."

After that hill, as you may know, there is a nice switchback gradient over Earlswood Common, and having picked up my companions, who were waiting for me, we started with 170 lbs. of steam. Oh! how truly glorious it was as I gave her one lovely swish for about a mile over the common. My heart beat, it was simply splendid as we travelled at thirty miles an hour, and so smoothly! Oh! if only we could have kept it up, but . . . ! We had no time to stop for food and had to be content with biscuits eaten as we went. We took in water three times and petrol once, and at every hill I shed the passengers.

"Do you think we shall arrive before Christmas?" asked one of the party drily. It was December 1st and they were all waiting for me at the top of the hill, shivering with cold in spite of their walk and fur overcoats.

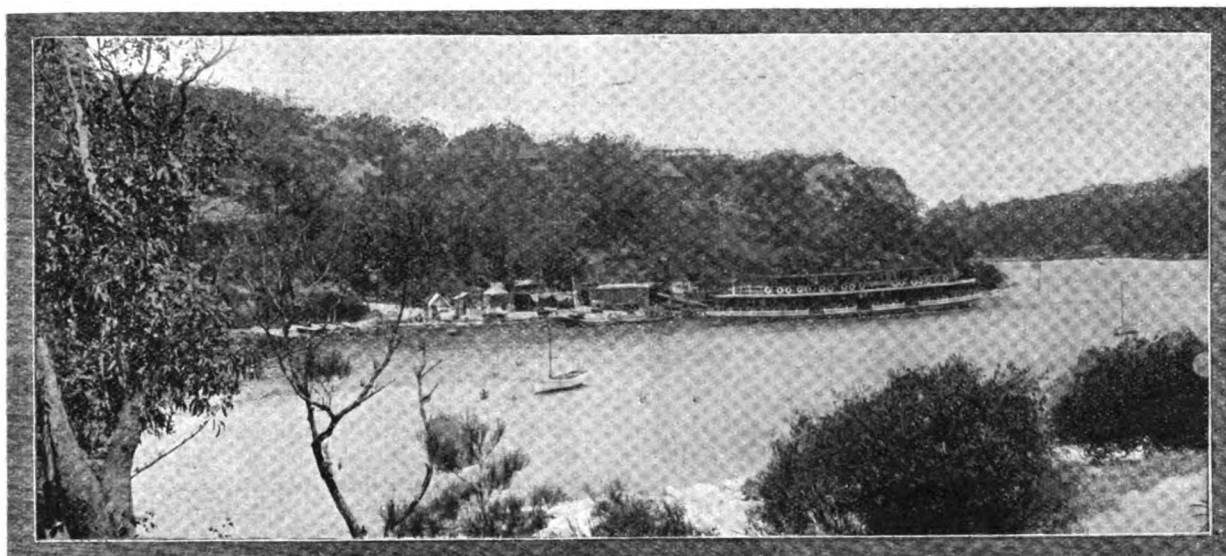
"We shall be in Brighton before midnight to-night!" I answered.

I had been looking forward to Handcross Hill, anticipating the same grand exhilarating sensation we had experienced over

Personally, I was feeling as jolly as a sand-boy, and with my new toy safely in garage I thought I had earned a good night's rest, in preparation of the many hours' work I anticipated in the entire overhauling of it.

Seven years have passed since the events narrated above took place, and I have often had a good laugh over the troubles of that eventful day, when they passed through my mind. After the entire overhauling I got the car in thorough repair and eventually sold it to a gentleman whose business only permitted him to legally go three miles an hour, i.e., an undertaker. It was the best master it could have had, but I do not mean to malign the machine, for I often met that gentleman on the road, and, without saying anything wrong, he was going at the usual speed limit of twenty miles an hour with perfect ease. Her number was C.D.I. When I first had her she might indeed have been called 'Seedy' I.

Since then I have owned six steam cars and one four-cylinder petrol car, and my stud at the present moment consists of two modern steamers, the last word in the application of steam as a motive power on ordinary roads. I can now run up to town and back with the punctuality of a railway train, to visit a brother mechanic and M.D. No! Steam is not dead yet!



Mosmans Bay, a pretty and popular resort near Sydney, New South Wales.

Earlswood Common. In due course we arrived at the "Scene of Accidents," and away we started, but I quickly realised that the brake was not sufficient to keep the car in check, and I had to reverse the engines. I thoroughly enjoyed finding all these defects as it meant all the more pleasure to me later on, but I must admit I was somewhat disgusted when at Dale Hill we all had to dismount and push the thing up with steam on to help us—it was awful hard work. We were very glad of the rest accorded us by managing to make her go for the next two miles; but after that the passengers had to alight again and walk to Patcham, while I got it along somehow.

Then, to add to our many woes, the water gave out. It was just out of sight in the glass, and I thought the pump had failed. so I started the hand pump, but without effect, and then I discovered there was no water in the tank. The fire meanwhile had got the pressure up to 170 lbs., so I put the fire out, again discarded the passengers, and with what steam I had left I struggled on to Preston Park Gates without a fire. The others soon caught me up, and we then set to with a will and pushed the thing home, among the taunts and jeers of the cab and 'bus men. We arrived at the house at 11.30 p.m.—half-an-hour within my stated time, and were greeted with pleasure and relief by my wife, who introduced us to a jolly good "tuck in"—and we needed it.

If I am asked the salient points in which a modern steam car surpasses the early efforts, I would give the following:—The fire tube boiler is retained, but it is larger and uses steam at 450–500 lbs. pressure. There are two engine pumps, which entirely eliminate the necessity for using the hand pump (water). There is also an introduction for careless drivers who run short of water, i.e., a fusible plug to prevent burning the boiler.

Again, all connecting joints are eliminated, so that the escape of steam or water is practically rendered impossible. A simple water gauge is fitted to the water tank, enabling the amount of water to be seen at a glance. And all pressure, instead of being in a big petrol tank, has simply to be maintained in a small one about the size of a 9 in. coffee canister, and the main petrol supply is at atmospheric pressure and can be filled up at will even without turning out the fire.

We can now go forty-five miles an hour on a tank of water, and instead of shedding passengers up Handcross Hill we are hardly aware of its existence.

RETURNS just to hand show that the exports of motor-cars and parts from the United States last year only reached a total of £989,718 as compared with £1,151,394 in 1907. The United Kingdom heads the list with £345,740, Canada being second with £223,108 and France third with £112,089.

GOSSIP FROM PARIS.

French Motor-Car Makers Break Away.

The revolt against the A.C.F., which had been brewing so long before it manifested itself openly at the last Salon, has assumed a yet more aggressive character. The big French manufacturers who led the movement for the suppression of the Grand Prix, and who last December sent their emissaries to all the exhibitors at the Grand Palais with the object of getting as many of them as possible to undertake to boycott the Salon of 1909, have now gone further. They refuse to be "protected" and "patronised" any longer by the A.C.F. and its Syndical Chamber, and are constituting for themselves a Syndical Chamber of Automobile Manufacturers, from which the representatives of all the rather heterogeneous interests represented in the A.C.F. are to be rigorously excluded. None but *bona fide* automobile makers are to be admitted into the new association. There seems to be no doubt of the intention of the manufacturers to separate themselves completely from the two automobile syndical chambers already existing—that of the Automobile Club (the *Chambre Syndicale de l'Automobile et les Industries qui s'y attachent*) and the *Chambre Syndicale du Cycle et de l'Automobile*—but till now no resignation has yet been received by either of them. The desire of these automobile makers to



Touring in France.—A halt on the roadside near Brioude, in the Auvergne.

thwart the action of the Automobile Club is still further demonstrated by the campaign they are carrying on relentlessly against the decision of the official syndical chamber to hold a Salon at the end of the present year, and it is stated on first-rate authority that the new syndical chamber of manufacturers will, immediately it is legally constituted, use all its influence with the Government to prevent it from granting the application of the A.C.F. for the Grand Palais, in which, in accord with the vote of its syndical chamber, it was decided to hold the usual show in November and December next.

How they do it in France.

One after another all the automobile clubs of France are adopting strongly worded protests against the drawing up of *procès verbaux au vol*. The abuses they lead to are intolerable and endless. A typical example of their injustice was recently furnished in the Paris Police Court. A foreigner possessing a motor-car left it in the care of a garage while he went for a tour round the world. During last autumn the manager of the establishment was astonished to receive a legal notice that on a certain day in October a *procès verbal au vol* had been drawn up for excess of speed against the driver of a car bearing the number of his absent foreign client's automobile. Now the vehicle had not left the garage since the month of June. The manager went to the Police Commissary to explain the matter and came

away quite satisfied, especially as he happened to meet at the Police Commissary's office the very *sergent de ville* who had drawn up the *procès*, and who did not seem very sure of having copied the number of the car correctly. The manager believed the accusation had been withdrawn. But imagine his amazement when, some long time afterwards, he received for his foreign client, who is even now absent from Europe, a summons to appear before the police court to answer for the offence of having on October 7th, while perhaps at that moment in Japan, committed in Paris a breach of the regulation concerning speed. Even that was not the worst of it. When the manager of the garage appeared in court in the place of his absent client and tried once more to explain and to prove the impossibility of the offence having been committed by his client or any one using his car, the judge refused to listen to him, because he had not a power of attorney authorising him to represent the supposed delinquent, who was consequently condemned in his absence to pay the usual fine.

The Gordon Bennett Aeroplane Competition.

The C.A.M. (Commission Aérienne Mixte) has taken a wise decision. It has adopted the proposal to hold the Gordon Bennett Cup competition at Bétheny during the Rheims grand aviation week, extending from 22nd to 29th August. The aviators competing for the prize are to cover a total distance over a circuit measuring between five and ten kilometres with no acute angles. The definitive regulations will be published very shortly. The cup will be awarded to the Aero Club to which the aviator covering the distance in the shortest time may belong, but it will not become the property of the club unless it is gained by one of its members in three consecutive years. The money prize of £1,000 is to be handed to the victorious aviator, and other prizes comprising the amount of the entrance fees, fixed at £20 for each machine, and any donations which may be made will be distributed to the aviators coming in second and third.

Entries for the Competition.

It was stated in a circular addressed last week to the French aviators by their Aero Club that the latest day allowed them to make known their desire to be chosen to form part of the trio destined to represent France in the competition was February 15th. At a meeting of the club held last Saturday that date was, however, extended till June 15th. The official note concerning this extension of time also announced that so many French aviators aspire to the honour of representing their country in this great international event that it may be necessary to hold preliminary elimination trials on August 23rd. Though there are at the present moment, so far as I know, only two French aviators—Delagrangé and Blieriot—who have already flown so much as the 12½ miles they will have to cover in the Gordon Bennett competition, no doubt others will before the great day come have proved their ability to do so. Henry Farman is an Englishman, and therefore, though born and resident in France all his life, cannot, I suppose, be a French champion. I have not heard that he has been asked to form part of the English trio or that he has offered to do so. As for Wilbur Wright, I do not know his intentions. He may be one of the American champions.

I understand that the competitors at the Rheims meeting will have the whole week in which to choose the most favourable moment for their performances. There will be at least five competitions—one of duration of flight, one of speed over a measured distance of thirty kilometres (18½ miles), one of speed over a short circuit, one of height, and one for machines carrying more than one person. The local committee, of which Marquis de Polignac is the President, has already in hand no less a sum than £8,000, so the prizes will be worth gaining.

MARNEY.

THE report of the Motor Union Insurance Co., Ltd., for the year ended December 24th, 1908, has just been issued, and shows a net premium income of £52,952. Out of the available balance the directors recommend that a dividend of 7½ per cent. be declared upon the paid-up capital.

THE IMPERIAL FLYING SQUADRON.

HAD he lived until these years of the Twentieth Century, Tennyson would probably have done for the Imperial Flying Squadron what he did for the Volunteer movement in the Sixties by his poem of "Riflemen, Form." For, said the great Victorian poet,

"I dipt into the future, far as human eye could see,
Saw the Vision of the world, and all the wonder that would be;
Heard the heavens fill with shouting, and there rained a ghastly dew
From the nations' airy navies grappling in the central blue."

It is something of that feeling that has led Mr. Pemberton-Billing to give practical evidence of his patriotic purpose by the formation of the Imperial Flying Squadron.

This is to consist of amateurs who, taking up aeroplaning as a hobby, are willing to give their services to their country in time of need. Believing that, in the not distant future, the aerial machine will be a great factor in decisive warfare, Mr. Pemberton-Billing has studied the geography of England and Wales from the point of view of an aerial navigator. He has come to the conclusion that there is one vulnerable piece of flat land on our eastern coast which might tempt the enemy to an aerial invasion; and hence the enterprise, details of which have been supplied us by Mr. C. E. Whitaker, whose enthusiasm for the newest and the highest form of locomotion will have practical vent as supervisor and general director of the flying ground now being established in Essex.

Fambridge, on the Crouch, is the headquarters of this latest enterprise. The little village has a few bungalows, a capital hotel, a post-office and many other conveniences of modern life, and then, looking eastward, there is not a single pimple on the face of the land—all is marshland, and we have a wide view of the river valley and of the battlefield of Ashingdon, where Canute defeated Edmund Ironside. The Romans had a station in the district. It is indeed a dreary grassy piece of country, with scarcely a tree and ne'er a telegraph pole—an ideal place for a "flyaway"—if we may suggest a word that well indicates what Mr. Pemberton-Billing and Mr. Whitaker have in contemplation.

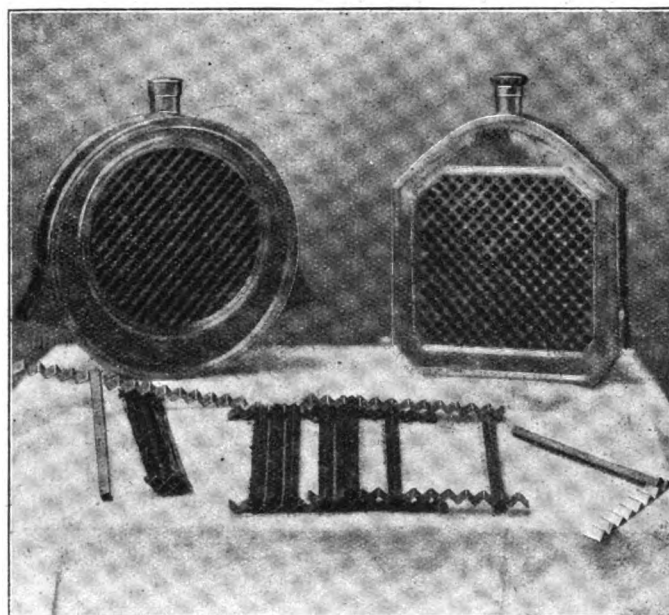
An estate of about 3,000 acres has been obtained, with all the buildings already indicated and a well-built works, which, originally designed for the manufacture of cranes, now promise well as aeroplane sheds. There are two great shops, one 126 ft. by 111 ft. and 75 ft. in height; another 112 ft. by 56 ft. and 30 ft. high. These will have great doors 70 ft. wide and 30 ft. in height, to admit of the aeroplanes which will be housed therein. Then for a distance of about fifteen miles to the sea is a great stretch of the marshes a mile in width, along which the aeroplanes can fly in security.

Those who contemplate journeying towards the skies will be able to indulge their hobby at Fambridge, about seven miles from Southend by road and less than that distance from the railway station at Hockley. At the Aeroplane Colony there will be maintained a squad of men to assist amateurs who, for an inclusive rental, can have the use of a bungalow for themselves, the aeroplane shed for their machines, and plenty of assistance in connection with their flights. Mr. Whitaker is entering into this innovation with zest and all must hope that the scheme will have all the success it deserves. The location is certainly an ideal one for an aviators' experimental ground and should do much to improve the position of Great Britain in the category of nations that are encouraging aerial flight. Free of official restrictions, those who become associated with the Imperial Flying Squadron will be able to develop their ideas along their own lines, so that it will become an important centre for experimental work as well as a useful flying ground.

A 40-H.P. Mercédès car has just been supplied by Messrs. Dueros Mercedes to Prince Akisugawa, the Crown Prince of Japan. The vehicle is fitted with a special seven-seated Roi-des-Belges body, built by the Automobile Carriage Builders, Ltd., of Vauxhall, S.W.

THE ARMOURED HONEYCOMB RADIATOR.

WE are this week able to illustrate the new armoured honeycomb radiator which, as was briefly mentioned in our last issue, is being put on the market by the Horley Motor and Engineering Company, Ltd., of Horley, Surrey. It will be seen that the radiator is built up of a large number of solid-drawn square (in section) tubes of brass or copper. Each row of tubes is separated at the front and rear by strips of tinned brass so made as to embody a series of sharp angled corrugations corresponding to the sides of the tubes. The latter are laid on the strips in such a way that the ends thereof are not flush, but so that those of the tubes are at a point midway across the width of the strip. The strips and tubes, when built up to the required size and form, are then soldered together, hermetically sealing the water space. The object of introducing the strips is to produce a radiator of such a strength as to be capable of resisting heavy shocks without damage and consequently without leakage. Even should some of the tubes be injured as a result of a severe collision the makers claim that the



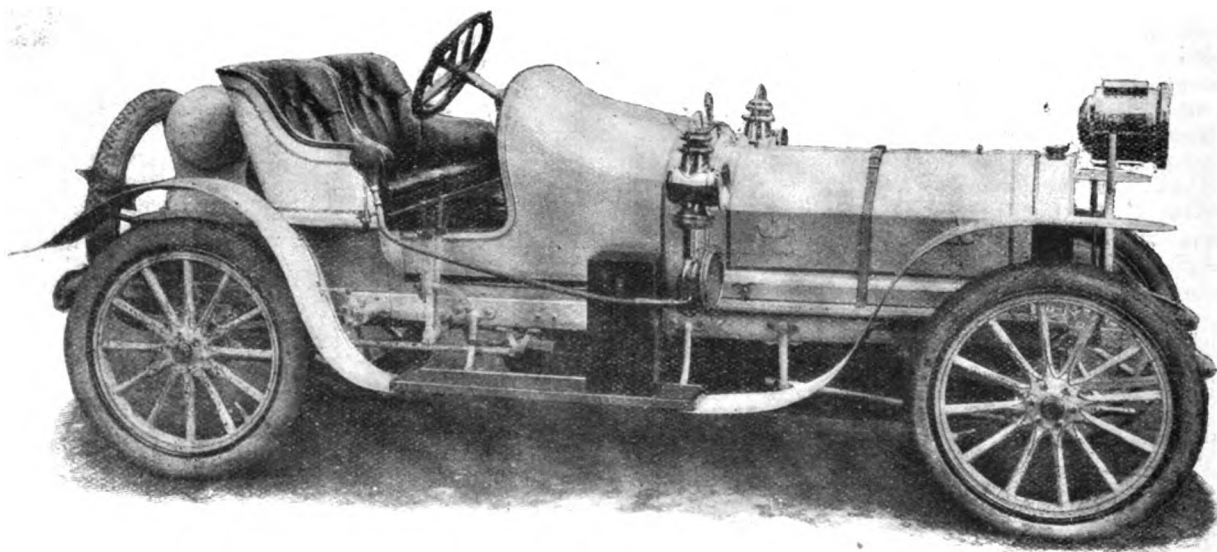
method of construction is such that anyone able to use a soldering iron can readily fit new tubes in place of the damaged ones.

In addition to the increased water space between the tubes made possible by the use of the strengthening strips, there is another feature in the new radiator to which attention may be drawn; we refer to the fixing of the tubes cornerwise; it will be seen that as the hot water descends it meets a series of deflecting ridges, which divides it up into a series of fine sprays, consequently increasing the cooling efficiency. The armoured radiator, as will be observed from the two patterns depicted in the accompanying illustration can be made in any desired shape or size, and, apart from its strength and other advantages, has a neat and pleasing appearance. The Horley Company are also making an improved form of gilled-tube radiator, the front of which is made to resemble in appearance one of the honeycomb type. In this the tubes can be either arranged vertically or horizontally, as required.

A MAN who was in charge of a heavy motor vehicle on the Staines road, Bedfont, on February 11th, came before the Feltham magistrates, on Monday, charged with being drunk on that occasion. While driving he ran into a troop of horses belonging to the Dragoon Guards, one of which was thrown into a ditch. The prisoner was sentenced to a month's imprisonment in the second division.

A NEW JACKSON CAR.

THE accompanying illustration depicts the latest model of the well-known Jackson cars which Messrs. R. Reynold Jackson and Co., Ltd., of Notting Hill Gate, W., are putting on the market for the 1909 season. As will be seen, the vehicle, what with its long bonnet, its extended dashboard, &c., has quite a racy appearance. As regards the mechanical portion of the chassis, which is known by the firm as their No. 8 type, this comprises a number of detail improvements. The motive power is supplied by one of the latest De Dion 8-11-h.p. single-cylinder engines, with mechanically-operated valves and automatic carburettor. The water circulation is on the thermo-syphon system, no pump being employed; the lubrication is effected by means of a Dubrulle mechanical oiler. The power of the motor is transmitted through a leather-faced cone clutch to the gear-box, which is now located more to the rear, so that access can be had to it below the driver's footboard; at the same time the change in position has enabled a universal joint to be introduced on the shaft between the clutch and gear-box to allow for any want of alignment between the two parts, and to permit of either being dismantled without disturbing the other. The three speeds and reverse motion are controlled by a single lever, and the final transmission is by a cardan shaft and bevel gear to a strongly built live axle. Following modern practice, the



General View of New Jackson Car.

cardan shaft has only one universal joint and is enclosed over its entire length in a sleeve. Other details to which reference may be made are the adoption of three-quarter elliptic springs at the rear and the fitting of ball bearings not only to the gear-box shafts and back axle but to all the road wheels. As showing the attention that has been paid to the details, it may be mentioned that to facilitate starting both a carburettor "tickler" and a half-compression device are provided, the levers operating these being located near the starting handle.

The car is designed for two passengers, and, with its low bucket seats and acutely inclined steering gear, the vehicle combines the appearance of a powerful racer with a machine that is not only speedy and moderate in first cost, but in point of view of the expense of running is well within the means of a very large section of the motoring public. Making a short run on one of the new models in company with Mr. Reynold Jackson a few days ago we were much struck with its behaviour; in fact, so relatively quiet ran the engine and so marked were its "pulling" powers that, except for the prior knowledge, we should have thought the engine was at least a twin instead of a single cylinder.

THE Didsbury Engineering and Motor Works are the proprietors of a new depot and garage which has been established at 20, Wilmslow Road, Didsbury, Manchester.

AN EARLY AERONAUTICAL ENGINE.

IT is interesting to recall the fact that the pioneer French aeronauts were obliged to place their order for an engine with a British firm. In a corner of the modern workshops of Messrs. Hunter and Son, of Lanier Road, Lewisham, who claim to be the "oldest firm of practical motor engineers in the United Kingdom," may be seen to-day an interesting petrol engine, the actual pioneer of its type built for aerial navigation purposes. The engine was built and designed to the order of M. Gaudron for his steerable balloon, which made several ascents from the Alexandra Palace in 1897 and 1898. The motor, which developed 4-h.p., has two horizontal opposed cylinders, the explosion acting on both pistons at the same time. The end aimed at was a smooth running, light and well-balanced engine, and it was admitted by technical experts at the time that this was attained. Mr. Hunter retains to-day many memories of the experiences with the engine. It was suspended by a light steel framework in the car basket and drove a four foot propeller. The balloon had a cigar-shaped envelope and was actually steerable in a calm atmosphere. Mr. Hunter, jun., superintended the working of the motor prior to the ascent, but when the intrepid M. Gaudron invited him to "fly ever so high up on his bonny balloon," to quote the modern ditty, the request was politely but firmly refused. "For one thing," he in-

forms us, "he had only just got married," and motor experiences on land at that time were quite sufficiently exciting and varied for his liking. However, M. Gaudron's flights were attended with good fortune, though in one, as Mr. Hunter recalls, he had a narrow escape through the carburettor taking fire, causing a hasty descent.

MESSRS. HUTCHISON, MAIN AND COMPANY, of the Spring Vale Works, Cowlares, Glasgow, are making a special feature of the repair and retreading of motor tyres. We understand they will shortly introduce a new tyre for motor-cars.

A TEST of the "Avon" pneumatic tyre recently made on the Resiliometer of the R.A.C. gave some very gratifying results. The tyre tested was 880 mm. by 120 mm. and the average readings of three tests were as follows:—At 60 lb. pressure: Yield 1.562 in., Return 16.479 in. At 75 lb. pressure: Yield 1.50 in., Return 16.875 in.

A USEFUL adaptation of the Latil "avant train" or motor fore carriage has been made by the Paris municipal authorities, who are using an arrangement of the kind in conjunction with a street sweeping machine. The whole apparatus is very simple, and the fore carriage can be easily detached from the sweeping mechanism when required to be used in connection with another vehicle.

AERONAUTICAL NOTES.

AT Gennevilliers, France, last week, M. Vaniman made a successful flight on his aeroplane, which is of the tri-plane type.

A SYNDICATE in Madrid is reported to have placed an order for four aeroplanes of the Wright type.

THE British Aeroplane Syndicate, Ltd., has been formed with a capital of £5,000 and a membership limited to fifty persons.

It is reported that the Wolseley Tool and Motor Car Company are engaged on the construction of a new aeroplane.

THE Union Francaise Aerienne is the name of a new society which has just been formed at Toulon with the object of aiding inventors and designers of aeroplanes in developing their ideas.

It is announced that the Aero Club of Vichy (France) will offer a prize of £400 for an aeroplane competition to be held on the new trial ground which is being established near that place.

It is reported that, notwithstanding the objections of his suite, King Alfonso of Spain intends to shortly visit Pau with the view of making an ascent with Wilbur Wright in the latter's aeroplane.

M. ZIFFEL met with a slight accident with his Voisin aeroplane at Berlin on Monday, last week, after making a flight of about six hundred metres. No serious damage was, however, done to the machine.

THE French Ligue Nationale Aerienne has passed a resolution urging the municipal authorities of the principal towns in France to establish landing places and sheds for aeroplanes and airships in the neighbourhood of their localities.

WE learn that arrangements have been concluded between the German Imperial Automobile Club and the German Aero Club with a view to a joint regulation and promotion of all matters relating to aeronautical matters in future.

THE U.S. House of Representatives has reversed its recent decision to make a grant of £100,000 for experiments with war balloons and airships, and ordered the clause relating to the grant to be struck out of the Army Appropriation Bill.

SOME experiments have lately been carried out at Berken-dael, near Brussels, with an extremely novel form of flying machine devised by M. Adhemer de la Hault. The apparatus is of the flapping wing type and is known as an "orthoptere."

M. JACQUES FAURE, a well-known French aeronaut, who has frequently made the journey across the Straits of Dover in a balloon, is reported to be contemplating a journey from Monaco to the Island of Corsica in a small dirigible airship. The distance is, roughly, 115 miles.

THE suffragist attempt to influence Parliament from a dirigible airship on Tuesday was scarcely a success, the great airship navigated by Mr. Spencer, and bearing the legend "Votes for Women," going as far as Coulsdon, and the lady passenger returning to London by motor-car.

THE aeronautical movement is growing apace in Austria, where two new associations have just been formed—the Austrian Aviation Society and the Upper Austrian Association for the Promotion of Aerial Navigation. The first-named has its headquarters in Vienna and the second in Linz.

A NEW arrival at the Issy-les-Moulineaux trial ground, near Paris, is a Voisin aeroplane specially arranged for the testing of different types of aeronautical engines. The first to be fitted to it is one of the E.N.V. 70-h.p. eight-cylinder motors recently described and illustrated in the *M.C.J.*

It is reported that provision is being made in the next Italian Budget for the construction of forty military airships. Six of these are stated to be already completed, while it is expected that no less than eighteen will be available for use in connection with the manoeuvres to be held in Italy during the coming summer.

THE Simms Manufacturing Company, Ltd., are constructing a 50-h.p. six-cylinder Simms engine, fitted with special carburettor and Simms magneto, for use by Mr. S. F. Cody in his new aeroplane. The engine is of special design and construction, and will weigh about 4½ lb. per h.p. The cylinders (bore and stroke 110 mm.) are inclined 120 deg.

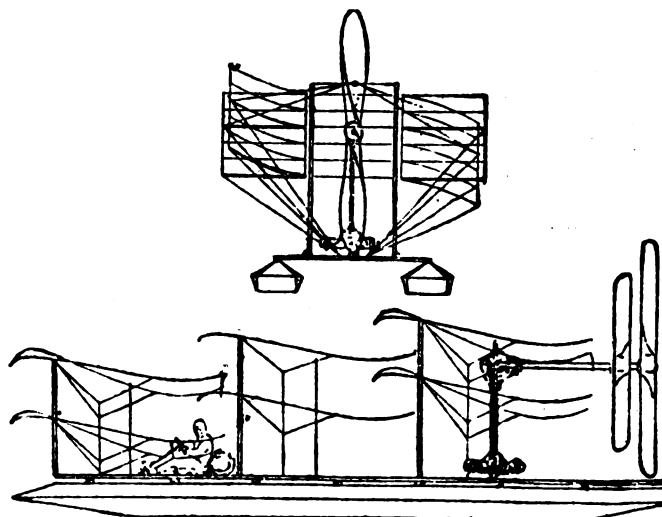
THE Aero Club of France is preparing a map of Paris and district for the special use of aeronauts.

MAURICE FARMAN, to whose new aeroplane reference was made in a recent issue, has already succeeded in making his first flight. The trial was made on M. Esnault-Pelterie's private ground at Buc, near Versailles. The flight was one of about 330 yards at a height of from fifteen to thirty feet from the ground.

THE Aero Club of France has now issued certificates designating them "flying pilots" to the Wright Brothers, Henri Farman, M. Bleriot, M. Delagrangé, M. Esnault-Pelterie, Captain Ferber and Santos Dumont. To secure the certificate aviators are required to make a flight, on a closed course, of at least three kilometres without touching the ground.

MR. G. H. CURTISS, a well-known American aeronaut of Hammondsport, N.Y., has gone to Nova Scotia, where he expects to remain a month or more at Professor Alexander Graham Bell's home on Cape Breton Island, assisting the members of the Aeronautical Experiment Association in testing several new machines.

AN extremely novel combination hydro and aeroplane has been designed by M. Roger Ravaud, who has entered it for the Monaco competitions. Not only will the apparatus, which has been named the "Aerocaphe," be able to propel itself on the surface of the water, but it is expected to be also able to fly in the



Front and Side Views of the "Aerocaphe."

air. Superimposed above two long parallel floats are a number of planes having a total sustaining surface of thirty-nine square metres. The propulsion of the vessel is effected by two concentrically-arranged propellers at the rear, working in opposite directions. The motive power will be supplied by a Gnome 50-h.p. engine of the type which has lately been illustrated in the *M.C.J.*

THE German military authorities have decided to establish a new station for aerial warships in the vicinity of Cologne. The sheds will provide accommodation for two airships, which are to be permanently stationed there. The new airship station at Metz, now in course of construction, is expected to be completed in May or June. Two dirigibles, one of the Zeppelin type and the other of the Gross pattern, will be stationed there. Another military airship station has been erected at Friedrichshafen. Including the station at Tegel, near Berlin, the German Government will thus possess in the near future four havens for aerial warships.

THE trouble between the Belgian Aero and Automobile Clubs with regard to jurisdiction over aeronautical matters has been settled. An agreement has been arrived at, to last a year, and afterwards continues by tacit understanding, that the Automobile Club will deal in all matters appertaining to machines of the heavier-than-air type and the Aero Club with balloons, airships and the like. An amalgamation of the Belgian Aeronautical Society with the Aero Club has been effected. The former body sinks its title but its committee retain office, and Count Havelin d'Oultremont, who was President of the Society, is to be nominated for election to a Vice-Presidency of the Aero Club.

Aeronautical Notes—continued.

EFFORTS are being made to organise a demonstration of flying machines on the cycle racing track in Munich, Germany.

SEÑOR SEASATE-LARIOS, Professor of Engineering at the National College at Buenos Ayres, has designed a new flying machine of the ornithoptere type.

HERR WELS is continuing his experiments in Vienna with an aeroplane of the bi-plane type. The machine, which is fitted with a 40-h.p. engine, has, however, not yet succeeded in making any noteworthy flight.

THE Smithsonian Institution of Washington, U.S.A., is planning a "Langley Medal" to be offered as a reward for successful endeavours in aviation, in appreciation of the grand work of Professor Samuel Pierpont Langley.

M. A. VAN DER CHKROUFT, a member of the Aero Club of Odessa, has acquired an aeroplane of the Delagrange type, with which he hopes to shortly make some trial flights. The apparatus is fitted with a Vivinus 66-h.p. motor.

MR. WILBUR WRIGHT is now engaged on the construction of a second aeroplane, which is expected to be ready in three or four weeks. As soon as he has completed the training of his three pupils he is under contract to go to Rome to make a series of flights; no date has, however, been specified.

THE Aerial League of the United Kingdom is arranging a course of lectures on aeronautics to be given at the leading public schools, and is also organising a kite-flying competition for children. The prizes in the latter will be given to the boys who succeed in lifting by means of their kites the heaviest weight in a specified distance from the ground.

A SWISS engineer, M. Auffm-Ortt, of Geneva, has lately completed a new flying machine of the monoplane type. The apparatus, which weighs complete about 4 cwt., is fitted with a 30-h.p. engine. The usual cycle-type wheels employed to enable aeroplanes to run along the ground are replaced by skis about 10 ft. long. Some trials with the machine have already been made on the frozen over lake of St. Moritz.

WILBUR WRIGHT made a flight of about eighteen minutes' duration on his aeroplane, on Thursday last week, in the presence of Mr. A. J. Balfour, who evinced great interest in the machine. On Monday Wright made a flight lasting twenty-one minutes with the Count de Lambert; afterwards he took up the Countess de Lambert for a four minutes' flight, while later Miss Wright ascended with her brother and flew for seven minutes.

THE Aero Club has now issued its rules concerning the Challenge Cup presented by Mr. John D. Dunville, which is to be awarded on January 1st in each year to the member of the Aero Club of the United Kingdom who, having given due notice to compete for the cup, has performed the longest voyage in any balloon, airship or aeroplane during the previous year. The start must be made from some place in the United Kingdom although the voyage may be completed in any other country. The cup will not be awarded for any voyage of less than 150 miles and no temporary descents will be allowed during the trip.

MR. CORTLANDT FIELD BISHOP, the president of the Aero Club of America, has announced that he will give £200 in cash prizes for aeroplane flights in the United States during 1909. The amount will be divided into four prizes of £50 each, and will be awarded to the first four machines making the prescribed distance, the winners also receiving the club silver medal. The competition, which will be held under the supervision of the Aero Club of America, will be open to all aeroplanes that have not in the past made an officially tested flight of one kilometre, or more.

CAPT. WINDHAM hopes to have his new aeroplane over in this country by the end of next week. The apparatus is of the bi-plane type; it is being constructed by the brothers Voisin, and will be fitted with a Duthell-Chalmers 25-h.p. engine. The latter will drive through chains a couple of large propellers. The lateral stability of the apparatus is to be secured not by making one-half of the planes moveable, as in the Wright machine, but by means of "ailerons," or a kind of moveable wing-tips attached to the lateral extremities of each plane. The aeroplane is intended to carry two persons, a pilot and a passenger, two seats being arranged in the centre of the frame.

A NEW aeroplane is being built in Chemnitz, Saxony, by Herr Max Schuler. The machine will be a combination of the Voisin and Wright designs, and will comprise two planes. The sustaining surface of the apparatus is fifty-two square metres.

ACCORDING to the "Temps," excavations are being made on the heights of Chantaine, France, for the foundations of a balloon shed, to be erected there for the reception of the new dirigible balloon, Republic, which has been allocated to the defence of Epinal.

A NUMBER of new aeroplanes are in course of construction in the Marseilles district; one is being built by M. Serrailier and another by M. Combes, of Pertuis. At Martigues M. Rene Bazin is putting the finishing touches to a new flying machine of the flapping wing type.

THE Société des Eleves Industriels de France (5, Rue Champollion, Paris), is organising an exhibition of model aeroplanes to be held in the Galerie des Machines, Paris, from the 22nd to the 28th March next. On the last day a competition will be held as to the best design exhibited.

M. JEAN BAYLAC, an engineer of Bordeaux, is at work on the construction of a new flying machine of the helicoptere type. The apparatus will be fitted with four propellers—two being vertical and two horizontal—as well as a screw. The motive power will be supplied by an engine of 100-h.p.

LA SOCIÉTÉ ZODIAC has recently completed the construction of a small dirigible airship, the feature of which is that it can be quickly dismantled and carried on an ordinary horse-drawn lorry. To this end the car which is suspended from the balloon, and in which the motor and propeller are mounted, is built up in three readily-detachable sections.

THE town of Pau, near which Wilbur Wright is now making flights almost daily, is attacked with "Wright-mania." There are "Wright watches," "Wright brooches," with portraits inset, and "Wrights" in porcelain, an amusing caricature, representing the aeronaut seated in his machine. Picture postcards of him are also in every shop window.

SOME confusion has arisen in connection with the Gordon Bennett aerial contests to be held this year. Two distinct events have been arranged; one is for flying machines of the heavier-than-air-type, and it will be held in France for the first time in August next. The second Gordon Bennett contest is that for ordinary balloons; and, as the trophy last year was awarded to Col. Schaeck, of Switzerland, this year's event will start from Zurich, the race being held about the end of September or early in October.

MR. C. A. CHAPPELL, of New Southgate, has recently patented the designs of a new aeroplane; the apparatus is of the bi-plane type and comprises two superposed supporting-planes connected together by flexible steel or wooden laths. Small movable planes are fixed to the front of the upper and lower planes for steering. This arrangement of the stays allows the planes to move relatively to one another. Auxiliary steering-planes are pivoted to the front of the upper and lower planes. To the rear edges of the latter are attached cords which can be operated separately or simultaneously for steering and balancing the machine, the rear edges of the upper and lower planes being lowered and raised for inclining the machine upwards and downwards respectively. When all the four planes are inclined, they act as a brake for stopping the machine.

ON Sunday last, at Bouy, near Chalons-sur-Marne, Henry Farman flew with a passenger beside him on his aeroplane a distance of five kilometres, and could have prolonged his flight as long as the petrol supply lasted. The performance was a notable one, but the various flights of one, two, and five kilometres made by his pupil, Legagneux, were of yet more considerable importance. After receiving instruction in the aeroplane shed and being made familiar with the working of the machine, Legagneux, who has been engaged by the Austrian syndicate, the purchaser of Henry Farman's transformed aeroplane, to make experiments in Vienna, first watched the aviator operate with it. He was then able to at once mount the machine alone and to fly straight away without any sort of mishap. Legagneux's performance is eloquent, and speaks highly for the aeroplane, the master, and the pupil.

THE SOCIAL WHIRL.

H.R.H. THE PRINCE OF WALES, K.G., who is a vice-president of the R.A.C., will honour the Club with his presence at the annual dinner, on Thursday, the 18th prox. This will be the first time that Royalty has been present at the annual dinner of the Club, although His Royal Highness has previously visited the motor exhibitions, his introduction to such having taken place at one of the Cordingley Motor Shows.

LADY MONTAGU of Beaulieu was, owing to illness, unable to preside at the annual meeting of the Ladies' A.C., held at the Club Room, Claridge's Hotel, Brook Street, W., last week. In her absence Lady Edward Spencer Churchill presided. The report showed a very satisfactory financial position and keen interest taken by members in the lectures and meets which have been organised by the committee. The latest members of the Ladies' Club are the Marchioness of Donegall, the Hon. Mrs. Henry Dennis and Mrs. Charles Clifford. Garage accommodation has been provided for the cars of the ladies in the R.A.C.'s Club House in Brick Street, W., and I understand the committee are somewhat astonished that members have not more generally availed themselves of the excellent facilities there offered.

A PLEASANT time was spent at the Central Hotel, Glasgow, an evening or two ago, when the Dunlop Pneumatic Tyre Company, Ltd., gave a complimentary dinner in honour of Mr. J. S. Matthew, who, as already announced, has become the manager of the Argyll Works at Alexandria, to which, by the way, Mr. A. Davidson has been appointed works manager. Mr. H. L. Richardson, who has succeeded Mr. Matthew at the Dunlop Company, was in the chair, and spoke of the regret of the staff at his departure for Alexandria, where, however, they wished him all prosperity and good fortune. Mr. Matthew received several presents from his old colleagues, and is commencing his career at Alexandria with every token of goodwill both from former and present associates.

MR. A. J. BALFOUR has been visiting Mr. Wilbur Wright at Pau, and taking a keen interest in his aerial flights. The ex-Premier was one of the first of Front Bench Statesmen to become a motorist, and he has subsequently proved a great enthusiast for accelerated travel on land and in air; but, so far, he has not added motor boating to his recreations.

It is not very often that motor-cars propelled by their own power are seen on the stage, owing, perhaps, to the fact that whilst most of the ladies and gentlemen of the theatrical profession can adapt themselves to the small equestrian requirements of romantic plays, few have acquired the technical knowledge necessary to drive a motor-car, with the attendant mysteries of gate gear, clutch, brake, pedals, and starting handles. In the fairy play produced at the Coliseum on Monday, entitled "The Queen of the Fairies," in which the child who scored such a success in "Pinkie and the Fairies" at His Majesty's Theatre is appearing, a motor-car which has actually done a few thousand miles of good road service is used. It is a 16-20-h.p. Imperia, and Mr. Legrand, who takes the part of the male mortal in the play at the Coliseum, had never driven a motor-car up to the morning of February 11th. After ten minutes' instruction he was able to utilise the starting handle, gear levers and pedals with sufficient success to be able to drive on and off the stage, and two hours' further practice sufficed to put him right for the road.

THE first annual Bohemian concert of the motor department of Messrs. A. W. Gamage, Ltd., was held on Friday of last week and was a delightful occasion. In the absence of the head of the firm Mr. Eric Gamage presided, supported by Mr. J. Dunn, Mr. W. A. Vincent, who is taking a keen interest in the doings of the North Middlesex A.C., Mr. H. Johnson and others associated with the establishment in Holborn. During the evening the interesting announcement was made that a company of Territorials is being formed, officered by Gamage men and attached to the 7th City of London regiment.

LOLLIUS

HERE AND THERE.

A FIRE has occurred at the motor repair establishment of Mr. George Paterson, at Dingwall.

THE Duke and Duchess of Connaught and Princess Patricia paid a visit on Thursday, last week, *en automobile*, to Pompeii.

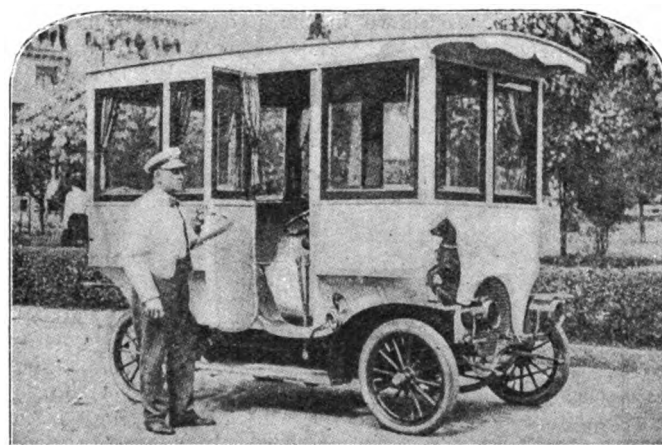
MESSRS. SIMPSON AND SON have acquired the Central Garage in Clerk Street, Brechin, and will carry on business there in future.

MESSRS. BUCKMAN BROTHERS are opening a motor garage in the Alexandra Road, Chesterfield, where they will prove of useful service to motorists visiting the town.

AN advertisement in the "Daily Chronicle" a few days ago notified that "if the motor-car left at 10, King Street, Leyton, in June, 1907, is not owned in seven days it will be sold to defray expenses."

THE Provincial Motor Cab Company having acquired the premises in Bentley Road, Liverpool, of the Liverpool Carriage Company, Ltd., the latter concern is selling off its stock of horses and carriages.

AT 36 and 38, Willesden Lane, Kilburn, Messrs. Crowe and Decrevel have a motor garage and repair works, from which they are able to let motor vehicles on hire, and at which they also keep a large stock of accessories and tyres.



An Automobile Caravan.

The above illustration depicts the automobile caravan used by Mr. N. H. La Grand, a travelling razor seller, of Jacksonville, Fla., U.S.A. Mr. La Grand not only designed his combination workshop and dining and sleeping car but built it and mounted it himself, on an ordinary petrol motor chassis.

THE Alnwick and Berwick Garage and Cycle Company, Ltd., has recently extended its premises in Alnwick and also established branches at Ayton and Belford, the intention of Mr. C. B. Ford, the managing director, being to establish a garage at the latter place ere long.

THE Lamport and Holt Line, who have their headquarters in Water Street, Liverpool, are making a bold bid for the trade of carrying motor-cars to South America and *vice versa*. The company have a splendid fleet with large cargo capacity, and have also excellent accommodation for passengers.

BOTH Cudham and Brasted Hills, Kent, which, on account of their severity and proximity to town, are a good deal used for test purposes, have wintered well. The awkward bend at Brasted entering the certified 1 in 4½ section has been re-metalled, and Cudham is somewhat loose on the bending. Both hills are situated on comparatively unused roads and undoubtedly are the stiffest rises within a fairly wide radius of London.

MESSRS. PUTTOCK AND SON, jobmasters and motor agents, of the White Horse Mews, Guildford, send their motor hire tariff, giving the rates at which they are letting 20-h.p. Dennis cars by the day, week, month or year. The firm are entering into maintenance agreements with owners of cars of good repute, whereby they undertake to supply a competent chauffeur, tyres, petrol, oils, repairs, renewals, insurance, &c., at an annual sum as arranged between the parties.

Here and There—continued.

THE French post and telegraph authorities are about to invite tenders for the transport of the mails between Ajaccio and Vico, Corsica, by motor-cars.

THE latest novelty in motor-car accessories is a bouquet holder for the interior of limousines and other covered cars. They are being made in various patterns, and consist of a crystal cut glass vase, held by brackets of silver, gold, brass or gun-metal.

THE Dee Oil Company, of Chester, who have large offices in Colonial House, Liverpool, under the charge of Mr. R. Crawford, are doing a good trade in Liverpool and district in their lubricating oils, they having lately secured some very large contracts in the city.

THE London and Parisian Motor Company, Ltd., have received an order from the Countess of Clanwilliam for a 30-40-h.p. Hotchkiss landaulet similar to that recently supplied to Her Grace Katherine Duchess of Westminster, which we hear is giving every satisfaction.

WE understand that the Gornall vulcanizer introduced by Messrs. Richard Gornall, Ltd., of Pilling, near Garstang, is proving popular in France, and that orders are reaching the firm from many of the British colonies. This device was recently illustrated and described in our columns, and is apparently meeting with distinct success among motor garages in this country as well as abroad.

THE Perth County Garage Co., of Perth, have just introduced the emergency tyre clip shown in the accompanying illustration.



The device, which is the invention of Mr. W. Lowson, the manager of the company, is extremely simple, and is intended to obviate the inconvenience arising from burst or cut tyres, and to effect a speedy repair. The clips, which are very strong and easily fixed, are made of forged steel and can be had to suit all sizes of rims. The method of using the clip to temporarily repair a burst outer cover is to first cover the burst with a repair band or a piece of old cover, extending from bead to bead round the tyre, then the clip is applied with the turned-in points pressing the edges of the band into the bead. The large

bolt at the bottom is then tightened, drawing the two clamps together and holding the repair band tightly in position.

ACCORDING to a return just to hand 1,416 European built cars were imported into New York last year. The list is headed by 418 Darracq, all but six of which were taxi-cabs, Renault is second with 266, of which 64 were cabs, then follow Fiat with 181, Mercedes with 94, Panhard 72, Delahaye 65 (all but three being cabs), Isotta-Fraschini 40, Lancia 27, Itala 25, Hotchkiss 22, and Lorraine-Dietrich 20. Of British vehicles imported there were five Napiers, three Humbers, two Daimlers, and one each Argyll and Rolls-Royce.

MR. H. SHERLEY-PRICE, the senior partner in the firm of Wheatley Kirk, Price and Company, has written a *brochure* on the "Depreciation of Works and Machinery," with a view of emphasizing to engineering and manufacturing firms generally the importance of dealing with the subject adequately in practical affairs. He lays down as an axiom that all necessary repairs, maintenance or upkeep shall be a charge upon revenue and form part of the charges or expenses before any profits can be earned or declared. Mr. Sherley-Price advocates that a complete valuation should be made and the sums of the various sections entered in the books. An annual inspection should follow in order that the percentage of assumed depreciation should be brought up to date each year. A revaluation at certain periods is necessary, five years being the period suggested. The little work is published by Messrs. J. Davy and Sons at the Dryden Press, London.

ON Wednesday, Mr. Albert House, of the Oak Lane Garage, Bradford, held an auction sale of motor-cars on behalf of the Northern Automobile Company, Ltd.

THE Chinese taxi-cab or "measure-mile-drum-carriage," of which some particulars were given in our issue of February 6th, has been the subject of a lecture by Professor Giles, of Cambridge, before the China Society in London. He has discovered in the dynastic histories of China a full specification of this curious vehicle.

THE Pyrolignite Syndicate, Ltd., has been registered with a capital of £1,000 to enter into an indenture of assignment with Lord Montagu of Beaulieu, Mr. T. Tyrer and Mr. E. Thomas, and to turn to account several patents and processes relating to the manufacture of acetone, charcoal, pyroligneous acid and other substances.

THE Bull Dog Tyre Grip Company, of 230, Westbourne Grove, London, W., have recently introduced a new tyre lever known as the "Bull Dog Grip," to help in the removal or detachment of tyre covers; it is intended to automatically hold the beaded edge in position whilst the usual long levers are being manipulated.

A NEW petrol fire engine, which is the first of its kind to be put into service in the Metropolis, was received on Tuesday at the headquarters of the London Fire Brigade. The machine, which is of Merryweather's patent "Hatfield" pattern, pumps 500 gallons of water per minute and can attain a speed of thirty miles an hour on the level.

THE official trial of the non-skidding properties of the Allen-Liversidge front wheel brakes took place at the London General Motor Omnibus Company's depot, Dollis Hill, on Thursday. On the same day and at the same place a set of Kempshall pneumatic tyres entered by the Kempshall Tyre Company of Europe, Ltd., were also tested for their non-skidding properties.

THE original letters assigned by the Local Government Board to the County of London in connection with the Motor Car Act having proved insufficient to cover the large number of cars that are now being registered, a new index mark, consisting of the letters LD, has now been assigned to the Council. This is in addition to the previous marks of A, LC, LN, and LB.

A two days' motor meeting will be held in the neighbourhood of Buenos Ayres early next month by the Argentine Touring Club. On the first day there will be a race over two laps of a 125 kilometre circuit, while on the second day "the survivors" will be eligible for the contest over five circuits (625 kilometres). It is reported that three Benz, an Itala, a Fiat and a Lorraine-Dietrich racer have already been entered for the event.

HER Highness the Khedivah recently had a somewhat unpleasant motoring experience. She was taking an afternoon's run with the Princess Nazli along the desert road to Suez when the car skidded and came to a sudden stop. Both ladies suffered bruises and abrasions, but neither of them was seriously hurt. The accident happened at a considerable distance from Cairo, and, owing to some derangement of the gear, the car was disabled. It was not until four o'clock the next morning that another automobile arrived to take their Highnesses back to Cairo, they having passed the interval in an old resthouse on the roadside.

UNDER the title "The Story of the New York to Paris Race," an interesting record of the journey of the Thomas car, one of the vehicles which took part in the round-the-world run, has just been issued. The booklet forms extremely interesting reading, showing as it does the wonderful variety of incidents that were experienced in this notable excursion. Apart from the description of the journey, the book is well worth preserving if only on account of the very numerous reproductions of snapshots taken on the trip in the United States, Alaska, Japan, China, Siberia, Russia, and the other countries passed through. These show in an unmistakable fashion the arduous nature of the undertaking which was so successfully carried through by the Thomas car. Messrs. Cloud and Co., Ltd., 124, High Street, Kensington, W., the British agents for the Thomas cars, inform us that they have a limited number of the booklets for sale at the price of one shilling each.

CONTINENTAL NOTES.

Smoke Emission and Car Testing in Paris.

For some time past the police at Suresnes, the suburb of Paris in which a large number of motor-car factories have been established during recent years, have kept an extremely watchful eye on automobiles which, contrary to the law, have emitted too much smoke. As a large proportion of the vehicles have been new chassis from the factories undergoing their road test, the many summonses that have been issued are regarded by manufacturers as a persecution, and they have resolved to appoint delegates to approach the police authorities on the matter.

French Motor-car Imports and Exports.

The imports of foreign motor-cars into France during last year attained a value of only £279,560 as contrasted with £347,040 in 1907. The largest arrivals were of German vehicles, which headed the list with £102,524, Italian being second with £56,480 and Belgian third with £40,320. The exports of French motor-cars also showed a large decline—from £5,774,080 in 1907 to £5,092,000 in 1908. Decreases took place in the shipments to Germany, Belgium, Switzerland, Italy, Spain, Austria, Brazil, and the Argentine Republic. On the other hand, there was a slight increase in the exports to Russia, the United States, Turkey, Algeria and the United Kingdom. According to the French returns the British market was responsible for £2,642,120 last year—or more than half of the total—as against £2,416,400 in 1907.

Police Traps in Germany.

German motorists have at last become sensible of the fact that motor traps and police prosecutions are becoming a nuisance in the Fatherland. They have consequently founded the German Auto League, which will protect its members against unjust police prosecutions and will try to improve the relations between motorists and non-motorists in general, by prosecuting such followers of the sport as give reason for complaint. Foreign motorists travelling in Germany are eligible for membership, the subscription being only £1. The offices are at 100, Koniggrader Strasse, Berlin.

Motor-Cabs in Germany.

The motor-cab is making rapid headway in Germany. Berlin has of course the largest number, being credited with about 2,000. Frankfurt-am-Main has 31 motor-cabs in service, Hamburg 39, Hanover 20, Munich 134, Leipzig 24, Dresden 20, Magdeburg 15, Cologne 31, Breslau 24, and Nuremberg 40.

German Motor-Car Imports and Exports.

According to returns now available, the imports of foreign motor-cars and parts into Germany during last year only attained a value of £655,150, as contrasted with £891,750 in 1907. On the other hand, there was a slight increase in the exports of automobiles from Germany—from £656,150 to £681,250.

The Coupe des Voiturettes Contest.

The accessibility of Boulogne and the popularity of the Folkestone road should alone ensure a record attendance of English spectators at the Coupe des Voiturettes on Sunday, June 20th. Hotel accommodation at Boulogne, Abbeville, Desvres, Amiens and the villages and towns on and in proximity to the course is good and cheap. We travelled over part of the route at the end of last year, and found the going to Desvres very indifferent. The road is narrow in parts, very uneven, and the pavé in the villages is of the worst description. No doubt it will be put into some order for the race, but the first impression of French roads from Boulogne or Calais is disappointing. Not until one gets forty or fifty miles south or inland do they afford anything like good travelling.

Motor-Car Taxation in France.

M. Walckenaer, Ingenieur en Chef des Mines, who was appointed by the French Government to draw up a basis for the taxation of motor-cars according to their horse-power, has just

presented his report. He proposes to deal only with the bore of the cylinders, rating a four-cylinder engine of 85 mm. bore at 14-h.p., 90 mm. at 16-h.p., 95 mm. at 19-h.p., 100 mm. at 21 h.p., 110 mm. at 28-h.p., 120 mm. at 36-h.p., and 130 mm. at 45-h.p. In the cases of two-cylinder engines of the bores mentioned above the horse-power would be halved, while single-cylinder motors would be only a fourth of the power stated.

A Balloon and Flying Machine Meeting in the Anjou district.

Having been disappointed in losing the Grand Prix motor race, the representatives of the Anjou district of France are now actively engaged in the organisation of a series of aviation and aeronautical fetes, to extend over a fortnight in August or September next. The Municipal Council of Angiers has decided to transfer the £1,000 it had voted for the Grand Prix to the new programme. The Aero Club de l'Ouest is taking an active part in the scheme, and has asked the Aero Club of France to hold some of its competitions in the Anjou district, with the view of assuring the success of the meeting.

Belgian Motor-car Imports and Exports.

The value of the foreign motor-cars and parts imported into Belgium during last year amounted to only £144,904, as compared with £174,948 in 1907. On the other hand, there was an increase in the exports of Belgian motor-cars and parts from £439,656 in 1907 to £449,372 last year.



The Lorraine-Dietrich Car in service between Nice and Peira-Cava.

Miscellaneous Items.

A Motor Cycle Club, the first of its kind in Russia, has just been formed in St. Petersburg.—Under the title La Chambre Syndicale des Negociants en Automobiles, a new association has just been formed by dealers in second-hand motor-cars in Paris.—The annual motor-car race between Moscow and St. Petersburg is to be held on the 26th and 27th of May next.—Count Andrassy, the president of the Hungarian Automobile Club, has just placed an order for a Fiat 50-h.p. car.—The Mid-German Automobile Club, of Eisenach, proposes to organise a motor reliability trial in August next.—Tenders are about to be invited by the French post and telegraph authorities for the transport of the mails between St. Rambert-sur-Rhone and Anneyron (Drome) by motor-cars.

L'Aviation est a l'ordre du jour.

Nous avons aperçu ces jours derniers, dans un grand magasin de nouveautés, où avait lieu une Exposition de blanc, un monoplan construit sur les modèles les plus récents, en... percale, linon, mousseline, toiles, etc. Au milieu, un mannequin figurant l'aviateur, la main sur un levier de mise en marche. Il ne manquait que le moteur. De nombreuses personnes s'arrêtaient devant la vitrine du magasin en question, qui, s'il a voulu s'attirer un gros succès de curiosité, a parfaitement réussi.

MOTURING ACCESSORIES.

A Useful Pocket Knife.

The "Contact" pocket knife is a useful pocket companion, recommended by the Bridgwater Motor Company. It consists of a cutting blade, screwdriver, platinum file, gauge for sparking plug points, inch rule, and a millimetre rule. About $3\frac{1}{2}$ in. in length, it is a really serviceable instrument, that, supplied in a leather case, should prove a popular line with all who drive motor-vehicles.

A Useful C.A.V. Combination.

Among makers of electrical fittings for automobiles Messrs. C. A. Vandervell and Co., of Warple Way, Acton Vale, are entitled to mention for the excellence of their productions. In Figs. 1 and 2 we illustrate



Fig. 1.—C.A.V. Combined Lamp.

their combined steering pillar lamp, tail light indicator and inspection lamp, the former sketch showing the device fixed in position and the second depicting it when detached for service as an inspection lamp. The combination consists of a universally jointed lamp fixed to the steering pillar. It can be used in the ordinary way for the inspection of signposts, lubricators, gauges, &c. When required for use under the bonnet it will be found instantly detachable. The special serrated joints cannot shake loose and the whole fitting is strongly made and well finished. In the separate circular switch device, which is connected in circuit with the tail lamp, a small relay is incorporated. This is so arranged that should the electric tail-light fail at any time the lamp on the steering wheel instantly



Fig. 2.—C.A.V. Combined Lamp detached for inspection work.

lights up. If kept in the position shown it will readily attract the attention of the driver. Thus, in serving a triple purpose, the C.A.V. combination should form part of the equipment of every up-to-date motor-car.

The "Marathon" Foot Pump.

An ingenious foot-operated tyre inflator, invented by Mr. H. T. Hutton, has just been put on the market by the United Motor Industries, Ltd.; it consists of a frame adapted to lie on the ground, and to which is attached a tyre pump and its operating mechanism; the latter consists of a series of pivoted levers and a pedal. The connection being attached to the valve, the pump, which has a barrel of unusually large diameter, is placed on the ground, and the operator, retaining an upright posture, simply presses the pedal down with one foot, causing one of the levers to travel along the slide provided, carrying the piston rod with it and thus sending out with great force the air from the pump to the tyre. The pedal then recovers its first position by means of a spring, which comes

into action the moment the operator ceases to press with his foot. When the tyre is inflated, the barrel of the pump can be folded into the frame, and the levers pressed down, the apparatus then occupying but a very small space. It is claimed that by means of the "Marathon" pump a tyre can be inflated more rapidly than usual and with less exertion on the part of the operator, there being no stooping or back work necessary.

The Millership Motor Alarm.

The Moseley Motor Works, of 129, Alcester Road, Moseley, Birmingham, have introduced a new exhaust whistle. It is known as the Millership Motor Alarm, and has been designed to meet the demand for a means of giving warning of the approach of a motor-car without the objectionable noise of the ordinary exhaust whistle. It is self-contained, instantaneously operated, and can be fitted to any car without trouble.

Economy in Water.

In Fig. 3 is illustrated the Anti-waste automatic spraying nozzle brought to our notice by Messrs. A. W. Gamage, Ltd., of Holborn, E.C., as a useful accessory for all who are supplied with water through a meter. It

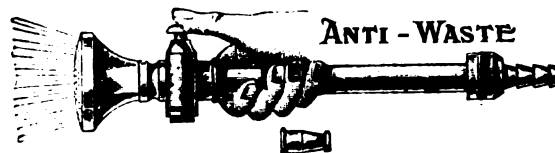


Fig. 3.

will be very handy for motor and carriage owners, garage proprietors, and all who use water in any quantity. Its employment obviates all waste by men who, while washing the car, may leave the water running to attend to some other duty. The pressure on the button by the thumb to open the valve is all that is required to operate the device, while the supply is shut off immediately the nozzle is released from the hand.

Sheet Metal Dashboard.

Among the specialities of the Coventry Motor Fittings Company, of Far Gosford Street, Coventry, is the sheet metal dashboard illustrated in Fig. 4. This is made in a standard size of 30 in. high and 40 in. wide, with a radius curve of 6 in. It is constructed in strong gauge tinned steel for painting, with a brass beading round the edge. A good feature of the device are the small cupboards at the sides, the

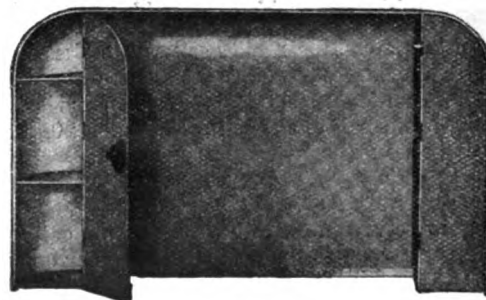


Fig. 4.—The C.M.F. Sheet Metal Dashboard.

doors fastening with small spring locks. If desired, the dashboard can be devised so as to form petrol and lubricating oil tanks in the upper portion; it can also be made with the bottom corners to come down below the frame, and curved to match the top corners. While the Coventry Motor Fittings Company are making their excellent speciality in the standard size already referred to, they are prepared to make it in any size according to the special requirements of customers.

A Catalogue.

From the Universal Imports, Ltd., of 10, Wilmington Square, Rosebery Avenue, London, W.C., comes a catalogue of their motor accessories, which includes the Eclipse patent lens. This can be fitted in place of the ordinary glass on any motor-car lamp, effectually preventing dazzling and the blinding glare often associated with such lamps. The Bullard speedometer, several types of tyre-holders, exhaust whistles, sirens and radiators are described, as well as the Black emergency wheel.

MESSRS. NORBURYS, LTD., of 39, New Bridge Street, Strangeways, Manchester, are agents for Manchester and district for the Ariel cars.

Correspondence.

[Letters to the Editor should be addressed to the offices, 27-33, Charing Cross Road, London, W.C.]

AVOIDING BROMLEY.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—I write with the object of warning motorists to be careful of Bromley. I was fined £5 and 11s. costs or two months' imprisonment for exceeding the ten mile speed limit at Bromley.

There are several ways for motorists leaving the West End of London for Sevenoaks to miss Bromley. They should cross Chelsea Bridge to Clapham Common, then follow the main road to Tooting, Mitcham, Croydon, West Wickham, and Hayes Common, where the road joins the Bromley-Sevenoaks road just south of Farnborough.

This road is a very good way out of London, and there are not so many trams as on the way out *via* Camberwell, Lewisham, Catford, &c.—Yours truly,

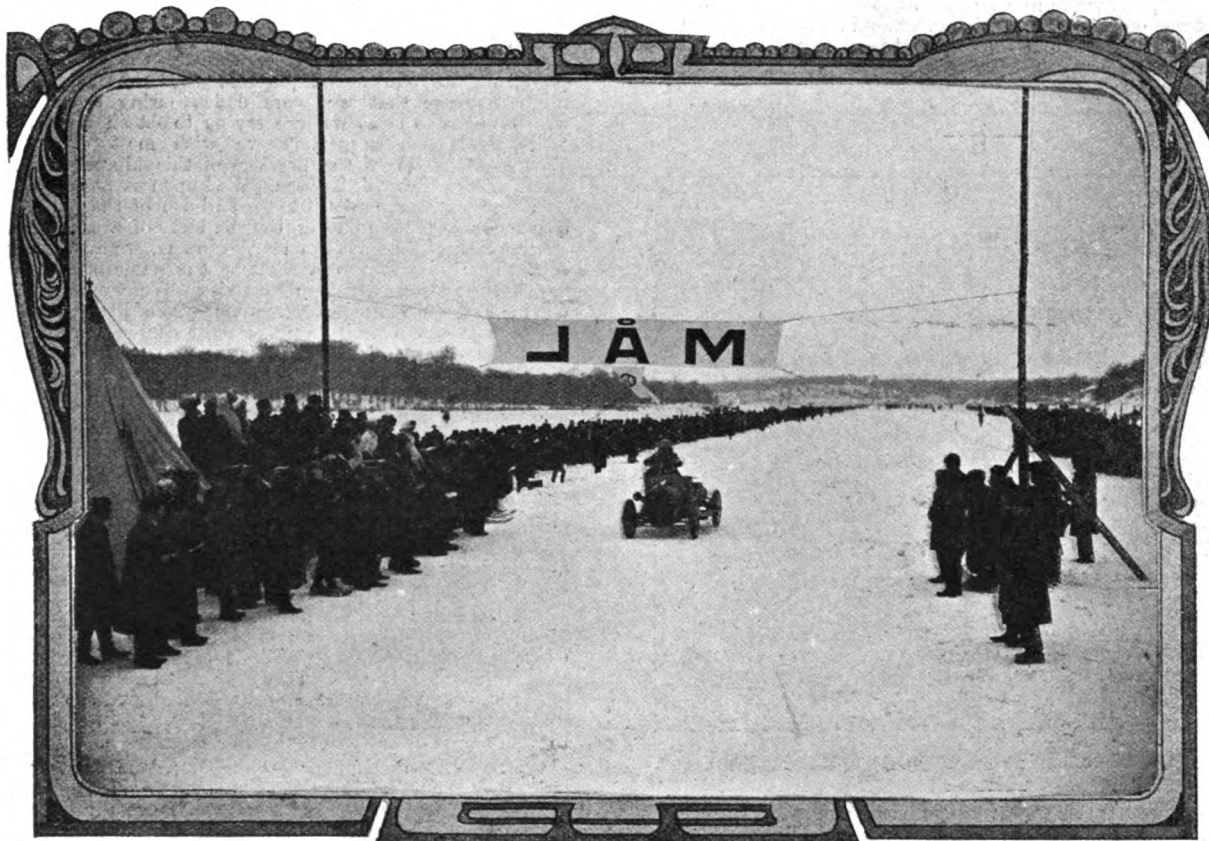
H. W. THOMPSON.

same fault, viz., exhaust valve seat cracked. My own Oldsmobile is in the same state, and has been so for over three years. However, it does not make any difference to the speed or power of the car. The reason for this is because the crack is very small and does not allow the compression to leak through. This may not, however, be so in every instance. My advice in these cases is, providing the compression is good, to leave it alone, as it does not affect the power, and to try to remedy the crack means much trouble and expense.”]

THE PRINCIPAL CAUSES OF ROADSIDE STOPPAGES.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—Concerning “Buxtonian’s” letter as published in the *M.C.J.* on the 6th inst. we are of opinion that the principal causes of roadside stoppages are tyres. We cannot agree with him that the causes are



The Northern Games at Stockholm.—One of the Cars in the Kilometre Speed Trials.

CONCENTRIC VALVES FOR PETROL MOTORS.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—In following the interesting descriptions you have recently been publishing of new petrol motors specially designed for use for aeronautical purposes, I have been struck with one feature. I refer to the adoption of concentrically arranged inlet and exhaust valves. There have been many attempts to introduce these in connection with engines for use on motor-cars, but hitherto the idea has been somewhat frowned upon by automobile designers. Personally, the idea has always struck me as a good one, and it would seem that aeroplane constructors are about to lead the way in more than one direction.—Yours truly,

INGENIERO.

A CRACKED VALVE SEATING.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—The outlet valve seat of my Oldsmobile has a slight crack in it; do you think this would affect the speed? I shall be much obliged for any information you can give me on the matter.—Yours truly,

OLDSMOBILE.

[One of our contributors to whom we submitted the above letter writes:—“I have had four Oldsmobiles through my hands, all with this

through the men, as we have found that the men are improving with the car, and a great percentage of the stoppages are as mentioned above.—Yours truly,

M. GEORGES.

To THE EDITOR OF *The Motor-Car Journal*.

SIR,—In reply to the letter which appeared in the *M.C.J.* of the 6th inst., we beg to say that we consider that the causes of roadside stoppages are of a fairly diversified nature, and that each type of car has its pet weakness. If one asks the question propounded of a man used to any one motor-car, the chances are that his stoppages are due to the same causes as trouble other people driving similar vehicles. We ourselves still attribute a very large share of road stoppages to tyres. Bad charging of accumulators is a fruitful cause of trouble, causing the current to fail rapidly and also spoiling the plates. Switches with wobbly contacts, and earth wires with unearthly leanings, are among fairly frequent causes (as far as ignition goes) which bring cars to an involuntary stop.

Actual breakages, either of the engine or gears, are happily getting rare nowadays, nor do we think that seizures for want of lubrication can be accused to any great extent, in comparison to the more trivial matters we have above indicated. At night time quite a lot of people are brought to a standstill by failure of their lamps. It is our emphatic opinion that most roadside stoppages would be avoidable if a more thorough inspection

were made before starting out, and if some drivers were not content to "chance things" which they know are not in apple-pie order. The parable of the foolish virgins is clearly applicable to the majority of roadside stoppages, if their causes are analysed; at least, that is the experience of—Yours truly,

For Acer, Ltd.,
A. E. S. CRAIG.

"A FRIEND IN NEED IS A FRIEND INDEED."

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—I should esteem it a favour if you would kindly insert the following for the benefit of any motorist who may by chance happen to be placed the same as I was on Sunday, the 7th inst. I was motoring from Chatham to London, and had the misfortune to break my chain at Blackheath, and it looked as if I was in for a night out. However, my son and I set out to look for a motor garage or firm of engineers of some description, and, after finding two or three, I was disgusted to find that as it was Sunday they refused me the loan of tools and labour, although I was willing to do the work myself. After leaving the aforesaid places a kindly policeman directed me to Mr. H. W. Phillips, Motor Garage, 165, Shooter's Hill Road, Blackheath, and, although this gentleman was dressed for a walk, he at once rolled up his shirt sleeves and repaired my chain and sent me on my way rejoicing. Should any other motorists happen with misfortune when in that district they cannot do better than call on Mr. Phillips, where, as I have shown, they will be promptly attended to.—Yours truly,

GRATEFUL.



Mr. V. W. Eyre, of Nuneaton, at the wheel of his Weigel 40-h.p. Car.

A RECIPE FOR BRASS POLISH.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—As a regular reader of the *M.C.J.*, I often see some very useful notes in its columns. I should be very pleased if you could give a recipe for brass polish, either paste or liquid, so as to make my own, as I have a lot of brass-work under my care.—Yours truly,

H. HOLLIDAY.

[We think our correspondent would find it cheaper in the end to buy his brass polish ready prepared. We append, however, two recipes for making the same: (1) Three parts of oxalic acid dissolved in 40 parts of hot water, adding 10 parts powdered pumice stone, 12 parts soft soap and 12 parts of a fat oil. Apply with water. (2) Rottenstone, 4 oz.; powdered oxalic acid, 1 oz.; sweet oil, 1½ oz.; spirits of turpentine of sufficient quantity to make a paste. Use oil of turpentine to apply.]

MAGNETO IGNITION.

TO THE EDITOR OF *The Motor-Car Journal*.

SIR,—I should be much obliged if you would explain the difference between high and low tension magnetos? I mean the difference in working parts and the systems with which they are used. I think a great many other readers of the *M.C.J.* would be interested in the explanation, especially now that magneto ignition has become so popular. I have been told that low tension magnetos can only be used with make-and-break ignition. Is this correct?—Yours truly,

NEW HAND.

[The simplest form of magneto is the low-tension, which consists of a number of permanent horseshoe magnets and an armature rotating be-

tween their poles. As the armature cuts the "lines of force" of the magnets an electrical current is set up in its coils, and this is collected by a suitable brush. In this form the magneto is generally used with a make-and-break device, but it could be used with ordinary high-tension sparking plugs in connection with a contact-maker and an induction coil or a contact maker, single coil and high-tension distributor. As a rule, however, when this type is used with ordinary sparking plugs the contact maker and distributor are mounted on the magneto, and it is then usually called a "high-tension" magneto. This name is, however, electrically incorrect, for the magneto really generates only a low-tension current, which is then transformed by a separate coil. A true high-tension magneto, on the other hand, has a second winding on its armature which takes the place of the coil, so that its current when collected for distribution is already at a high tension.]

THE DAIMLER PATENTS.

Writing with reference to the letter of the Mercedes-Daimler Company, Ltd., in our last issue, Messrs. Jarrott and Let's, Ltd., say:—"Our position is quite clear. The Mercedes-Daimler Company wrote us a letter claiming certain patent rights, and as we believed other firms had received a similar letter we placed the matter before the Society of Motor Manufacturers and Traders for its investigation, at the same time advising our friends in the trade and suggesting united action after the society had given its report. This—to us—very proper course, appears to have considerably ruffled the Mercedes-Daimler Company, and anyone not acquainted with the facts, reading its letter, might suppose that we were endeavouring to make terms with it at the same time as we are trying to obtain a united action by the trade, and such suggestion we wish most emphatically to deny. Two years ago one of the directors of this Mercedes-Daimler Company, namely, Mr. Harry J. Lawson, called upon us and informed us that his company was then entitled to the full use of the name 'Mercedes,' and as we were contemplating the building of a car to be described as 'Mercedes,' coupled with some other name, we eventually paid the sum of £150 for an option for a right to the name of 'Mercedes,' with full use of any patents which might exist. We eventually came to the conclusion that the suggested agreement was of little value and dropped the whole matter, and we have never built cars either on Mercedes or any other lines. Regarding the validity of the patents, the title of the Mercedes-Daimler Company, Ltd., or the value of the device it claims to control, we know nothing. These are matters which are being enquired into by the Society of Motor Manufacturers and Traders, and we think the trade may remain perfectly calm until the investigations of that body are complete."

MR. J. E. HODGKIN, the hon. sec. of the North-Eastern A.A., is warning motorists against purchasing sparking plugs from an itinerant salesman who has recently been in the North of England representing himself as an agent for a firm in Paris, and selling the articles at a very substantial advance upon their value.

AUTOMATIC CAR LIGHTING AND BATTERY CHARGING DYNAMO.—Messrs. S. Bottone and Son, of Wallington, Surrey.—"Having seen a letter in the *M.C.J.* from Mr. T. Jenkinson, re electricity for car lighting, wherein mention is made of the Phi dynamo, we think it would not be out of place to mention that we have an English dynamo which we claim compares favourably with that of our worthy French competitors." We hope to refer to the device more fully in a later issue.

THE COST OF UPKEEP.—The Long Acre Autocar Company, Ltd., write:—"We notice in a recent number of your journal a letter from Mr. R. J. Sefton re the cost of upkeep, and we think that we provide an answer and a way out of the difficulty. By our new guarantee scheme we provide that the purchaser of a car through us is absolutely safeguarded against any other expenses than those occasioned by the requirements of the car in petrol, lubricating oil, and the charge for insurance. We publish a very full explanatory pamphlet of this guarantee, which we shall be pleased to forward to any of your readers who are interested, and who will favour us with a post card application. But, above all, we wish to emphasise that for 5,000 miles Mr. Sefton will be free of upkeep expenditure, whether he purchases from us a two-cylinder 10-h.p. car or a four-cylinder side entrance 16-20-h.p. car, and that he has the option of renewing this guarantee for a further five thousand miles upon payment of a sum stated in the guarantee form."

FROM the L. S. Starrett Company, of 37, Upper Thames Street, London, E.C., comes a copy of the latest catalogue of their fine mechanical tools. The name of Starrett is a world-wide one in connection with micrometers, gauges, calipers, rules, &c., and the list is one which should be of considerable interest to motor mechanics of all classes.

A COPY of the catalogue of the Pierce-Arrow Motor Car Company, of Buffalo, U.S.A., the successors to the George N. Pierce Company, is to hand. This is a very elaborate production, and as regards the illustrations is a striking example of the printers' art. Full particulars are given of the various models of Pierce-Arrow cars, which comprise 24-h.p. and 40-h.p. four-cylinder, and 36-h.p., 48-h.p. and 60-h.p. six-cylinder. Practically all the important components of the vehicles are illustrated, while the full-page coloured plates of the different types of bodies that can be fitted to the chassis are amongst the finest we have so far come across.

CLUBS AND ASSOCIATIONS.

ROYAL.

THE Mid-Staffordshire A.C., with a membership of eighty one, has become associated with the R.A.C.

BROOKLANDS.

THE test hill which it was recently proposed should be constructed at Brooklands has now been begun. The gradients, as approved by the Royal A.C., are 1 in 8 for 35 yards at the bottom of the hill, 30 yards of 1 in 5, and 50 yards of 1 in 4 at the top. The hill, which will be straight, will be approachable from a flat of 200 yards.

NORTH MIDDLESEX.

THE first meeting of the newly-elected committee was held at the club's headquarters, the Great Northern Hotel, King's Cross, on the evening of Thursday of last week, when Mr. W. A. Vincent occupied the chair.

Mr. A. C. Denham was elected chairman of the club for the ensuing year, and Mr. W. A. Vincent vice-chairman.

The committee agreed to share with the R.A.C. the cost of erecting a special illuminated signal, which is to be placed in the main road at Wood Green at a dangerous point where the cross-roads are completely intersected by tram lines.

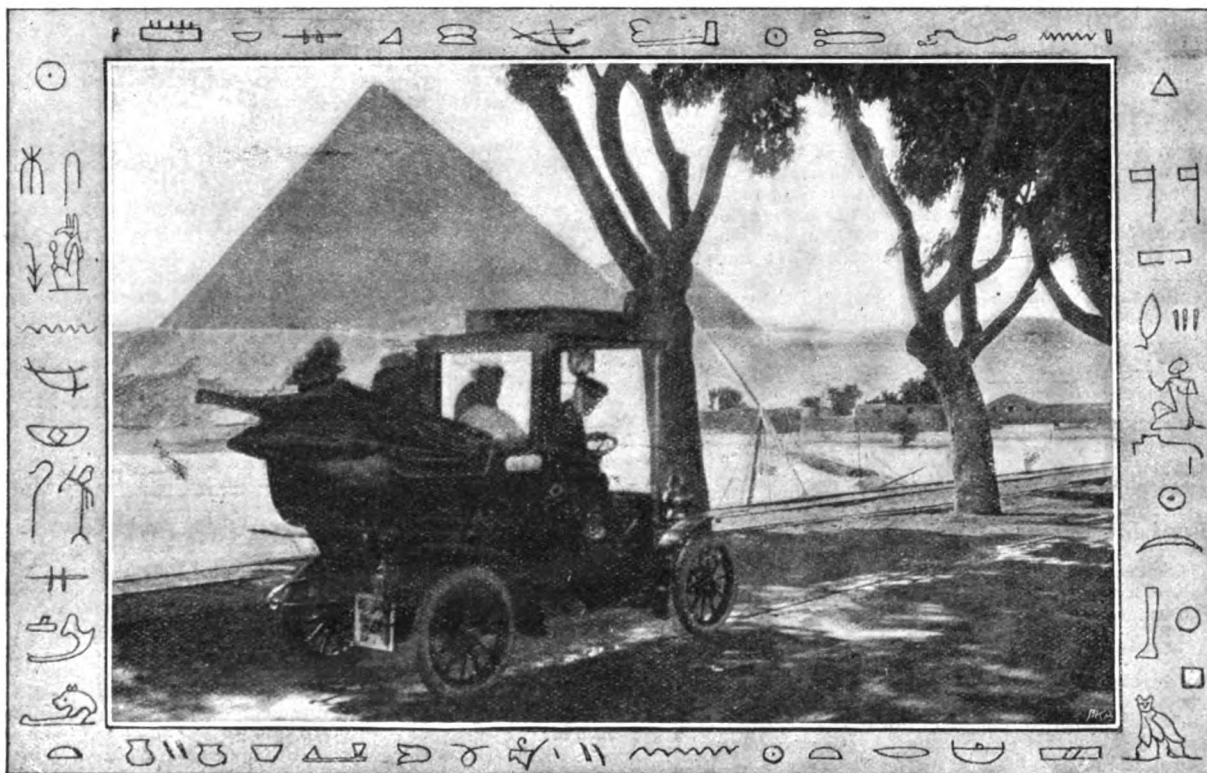
Professor Lambert urged the entrancing claims of the automobile, and how, now the ladies insisted on their husbands investing in one, he remarked that their wishes could be gratified at a very low figure, and instanced that cars could be purchased for as little as £10, and how even with such a mount enjoyment and experience could be obtained. Stress was laid on the advantages motorists obtained by uniting together, especially now that persons in high places had their eyes on the "motorist's nest," and how union might prevent and ward off possible future further taxation.

Mr. Rees Jeffreys, the secretary of the Motor Union, replied for the ladies and visitors.

An enjoyable musical entertainment was provided under the direction of Mr. Fred T. Daniels. After the health of "The President" had been drunk with great enthusiasm, the dinner concluded with the toast of "The hon. sec.," Mr. Leonard Beadle.

THE INCORPORATED INSTITUTION OF AUTOMOBILE ENGINEERS.

A PAPER is to be read before the London Branch of the Graduates' Section, on Tuesday next, at 1, Albemarle Street, Piccadilly, London, W., by Mr. F. Thomas, on "Change-speed Gears." The following is a digest of the paper:—To effect changes of speed in a motor vehicle the speed of the engine itself may be varied. Over a considerable range, however, the



Motor Touring in Egypt.—On the road between Cairo and the Gizeh Pyramids.

[Allgemeine Automobil Zeitung.]

Messrs. Denham, Vincent, and Barber were appointed to represent the club on the R.A.C. General Committee.

Two new members were elected, bringing the total membership up to 114. The district which the club covers is the whole of the northern portion of the county of Middlesex, i.e., north and east of Uxbridge and Kilburn, and any motorist or motor-cyclist living inside this district is invited to communicate with the hon. secretary, Mr. J. Thos. Barber, Medina, Hardwicke Road, Palmers Green, N., who will gladly forward particulars of all the advantages offered by the club.

BLACKHEATH.

THE annual dinner of the Blackheath Automobile Club was held on the 11th inst. in the Oak Room of the Trocadero Restaurant, London, W. There was a good attendance of members and friends under the genial chairmanship of the President, Col. H. C. L. Holden, R.A., F.R.S., who was supported by Professor Carlton J. Lambert, M.A., and Mr. Alfred Roberts, F.R.I.B.A.

After the usual toasts had been enthusiastically honoured, Colonel Holden pointed out the advantages of belonging to such a club as the Blackheath Automobile, the various meets that had been and would be held under the auspices of the club, and how in future hill-climbing contests could be held on the shortly-to-be-erected hill at Brooklands.

power of the engine is proportional to its speed. It often happens that the greatest power is required at a low speed, e.g., in hill climbing, and hence it becomes necessary to adopt some form of change-speed gear independent of the speed of the engine. The two principal methods in use in England are those known as the sliding gear and epicyclic gears respectively. Speed reductions are proportionable to each other. With a four-speed gear the proportions are generally as follows:—First speed is a quarter of fourth speed; second speed is half of fourth speed; third speed is three-quarters of fourth speed. The best material for gear wheels appears to be forged steel, case-hardened. An addition of 3 per cent. of nickel considerably improves the qualities, test properties, and facilitates lighter construction. For gears always in mesh, however, soft metal can be used and tends to silence. Sliding gears have to a certain extent superseded all other kinds in England. This is rather surprising, especially in the case of motor-buses, where, owing to the great number of changes that have to be made, a great number of renewals and repairs are necessary. The necessity for "striking-in" has been obviated by a system using a separate clutch for each gear, and keeping each pair of gear wheels constantly in mesh. The shock when changing gear is then borne by the comparatively massive jaw clutches. Examples of this are the Renault and Argyll. Epicyclic gears were used by some early motor engineers and are being revived at the present time. A gear of this kind must have (a) A sun or central wheel; (b) one or more plane-

tary wheels, revolving about a ; a fulcrum wheel. Consideration will show that for a 2 to 1 speed the sun and fulcrum wheels must be the same size, and this is the limiting case. In practice 5 to 1 is the working limit. By adding extra wheels to the epicyclic trains the range of reduction may be extended, but the gear-box becomes more complicated at each step. Friction brakes are generally used for holding the cases or drums stationary to obtain the various speeds. A common complaint against planetary gear is that these friction bands do not completely release themselves when out of action.

HERTFORDSHIRE.

THE Hertfordshire County A.C. has held a very successful annual general meeting, at which Mr. Sidney J. Ellis was elected chairman for the year, and Mr. J. E. Greenman secretary, in place of an honorary secretary, the work having become too much for an honorary officer.

BRITISH MOTOR BOAT.

MR. G. F. BESTIC, who is returning to Australia next week, has presented the British Motor Boat Club with a challenge bowl to be raced for by boats having engines up to 100-h.p. The event will be held annually at Burnham-on-Crouch. The race is to take place under the British Motor Boat Club rules for the time being in force, and hydroplanes, under the club's definition, will not be eligible. There will be no time allowance.

The annual dinner of the British Motor Boat Club was held at the Trocadero Restaurant, London, on Friday of last week, when about 150 members and guests sat down under the chairmanship of the Admiral, Admiral Sir William Kennedy, K.C.B., and amongst those present were the Marquis and Marchioness of Ailes, Lord Angus Kennedy (Commodore of the Scottish Marine Motor Club), Mr. W. Miall Green (Commodore of the British Motor Boat Club), Mr. L. M. Waterhouse (Vice-Commodore of the British Motor Boat Club), Mr. F. May (Rear-Commodore of the British Motor Boat Club), Mr. O. B. Colls (hon. treasurer of the British Motor Boat Club), and Mr. C. H. Holland (Commodore of the Burnham Yacht Club). Col. Bosworth proposed the toast of "The Club," to which the Admiral responded. He said motor crafts might prove of enormous value as despatch boats, especially if the owners made a study of our coast, the currents and tides. He had written to the Admiralty on the subject, and that morning had received a reply to the effect that the matter was under consideration.

During the evening the Marchioness of Ailes presented the cups and trophies secured by members of the club during the past season. These awards, which numbered thirty-seven in all, made an attractive and much-admired display.

MOTOR YACHT CLUB.

THE following are the provisional dates for the principal Motor Yacht Club meetings for the current year:—Saturday, May 29th, and Monday, May 31st (Whitsuntide); Friday, July 2nd, and Saturday, July 3rd; August 12th, 13th, and 14th (Annual Regatta); and September 17th and 18th.

The annual general meeting of the Motor Yacht Club will be held on Friday of next week, when considerable progress will be reported.

Nearly eighty candidates have been elected to membership, and the popularity of the "Enchantress" is demonstrated by the fact that 60,000 meals were served on board during the year.

SCOTTISH.

A REPORT of the papers read and of the discussions which took place at the Conference between the Road Surveyors' Association of Scotland and representatives of the Scottish Automobile Club, in the Central Hotel, Glasgow, recently, on the subject of the results and recommendations of the International Road Congress at Paris in October, has now been printed in pamphlet form (40 pp.) and a copy will be sent to any member of the club on application to the secretary, at 163, West George Street, Glasgow.

At a recent meeting of the Executive Committee a communication was read from Mr. W. E. E. Baxter relative to his scheme for the provision of discs for deaf cyclists, and it was agreed to recommend the approval of the same, and also that due regard on the part of motorists be given to the exhibition by cyclists of such discs, provided satisfactory steps are taken to ensure that they are issued discriminately and only to appropriate persons.

The secretary intimated that Mr. W. H. Cox, of Murthly, had gifted to the club for the library of the prospective club-house a considerable number of bound volumes of the *M.C.J.*, *R.A.C. Journal*, and other books, and the best thanks of the Club have been conveyed to Mr. Cox for his gift.

THE Bradford A.C. has now a membership of ninety-nine, having made an increase of twenty-two during the past year.

MR. A. BARLOW has been elected chairman of the committee of the Nottinghamshire A.C. for the current year.

THE Motor Union enrolled 328 new members during January. The funds in hand at the beginning of the year 1909 amounted to £12,000.

THE Bowring Petroleum Company, Ltd., of 5 and 6, Billiter Avenue, London, E.C., are introducing a new motor spirit bearing the name of "Mex." The supply is drawn from the Mexican wells owned by the well-known firm of contractors, Messrs. S. Pearson and Son, Ltd.

CASES AGAINST MOTORISTS.

A FINE REDUCED.

The chauffeur of Mr. Lewis Harcourt, the First Commissioner of Works, was summoned by Mr. Plowden, at Marylebone, for driving his motor-car at a speed of more than twenty miles an hour. He was fined 40s., which was subsequently reduced to 20s. on a gentleman representing Mr. Harcourt explaining that this was the first time his car had been stopped or his speed called into question.

NO RECEIPTS AT POLICE COURTS.

Stanley Gilmour, of Kensington, was fined £2 and 8s. 6d. costs, at Kingston, for exceeding the ten mile speed limit in Richmond Park. Defendant wrote out a cheque for £2, which was refused, as it did not include the costs. Then he wrote another, which was also refused, as it was torn in two pieces in being separated from the counterfoil. With great deliberation he wrote a third, and then demanded a receipt. He was told he could not have a receipt, but could have his liberty, and left the court remarking, "It is very good of you."

A HARD CASE.

When a chauffeur, named Joseph Blackburn, of Shepherd's Bush, was summoned, at Kingston, for failing to produce his licence for endorsement after a conviction for exceeding the speed limit last month, his wife appeared, and produced the licence and the fine, amounting to £10 and costs. As she paid the money she declared that her husband had to sell most of his clothing, and that she had to dispose of all her rings to get it together.

PASSING TRAMCARS.

At the Bradford City Police Court, on Friday of last week, John Holmes pleaded guilty to a technical offence under the Motor Car Act, and was fined 10s. and 11s. costs. The offence in question was that of passing a "carriage" proceeding in the same direction on the wrong side, and the case had been several times adjourned pending an appeal in another case as to whether a tramcar was a carriage within the meaning of the Act. As the High Court has held that it is, Mr. Holmes had to submit to the decision. The Stipendiary pointed out that now the law was settled it must be obeyed until it was altered.

A MOTORIST DISCHARGED.

At Sussex Assizes, on Saturday, before Mr. Justice Bucknill, Arthur Campbell was charged with causing grievous bodily harm to Henry Catt, at Ovingdean, near Brighton, on May 17th last. About midnight on the date in question Catt was cycling home, and when descending a hill he observed a car, driven by prisoner, approaching on the wrong side of the road. Prosecutor shouted, and was in the act of dismounting when the car dashed into him. The occupants of the car felt a jolt, but having felt a similar thump on the outward journey, they proceeded to Brighton, thinking they had run into the bank. Arriving at Brighton, it was found the lamp and top part of the radiator were broken, and two of the motorists returned to the spot where the jolt had been felt. There Catt was found badly hurt. He suffered from concussion, broken ribs and smashed hand, &c. Prisoner pleaded that the night was so foggy that he could not see many yards ahead, and was quite unaware that he was on the wrong side of the road, or that he ran into Catt. There were five lighted lamps on the front of the car. His lordship stated that the jury must consider whether the accident was due to prisoner's wilful neglect. The jury found prisoner not guilty, and he was discharged, the judge agreeing with the verdict.

EXCEEDING THE LIMIT.

The Earl of Annesley has been fined £6 and costs for driving in the Long Bennington police trap, near Grantham, at an alleged speed of 40 m.p.h.

At the Edgware police court four motorists have been fined sums ranging from £3 to £6 for exceeding the speed limit on the Harrow road.

A PROBABLE APPEAL.

Philip Paddon, 1, Albemarle Street, W., was summoned at the Kingston Court for exceeding the limit in Portsmouth Road, Thames Ditton. Mr. Staplee Firth defended. P.c.'s Beck, Davis, and Smith gave evidence in support of the summons, but, as none of them could identify the defendant, Mr. Firth submitted that there was no case to meet. Mr. Paddon did own a car, but it was not the number of the car stopped. P.c. Beck said "Paddon" was the name on the licence, and the driver said: "You had better make the address 1, Albemarle Street," by which he understood that he was not then living at the address on the licence. The Chairman (to Mr. Firth): Are you going to put defendant in the box? Mr. Firth: No. Inspector Brice: Do you say he is not the Mr. Paddon who was stopped? Mr. Firth: Prove your case. The Chairman said there was presumptive evidence that defendant was the man, and he ought to go into the box. Mr. Firth: I object to call him; you cannot convict on presumptive evidence in such a case as this. I know of a case in which a private card of mine was handed to the police at Huntingdon, by a motorist, and I was summoned. There must be identification clear and unmistakable. It may well be that some other person had got Mr. Paddon's licence. The Chairman: "We have decided to convict in this case, unless the evidence is rebutted. Mr. Firth: "You will take the responsibility for it; I shall most certainly appeal. It is the grossest injustice I ever heard in my life. I object to that, if it is intended to apply to my client in the case now before you, and having regard to the decision to commit in this case, I shall most certainly apply to the High Court for a writ of certiorari. I don't say it out of any disrespect to the Court, but I shall ask that the justices shall also

be compelled to pay the costs of my application to the High Court." The fine was £5 and costs.

A MOTORIST who was summoned at the Kingston County Bench on the 10th inst. for travelling up Kingston Hill at a speed estimated by the police at twenty-eight miles an hour has been fined £15 and costs, although there was no suggestion of danger to the public. It was mentioned that there were six previous convictions against him.

ON January 31st a police trap was established between Lewes and Brighton, which resulted in several motorists being convicted at Lewes on Tuesday, fines of £2 to £5 being inflicted in seven cases of exceeding the speed limit. Other motorists were charged with failing to produce their licences, but where it was found that the licences were actually in existence the charges were withdrawn on payment of costs.

ALLEGED OBSTRUCTION.

In the case in which Eugene J. Robertson, of Wandsworth, was summoned for obstructing the police at Putney by warning motorists of a police trap, Mr. Denman, at South Western Police Court, said that he did not think he could convict, but he would adjourn the hearing in order to prepare a written judgment, as the case was to be taken to the higher courts.

MOTOR-CAB LAW.

MR. H. R. WINTERTON attended before Mr. Plowden on behalf of the Fiat Motor-cab Company, at Marylebone Police Court on Saturday, and asked for a summons against a consulting surgeon in Harley Street

ROAD REPORTS.

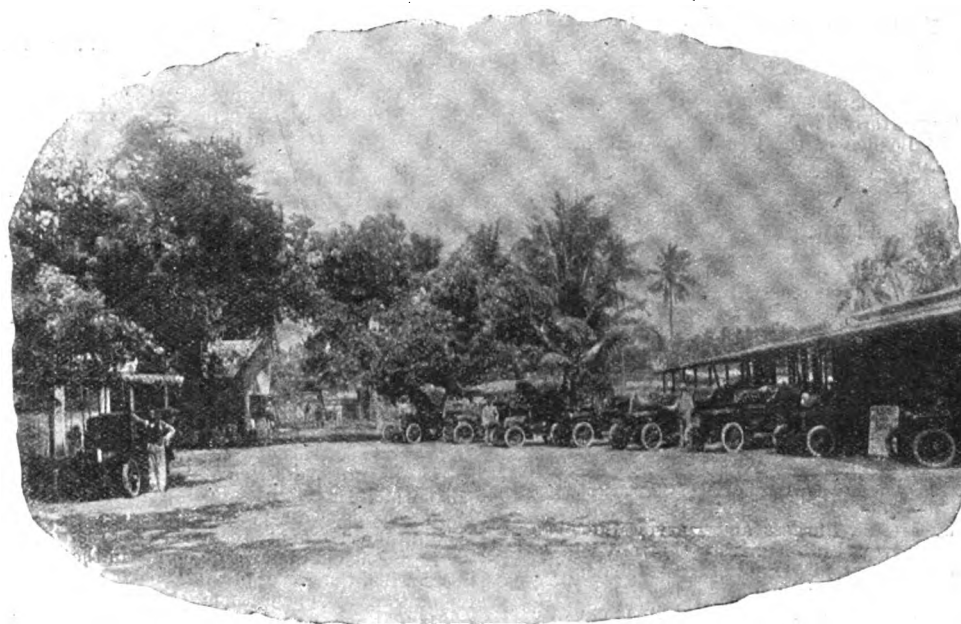
HORSHAM.—No fewer than 42,000 square yards of roadway in the Horsham district have been selected for tar treatment during the next twelve months.

CHESHIRE.—At the last meeting of the Cheshire County Council Mr. W. L. Williams referred to recent experiments that have been made in the use of tar macadam as a preventive of dust upon the roads. Seven miles of road had been laid with the material at Liverpool, and it proved to be absolutely dustless and mudless, and its condition now was as perfect as when it was laid down. This was on a road over which there was heavy traffic, and he calculated that on an ordinary country road tar macadam would last for twenty-five years. There were 511 miles of road in Cheshire, and the County Council was at present spending £80,000 a year on road maintenance.

WHITBY.—The application for prohibiting the driving of motor-cars on certain streets in Whitby, which had been made to the L.G.B. by the County Council of the North Riding of Yorkshire, has been withdrawn.

ASCOT.—The tarring of the roads in the vicinity of the Ascot race-course is about to be undertaken by the Taroads Syndicate, Ltd., who have entered into a contract with some of the local authorities.

BACUP.—The existing tramway track along Market Street and Newchurch Road, leading from Todmorden, Burnley, and through Bacup to Accrington, will be unsuitable for motor traffic during the next six months, as it is to be taken up and new lines laid for a distance of about two and a half miles.



Motoring in India.

The above illustration depicts a view in Madras. On the left is seen the pavilion of the South Indian Motor Union, and on the right the garage of Messrs. Oakes and Co., Ltd.

for the recovery of 1s. 10d., the amount of a motor-cab fare. The driver of the cab, he said, was called from a stand in Regent Street to the address in Harley Street. When he arrived there the taximeter registered eightpence. After waiting a little time the surgeon entered the vehicle and directed the driver to proceed to Maresfield Road, Fitzjohns Avenue. When it reached the Marlborough Road Station, in Finchley Road, the cab broke down. The taximeter then registered 1s. 10d. Mr. Plowden: Don't you think the fare has a claim against you? Mr. Winterton: That may be in civil law. There are two stages in the transaction. It might be said there was a contract to proceed to a certain place, and as we have failed in the performance of our contract we cannot sue. Mr. Plowden: That is a common-sense view, I think. Mr. Winterton: But there is another stage. We were first told to drive to Harley Street, and were not bound to drive further. We have so many cases of the kind that my clients desire to make this a test case. It is a matter involving principle. Our claim is that immediately the meter registers that amount is due, and whatever happens on the further stage of the journey we are entitled to whatever the meter shows at the given moment. Mr. Plowden: Whether that is sound or not I do not know. Of course I am not expressing an opinion; my judgment is suspended. You may take a summons, and see what comes of it.

MAYFIELD.—The County Council has decided to make application for a speed limit of ten miles an hour through the village of Mayfield.

WEYBRIDGE.—The Surrey County Council have made an application to the Local Government Board for a ten mile speed limit for parts of Baker Street, Church Street, Bridge Road, Monument Hill, High Street, Balfour Road, and Portmore Park Road, Weybridge.

CLAYTON.—The Clayton Parish Council are asking the county authorities to apply for a speed limit of ten miles an hour on the well-known Clayton Hill, on the Brighton road.

TOOLS FOR MOTOR REPAIRS.

MESSRS. DRUMMOND BROS., LTD., of Ryde's Hill, Guildford, are showing at the Manchester Show one of their newly-designed 7½ in. high speed quick change screw and feed gear, screw cutting, sliding and boring lathes. This is provided with the firm's patent gap bed, by means of which the saddle can be brought right over the gap at any time without any overhang of tool or saddle. This lathe is fitted with a narrow guide, rendering it as suitable for precision work as for heavy work, and with the new boring table cross slide makes it particularly suitable for cylinder boring and the many other boring jobs in motor manufacturing or repairing. The lathe can also be reversed at saddle for screw cutting, and is so arranged that the threads cannot be crossed when cutting. The lathe is designed for motor repairing or heavy repairs in garages or bus yards.

THE firm of Renault Freres, the makers of the well-known cars bearing that name, will be in future carried on under the style of Louis Renault, M. Fernand Renault having retired from the business.

FORTHCOMING EVENTS.

FEBRUARY.

- 19th (F.)-27th (S.).—Manchester Motor Show at Belle Vue, Manchester.
 20th (S.).—First Annual Dinner of the Sutton Coldfield A.C.
 22nd (M.).—Manchester A.C. Dinner.
 23rd (Tu.).—Paper on Change Speed Gears will be read before the Incorporated Institution of Automobile Engineers.
 25th (Th.).—Irish A.C. Annual Meeting.
 26th (F.).—Hull A.C. Annual Meeting.
 Annual Meeting of the Motor Yacht Club.

MARCH.

- 1st (M.).—The Road Trials in connection with the Army Council Competition for light tractors commence.
 10th (W.).—The Sixth Ordinary General Meeting of the Incorporated Institution of Automobile Engineers will be held at 8.15 p.m. at the Institution of Mechanical Engineers, when papers will be read by Mr. G. H. Baillie, on "Carburettor Experiments," Mr. H. Ballantyne, F.I.C., F.C.S., on "The Chemistry of Petrol," and Mr. B. Blount, F.I.C., F.C.S., on "Specifying the Quality of Petrol."
 The meeting will be preceded at 8 o'clock p.m. by the Annual General Meeting of the Institution.
 18th (Th.).—Royal A.C. Annual Meeting, followed by Annual Dinner at the Covent Garden Theatre.
 20th (S.)-27th (S.).—Cordingley's fourteenth Annual Motor-Car Exhibition and Mart and third Aero Show at the Agricultural Hall, London, N.

APRIL.

- 10th & 12th.—Easter Meeting at Brooklands.
 24th (S.).—Auto-Cycle Union's Quarterly Trial.
 29th-30th.—Road Conference in London of the County Councils Association.

MAY.

- 26th-June 1st.—Irish Reliability Trials.
 31st (M.).—Whitsuntide Meet at Brooklands.

JUNE.

- 10th-18th.—Prince Henry Touring Trophy Competition.
 14th-19th.—Scottish Reliability Trial.

LIGHTING-UP TIME—LONDON.

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| Feb. 20th—6.19 | ... | 22nd—6.24 | ... | 24th—6.27 | ... | 26th—6.30 |
| 21st—6.20 | ... | 23rd—6.26 | ... | 25th—6.28 | ... | 27th—6.32 |

COMPANY NEWS.

In the case of New Companies the file number is given at the end of the particulars.

THE business carried on by Messrs. Burgess and Harvey, Ltd., has been acquired by Messrs. W. J. Harvey, Ltd., a private company with a capital of £10,000 and registered offices at 463, Oxford Street, London, W.

THE Pneumatic Tyres, Ltd., is the title of a private company which has been registered with a capital of £100 to deal in pneumatic tyres for motor vehicles.

THE Motor Repairs and Accessories Syndicate, Ltd., has been registered with offices at 86, Cannon Street, London, E.C. It has a capital of £5,000 and has been formed to acquire the plant, machinery, tools and stock in trade of Argylls, London, Ltd., and to adopt an agreement with Mr. A. Clark.

WITH a capital of £2,000 the Ealing and Acton Motors, Ltd., has been registered to carry on business as motor-car manufacturers and agents. The registered offices are at 11, King's Parade, Acton, W.

AN extraordinary general meeting of Humber (Limited) was held at Coventry on Tuesday for the purpose of confirming the special resolutions passed at a previous meeting for the reconstruction of the company. Under the scheme the new preference shares are subject to a call of 3s. 6d. each, but four shares in the new company are to be given in place of three, and the ordinary to a call of 4s. 8d. Mr. E. Powell (chairman) presided over the meeting, and Earl Russell moved the confirmation of the resolutions. This was seconded by Mr. D. Basden, who said that the new company would have a working capital of between £300,000 and £400,000. The stock-in-trade, book debts, and cash, according to the last printed balance-sheet, amounted to £288,000. To that would be added the proceeds of the calls on the shareholders, which brought the figures to £414,000. Arrangements have been made for the £150,000 advanced on debentures to stand, and that was not to be paid off; consequently the £400,000 was available as working capital, less the ordinary trade liabilities which were naturally on the books at all times. The resolutions were unanimously confirmed. Under the scheme the new board will consist of Lord Russell, Major Ashworth, and Messrs. D. Hasden, Ballin Hinde, J. W. Davy, and W. B. Jessop, the last-named two being members of the present board of directors.

THE East London Rubber Company are removing from Shoreditch to more commodious premises at 29-31, Great Eastern Street, E.C.

PUBLIC SERVICES.

MR. HUNTER, of the Dewsbury Motor Garage, who has had three motor-cabs plying in Dewsbury for some time, has now been granted licences for similar vehicles for Batley.

THE Keighley Town Council have recently been running a motor-bus between Eastburn and Utley as a feeder of the tramway system, and, satisfied with the result of the test, the Tramway Committee have now obtained the Council's authority to buy two motor-buses of the char-a-banc type at a cost of not more than £755 each.

THE Liverpool Dock Board has arranged to give permits, through the Harbour Master, for the drivers of motor-cabs wishing to take their vehicles on the dock estate.

THE affairs of the Vanguard Motor Omnibus Company have lately been before the Court. On the petition of Col. Mayhew, Major Rhodes and other gentlemen, Justice Swinfen Eady has made an order that the voluntary winding up is to be continued under the supervision of the Court, and that the agreement to sell the undertaking of the Vanguard Motor Omnibus Company to the London General Omnibus Company should be sanctioned.

THE East Ham Town Council have requested the police authorities to require the motor-buses to select stopping places other than those used by the trams, as this has proved a source of danger to vehicular and pedestrian traffic.

SEVERAL reductions in the motor-bus fares in the Metropolis have been made by the London General, Road Car, and Vanguard Omnibus Companies, which are now in combination. It is understood that with the inauguration of the summer service several of the routes will be extended.

"POLICE CONTROLS."

IN the Mitcham Lane, Streatham, between the cricket field and the King's Head Hotel, the police have a trap in frequent operation.

THE police traps on the Great North Road, near Grantham, have been in frequent operation of late; one is over a stretch of four miles between Great Gonerby and Long Bennington, another between South Witham and Colsterworth, and a third between the latter place and Great Penton.

AUTOMOBILE ACCIDENTS.

AT Kilburn, on Monday, an inquest was held concerning the death of a boy run over by a motor-omnibus. The witnesses deposed that the deceased and two other lads were playing with a dog on the roadway and that the driver of the motor-bus could not avoid the accident. The jury returned a verdict of "Accidental death," exonerating the driver from blame.

A DISTRESSING motor-car accident, in which six children were involved, took place on Saturday at the village of Ashford, on the main road between London and Windsor and about two miles from Staines, at a point which Dr. Maurice Cook, the medical officer of the Staines Infirmary, regards as a very dangerous highway, where the police authorities should take stringent precautions in order to safeguard the safety of the public. The children were playing in the road throwing each others' caps about when the driver of a car belonging to Mr. Stanley Brotherhood, trying to avoid one of them, struck into the group of five, with the sad result that one received such injuries that he died a few hours afterwards and of the others two are not expected to recover.

MR. HUGH DONALDSON, residing in Edinburgh, has just died as the result of an accident near Sanquhar, Dumfriesshire. The deceased gentleman was motoring to Edinburgh from Thornhill, and at Orchard Bridge on Friday of last week, where the road resembles the letter "s," he is reported to have lost control of the car, which crashed through a fence and toppled down an embankment of twenty feet. Mr. Donaldson's back was broken. A friend, who jumped out, had a narrow escape.

A YOUNG cyclist died at Southend Hospital on Monday from injuries received by colliding with a motor-car at Hadleigh on Saturday.

BUSINESS NEWS.

FROM the Jackson Automobile Company, of Jackson, Mich., U.S.A. comes a copy of the 1909 catalogue of Jackson cars. Four models are being turned out of respectively 15-18-h.p., 20-24-h.p., 30-h.p., and 36-40-h.p., the first two being fitted with horizontal double-cylinder engines, and the more powerful cars with four-cylinder motors of the vertical type.

THE Sheppey Motor Company, York, send a copy of their latest catalogue of specialities for steam cars. These comprise engines, generators, feed pumps, regulating valves, and other fittings for use in connection with superheated steam. The firm have also lately introduced a new steam chassis adapted to be fitted with char-a-banc or lorry bodies.

OWING to a similarity in names there has been a certain amount of confusion between the London and Parisian Motor Co., Ltd., and the London and Paris Exchange, now in liquidation. The London and Parisian Motor Co., Ltd., of 87, Davies Street, Oxford Street, W., who deal in motor-cars and accessories only, have not, nor have they at any time had, any connection with the London and Paris Exchange.



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